



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

ALGOA BAY SEA-BASED AQUACULTURE DEVELOPMENT ZONE

DRAFT BASIC ASSESSMENT REPORT

BASIC ASSESSMENT PROCESS IN TERMS OF THE
NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998)

APPENDIX F: DRAFT STAKEHOLDER CONSULTATION REPORT



ANCHOR
research & monitoring

ALGOA BAY SEA-BASED AQUACULTURE DEVELOPMENT ZONE

DRAFT APPLICATION BASIC ASSESSMENT REPORT

BASIC ASSESSMENT PROCESS IN TERMS OF THE
NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998)

APPENDIX F: STAKEHOLDER CONSULTATION REPORT

July 2019



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PROJECT DETAILS

Objective	Application for Environmental Authorisation in terms of the National Environmental Management Act, 1998 (Act No 107 of 1998)
Applicant	Department of Agriculture, Forestry & Fisheries
Environmental Assessment Practitioner (EAP)	Vera Massie under supervision of Dr Barry Clark from Anchor Research & Monitoring (Pty) Ltd
Anchor Project Name	Algoa Bay Sea-based Aquaculture Development Zone Basic Assessment Process
Anchor Project Number	1808
Report name	Algoa Bay Sea-based Aquaculture Development Zone, Basic Assessment Process in Terms of the National Environmental Management Act, 1998 (Act No. 107 Of 1998) - Draft Basic Assessment Report
Status	Application phase
Application submission date	To be confirmed
Competent Authority Reference	Not currently assigned
Case Officer	Not currently assigned

OVERVIEW OF PROJECT OUTPUTS BASIC ASSESSMENT REPORT AND APPENDICES

Basic Assessment Report (BAR)	Pre-Application BAR – Released for comment between 28 March and 30 April 2019 Draft BAR - Current Final BAR – To be completed after application-phase public participation period
Appendix A	Environmental Management Programme (EMPr)
Appendix B	Details of EAP, Expertise and Declaration
Appendix C	Details of Specialists, Expertise and Declaration
Appendix D	Specialist studies: <ol style="list-style-type: none"> 1. Benthic Mapping Assessment for the Proposed Algoa Bay Sea-based Aquaculture Development Zone (Dawson <i>et al.</i> 2019) 2. Dispersion Modelling Study for the Proposed Algoa Bay Sea-based Aquaculture Development Zone (Wright <i>et al.</i> 2019) 3. Marine Specialist Study 2019 (Hutchings <i>et al.</i> 2019) 4. Maritime Underwater Heritage Specialist Study (Gribble 2019) 5. Comparative Assessments for the Development of the Proposed Sea-based Aquaculture Development Zone Located within Algoa Bay in the Eastern Cape in South Africa (Rhodes University August 2016) <ol style="list-style-type: none"> a. Socio-economic Report b. Ecological Report c. Feasibility study
Appendix E	Background Information Document
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1 INTRODUCTION

The Department of Agriculture, Forestry and Fisheries (DAFF), as the lead agent for aquaculture management and development in South Africa, intends to establish and manage a sea-based Aquaculture Development Zone (ADZ) in Algoa Bay in the Eastern Cape. DAFF recently successfully established the first sea-based ADZ in Saldanha Bay in the Western Cape and has received an Environmental Authorisation for a land based ADZ in the Eastern Cape at Qolora. A Sea-based ADZ typically consists of a selection of designated precincts that provide opportunities for existing aquaculture operations to expand and new ones to be established. ADZs are intended to boost investor confidence by providing 'investment ready' platforms with strategic environmental approvals and management policies already in place, allowing commercial aquaculture operations to be set up without the need for lengthy, complex and expensive approval processes. It is anticipated that an ADZ will create incentives for industry growth, provide marine aquaculture services and enhance consumer confidence. An ADZ can provide economic benefits to the local community through job creation and regional economic diversification.

Aquaculture is one of the sectors that form part of Operation Phakisa under the Ocean's Economy in South Africa. Operation Phakisa is an initiative of the South African government which aims to implement priority economic and social programmes better, faster and more effectively. Operation Phakisa was launched by the President of the Republic in October 2014. The sector offers significant potential for rural development, especially for marginalised coastal communities. The proposed development will provide employment opportunities for the local and regional communities.

The proposed development triggers several Listed Activities in the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended by Government Notice No. 40772 of 7 April 2017), promulgated in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA). DAFF is therefore required to apply for Environmental Authorisation to the National Department of Environmental Affairs (DEA). DAFF appointed Anchor Research & Monitoring (Pty) Ltd (Anchor) to undertake the Basic Assessment (BA) process for the proposed Aquaculture Development Zone in terms of the National Environmental Management Act 107 of 1998, as amended (NEMA).

A Basic Assessment process must be undertaken in compliance with Government Notice (GN) R. 326 of 2017 (2014 Environmental Impact Assessment (EIA) Regulations as amended) and with the guideline documents for EIA processes and stakeholder consultation, as produced by the Department of Environmental Affairs.

This report documents the stakeholder process conducted for the proposed Algoa Bay sea-based Aquaculture Development Zone Basic Assessment process (note that the Background Information Document constitutes a standalone document in the BAR as Appendix F).

2 PRE-APPLICATION PROCESS STAKEHOLDER CONSULTATION

The 2014 EIA Regulations (as amended) stipulate that the final Basic Assessment Report (BAR) has to be submitted within 90 days of receipt of the application by the competent authority. Experience has shown that 90 days for the submission of a BA including a thorough stakeholder consultation process is commonly impossible to achieve. The DEA therefore recommends that a ‘pre-application’ public participation process is conducted where major issues can be resolved before the application is submitted. This means that two stakeholder consultation processes are conducted throughout the Basic Assessment process, one prior to and one after the application is submitted.

Regulation 40(3) which states that: “Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans [...] prior to submission of an application but must be provided an opportunity to comment on such reports once an application has been submitted to the competent authority.”

The Regulations do not prescribe exactly when such pre-application stakeholder consultation may take place¹ and the timing is left up to the discretion of the applicant and competent authority. However, it must be noted that stakeholder consultation must be undertaken at a time or time period that enables all I&APs an opportunity to comment and should there be any doubt by the applicant, EAP or the competent authority that all I&APs have not been given such opportunity, then there can be consideration of redoing or restarting the stakeholder consultation process.

A pre-application meeting was held with the competent authority and other relevant authorities in Cape Town on 30 January 2019 prior to the finalisation of the pre-application Basic Assessment Report. The following Departments attended this meeting:

- Department of Agriculture, Forestry and Fisheries: Sustainable Aquaculture Management
- Department of Environmental Affairs: Integrated Environmental Authorisations
- Department of Environmental Affairs: Branch Oceans & Coasts

A pre-application stakeholder consultation process was conducted for a period of 30 days from the 28th March – 30th April 2019. The pre-application consultation was conducted three months prior to submission of the application for environmental authorisation. The pre-application stakeholder consultation process included the following actions:

- i. All documents were made available on Anchor’s website at <https://anchorenvironmental.co.za/public-documents>
- ii. A public meeting was held at the Port Elizabeth Municipal Hall on 6 March 2019.
- iii. An authorities meeting was held at the Eastern Cape Department: Economic Development, Environmental Affairs and Tourism on 6 March 2019.
- iv. All registered stakeholders were notified via email of a commenting period of 30 days on 28th March 2019 (Appendix F5).¹⁶ Radio announcements in isiXhosa on Nkqubela FM during drive time for both processes (1-6 March 2019, ~June 2019)

¹DEA 2017. Public Participation Guideline in Terms of National Environmental Management Act, 1998 Environmental Impact Assessment Regulations. Prepared by the Department of Environmental Affairs.

- v. An advertisement in English was placed in the local newspaper “Port Elizabeth Express” on 5 December 2018 (Appendix F1) to invite stakeholders to register as an Interested and Affected Party; and
- vi. Notice boards in English were fixed at (See photos in [Appendix F1](#)) (note that updated posters will be fixed in the same locations during the application-phase public participation process):
 - On Hobie Beach near the pier
 - On the life saving hut at Bluewater Bay Beach
 - At the popular Blue Flag swimming beach at Wells Estate, St Georges beach
- vii. Registered letters were sent to key stakeholders as per Regulation 41(2)(b) ([Appendix F2](#)).
- viii. A stakeholder list was compiled and has been maintained ([Appendix F3](#), email addresses and phone numbers are not included to protect the privacy of the stakeholders);
- ix. A comment and response report was compiled ([Appendix F4](#))
- x. A Background Information Document (BID) was compiled and uploaded on Anchor’s website ([Appendix E](#) of the BAR);

2.1 Summary of stakeholder engagement

Public and authorities meetings were held on 6 March 2019 at the Port Elizabeth Municipal Hall and at the Eastern Cape Department: Economic Development, Environmental Affairs and Tourism respectively. The minutes to both meetings have been included in [Appendix F5](#) of this stakeholder consultation report. During the meetings, stakeholders were informed of the new application process, the changes made to the project description since 2014, and to provide an overview of the environmental impact assessment. Concerns raised during these meetings were incorporated into the pre-application BAR where required. The pre-application BAR was made available to stakeholders on 28 March 2019 for a commenting period of 30 days.

To date, 689 stakeholders have been registered for the proposed development, which includes stakeholders from the 2010-2014 process. The following stakeholder types have been registered thus far (number of entries is listed):

- Accommodation (20)
- Accommodation association (1)
- Agriculture (1)
- Animal welfare (3)
- Aquaculture sector (13)
- Aquaculture association (2)
- Association for the Physically Disabled (1)
- Aviation (2)
- Commercial and small-scale fishery (26)
- Conservation (16)
- Divers and recreational fishers forum (1)
- Diving industry (2)
- Environmental consultancy (12)

- Event management (2)
- Fishery association (2)
- Fishing industry (12)
- Government (99)
- Heritage (4)
- Home Owners Associations (3)
- Industry general (13)
- Lifesaving (7)
- Media (6)
- Potential investor (3)
- Private citizen (274)
- Ratepayers association (4)
- Recreational businesses (2)
- Recreational fishery (5)
- Research institute (6)
- Resident (100, note that this refers to private citizens that explicitly stated they were categorised as resident in the area)
- Restaurant (5)
- Sailing (6)
- Sports events (6)
- Surfing committee (2)
- Tourism agency (1)
- Tourism operator (9)
- University (18)

The stakeholder database is updated throughout the BA process.

During the pre-application process, 179 stakeholders submitted comments. It was found that 32% of the comments were against the ADZ, while 31% were explicitly against finfish farming in Algoa Bay. Algoa 1 (Summerstrand site) was rejected by 13% of stakeholders who provided comment, while 17% were explicitly against finfish farming at Algoa 1 (Figure 1). It is important to note that the results presented below are not derived from a structured survey, but instead, the comments were interpreted and assigned a category to provide a high level understanding of the sentiment of registered stakeholders. These results therefore do not necessarily represent the sentiment of all people in Port Elizabeth or beyond.

Furthermore, it was noticeable that a large proportion of stakeholders did not appear to be familiar with the project description and were either unaware of DAFF's intention to apply for bivalve farming at Algoa 1 and 6 and/or that other sites are considered in this application for environmental authorisation. An increased understanding of the difference between the two farming types and the impacts thereof would likely result in greater support for Algoa 6 and perhaps for bivalve farming at Algoa 1.

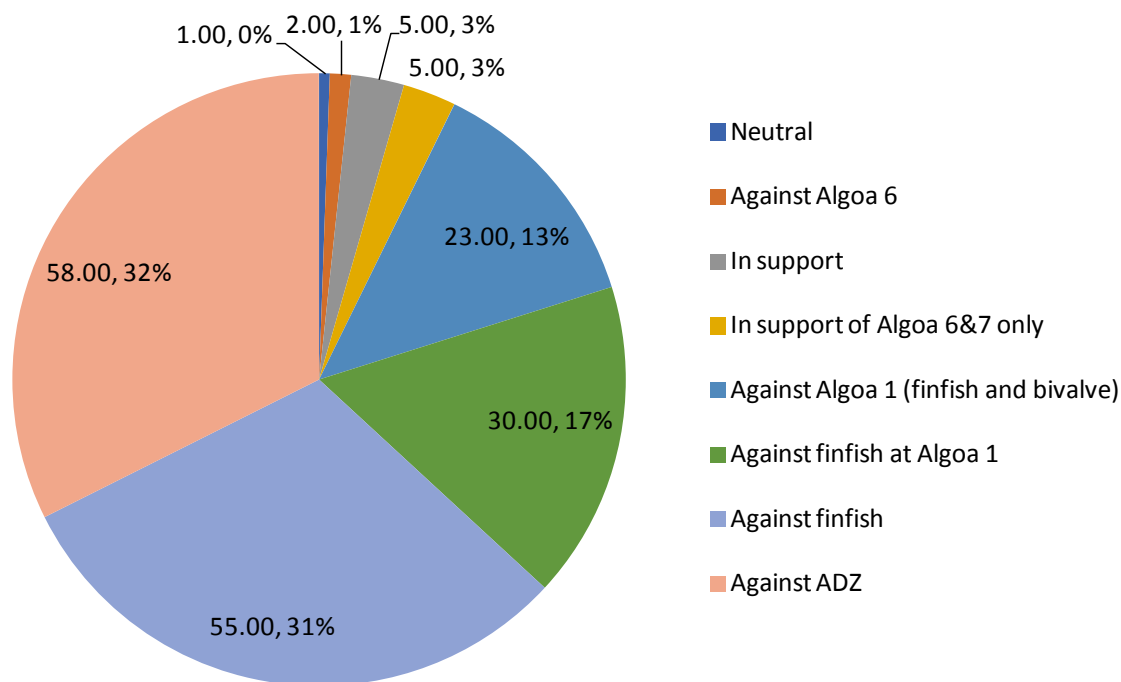


Figure 1 Interpretation of 179 comments submitted during the pre-application phase for the Basic Assessment process for the proposed sea-based Aquaculture Development Zone in Algoa Bay. Note the above data was obtained by interpreting the comments provided (i.e. this information was not the obtained from a survey) and does not necessarily represent the sentiment of all people in Port Elizabeth or beyond.

Of the 179 comments submitted, five comments were in support of the development, stating job creation, business opportunities for SMMEs and economic growth as the reasons. Eighteen comments were provided against the proposed development, although no reasoning was provided by these stakeholders. The remainder of the comments were negative and provided at least one reason for the opposition (156 stakeholders). The reasoned negative comments have been analysed for their content and the results are presented below.

The comments were assigned 23 broad categories, which included among others, concerns expressed regarding impacts on marine ecology, visual aesthetics, negative economic impacts, feasibility of the proposed ADZ etc. (Table 1 shows the categories that were assigned). Some categories were subdivided into multiple topics. For example, marine ecology was divided into 25 topics, including impacts on birds and cetaceans, benthic habitat, water quality etc. It is important to note that the categories and sub-categories/topics are not mutually exclusive. For example, the impact on recreational activities as a whole includes the perceived increase in risk of a shark attack. With regards to the sub-categories, generic marine ecological impacts encompass individual impacts on cetaceans, penguins, benthos etc. These categories were derived from the types of answers provided to stakeholders with the sole purpose to demonstrate the level of engagement of stakeholders.

Table 1 Commenting categories and sub-categories derived from the stakeholder comments and answers. It is important to note that this information was not derived from a structured survey.

Comment category and sub-category	Number of comments	Number of stakeholders that provided comment on a category
Positive economic impact and new job opportunities	5	5
Negative economic impacts	106	81
Negative economic impact generic	74	
Job losses	32	
Shark risk to recreational users	72	72
Impacts on marine ecology	125	62
Marine ecological impacts (generic)	26	
Water quality only (ecology)	15	
Chemical pollution	12	
Cetacean entanglement	10	
Penguins	9	
Reef sensitivity general	8	
Benthic impacts	5	
Apex predator interaction	4	
Disease transfer from finfish cages	4	
Algoa 1 overlaps with Humpback dolphin sanctuary	3	
Escapes	3	
Pelagic fish stock as feed	3	
Reef sensitivity specific to antifouling and antibiotics	3	
Sensitive marine environments	3	
Contribution to nutrient loading and HAB	2	
Introduction of alien species not considered	2	
Mediterranean mussel (alien species)	2	
Sharks and their prey	2	
Stocking densities and environmental issues	2	
Sustainable food	2	
Birds and cetaceans	1	
Impact on marine predators	1	
Impact on squid nursery area at Algoa 1	1	
Impact on Swartkops Estuary.	1	
Release of petrochemicals	1	
Water quality deterioration - recreation	99	54
Feed on beaches	32	
Water quality, blue flag status	28	
Water quality only (human health E. coli)	22	

Comment category and sub-category	Number of comments	Number of stakeholders that provided comment on a category
Water quality only human health chemicals	13	
Mussel harvesting could be jeopardised	1	
Surface currents not considered	3	
Negative impact on recreation	49	45
Ocean swimming and events	26	
Recreational activities as a whole	13	
Reef and SCUBA diving	7	
Sailing	2	
Recreational fishing sector	1	
Visual and aesthetics	32	28
Algoa 1 (Summerstrand site)	28	
Algoa 6 (PE Harbour site)	3	
Algoa 7 (Nqgura Harbour site)	1	
Site selection	26	26
Site selection in general (why Algoa Bay?)	22	
Go to Algoa 7	4	
Economic feasibility of ADZ	38	25
Wave feasibility	16	
E. coli in receiving environment	12	
Days for servicing vessels not considered	4	
Harmful Algae Blooms	3	
Bird predation	1	
Climate change	1	
Microplastics and food safety	1	
Not enough information provided	30	18
Lack of quantitative economic study	11	
Algoa 7 not assessed to same detail	8	
Appeal request by minister was not met	6	
Full EIA should be conducted	4	
Lack of transparency due to incomplete assessment	1	
Implementation queries	13	12
How to manage impacts on sensitive habitats	7	
Who is responsible for implementation	5	
How are dead fish disposed of	1	
Land-based ADZ as an alternative	12	12
Impact on beaches	11	11
Debris on beaches	5	

Comment category and sub-category	Number of comments	Number of stakeholders that provided comment on a category
Beaches will be destroyed (not specific)	4	
No consideration was given to sand movement	2	
Marine Spatial Planning not done	11	9
Marine spatial planning	8	
Priority given to certain ocean users	2	
How can Algoa 7 be simply excised from the MPA.	1	
Need and desirability	11	9
The proposed ADZ will not contribute to food security	5	
Impact on SMMEs is the same as contribution to economic growth	2	
Job opportunities	2	
Benefit to ecosystem and Metropolitan Municipality	1	
Small-scale fisherfolk are excluded	1	
Impacts on fishing industry	9	9
Small-scale and commercial fishing sector	6	
Chokka industry	3	
Shortcomings of the stakeholder consultation process	13	8
Lack of consultation with important stakeholder groups (e.g. hospitality industry)	5	
Not enough time to comment	3	
Public participation does not enable I&APs' informed engagement	3	
Algoa 7 communities were not consulted	2	
Impact on real estate	5	5
Vessel navigation	4	4
Impact on air quality (fishy smell)	10	3
Impact on aircraft navigation (bird collision with aircrafts)	3	3
Impact on planned water front at PE Harbour	2	2
Violation of environmental rights (Bill of Rights Section 24 reference)	2	2
Corruption	1	1

Negative economic impacts (including potential job losses) as a result of the proposed Aquaculture Development Zone was most frequently mentioned (81 stakeholders), followed by the concern over the increased risk of shark attack as a result of finfish farming (72 stakeholders). A substantial proportion (26 stakeholders) also commented on the impact on ocean swimming and events without mentioning the concern over increased risk of shark attacks. Both of these comment categories are mostly applicable to finfish farming at Algoa 1 (Summerstrand site) and to some extent applicable to Algoa 7 (Ngqura Harbour site) (some stakeholders indicated that they would not continue open water swimming if any finfish farms were implemented in Algoa Bay).

Impacts on the marine ecology of Algoa Bay was commented on by 62 stakeholders, amounting to 125 individual comments, which most commonly were concerned with marine ecological impacts as a whole, water quality issues, and chemical pollution arising from finfish farming (Table 1). Overall, marine ecological impacts are more diverse, more negative for finfish farming when compared to bivalve farming, and are more pertinent to Algoa 7, which lies adjacent to the recently proclaimed Addo Marine Protected Area. Due to the fact that stakeholders were mostly unaware of the fact that DAFF intends to apply for bivalve culture in addition to finfish culture, these comments were mostly directed at finfish farming.

Almost one third of stakeholders (54) who provided comment were concerned about water quality deterioration on the beaches, which in some cases was extended to the loss of Blue Flag status of Hobie, Humewood and Kings Beaches in Port Elizabeth. Stakeholders are most concerned about feed and faeces washing up on the beaches posing a health threat to contact recreation. Furthermore, some stakeholders (13) were concerned that chemicals used in finfish culture could harm recreational participants. In the response to stakeholders, it was concluded that (i) chemical pollution from finfish cages is not known to impact humans participating in recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 3 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses. It was highlighted however, that, in as much as the risk of shark attack is higher for open water swimmers than bathers, training and event routes passing Algoa 1 in proximity may be impacted by reduced water quality mainly related to visibility. A paragraph has been included in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character) to address the misconception that the proposed development could harm human health or jeopardise the Blue Flag status as a result of water quality deterioration. Other than water quality deterioration, a limited number of stakeholders were concerned about physical impact on beaches, including debris washing up on the beaches and sand depletion as a result of offshore aquaculture structures.

Visual and aesthetic impacts, especially of Algoa 1 (no distinction was made by stakeholders between bivalve and finfish farming, although the latter is likely to have a higher impact) was mentioned by 16% (28) of stakeholders who provided comment.

It was evident that many stakeholders (14.5%) were not aware that the site selection process commenced with the National Strategic Assessment (SEA) for Finfish Culture in South Africa (Hutchings *et al.* 2011), with seven sites having been considered to date. Stakeholders feel that the Marine Spatial Plan for Algoa Bay that is currently being developed should be considered in a renewed site selection process.

The economic feasibility of the proposed ADZ was questioned by 14% (25) of the stakeholders who provided comment. Most frequently, finfish cage farming feasibility was questioned due to swell height and windy conditions in Algoa Bay. Although very few stakeholders explicitly expressed opposition to bivalve farming at Algoa 6 as a result of environmental impacts, twelve stakeholders questioned feasibility of the proposed site due to land-based pollution sources.

Some stakeholders felt that not enough information was provided in the pre-application BAR (10% of stakeholders). The most frequently mentioned short coming was the lack of a quantitative socio-economic study to determine the number of jobs gained in comparison the jobs potentially lost, as well as the potential social income gain compared to the potential economic losses as a result of Algoa 1, as per the comments of the Minister in the appeal statement (17 comments provided). The general sentiment is that the risk remains unquantified and therefore unknown. It must be noted here that this issue is mostly applicable to finfish farming at Algoa 1 and would be largely mitigated in Alternative Option B. Some stakeholders requested that a Full Environmental Impact and Reporting (EIA process) should be conducted to ensure that all sites were assessed equally (12 comments provided, including those provided for Algoa 7).

A limited number of stakeholders (7%) were interested to find out how the environmental management and monitoring requirements would be implemented and who would be accountable. Land-based aquaculture was repeatedly suggested as the better option when compared to sea-based culture (7% of stakeholders).

The need and desirability of the proposed project was questioned by 5% of stakeholders who provided comment. Most importantly, it was argued that food security will not be improved by the proposed development as bivalve and finfish products will be mostly grown for the export market and not provide food for poor communities. This statement was made by Britz et al. 2016 and was carried over into the pre-application BAR. However, the 'Need and Desirability' Section was not updated consistently, which mislead the stakeholders. This has been corrected in the Draft BAR.

Eight stakeholders claimed that the stakeholder consultation process was inadequate. It must be noted that the pre-application stakeholder consultation process has informed the Draft BAR and comments provided during the application phase will inform the Final BAR. Anchor is well aware that the proposed project is contentious and stakeholder consultation must be scaled accordingly. This report details how this is achieved.

Impacts of the proposed development which were mentioned infrequently include:

- Impact on the fishing industry (mostly applicable to Algoa 1)
- Impact on real estate (mostly applicable to Algoa 1)
- Impact on vessel navigation (all sites)
- Impact on air quality (mentioned in connection with Algoa 1 and 6)
- Impact on aircraft navigation (potential bird collisions with aircrafts)
- Impact on planned water front at PE Harbour (applicable to Algoa 1)
- The proposed development violates environmental rights (reference to Bill of Rights Section 24).
- Corruption

Stakeholder engagement (positive and negative) with the proposed project was successful during the pre-application phase. The histogram in Figure 2 shows that nearly 80% of stakeholders provided comments that covered between zero and five commenting topics (or sub-categories). More than five and up to ten commenting topics were included in 17% of the comments submitted. Only very few comments included more than ten commenting categories.

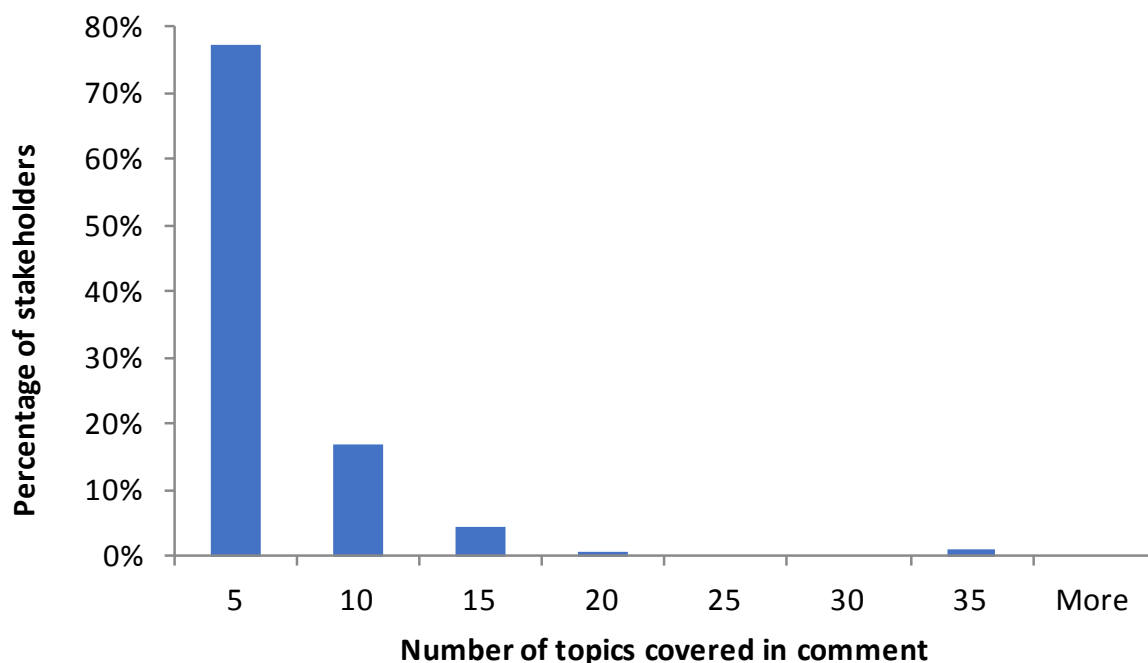


Figure 2 Stakeholder engagement level for the pre-application stakeholder consultation process for the Algoa Bay sea-based aquaculture development zone Basic Assessment process. The percentage of stakeholders on the y-axis was calculated from the total number of stakeholders that provided comment (i.e. 179). The number of topics covered in the comments are shown on the x-axis.

Although most comments could be responded to without requiring changes to the pre-application BAR, comments on socio-economic impacts, specifically pertaining to finfish farming at Algoa 1 resulted in substantive revisions, which are highlighted in the Draft BAR.

Overall, it appears that the sentiment captured during this stakeholder consultation process aligns closely with the social preference study conducted for Algoa 1 and 5 by Britz *et al* in 2016. Based on the choice modelling study conducted by Britz *et al* 2016 and feedback from stakeholders thus far, it appears that potential ecological impacts and the perception of an increased risk of shark attacks occurring (whether this risk is real or not) were identified as the most important disturbing aspects of the proposed development after marine ecological impacts (note this is finfish farm specific and is mostly applicable to Algoa 1). While mitigation measures have been recommended for negative visual and marine ecological impacts, no meaningful mitigation measures are available for the other aspects other than site selection or site reduction (reference to the visual buffer recommended in the specialist study 2013).

All these aspects are likely to impact negatively on tourism and therefore the economy of Port Elizabeth. However, the perceived higher risk of shark attacks could potentially have a profound direct impact on the local economy, should the Iron Man Event (and other events) be moved to a different location (Iron Man Organisers indicated during the appeal phase that the event would be moved should finfish cages be installed at Algoa 1). Furthermore, this impact could potentially be irreversible and occur during the pilot phase. For this reason, the 'high' impact rating on the specialised tourism and businesses benefiting from tourism in the area was reassessed for finfish farming at Algoa 1 (Section 9.5.2.3), this rating cannot be reduced to 'medium' after the implementation of mitigation measures and will be increased to 'high' with a medium confidence in the impact rating.

Britz *et al.* 2016 concluded on page 25 that: "it is entirely appropriate that the social choice be partly informed by social preference, and not only with reference to expert opinion." Furthermore, the expert opinion in the final feasibility study by Britz and Sauer (2016) concludes that "For Algoa 1, the socio-economic feasibility was ranked 'moderately feasible' for most indicators (Table 7). The unquantified socio-economic costs and trade-offs associated with the 'tourism and recreation' economy were however ranked as a 'very low feasibility'." The outcomes of the social preference study, the expert opinion as stated above, as well as the comments provided by the public to date (which are mostly congruent with the Britz *et al.* 2016 study) have guided the EAP towards concluding that Alternative Option A (finfish farming and bivalve culture at Algoa 1) is not recommended.

2.2 Public resistance against the proposed ADZ

The Wildlife and Environment Society of South Africa (WESSA) launched an international petition on Azaaz with the title 'No to Fish Farms in Algoa Bay. Yes to rehabilitating the Swartkops Estuary'. Currently this petition has collected 3 033 signatures. WESSA also published a video on YouTube, advocating that instead of developing finfish farms, DAFF should rather look at rehabilitating the Swartkops Estuary. The video can be accessed online at:

<https://www.youtube.com/watch?v=SAjCv6tRr10>

A protest 'celebration' against proposed Algoa Bay fish farm was undertaken on the 13th July 2019. This protest celebration took place on the city's beachfront, following a unique protest that includes a run, swim, walk and even a snorkel dive. The event took place under the auspices of Adventure Swims ZA as the organisers of the event. This entailed a swim/paddle from Hobie Beach to Humewood Beach and those who chose not to swim walked from one beach to the next. On arrival at the beach the intention was to hand over the memorandum to persons representative of the interests impacted by the proposed ADZ, namely the Municipality, Business, Environment and the EAP. Unfortunately Anchor Research & Monitoring was not able to attend this protest celebration. According to the newsbroadcaster Algoa FM between 1000 and 2000 people took part in this protest.

3 APPLICATION PROCESS STAKEHOLDER CONSULTATION

The application for environmental authorisation will be submitted to the DEA by the end of June 2019. The application-phase stakeholder consultation process will be conducted for a period of 30 days around July-August 2019 and will include the following actions:

- i. All documents will be made available on Anchor Environmental's website at <https://anchorenvironmental.co.za/public-documents>
- ii. All registered stakeholders will be notified via email of a commenting period of 30 days;
- iii. A public meeting will be held in Port Elizabeth;
- iv. All registered stakeholders will be notified via email of a commenting period of 30 days. 16 Radio announcements in isiXhosa on Nkqubela FM during drive time to announce the meeting.
- v. Updated posters will be distributed in Port Elizabeth;
- vi. The Draft BAR will be couriered to the competent authority in form of two hard copies and an electronic copy on CD;
- vii. One hardcopy Draft BAR and electronic copies on 10 CDs will be made available to the public in Port Elizabeth;

Once the decision has been issued registered stakeholders will be notified of DEA's decision as per EIA regulations.

Note that the person conducting the stakeholder consultation process is not obliged by law to wait for a reference number from the competent authority prior to conducting a stakeholder consultation process (including placing an advertisement or holding a public meeting).

4 APPENDICES E1-E8

Appendices E1 to E5 are presented in the remainder of this document in the following order:

1. Proof of the placement of the relevant advertisements and notices
2. Proof that relevant organs of state and key stakeholders were sent written notification of the proposed activities
3. A list of registered I&APs
4. Comments and response report for the pre-application phase
5. Emails sent to stakeholders
6. Letters submitted by stakeholders
7. Minutes of the authority and public meetings
8. Attendance registers

**Notice board in English at Hobie Beach Pier.
Notice boards are size A2 and laminated to withstand wind and rain.**



APPENDIX F2: PROOF THAT THE ORGANS OF STATE AND KEY STAKEHOLDERS RECEIVED WRITTEN NOTIFICATION OF THE PROPOSED ACTIVITIES

Anchor Copy

Recipient	Affiliation	Postal address	Phone number	Email address	Registered letter tracking number
✓ Dayalan Govender	Regional Manager - Cadadu Region Department of Economic Development, Environmental Affairs and Tourism	Redacted for protection of personal information			REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162953ZA CUSTOMER COPY 301028R
✓ Judy Beaumont	Deputy Director General Department of Environmental Affairs: Branch Oceans and Coasts				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162637ZA CUSTOMER COPY 301028R
✓ Shonisani Munzhedzi	Director General DEA: Biodiversity and Conservation				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162946ZA CUSTOMER COPY 301028R
✓ Moshibudi Rampedi	Chief Executive Officer South African Biodiversity Institute				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162814ZA CUSTOMER COPY 301028R
✓ Mr Mandlakhe Mdoana	Environmental Manager Transnet National Port Authority (TNPA) – Port of Ngqura				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162829ZA CUSTOMER COPY 301028R
✓ Rajesh Dana	Port Manager Transnet National Port Authority - Port of Port Elizabeth				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162752ZA CUSTOMER COPY 301028R
✓ Lesa la Grange	Acting Director: Maritime and Underwater Cultural Heritage South African Heritage Resources Agency				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162801ZA CUSTOMER COPY 301028R
✓ Mr Basson Geldenhuys	Chief Town Planner - Cape Town Regional Office Department of Public Works				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162775ZA CUSTOMER COPY 301028R
✓ Noxolo Nqwazi	Acting City Manager Nelson Mandela Bay Metropolitan Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162789ZA CUSTOMER COPY 301028R
✓ Ted Pillay	Municipal Manager Sahra Baartman District Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162798ZA CUSTOMER COPY 301028R

Recipient	Affiliation	Postal address	Phone number	Email address	Registered letter tracking number
✓ Charl du Plessis	Municipal Manager Kouga Local Municipality	Redacted for protection of personal information			REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162761ZA CUSTOMER COPY 301028R
✓ Sydney Fadi	Municipal Manager Sundays River Valley Local Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162735ZA CUSTOMER COPY 301028R
✓ Ane Oosthuizen	Marine Coordinator SANParks				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162744ZA CUSTOMER COPY 301028R
✓ Stacey Webb	Port Elizabeth Branch Manager SANCCOB				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162713ZA CUSTOMER COPY 301028R
✓ Non available	Raggy Charters				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162727ZA CUSTOMER COPY 301028R
✓ Nonzuzo Phenduka	CEO Eastern Cape Parks and Tourism Agency (ECPTA)				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC321162095ZA CUSTOMER COPY 301028R
✓ Dino Moodaley	Executive Committee South African Squid Management Industrial Association				Redacted for protection of personal information
✓ Kobus Maritz	Chairman South East Coast Inshore Fishing Association (S.E.C.I.F.A.)				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308279978ZA CUSTOMER COPY 301028R
✓ Clyde Bodenham	Chairman South African Longline Hake Unit 25 Foregate Square Business Park				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308279981ZA CUSTOMER COPY 301028R
✓ Wally Croome	Chairman The SA Commercial Linefish Association (S.A.C.L.A)				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308279995ZA CUSTOMER COPY 301028R

Recipient	Affiliation	Postal address	Phone number	Email address	Registered letter tracking number
✓ Dr Keith du Plessis	Coega Development Corporation	Redacted for protection of personal information			REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280044ZA CUSTOMER COPY 301028R
✓ Leander Kruger	PR Councillor Ward 1 - Nelson Mandela Bay Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280018ZA CUSTOMER COPY 301028R
✓ Dean Biddulph	Councillor Ward 2 - Nelson Mandela Bay Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280021ZA CUSTOMER COPY 301028R
✓ Sandile Rwehwana	Councillor Ward 5 - Nelson Mandela Bay Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280052ZA CUSTOMER COPY 301028R
✓ Mvuzo Ernest Mbelekane	Councillor Ward 60 - Nelson Mandela Bay Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280066ZA CUSTOMER COPY 301028R
✓ Nomazulu Mthi Councillor	Ward 53 - Nelson Mandela Bay Municipality				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280036ZA CUSTOMER COPY 301028R
✓ Lynette van der Westhuizen	Chairperson				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280049ZA CUSTOMER COPY 301028R
✓ Kobus Gerber Chairperson	Nelson Mandela Bay Ratepayers Association				REGISTERED LETTER <small>(with a domestic insurance option)</small> ShareCall 0860 111 502 www.sapo.co.za RC308280070ZA CUSTOMER COPY 301028R



APPENDIX F3: LIST OF REGISTERED INTERESTED AND AFFECTED PARTIES

Stakeholder database for the basic assessment process for the proposed sea-based Aquaculture Development Zone in Algoa Bay. This data base is continuously updated throughout the stakeholder consultation process. Note that contact details have not been provided to protect the privacy of the stakeholder.

Name and surname	Affiliation	Stakeholder category
Michelle Pretorius	Department of Agriculture, Forestry and Fisheries	Client
Maxhoba Jezile	Department of Agriculture, Forestry and Fisheries	Client
Andrea Bernadzeder	Department of Agriculture, Forestry and Fisheries	Client
Zimasa Jika	Department of Agriculture, Forestry and Fisheries	Client
Dayalan Govender	DEDEA (Eastern Cape)	Government
Charmaine Struwig	DEDEA (Eastern Cape)	Government
Judy Beaumont	Department of Environmental Affairs: Branch Oceans and Coasts	Government
Nosisekho Mhlahlo	Department of Environmental Affairs: Branch Oceans and Coasts	Government
Lindelani Mudau	DEA: Oceans and Coast	Government
Nontsasa Tonjeni	DEA: Oceans and Coast	Government
Yazeed Peterson	DEA: Oceans and Coast	Government
Nitasha Baijnath-Pillay	DEA: Oceans and Coast	Government
Alan Boyd	Department of Environmental Affairs - MPAs - Oceans and Coast	Government
Shonisani Munzhedzi	Attention: DEA: Biodiversity and Conservation	Government
Simon Maletle	DEA: Biodiversity and Conservation	Government
Wadzi Mandivenyi	DEA: Biodiversity and Conservation	Government
Skumsa Mancotywa	DEA: Biodiversity and Conservation	Government
Khathutshelo Nelukalo	Department of Environmental Affairs: Directorate: Biosecurity	Government
Nelson Mbatha	Transnet National Port Authority - National	Government
Cebile Lzuza	Transnet National Port Authority - National	Government
Tandi Lebakeng	Transnet National Ports Authority - Port of Nqura	Government
Jody Kennedy	Transnet National Ports Authority - Port of Nqura	Government

Name and surname	Affiliation	Stakeholder category
Mandilakhe Mgodana	Transnet National Ports Authority - Port of Ngqura	Government
Sandisiwe Mtintsilana	Transnet National Ports Authority - Port of Ngqura	Government
Rajesh Dana	Transnet National Ports Authority - Port of Port Elizabeth	Government
Nelisa Ndulama	Transnet National Ports Authority - Port of Port Elizabeth	Government
Lesa la Grange	South African Heritage Resources Agency	Government
Basson Geldenhuys	Department of Public Works	Government
Francois Gerber	Department of Public Works	Government
Noxolo Nqwazi	Nelson Mandela Bay Municipality	Government
Ted Pillay	Sahra Baartman District Municipality	Government
Joezay Reed	Kouga Local Municipality	Government
Sydney Fadi	Sundays River Valley Local Municipality	Government
Ane Oosthuizen	SANParks	Government
Stacey Webb	SANCCOB - Port Elisabeth	Government
Michelle	SANCCOB - Port Elisabeth	Government
Jake Keeton	Raggy Charters	Tourism operator
Nonzuzo Phenduka	Eastern Cape Parks and Tourism Agency	Tourism agency
Dino Moodaley	South African Squid Management Industrial Association	Fishing industry
Kobus Maritz	South East Coast Inshore Fishing Association (S.E.C.I.F.A.)	Fishing industry
Craig Bacon	South East Coast Inshore Fishing Association (S.E.C.I.F.A.)	Fishing industry
Clyde Bodenham	South African Longline Hake	Fishing industry
Kerry Marx	South African Longline Hake	Fishing industry
Wally Croome	The SA Commercial Linefish Association (S.A.C.L.A)	Fishing industry
Keith du Plessis	Coega Development Corporation	Industry
Leander Kruger	Ward 1 - Nelson Mandela Municipality	Government
Dean Biddulph	Former councillor Ward 2 - Nelson Mandela Municipality	Private citizen
Sandile Rwexwana	Ward 5 - Nelson Mandela Municipality	Government
Ntombekaya Celia Mtati	Ward 15 - Nelson Mandela Municipality	Government
Xola Sabani	Ward 16 - Nelson Mandela Municipality	Government

Name and surname	Affiliation	Stakeholder category
Mvuzo Ernest Mbelekane	Ward 60 - Nelson Mandela Municipality	Government
Nomazulu Mthi	Ward 53 - Nelson Mandela Municipality	Government
Lynette van der Westhuizen	Sundays River Ratepayers Association	Ratepayers Association
Kobus Gerber	Nelson Mandela Bay Ratepayers Association	Ratepayers Association
Tim Hedges	Abagold Ltd	Aquaculture
Christiaan de Wet	Private	Aquaculture
Louise Vosloo		Aquaculture
Gert le Roux	Diamond Coast Abalone (Pty) Ltd	Aquaculture
	Aquaculture Association of SA	Aquaculture association
	SanCor	Government
Tracey	Department of Agriculture, Forestry & Fisheries	Government
Ah Shene Verdoorn Carolyn	Birdlife South Africa	Conservation
Allemann Kerry		Private citizen
Attwood Colin	University of Cape Town	University
Beckert Ingo	Blue Cap Trading Pty Ltd	Industry
Beuidenhout Karien	Nelson Mandela University	University
Bok Andre	Pure Ocean Aquaculture	Aquaculture
Botha Willie	Kouga Local Municipality	Government
Britz Pete	DIFFS	Specialist
Bruk Judian		Private citizen
Cain Fernando	NMBM Beach Manager	Government
Carter Alan	CES Environmental Services	Environmental Consultancy
Carter Gavin	Mtuzini Aquaculture Projects	Aquaculture
Cassidy Jared		Private citizen
Cerini Vernon		Private citizen
Chalmers Russell		Private citizen
Christy Greg		Private citizen
Andre Clarke	Synergy-solutions	Private citizen

Name and surname	Affiliation	Stakeholder category
Cloete Anton		Private citizen
Cloete Chrissie	Plettenberg Bay Community Environmental Forum	Conservation
Cohen Mike	CEN Integrated Environmental Management Unit	Environmental Consultancy
Corrigan Bridget	Endangered Wildlife Trust (EWT)	Conservation
Cowley Paul	SAIAB	Government
Gillian van Niekerk	Advance Africa	Environmental Consultancy
Thys De Bruin		Private citizen
Andre de Wat	Buffalo Bull Farming	Agriculture
Siyabonga Dlulisa	DEA: Integrated Coastal Management	Government
Janet Ebersohn	Eco Route Environmental Consultancy	Environmental Consultancy
Lloyd Edwards	Raggy Charters	Tourism Operator
Leon Els	DEDEA (Eastern Cape)	Government
Emery Kirsten		Private citizen
Grace Galuszynski		Private citizen
Patrick Garratt	Two Oceans Aquarium	Research institute
Gierz Martin	PE Deep Sea Angling Club (PEDSAC)	Recreational fishery
Gon Jenny	WESSA	Conservation
Wayne Goschen	SAEON	Government
Yadre Gouws		Private citizen
Gert Greeff	ESKOM	Government
Leticia Greyling	Rhodes University	University
Morgan Griffiths	WESSA	Conservation
Jingles Gxoyiya	Bees and Honey Consulting	Private citizen
Mark Halbert		Private citizen
Themba Hani	Nelson Mandela Bay Municipality	Government
Douglas Harrowsmith		Private citizen
Rory Haschick	Eastern Cape Development Corporation	Government
Tom Hecht	DIFFS	University

Name and surname	Affiliation	Stakeholder category
Chris Heinecken	Capfish & FOSS cc	Environmental Consultancy
Juliet Hermes	SAEON	Government
Rhett Hiseman	Cape Nature	Government
Zane Hobson		Private citizen
Greg Hofmeyer	Port Elizabeth Museum	Heritage
Lynn Jackson		Private citizen
Dave Japp	Capfish & FOSS cc	Environmental Consultancy
Chris Julius	DEDEA (Eastern Cape)	Government
Kelly William		Private citizen
Sven Kerwath	Department of Agriculture, Forestry & Fisheries	Government
Mike Klee	Mike Dive Shop	Recreational business
Kesia Koorts		Private citizen
AJJ Kotze		Private citizen
Pamela Labuschagne		Private citizen
Robert Landman	Irvin & Johnson (I&J)	Commercial and small-scale fishery
Gert Le Roux		Private citizen
Phillip Lennon	Coral Tree Films	Media
Kai Linder		Private citizen
Josie Mackenzie		Private citizen
Bruce Mann	Oceanographic Research Institute (ORI)	Research institute
Alwyn Marais	NSPCA (National Council of SPCAs)	Animal welfare
Benita Maritz	The Institute for Maritime Technology	Research institute
Paul Martin		Private citizen
Hamish McGregor		Private citizen
Sue Middleton	Department of Agriculture, Forestry & Fisheries	Government
Greg Miller		Private citizen
Theresa Milne		Private citizen
Joram Mkosana	Nelson Mandela Bay Municipality	Government

Name and surname	Affiliation	Stakeholder category
Sello Mokhanya	Eastern Cape Provincial Heritage Resources Authority (ECPHRA)	Government
Dino Moodaley	South African Squid Management Industrial Association (SASMIA)	Commercial and small-scale fishery
Christina Moseley		Private citizen
Dennis Mostert		Private citizen
Elliot Motsoahole	Transnet National Ports Authority	Government
Peter Myles	Tournet Africa	Tourism Operator
Lisa Nupen		Private citizen
Larry Oellermann	Oceanographic Research Institute (ORI)	Research institute
Sian O'Keeffe		Private citizen
Ane Oosthuizen	SANParks	Government
Theo Panagis		Private citizen
Kate Parkinson		Private citizen
Sanet Petschel		Private citizen
Grant Pitcher	Department of Agriculture, Forestry & Fisheries	Government
Stephanie Plon	Nelson Mandela University	University
Trevor Probyn	Department of Agriculture, Forestry & Fisheries	Government
David Randle		Private citizen
Nicole Richoux	Rhodes University	University
Charles Rowe		Private citizen
Mark Rowe		Private citizen
Arthur Rump	Algoa Bay Yacht Club (ABYC)	Sailing
Mark Saman		Private citizen
Rainer Schimpf	Ocean Messengers	Tourism Operator
James Schoeman		Private citizen
Peter Schwartz	Coastal Environmental Trust	Conservation
Tenjiwe Selani	DEA: Oceans and Coast Management	Government
Tom Shipton	Rhodes University	University
Mariska Fourie	Nelson Mandela Bay Tourism	Tourism Operator

Name and surname	Affiliation	Stakeholder category
Kyle Smith	SANParks	Government
Ray Snyders		Private citizen
Conrad Sparks	Cape Peninsula University of Technology (CPUT)	University
Venessa Strauss		Private citizen
Luc Strydom		Private citizen
Leslie Ter Morshuizen	Aquaculture Innovations	Aquaculture
Greg Tucker		Private citizen
Colin Tunstead	Sundays River Ratepayers Association	Ratepayers Association
Thembinkosi Tyali	DEDEA (Eastern Cape)	Government
Louis Van Aardt	Pro Dive South Africa	Diving industry
Mike van den Heever	Pioneer Fishing (Pty) Ltd	Commercial and small-scale fishery
Denise van der Merwe	PE Deep Sea Angling Club (PEDSAC)	Recreational fishery
Hanneen van der Stoep	Overstrand Municipality	Government
Mike van der Zee		Private citizen
Eugene van Niekerk		Private citizen
Andries Venter	NSPCA (National Council of SPCAs)	Animal welfare
Andrea von Holdt	Coega Industrial Development Zone	Industry
Peter Wakefield		Private citizen
William Walton		Private citizen
Wanless Ross	Birdlife South Africa	Conservation
Claudia Weetman		Private citizen
Bruno Werz		Private citizen
Ralph West		Private citizen
Philip Whittington	East London Museum	Research institute
Brenton Williams		Private citizen
Dale Wright	Birdlife South Africa	Conservation
Kerry Wright		Private citizen
Gay Youthed	Kromme-Geelhout Conservancy	Conservation

Name and surname	Affiliation	Stakeholder category
	Fisherman Fresh Cc	Commercial and small-scale fishery
	LETAP CC	Commercial and small-scale fishery
	UNATHI-WENA FISHING CC	Commercial and small-scale fishery
	South East Atlantic Sea Products CC	Commercial and small-scale fishery
	ITHEMBA LABANTU FISHING CC	Commercial and small-scale fishery
	BLUEFIN FISHING ENTERPRISES CC	Commercial and small-scale fishery
	Manicwa Fishing (Pty) Ltd	Commercial and small-scale fishery
	EYETHU FISHING (PTY) LTD	Fishing Industry
	RISAR FISHING CC	Commercial and small-scale fishery
	Basic Trading (Pty) Ltd	Industry
	LETAP CC	Commercial and small-scale fishery
	Fisherman Fresh Cc	Commercial and small-scale fishery
	Mayibuye Fishing (Pty) Ltd	Commercial and small-scale fishery
	Umsobomvu Fishing (Pty) Ltd	Commercial and small-scale fishery
	Pioneer Fishing (East Coast) (Pty) Ltd	Commercial and small-scale fishery
	Trevors Commercial Fishing (Pty) Ltd	Commercial and small-scale fishery
	Canan Fishing (Pty) Ltd	Commercial and small-scale fishery
	Pegasus Fishing (Pty) Ltd	Commercial and small-scale fishery
	Zimkhitha Fishing (Pty) Ltd	Commercial and small-scale fishery
	Jayfish Cc	Commercial and small-scale fishery
	MAST FISHING (PTY) LTD	Commercial and small-scale fishery
George Borman	Quintax 151 CC - Squid and Hake Handline	Fishing Industry
	Copper Moon Trading 612 Pty Ltd	Industry
	Tamarin Fishing (Pty) Ltd	Commercial and small-scale fishery
	Lithalethu Fishing (Pty) Ltd	Commercial and small-scale fishery
	Talhado Fishing Enterprises (Pty) Ltd	Commercial and small-scale fishery
	Dazzalle Traders (Pty) Ltd	Commercial and small-scale fishery
M Van Heerden	Traditional linefish	Fishery association

Name and surname	Affiliation	Stakeholder category
Alan Southwood	Private	Resident
Micheal Raimondo	Sea Farms Hawston	Aquaculture
Kerry Wright	Cleaner Climate South Africa	Environmental Consultancy
Adrian Smith	SA Squid Management Industrial Association (SASMIA)	Fishery association
Christelle du Plessis	Habitat Link Consulting	Environmental Consultancy
Henri Pfister		Private citizen
Julie Pfister		Private citizen
Kithi Ngesi	Nelson Mandela Bay Municipality	Government
Andrew Marriott	Business and Economic Sciences Faculty	Resident
Belinda Clark		Private citizen
Paul Martin		Private citizen
Chris Jordaan	East Coast Ancestral Sea harvest (ECASH)	Fishing industry
Kurt Kleinhans	Rainbow Ocean Grown	Aquaculture
Shane Pittard		Private citizen
Lorien Pichegru	Algoa Bay Hope Spot	Conservation
Andrea Shirley	Coega Development Corporation	Industry
Rolene Kotze		Fishing industry
Anton Meyer		Private citizen
Johann Botha		Private citizen
Redah De Maine		Private citizen
Sydney Fadi	Sundays River Valley Local Municipality	Government
Kobus Maritz		Private citizen
Simon Daniel		Private citizen
Greg Christy		Private citizen
Andre Bok		Private citizen
Pamela Mali	Nelson Mandela Bay Municipality - Urban Agriculture: EDTA	Government
Isaac Nokele	Nelson Mandela Bay Municipality - Urban Agriculture: EDTA	Government
Vos Pienaar	Bivalve Shellfish Farmers Association of South Africa (BSASA)	Aquaculture association

Name and surname	Affiliation	Stakeholder category
Andrew Pritchard	Architect	Resident
Christina Hagen	Birdlife South Africa	Research institute
Graham Bell	Ward 1 committee	Government
Shirley Parker-Nance		Private citizen
Claudia Marriott		Private citizen
Jaco Potgieter	Architect	Private citizen
Christian Bust	Arvato South Africa	Private citizen
Estee Vermeulen	NMU - coastal marine research inst	University
Megan Maritz	Ward 1 - Nelson Mandela Municipality	Government
Jill Miller	Nelson Mandela Bay Municipality - Public Health	Government
Pamela Howes	Nelson Mandela Bay Municipality - Environmental Management	Government
Gareth Wilson	The Harald	Media
Albert Mfenyana	DEDEA (Eastern Cape)	Government
Gerry Pienaar	DEDEA (Eastern Cape)	Government
Andries Struwig	DEDEA (Eastern Cape)	Government
Phumla Mzazi-Geja	DEDEA (Eastern Cape)	Government
Xolani Nikelo	DEDEA (Eastern Cape)	Government
Thembinkosi Tyali	DEDEA (Eastern Cape)	Government
Mlu Kosi	DEDEA (Eastern Cape)	Government
Leon Else	DEDEA (Eastern Cape)	Government
Zwelinzima Max		Private citizen
Jeremy Dobbin	Nelson Mandela Bay Business Chamber	Private citizen
Norman Myers		Private citizen
Chris Stage	SWARTKOPS SEA SALT/MARINA SEA SALT	Private citizen
Barb Cohen		Private citizen
Mzwandile Nkomombini		Private citizen
Sarah Caulfield		Private citizen
Mike Cohen		Private citizen

Name and surname	Affiliation	Stakeholder category
Timothy and Isobel Douglas-Jones		Resident
Mzamohle	Mzamohle Construction	Industry
Zanda Mkhulisi	Transnet National Ports Authority - Port of Port Elizabeth	Government
Mnyamezeli Williams	Nonyondla Dev .Services	Private citizen
Peter Inman		Private citizen
Moyna Joseph		Private citizen
Rainer		Private citizen
Team of AB Marine		Private citizen
Tamryn Law		Private citizen
Nina Bodisch	VWSA	Private citizen
Francois Gous	Coastal Medical & Surgical Supplies	Private citizen
Luzuko Mafu	WWS	Private citizen
Karien van Schalkwyk		Private citizen
Emma Hay		Private citizen
Nikki Dryden		Private citizen
Billie McNaughton		Private citizen
Paul Wolff		Private citizen
Shena Wilmot	Port Elizabeth Metro B&B Association	Accommodation association
Eckart Schumann	wessa	Conservation
Mariska Spoomaker		Private citizen
Tony Ribbink	Sustainable Seas Trust	Conservation
Desiree Fourie		Private citizen
Tim Parker-Nance		Private citizen
Steven Murray		Private citizen
Chris Mowbray		Private citizen
Maele Connan	Department of Zoology Institute for Coastal and Research Fellow	University
Amarein Fourie		Private citizen
Greg Cuthbert		Private citizen

Name and surname	Affiliation	Stakeholder category
Simon Wooldridge		Private citizen
Glynis van der Walt		Private citizen
Ed Grondel		Private citizen
Guy Rogers	Herald	Media
Angie Vermeulen		Private citizen
Diane		Private citizen
Umi ibrahim		Private citizen
Hennie Marais	The Bellbuoy Group at the instruction of the Home Owners Association of Amadada	Home Owners Association
Neil & Cheryl Dorward	52 The Seagull 21 Marine Drive Summerstrand PE 6001	Private citizen
Carol Jackson		Private citizen
Candice Haydam		Private citizen
Jenny Thompson		Private citizen
Kristoff Adelbert		Private citizen
Kelly		Private citizen
Brenda and David Wampach	Haka Hana Bed & Breakfast	Accommodation
Lyn Haller	Umzantsi Africa Tours	Tourism Operator
Marion Raupert		Private citizen
William Duckitt		Private citizen
Etta Hewitt		Private citizen
Bev de Lange		Private citizen
Chris & Mary de Villiers		Private citizen
Ben Van Heerde		Private citizen
Johan		Private citizen
Karl Botha		Private citizen
Roxi Phelan		Private citizen
Dt Marlize		Private citizen
dzeelie		Private citizen
marlyn		Private citizen

Name and surname	Affiliation	Stakeholder category
Adam mereki		Private citizen
Kapp Nelmarie		Private citizen
Stephanie Martin		Private citizen
Audrey Crawford		Private citizen
Charmaine	Keiskama B&B	Accommodation
Zita van der Sandt	Cape Flame Guesthouse	Accommodation
Michael Henwick		Private citizen
Geraldene du Plessis		Private citizen
Sue Wilson		Private citizen
Susan Moser		Private citizen
Rolf Kickhofel		Private citizen
Keith West		Private citizen
Alan Mounsear-Wilson		Private citizen
Margaret de Andrade	Nelson Mandela Bay Municipality	Government
Denise Parker-Nance		Private citizen
Anthony Donald		Private citizen
Tony Reid		Private citizen
Garry Stone		Private citizen
Mick Scheckter		Private citizen
Phrosne Phillips		Private citizen
Grizel Hart		Private citizen
Nawir ibrahim		Private citizen
Syd Lippstreu		Private citizen
Barry Carter		Private citizen
Joanne Anthony-Gooden		Private citizen
Lindsay Stephen	Ironman SA	Sports events
Punji Naidoo	Alushi Foundation	Private citizen
Benedetta Schafer		Private citizen

Name and surname	Affiliation	Stakeholder category
Lisa Rentzke		Private citizen
Jannie Gie	Addo Wildlife Lodge	Accommodation
Kathy Hoy		Private citizen
Dale Tucker		Private citizen
Loodt Buchner		Private citizen
Russell	Beach Lodges	Accommodation
Michelle Van Aardt	Pro Dive South Africa	Diving industry
Julia Banacj		Private citizen
Juergen Heckmanns	Africa Beach B&B	Accommodation
Stephen Medcalf	Treetops Guesthouse	Accommodation
Siya Ndzimande	Ironman SA	Sports events
Colin Abrahams	South End Museum Trust	Heritage
SM Slabbert		Private citizen
Bryan Wintermeyer		Private citizen
Dylan Bailey		Private citizen
Wayne Gerber	Eastern Province Deep Sea Angling Association	Recreational fishery
Lindsay Gibaud		Private citizen
Andrew Stewart		Resident
Suzanne Theunissen		Private citizen
Tony Neveling		Private citizen
Morag Gray		Resident
Kathy and Jack Dempsey	Self-Catering Guest House	Accommodation
Jill Stewart	Conifer Beach House	Accommodation
Basson Geldenhuys		Private citizen
Jan Lodge		Accommodation
Alon Rathbone	Property Scene	Private citizen
Jacques Lombard		Private citizen
Allan Bezuidenhout	Muse Restaurant	Restaurant

Name and surname	Affiliation	Stakeholder category
Travor Marshall		Private citizen
James Ruthven-Smith		Private citizen
James Flood		Private citizen
Carrie Brand		Private citizen
Kristopher Lynch		Private citizen
Andrew Whitehead	Capeparts Distributors	Private citizen
Alan van Deventer		Private citizen
Peter McAinsh		Private citizen
David Lipschitz		Resident
Carl Walton		Private citizen
Marguerite Walton	Nelson Mandela University	University
Martin Hartsliet		Private citizen
Chantal Du Pisani		Private citizen
Ryan Smith	Adrenalin Addo Adventure Park	Tourism Operator
Martin Van Rensburg		Private citizen
Jacque Mangold		Private citizen
Ardiaan van heerden		Private citizen
Anthony Scholtz		Private citizen
Richard Donaldson	Port Elizabeth Deep Sea Angling Club	Recreational fishery
Mick John		Private citizen
Etienne Potgieter		Private citizen
Travis Smit		Private citizen
Joost Souverijn		Private citizen
Gail Pullen	Ward 1 Nelson Mandela Bay Municipality	Government
Bongani Gocina		Private citizen
Siyabonga Makinana	YARD	Private citizen
Graeme John Lombard	The Port Elizabeth Hotel Group	Accommodation
Chantell van Baalen	The Port Elizabeth Hotel Group	Accommodation

Name and surname	Affiliation	Stakeholder category
Grant Davies	Something Good Roadhouse	Restaurant
Anle Marais	Something Good Roadhouse	Restaurant
Sunny	Something Good Roadhouse	Restaurant
Davies	Something Good Roadhouse	Restaurant
Chris Holdsworth		Private citizen
Louis Schoeman	BLC Attorneys	Private citizen
Ria Modeler	Open Sky Entertainment Park & Lapa	Event management
Selvin Meyer	ACSA Port Elizabeth	Aviation
Anthony Groom	ACSA Port Elizabeth	Aviation
Cathy Holdsworth		Private citizen
Kate Flood		Private citizen
Gary M Koekemoer	WESSA (Wildlife and Environment Society of South Africa) Algoa Bay	Conservation
Cloverley Lawrence	SANParks	Government
H May	Mandela Metropolitan Municipality: Directorate Sports, Recreation, Arts and Culture	Government
Neliswa J Piliso	DEDEA (Eastern Cape)	Government
Gcobisa Mdoda	DEDEA (Eastern Cape)	Government
G Murrell	Mandela Metropolitan Municipality: Directorate Environmental Management	Government
Rob Milne	SANParks	Government
Z Small	TNPA	Government
Vusi Mthombeni	DEDEA (Eastern Cape)	Government
Brynn Adamson	TNPA	Government
Ndileka Nozo	DEDEA (Eastern Cape)	Government
Lindelwa Twala		Government
Charles Kate	Aquagreen	Industry
Thandiswa Scout	Responsible Wife	Private citizen
Thandiwe Tshoni	YARD	Private citizen
Tuletu Nombona	YARD	Private citizen
Dumisani Jim	YARD	Private citizen

Name and surname	Affiliation	Stakeholder category
Z Mafu	NMBM	Government
Gillian McAinsh		Private citizen
Charles Manning	Eyethu Fishing	Fishing Industry
Patrick and Carol Mather-Pike		Private citizen
Barry Patterson	Aristea Environmental Services	Environmental Consultancy
Michele Dalton	World Endurance Africa Holdings (Pty) Ltd – A subsidiary of IRONMAN®	Sports events
Warrick Stewart	Resilience Environmental Advice	Environmental Consultancy
Nombulelo Mhlelude	AHLULE PTY Ltd	Industry
Alan Straton	MYPE	Media
Phakama Matshaya	Ndiyaphambile Trading	Industry
Linda Jackson	Libusisa Trading	Industry
Vera Massie	Anchor	EAP
Ken Hutchings	Anchor	EAP
Songezo Mtsokoba	Anchor	EAP
Elaine Hopewell	Private citizen	Private citizen
Graeme Hopewell	Private citizen	Private citizen
Lungisa January	Laas	Private citizen
Rodwil Meyer	ECDF - Eastern Cape Divers and Fishers Forum	Divers and recreational fishers forum
Andrew Stone	Summerstrand SurfLife saving	Lifesaving
John Tudehope	Algoabay sailing marina	Sailing
S Nash	ALGOAFM	Media
Octavia Boshoff	PamGolding Properties	Private citizen
Dean Blom	Boarolwal casino	Private citizen
M Frank		Private citizen
W.J.H Gray		Private citizen
S Sowazi	Sowazi trading	Private citizen
Nina Rivers	NMO	Private citizen
Elma Duplessis	WESSA (Wildlife and Environment Society of South Africa) Algoa Bay	Conservation

Name and surname	Affiliation	Stakeholder category
Mike Nelson	MSPN Construction	Private citizen
Muriel Groep	Symuzella Pty Ltd	Private citizen
Loven Pother		Private citizen
Mark Benson	Benson And Associates	Private citizen
Lungiswa	Masakhe trading	Private citizen
Amanda Mantutle	Coega Development Corporation	Industry
Derek Zimmerman	Rand Int Capital	Private citizen
Simon Burton	Zwembesi Farms (Pty) Ltd	Aquaculture
N Bodish	Individual citizen	Private citizen
Dave Wampach	PJT Partners	Private citizen
Janet Townsend		Resident
Anthony Townsend		Private citizen
W Pretorius		Private citizen
Misiwe Ngqondela	Rudulu fishing	Fishing Industry
Tembi Mnyamana	Tsamse Holding	Private citizen
Siya Somntu	Mamjoli	Private citizen
Sally Paulet	Hik .Abalone.Farm	Aquaculture
Rowan Timmer	Hik .Abalone.Farm	Aquaculture
Christopher Maduna		Government
Werner Illenberger		Private citizen
Gill Neuper		Private citizen
Liesl Gordon	Hik .Abalone.Farm	Aquaculture
Les Kingma		Private citizen
Dunyiswa Nyweba		Private citizen
Joey Elphick		Private citizen
David Pittaway	Nelson Mandela University	University
Stephen du Preez		Private citizen
Hannah Truter		Private citizen

Name and surname	Affiliation	Stakeholder category
S Holness	Nelson Mandela University	University
Victoria Goodall		Private citizen
Mziwamadoda Ryan Mooi	Entrepreneur	Potential investor
Clinton Wilson		Private citizen
Jaydeen Ras	Interested in EIA projects to learn	Private citizen
Nazareth Appalsamy	NSPCA	Animal welfare
Barbara Kinghorn	Coral Tree Guest House	Accommodation
Malcolm Kinghorn	Coral Tree Guest House	Accommodation
Lucienne Human	Nelson Mandela University	University
Lyn Haller	Mandela Bay Heritage Trust	Heritage
Tresia Holtzhausen	Nelson Mandela University	University
John Allan	Port Elizabeth Deep Sea Angling Club	Recreational fishery
Deidre de Vos	Nelson Mandela University	University
Marguerite Smit		Resident
Elize Kingston		Private citizen
Pete Fielding		Private citizen
Ralph West	Adventure Swims ZA	Sports events
Kevin Richards	Adventure Swims ZA	Sports events
Duncan Edwards	Adventure Swims ZA	Sports events
Donna van der Westhuizen	Ocean Bay Guest House	Accommodation
Lynn Odendaal	Ocean Bay Guest House	Accommodation
Mel Smethurst	Linkside Lodge B&B	Accommodation
Linda Devan	Sir Roys Guesthouse	Accommodation
Craig Williams		Private citizen
B Thomas		Resident
António Bastos		Private citizen
Kenneth Pattinson		Resident
Wendy Claydon		Resident

Name and surname	Affiliation	Stakeholder category
Tim Leeson		Private citizen
Rodney Louis	Prodigy Venture	Potential investor
Marilyn Du Plessis	Avocet Guest House	Accommodation
Anika Joubert		Private citizen
Margie Gaddin		Private citizen
Arina Bohler		Private citizen
Gloria & Hanlie Rens		Private citizen
Anonymous		Private citizen
Willem and Gabrielle du Plessis		Private citizen
Sameer Agherdien		Resident
Ighsaan Isaacs		Private citizen
John Saunders		Private citizen
Eduard Van der Westhuizen		Private citizen
Karen Barwood		Private citizen
Sulette Heystek		Private citizen
Chantal Bezuidenhout		Resident
Neil Dorward		Private citizen
Peter and Dianne Haarhoff		Private citizen
E Mitchell-Wyatt	Hartley Guesthouse	Accommodation
Stacy		Private citizen
Wayne Mukheibir		Resident
Grant Bresler		Resident
Ursula Defferary		Private citizen
Kim Nkumanda		Private citizen
Emil Hougaard		Resident
Lerryn Mew		Resident
Jenny Rubidge		Resident
Jill Weakley		Resident

Name and surname	Affiliation	Stakeholder category
Philip Myburgh		Private citizen
Mieke Struwig		Private citizen
Patrick Brett		Private citizen
Andre Lemmer	Schoenmakerskop Residents' and Ratepayers' Association (SRRA)	Ratepayers Association
Patricia Minnaar		Resident
David Botha		Resident
Heather Dowling		Resident
Eugène Ceronio		Resident
Ian Thomson		Resident
Ralph Ketzner		Resident
Louis Van Dyk		Resident
Rodney Idris	Algoa Bay Yacht Club	Sailing
Mark Dawson	Algoa Bay Yacht Club	Sailing
Roger	Algoa Bay Yacht Club	Sailing
Tony Bailessaa	Algoa Bay Yacht Club	Sailing
Charles du Toit		Resident
Ann Lourens	Nelson Mandela University	University
Jill McLellan		Resident
Mickey O'Hafer		Private citizen
Pat Reen		Resident
Irene Ketzner		Resident
Charles Tregoning		Resident
Michelle Brown		Event management
Taryn Bresler		Private citizen
Cary-Lee Friend		Resident
Cornelius Poisat	Algoa FM	Media
Margo Schuin		Resident
Dianne van Zyl		Resident

Name and surname	Affiliation	Stakeholder category
Grant Dryden		Resident
Adrian de Villiers		Resident
Luc Hosten		Private citizen
Kathy Cogan		Private citizen
Andre Venter	NELSON MANDELA BAY SURFRIDERS	Surfing committee
Paula Bush		Private citizen
Warren van der Merwe		Private citizen
Graeme Plenaar		Private citizen
Pieter van Rhijn	NELSON MANDELA BAY SURFRIDERS	Surfing committee
Marchant Kuys		Resident
Sonja Willemse		Private citizen
Christopher Dunderdale		Private citizen
Alice Deboux		Resident
Jonathan Leitch		Private citizen
Reg & Sheila Marshall		Private citizen
Wayne Bolton	One Land Love It	Conservation
Aston Cain	Hobie Beach Surf Life Saving Club (HBSLC)	Lifesaving
Bridget Mcilroy		Resident
Craig Venter		Resident
Keith Buhr	Algoa Holdings (Pty) Ltd	Resident
Bronwyn van den Berg		Resident
Earl Ingram	Lifesaving Nelson Mandela Bay	Lifesaving
Iris Steyn		Resident
		Private citizen
Kay Mc Nish	The Paddling Shop	Recreational business
Danny Darné		Resident
Karen Mels		Resident
Lorraine Hewett		Private citizen

Name and surname	Affiliation	Stakeholder category
Alex Hofmeyr		Resident
Tess Kotze	Lifesaving Eastern Cape	Lifesaving
Andy Radford	Mandelabay Composite Cluster, including The Composites Group (Pty) Ltd, Mandela	Industry
Deborah Johnson		Resident
Andrew Austin		Resident
Johan Gerrits		Resident
Paul Middleton	Kings Beach Surf Life Saving Club	Lifesaving
Karen Austin		Private citizen
Michelle MacLean		Private citizen
Grant Dryden		Resident
Benlloyd Roth		Resident
Christina van Niekerk	Retiefplein home owner	Resident
Gavin Rogers		Private citizen
Sharon Tarboton		Resident
		Private citizen
Retha Smith		Resident
Greg Tucker		Resident
Frank Greyling		Resident
Ashleigh Darné		Resident
Celeste Naude	Nelson Mandela University	University
Herman van Thiel Berghuijs	The Dunes	Home Owners Association
Eileen Shepherd		Resident
Paula Archibald		Resident
Gianluca Acquisto		Resident
Simone Williams		Resident
Renaldo Gouws	Ward 2 - Nelson Mandela Municipality	Government
Andrew Baker		Private citizen
Alex Lopes		Private citizen

Name and surname	Affiliation	Stakeholder category
Jenny Rump	Zwartkops Conservancy	Conservation
Natalie Sharp	Stellenryck Environmental Solutions	Environmental Consultancy
Stanford Slabbert	Life Saving South Africa	Lifesaving
Jane Histed		Resident
Gillian McAinsh		Resident
D Martin Smith	Addo Secrets Safaris	Tourism Operator
Molly Reed	Laboria Residence	Resident
Michelle van Heerden		Resident
Bev and Steve MacDonald		Resident
Howard Loftus		Private citizen
Nicholas Forsythe		Resident
Lise Claassen		Resident
Michelle Barnett		Resident
Brian Bezuidenhout	Association for the Physically Disabled (APD NMB)	Association for the Physically Disabled
Des Topper		Resident
Tracy Hartwig		Tourism Operator
Maria Stott		Resident
Rob Green		Resident
Maurice Millard	Summerstrand Surf Lifesaving Club	Lifesaving
Russel Julie		Private citizen
Lindy Green		Resident
Marie Hoensbroech		Private citizen
Stanford Slabbert	Personal capacity (note also submitted on behalf of Life Saving Club)	Resident
LQ van Staden		Resident
Richard McIntyre		Resident
Debbie Bodley		Private citizen
Neal Green		Resident
Mark Scherer	The Bellbuoy Group at the instruction of the Body Corporate of Retiefplein	Home Owners Association

Name and surname	Affiliation	Stakeholder category
Sian O'Keeffe		Private citizen
Tim Norris		Resident
Gary Koekemoer	Also registered to represent WESSA, this is in personal capacity	Resident
Cyndi Gilbey		Private citizen
Vaughan McIntyre		Private citizen
Dennis, Deborah, Sipenati and Bennie Thompson		Private citizen
Jill and RM Tomlinson		Resident
Louise Palmer	Aurecon	Environmental Consultancy
Tichy Mashiri	Dominion Business Investments	Potential investor
Geoff Newcombe		Resident
Chao-Sheng Chang Family Trust	Retiefplein home owner	Resident
R Wahab	Retiefplein home owner	Resident
TJ & MM Knoesen	Retiefplein home owner	Resident
MJ Loftus	Retiefplein home owner	Resident
J Williams	Retiefplein home owner	Resident
PJ Thorp	Retiefplein home owner	Resident
MM Almeida	Retiefplein home owner	Resident
D Robey	Retiefplein home owner	Resident
SJ Page	Retiefplein home owner	Resident
L Grondel	Retiefplein home owner	Resident
Blue Grass Family Trust	Retiefplein home owner	Resident
HM Ball	Retiefplein home owner	Resident
EC Walker	Retiefplein home owner	Resident
CJVR Family Trust	Retiefplein home owner	Resident
DH Morgan	Retiefplein home owner	Resident
P Watts	Retiefplein home owner	Resident
RN Pearton	Retiefplein home owner	Resident
HV Kaplan	Retiefplein home owner	Resident

Name and surname	Affiliation	Stakeholder category
Nick De Goede	SANParks	Government
Kyle Smith	SANParks	Government
Michael Barry	Nelson Mandela University	Heritage

APPENDIX F4: COMMENTS AND RESPONSE REPORT

Comments and response table for the pre-application phase basic assessment stakeholder consultation process for the proposed sea-based Aquaculture Development Zone in Algoa Bay.

It is best practice that all comments received from registered I&APs are acknowledged by the EAP, with the EAP indicating how the comments received will be responded to (even if just referring to the fact that a response will be contained in the “comments & response report”)². Due to the nature and complexity of this project, each stakeholder was individually contacted and provided with a comprehensive written response to their comment, which has been included in the comment and response report below. The notification sent out to stakeholders in response to the comments received has been included in E5.

In some cases, registered I&APs submitted comments as letters with substantial content and are included in [Appendix F6](#) of this report. Such comments were summarised in the table below. Responses are provided by Anchor unless otherwise indicated.

No	Comment
1	<p>Christian Bust</p> <p>Comment submitted: 15 January 2019</p> <p>I object to the project on the following basis:</p> <ul style="list-style-type: none"> • It will hinder tourism and hinder growing PE into an internationally known watersports- and beach tourism hub • It will affect our water quality negatively, create pollution on our beaches, potentially increase risk of shark attack and / or shark activity closer to shore <p>There are more suitable locations for this project (further away from the PE City Beaches)</p> <p>Response by Anchor: 10 April 2019</p> <ul style="list-style-type: none"> • Basic Assessment Report (BAR) (main report) Sections 8.5, 9.4 and 9.5 (impacts listed in your comment are mostly assessed separately) • Water quality issues are addressed in Section 9.3 (in summary) and in the Marine specialist study (Appendix D of the BAR) • Socio-economic studies conducted by the Rhodes University in 2016 (Appendix D) are also relevant to your concerns • Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. The site selection process is explained in more detail in Section 2.5 of the BAR (main report). <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water pollution and human health: Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms (aquaculture in general) are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Although some chemicals used in aquaculture can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>Most stakeholders are concerned about uneaten feed and faeces washing up on the beaches from finfish cages (note that this concern is not applicable to mussel and oyster culture). Uneaten food and faeces are negatively buoyant (sink) and begin settling as soon as they enter the water column. Settling of waste below and around the</p>

² Department of Environmental Affairs (2017), Public Participation guideline in terms of NEMA EIA Regulations, Department of Environmental Affairs, Pretoria, South Africa.

No	Comment
	<p>cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 thousand tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages where they are broken down by bacteria. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Sharks and safety: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries will submit an application for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p>
2	<p>Jaco Potgieter</p> <p>Comment submitted: 15 January 2019</p> <p>I object to the project on the following basis:</p> <ol style="list-style-type: none"> 1. Farmed fish kept in concentrations at high density could have a negative effect on the growth rate and increased feed conversion ratio (kg dry feed/kg of fish produced), which results in increased cost and risk of health problems along with a decrease in profits. 2. Sea lice, can cause deadly infestations of both farm-grown and wild fish species. Due to large numbers of highly populated, open-net fish farms. Parasites have been shown to have an effect on nearby wild fish. Juvenile fish would thus encounter large fish farms located off-shore, before making their way to sea. These farms could potentially cause such severe sea lice infestations leading to a collapse in the local fish population. 3. Because of parasite problems, strong antibiotic drugs to keep the fish alive, but many fish still die prematurely. These drugs can entered the environment. Additionally, the residual presence of these drugs in human food products are controversial. Use of antibiotics in food production is thought to increase the prevalence of

No	Comment
.	<p>antibiotic resistance in human diseases.</p> <p>The large number of fish kept long-term in a single location contributes to habitat destruction of the nearby areas. The high concentrations of fish produce a significant amount of condensed faeces, often contaminated with drugs, which again affects local waterways. However, if the farm is correctly placed in an area with a strong current, the 'pollutants' are flushed out of the area fairly quickly. Concern should be shown that resultant bacterial can reducing or kill off the local marine life. Once an area has been so contaminated, the fish farms are moved to new, uncontaminated areas.</p> <p>Response by Anchor: 10 April 2019</p> <p>Please refer to the Marine Specialist Study (Appendix D) for a detailed assessment of environmental impacts related to diseases and parasites, water quality and impacts on the benthic environment. The assessment of waste dispersion and impact on the benthos were informed by two additional studies included in Appendix D (i.e. Benthic habitat and dispersion modelling studies). Sustainable stocking densities (expressed as carrying capacities at the selected sites) are recommended in the Dispersion Modelling study. Note, however, that environmental monitoring during the operational phase would be critical in maintaining health of the farmed fish (biosecurity plans, feeding plans, receiving environmental monitoring etc.). Please refer to the Environmental Management Programme in Appendix F of the BAR for more information the mitigation measures and monitoring plans proposed.</p>
3	<p>Claudia Marriott</p> <p>Comment submitted: 16 January 2019</p> <p>I wish to again be registered as an I&AP for the below proposed project. I again wish to lodge my objection specifically in relation to Site Algoa 1. As before, my reason for objection is that this site, if selected, will have extremely negative effect on tourism and drive away current secured events i.e. ironman world champs and Ironman which creates HUGE revenue for our city. Swimming will become hazardous both due to pollution from the fish farm as well as attracting more sharks into the popular bathing/surfing areas in Summerstrand. Property prices will also suffer negatively due to this since you will be making an industrial zone of the prime beachfront area.</p> <p>Response by Anchor: 10 April 2019</p> <ul style="list-style-type: none"> • Basic Assessment Report (BAR) (main report) Sections 8.5, 9.4 and 9.5 (impacts listed in your comment are mostly assessed separately) • Water quality issues are addressed in Section 9.3 (in summary) and in the Marine specialist study (Appendix D of the BAR) • Socio-economic studies conducted by the Rhodes University in 2016 (Appendix D) are also relevant to your concerns <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water pollution and human health: Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms (aquaculture in general) are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Although some chemicals used in aquaculture can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>Most stakeholders are concerned about uneaten feed and faeces washing up on the beaches from finfish cages (note that this concern is not applicable to mussel and oyster culture). Uneaten food and faeces are negatively buoyant (sink) and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 thousand tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches</p>

No	Comment
.	<p>and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. where they are broken down by bacteria. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Sharks and safety: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Impact on real estate: The impact on real estate value is assessed in Section 9.5.2.8. The impact of the proposed ADZ on the visual aesthetics of the coastal environment constitutes a primary factor in influencing real estate value. The Visual Impact Assessment shows that floating structures and maintenance vessels, as well as lights at night, could have a high visibility during the operational phase (both finfish and bivalve culture). The visual impact can be mitigated however, and mitigation measures are more effective for bivalve culture. The negative impact of Algoa 1 on real estate value with and without mitigation measures was rated as high and medium respectively. It is important to note that mitigation measures include a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p>
4	<p>Andrew Pritchard – Resident and lifeguard Comment submitted: 21 January 2019</p> <p>I am a resident in Summerstrand and believe this development will have an impact on myself and the value of my properties in Summerstrand. I am also a voluntary lifeguard at Summerstrand Surf Lifesaving Club and daily user of the sea and believe this development will impact on my safety and the quality of the beaches.</p> <p>I object strongly to the project on the following basis:</p> <p>This development will Impact on the natural beauty and cannot possibly be described as an improvement on the scenic, aesthetic quality of our beachfront.</p> <p>The impact on tourism cannot be positive. Whoever went to a coastal town because they had a fish farm. We have thousands of kilometres of coastline that are not adjacent to swimming beaches and residential dwellings, why not use these areas.</p> <p>Property prices will be affected. I have two properties that look out over the Pipe surf area. Who will want to buy a flat that looks out on a fish farm and who will reimburse me for the lower price I would get when selling these</p>

No	Comment
.	<p>properties? There will be an increased fishy smell.</p> <p>The impacts on the marine and coastal environment. The natural balance of the ecosystem will be affected. The food not eaten by the fish in the farm will attract more fish followed by more sharks.</p> <p>Increased shark activity is inevitable</p> <p>The water quality will be affected. The fish faeces will be in a greater concentration. When the south-easterly blows this concentration of faeces will be deposited on our beaches.</p> <p>More pollution on our beaches. The more boating with fishermen will lead to rubbish being deposited in the water (packets, plastics etc). This will not improve tourist industry and the beautiful beaches that attract visitors.</p> <p>As a paddler who regularly paddles on a surf ski to the lighthouse and back there will be more boating activity in this area which increases the probability of boating accidents. I will be under greater risk of being injured.</p> <p>According to marine biologist there is a good chance this development will increase the occurrence of red tide.</p> <p>It is for the above-mentioned reasons that I oppose the location of the fish farm, specifically the site close to the Pipe surfing area.</p>
	<p>Response by Anchor: 10 April 2019</p> <ul style="list-style-type: none"> • Basic Assessment Report (BAR) (main report) Sections 8.5, 9.4 and 9.5 (impacts listed in your comment are mostly assessed separately) • Water quality issues are addressed in Section 9.3 (in summary) and in the Marine specialist study (Appendix D of the BAR) • Socio-economic studies conducted by the Rhodes University in 2016 (Appendix D) are also relevant to your concerns • Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. The site selection process is explained in more detail in Section 2.5 of the BAR (main report). <p>Visual impacts: The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Negative economic impacts (including tourism) as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries will submit an application for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>The impact on real estate value is assessed in Section 9.5.2.8. The impact of the proposed ADZ on the visual aesthetics of the coastal environment constitutes a primary factor in influencing real estate value. The Visual Impact Assessment shows that floating structures and maintenance vessels, as well as lights at night, could have a high visibility during the operational phase (both finfish and bivalve culture). The visual impact can be mitigated however, and mitigation measures are more effective for bivalve culture. The negative impact of Algoa 1 on real estate value with and without mitigation measures was rated as high and medium respectively. It is important to note that mitigation measures include a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>There will be a fishy smell. Aquaculture farming generally does not generate smells that are atypical of the marine environment. The Environmental Management Programme (EMPr) in Appendix F makes provision for a complaints register. The EMPr requires that air emissions are minimised and requires corrective action if complaints about</p>

No	Comment
.	<p>unpleasant odours are received.</p> <p>Impacts on the marine environment. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>Sharks and safety: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry - is their cause for concern?).</p> <p>Water pollution: A number of stakeholders are concerned about uneaten feed and faeces washing up on the beaches from finfish cages (note that this concern is not applicable to mussel and oyster culture). Uneaten food and faeces are negatively buoyant (sink) and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 thousand tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages where they are broken down by bacteria. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Solid waste on beaches. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document and contains clauses that instruct the holder of the Environmental Authorisation to ensure that solid waste is managed carefully. Equipment lost offshore must be cleaned up immediately by the operator (refer to environmental management measures for the operational phase in Section 7.3 of the EMPr).</p> <p>Vessel navigation and risk of injury. Negative impact on vessel navigation routes (potential risk of collision of vessels with the aquaculture farms) have been assessed in Section 9.5.2.4. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures. Vessels used for the maintenance of aquaculture facilities at Algoa 1 would depart from the Port of Port Elizabeth and travel to Algoa 1, which lies more than 2 km offshore and will not pose a danger to recreational users of the coastline.</p>

No	Comment
.	<p>Contribution to nutrient loading in the bay. Algal blooms are caused by excessive amounts of nitrates, phosphates, and other nutrients entering an aquatic ecosystem. In the marine environment, strong offshore winds can trigger an upwelling event where cold, nutrient rich bottom water is transported to the surface. Upwelling events are characteristic of western boundary currents and occur mostly on South Africa's west coast. However, Algoa Bay can experience intense, intermittent upwelling events, the frequencies of which may change with the progression of climate change. A recent publication by Lemley et al. (2019) attribute the increased observation of eutrophic symptoms in Algoa Bay, including <i>harmful</i> algal blooms (e.g. <i>Heterosigma akashiwo</i> and <i>Lingulodinium polyedra</i>) (note that not all algal blooms are harmful which is why the term red tide can be misleading) and hypoxia (<2 mg l⁻¹) at least in part to anthropogenic nutrient loading from land based sources (e.g. waste water treatment works, storm water outfalls). Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. The impact on water quality and benthic habitat is rated as medium after the implementation of mitigation measures in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report.</p>
5	<p>Jill Miller Comment submitted: 25 January 2019</p> <p>There had been previous applications for proposed aquaculture within the Nelson Mandela Bay Municipality (NMBM)/Algoa Bay region and were strongly apposed by the many different stakeholders for a number of reasons:</p> <ol style="list-style-type: none"> 1. The potential impacts it may have on the blue flag status, 2. Specialist tourism/international sporting events such as the Ironman 3. Recreation and sporting activities and facilities, 4. The economic/real estate value/local fishing industry, 5. Vessel navigation routes it is proposed within close proximity of a high end coastal system within the NMBM. 6. The NMBM has a gazetted Bioregional Plan 2014. In terms of conservation targets, the NMBM needs to conserve pristine open space areas located within its coastal setback line. Consideration must be given to the marine protected areas (MPA) within the Bay. The area in question was demarcated in terms of the zoning as an MPA. 7. Concern regarding waste management of the site and issues of pollution. Ecological concerns are related to chemicals and pesticides used and the effect on the surrounding environment and the longevity of these compounds in the water. 8. Will exotic species be considered, because this can lead to habitat modification, leaving the indigenous species at a disadvantage. Visual impacts and the effect it will have on tourism and the aesthetics related to the beaches. 9. Will this encourage predatory species (sharks) and pose a risk to residents? <p>DAFF was previously issued with an authorisation for aquaculture in the bay, how does this application relate? The objections of the previous applications and Public Participation Processes must be taken into consideration.</p> <p>Response by Anchor: 12 April 2019</p> <ol style="list-style-type: none"> 1. Water quality requirement criteria to obtain blue flag status (relevant requirement criteria): <ol style="list-style-type: none"> A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted) B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below) C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges and see explanation below) D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below) E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below) <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved</p>

No	Comment
.	<p>nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>2. Specialist tourism/international sporting events such as the Ironman. Impacts assessed in Section 9.5.2.3 of the BAR. Negative economic impacts (including impacts as a result of losing events such as IronMan) as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>3. Recreation and sporting activities and facilities. Impacts assessed in Section 9.5.2.3 of the BAR.</p> <p>4. The economic/real estate value/local fishing industry Impacts assessed in Sections 9.5.2.8 (real estate value), 9.5.2.6 (Fishing industry), and 9.5.2.3 (economic activities) of the BAR</p> <p>5. Vessel navigation routes it is proposed within close proximity of a high end coastal system within the NMBM. Impacts assessed in Sections 9.5.2.4 (vessel collision) and Marine impact assessment (see summary in BAR and specialist study in Appendix D)</p> <p>6. The NMBM has a gazetted Bioregional Plan 2014. In terms of conservation targets, the NMBM needs to conserve pristine open space areas located within its coastal setback line (not applicable as no land-based facilities). Consideration must be given to the marine protected areas (MPA) within the Bay. The area in question was demarcated in terms of the zoning as an MPA. The Department of Environmental Affairs Branch Oceans and Coasts has indicated that the affected portion of this site could potentially be excised³ should Environmental Authorisation be granted for this precinct. The impacts have been rated accordingly in the marine impact assessment (see summary in BAR and specialist study in Appendix D)</p> <p>7. Concern regarding waste management of the site and issues of pollution. Ecological concerns are related to chemicals and pesticides used and the effect on the surrounding environment and the longevity of these compounds in the water. The Environmental Management Programme (Appendix F) contains provisions for waste management (including pollution issues). Ecological concerns are addressed in the Marine impact assessment (see summary in BAR and specialist study in Appendix D)</p> <p>8. Will exotic species be considered, because this can lead to habitat modification, leaving the indigenous species at a disadvantage. Visual impacts and the effect it will have on tourism and the aesthetics related to the beaches. No exotic finfish species are considered in the application. Exotic, already existing Mediterranean mussel <i>Mytilus galloprovincialis</i> and Pacific oyster <i>Crassostrea gigas</i> are however, considered. Impacts have been assessed in the Marine impact assessment (see summary in BAR and specialist study in Appendix D). Visual impacts are assessed in Section 9.4 of the BAR.</p> <p>9. Will this encourage predatory species (sharks) and pose a risk to residents? Finfish cages have the potential to attract sharks. The concern is related to the fact that finfish cages may encourage migrating great whites to become resident in an area. The impacts have been assessed in the Socio-economic impact assessment (BAR Section 9.5.2.3)</p> <p>Alternatives. Please note that the project description has changed since the last EIA process (2010-2014). Some additional information on the sites and activities considered, as well as Alternative Options that are being assessed has therefore been provided below for clarity.</p> <p>In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment.</p> <p>Option A: Finfish and bivalve at Algoa 1 + Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>Option B: Bivalve at Algoa 1+ Bivalve at Algoa 6 +Finfish at Algoa 7</p>

³ Since this communication, this area was excised from the MPA and now Algoa 7 does not fall within the MPA (National Environmental Management » Protected Areas Act (57/2003) » Notice declaring the Addo Elephant Marine Protected Area in terms of section 22A of the Act. National Gazettes, No. 42478 of 23 May, 2019).

No	Comment
.	<p>Option C: Exclude Algoa 1. Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>Negative economic impacts (including impacts as a result of losing events such as IronMan) as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Impact on recreational activities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low) for finfish farming at Algoa 1 and 7. The impact by bivalve farming at Algoa 1 and 6 is lower and was rated as very low before and after mitigation. However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately. The proposed ADZ is likely to have a higher negative impact on these activities when compared to bathing and surfing. SCUBA diving (Section 9.5.2.3) (very low impacts after mitigation for all sites) and impacts on sailing navigation routes (Section Section 9.5.2.4) (medium impact after mitigation) have also been assessed in the socio-economic impact assessment.</p> <p>Impact on real estate value. The impact on real estate value is assessed in Section 9.5.2.8. The impact of the proposed ADZ on the visual aesthetics of the coastal environment constitutes a primary factor in influencing real estate value. The Visual Impact Assessment shows that floating structures and maintenance vessels, as well as lights at night, could have a high visibility during the operational phase (both finfish and bivalve culture). The visual impact can be mitigated however, and mitigation measures are more effective for bivalve culture. The negative impact of Algoa 1 on real estate value with and without mitigation measures was rated as high and medium respectively. It is important to note that mitigation measures include a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Small-scale and commercial fishing sector. The proposed Aquaculture Development Zone has the potential to reduce fishing grounds and this impact was assessed in Section 9.5.2.6 of the Basic Assessment Report. Impacts on the local fishery were rated of medium to low significance (medium for Algoa 1 and 7, low for Algoa 6). It should be noted that the impact at Algoa 1 before mitigation is high due to the overlap of the site with an important squid nursery area. The only way to reduce the impact at Algoa 1 to "Medium" significance is to avoid the southern part of Algoa 1, which is in conflict with the recommendations in the visual impact assessment (avoid northern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Sensitive marine ecosystem. The marine specialist report describes the conservation status and biodiversity importance of Algoa Bay and takes cognisance of sensitive habitats in the assessment of impacts. For example, Section 4.1.5.1.4 considers the impact of chemical pollution arising from finfish cages. Here, the risk of these chemicals bioaccumulating up the food chain is considered to be higher for Algoa 7, which is situated adjacent to the Addo MPA. The impact of organic waste discharge from finfish cages is considered 'high' before and 'medium' after the implementation of mitigation measures. This rating takes into account the proximity of Algoa 1 to the adjacent critically endangered reef and proximity of Algoa 7 to the Marine Protected Area. We have, however, added a sentence explicitly mentioning sensitive temperate reef habitats of Algoa Bay in the impact assessment section 4.1.5.1.2.</p> <p>Sharks and safety: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (Carcharodon carcharias), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected</p>

No	Comment
.	<p>environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
6	<p>Octavia Boshoff Comment submitted: 7 February 2019</p> <p>I know this was published ages ago, but if we speak English, are they proposing a fish farm or a shark cage diving site or a research aquarium? NO to the shark cage, NO to fish farm. NO FISH FARM - Does the environmental studies not speak for itself? Port Elizabeth is an ECO-TOURISM destination! Harvesting foreign fish in cages increases the amount of predators that eat people, it destroys our natural reefs and about 3 people get employed to feed the fish - false pretense of job creation! Last time you proposed this, Sun International lawyers helped us to block it, you are not opening a fish farm in our harbour.</p> <p>Response by Anchor: 12 April 2019</p> <p>No shark cage diving or aquarium is proposed. DAFF intends to apply for environmental authorisation for a sea-based aquaculture development zone for finfish and bivalve farming in Algoa Bay.</p> <p>Your concerns have been assessed as part of the impact assessment (BAR and specialist studies). Please consult the documents downloadable from our website at https://anchorenvironmental.co.za/node/344</p> <p>Your concerns are addressed in the socio-economic impact assessment of the BAR (main report and Appendix D, socio-economic specialist studies) (Section 9.5.2) and in the marine impact assessment (summary in BAR and specialist report in Appendix D).</p> <p>Sharks and safety: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Reef sensitivity. None of the proposed sites overlap with reef habitat (this was a site selection criterion for the Strategic Environmental Assessment conducted in 2009). However, impact significance ratings in the marine impact assessment were derived by taking cognisance of sensitive habitats and species surrounding the proposed ADZ sites.</p> <p>Job creation. Your concerns regarding employment creation has been addressed in Section 9.5.2.2 of the BAR. The socio-economic specialist study by Britz et al (2016) estimated the number of jobs that could be created by this development: "Direct employment in the production component of an offshore finfish farm in Algoa Bay is expected to roughly 50 employees for a 1000t/annum scale operation (1 employee per 20 ton) and 80 employees for a</p>

No	Comment
.	3000t/annum commercial unit (1 employee per 37.5 tons) (Britz et al. 2016)". Jobs will include unskilled and semi-skilled labourers, skippers, divers, farm maintenance staff, fish processing facility, aquaculture consultants, food safety technicians, aquatic animal health vets, environmental officers, and associated staff. Services could include boat maintenance, net manufacturing and repairs and commercial diving.
7	<p>Mnyamezeh Andrew Williams Comment submitted: 7 February 2019</p> <p>I am a SMME based at Addo's Nomathamsanqua Township, who is very interested in the project as it is situated within the ambit of our municipal development zone. Due to the high unemployment, food security and poverty of the area the project could bring relief to many including myself. Economic development and diversification is what will bring change to the area</p> <p>Response by Anchor: 12 April 2019 Comment noted.</p>
8	<p>Wally and Morag Gray Comment submitted: 19 February 2019</p> <p>Wally and Morag Gray object strongly to the proposed fish farm off Pipe Beach, Summerstrand, Port Elizabeth. This was already set aside years ago because of the negative impact it would have. Why has the idea been resurrected??</p> <p>Response by Anchor: 12 April 2019 Your opposition to the proposed aquaculture development has been noted.</p> <p>There are very few sites for sea-based aquaculture in South Africa and Algoa Bay was identified as a suitable site during the 2009 Strategic Environmental Assessment. Environmental Authorisation was granted on 9 July 2014 following a lengthy Environmental Authorisation process. During the appeal period, 28 substantive appeals were lodged against the decision. In response, the Minister of Environmental Affairs issued a decision on the appeal suspending the Environmental Authorisation to allow for further studies to be undertaken. DAFF has since conducted further socio-economic and marine specialist studies and has decided to submit a NEW application (note the old one is not resurrected) for environmental authorisation. This application needs to follow the Basic Assessment process as per Environmental Impact Assessment Regulations (2014, amended in 2017).</p>
9	<p>Jill Stewart Comment submitted: 12 April 2019</p> <p>Port Elizabeth is known as the Water Sport capital in South Africa. These sporting activities take place at Blue flag beaches - Hobie and Kings Beach.</p> <p>Conifer Beach House is a 15 roomed B&B and is kept at 80% average occupancy due to the major water sports that take place throughout the year at Hobie Beach and Kings Beach. We are therefore economically dependent on these sporting activities, as well as local and foreign tourists who stay at or near the beach. If the fish farm project goes ahead these major water sports and tourism will be severely affected. This will result in a drastic loss of jobs and the hospitality industry being severely crippled financially. My vote is NO.</p> <p>Response by Anchor: 15 April 2019 Opposition is noted.</p> <p>The impact on specialised tourism and businesses depending on recreation and water sport events are assessed in Section 9.5.2.3 of the BAR. The socio-economic feasibility study conducted by the Rhodes University in 2016 (included in Appendix D of the BAR) is also relevant to your concern.</p> <p>The blue flag status should not be impacted by the proposed development: Water quality concerns: A) Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. B) General water quality and nuisance algae growth. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however,</p>

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	<p>confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Indeed, jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock on effects on existing jobs. The various impacts that could have a knock on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. Furthermore, Anchor recommends a phased approach to finfish farming, where the expansion from 1000 t per year to full scale (i.e. carrying capacity of a specific species at a specific location) will only be permitted should monitoring reveal acceptable impacts as defined by the environmental quality objectives, indicators and performance measures. For example should the initial phase indicate that the hospitality industry would suffer unacceptable financial losses, expansion to full production would not be permitted. Independent socio-economic specialists would be required to conduct a detailed monitoring study and provide recommendations prior to expansion to full production.</p> <p>Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
10	<p>Ryan Smith Comment submitted: 12 April 2019</p> <p>I am in tourism trade and am the director of Adrenalin Addo Adventure Park - fish farm will decrease our tourism business in the Eastern Cape and hurt all our tourism business in Addo and PE surrounds</p> <p>Response by Anchor: 12 April 2019</p> <p>Opposition is noted. Please refer to the socio-economic impact assessment of the BAR (main report Section 9.5.2 and socio-economic specialist studies in Appendix D), which provides details on the potential impacts on the tourism industry in Port Elizabeth.</p> <p>Negative economic impacts (including impacts on the tourism industry) as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Decision-making. During the next public participation process (submission of Draft BAR and application form), the competent authority will provide input and request additional information if required. In making their decision on the Final BAR, the competent authority will weigh up the likelihood of the proposed development realising its full benefits against the potential negative impacts of implementing the Aquaculture Development Zone.</p>
11	<p>Etienne Potgieter Comment submitted: 23 February 2019</p> <p>I am completely against this idea. (No reasons provided).</p> <p>Response by Anchor: 25 February 2019</p> <p>Comment noted.</p>
12	<p>Mick John Comment submitted: 23 February 2019</p> <p>Please stop proceeding with this insane idea. The farm will bring sharks in closer to the beaches which will have a knock-on affect for tourism by having our beaches declared unsafe. It will also signal the death of the Iron Man World Championship which will also adversely affect tourism.</p> <p>Response by Anchor: 12 April 2019</p> <p>Opposition is noted. Your concerns are addressed in the socio-economic impact assessment of the BAR (main report and Appendix D, socio-economic specialist studies) (Section 9.5.2).</p>

No	Comment
	<p>Sharks and safety: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Impact on IronMan. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to have a different rating when compared to beach and shallow water users (i.e. more negative).</p> <p>Negative economic impacts (including impacts on the tourism industry) as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Decision-making. During the next public participation process (submission of Draft BAR and application form), the competent authority will provide input and request additional information if required. In making their decision on the Final BAR, the competent authority will weigh up the likelihood of the proposed development realising its full benefits against the potential negative impacts of implementing the Aquaculture Development Zone.</p>
13	<p>Geoffrey Newcombe Comment submitted: 25 February 2019</p> <p>Please I Geoffrey Newcombe who has lived in Port Elizabeth for 63 years oppose strongly against having our beautiful Bay been turned into a hunting ground for the great white sharks. I don't think its good to have a fish farm of that nature in the surrounding beach surfing swimming area.</p> <p>Response by Anchor: 12 April 2019</p> <p>Opposition is noted. Your concerns are addressed in the socio-economic impact assessment of the BAR (main report and Appendix D, socio-economic specialist studies) (Section 9.5.2).</p> <p>Sharks and safety: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth</p>

No	Comment
.	<p>2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry - is their cause for concern?).</p>
14	<p>Dr Peter A. Schwartz Chairman of Coastal Environmental Trust Comment submitted: 05 March 2019</p> <p>We endorse the national government to stimulate aquaculture It will create jobs, stimulate the economy, assist with protecting our limited fishing resources, enhance protein intake from a good source, stimulate on shore and offshore infrastructure Summerstrand/Algoa Bay is an inappropriate site if declared. There are multiple other more appropriate sights along our coastline/harbours The fish farm would be a physical and environmental eyesore on our ocean views. The height of each cage is envisaged to be 2 meters above sea surface. There will 35 cages per farm; 9 farms ; each cage 70-100m in circumference . Total 145 ha (4.5km²).This environmental eyesore would be similar to putting a road around Table Mountain, a national asset. There are multiple negative effects if a fish farm is constructed offshore in the specific site already identified by an EIA process Pollution of beachfront beaches and sea with faecal waste from the fish, and the genetic artificial food pellets. This includes the likelihood of a massive "red tide" reoccurrence already witnessed in 2014/2015 Genetic inbreeding of our natural native fish stocks with genetic modified fishlings The possibility of structural pollution and danger on sea going vessels and the beachfront if the advent of the structure coming adrift in our known powerful south easterly gale winds (previously documented in historical files of boats breaking anchor on our northern beaches) Adverse affects on the Port Elizabeth tourist industry. This can be in the form of Blue Flag status of beaches in the vicinity, recreational and commercial diving, paddle skiing, surfing, fishing and aquatic events e.g. Ironman and Ocean Series Swimming and Running events. The unknown affects on the labour intensive chokka/squid and commercial fishing industries. Can possibly collapse the new abalone seeding farm at Cape Recife wherby a large investment has already started to replete one of South Africa's endangered species due to widespread and illegal poaching Negative effects on the hotel, B & B establishments and restaurants Negative effects on property prices in Summerstrand and Port Elizabeth Possible attraction of marine predators (sharks, seals and orcas) Possible adverse and negative effects on our large dolphin population and natural pathway of the Humpback whale annual migration (international issue). This includes entanglement of these species in the anchoring infrastructure Disease and parasite transmission to our resident fish population and the possible effects on the Swartkops River Estuarine Impact on the navigational capabilities of commercial ships passing the large area</p>
	<p>Response by Anchor: 12 April 2019</p> <ol style="list-style-type: none"> 1. Summerstrand/Algoa Bay is not an appropriate site. Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. The site selection process is explained in more detail in Section 2.5 of the BAR (main report). 2. Please refer to section 3.5 for details on the three alternative options tabled for this application, which is especially pertinent to Algoa 1.

No	Comment
.	<p>3. Visual aesthetics are addressed in Section 9.4 of the BAR</p> <p>4. Pollution from finfish farming. Ecological concerns are addressed in the marine impact assessment (see summary in BAR and specialist study in Appendix D). Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: "Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Harmful Algal Blooms (HABs) occur naturally as a result of upwelling events which bring nutrient rich bottom waters to the surface. Their frequency and location can be influenced by anthropogenic activities (e.g. waste water discharge into the marine environment, greenhouse gas emissions resulting in climate change and changes in water temperature). While sea-based aquaculture would contribute to the nutrient loading in Algoa Bay and must be considered with regards to cumulative impacts, it cannot be claimed that the ADZ will result in increased frequencies of HABs. The majority of nutrients currently entering Algoa Bay are from land-based sources, which consist of human waste, agricultural runoff and industrial waste. With regards to the risk of HABs to the aquaculture development itself, DAFF is well aware of the risks. Please refer to Chapter 7 of the BAR for more information on the risks identified.</p> <p>5. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted. The Environmental Management Programme (Appendix F) contains provisions for waste management (including food, application of chemicals, biological waste).</p> <p>6. Collision risks of the aquaculture infrastructure with vessels has been assessed in Section 9.5.2.5 of the BAR</p> <p>7. Potential impacts on the fishing industry have been assessed in Section 9.5.2.6 of the BAR</p> <p>8. Potential impact on existing abalone ranching site. Abalone is farmed subtidally along the Cape Recife area. Algoa 1 is situated 3 km offshore and dispersion modelling shows that neither water quality nor the benthic environment will be impacted at such a distance away. The sea-based site is therefore unlikely to impact the abalone ranching site.</p> <p>9. Socio-economic impacts related to recreational activities, attraction of sharks, businesses and property value are assessed in Sections 9.5.2.3 and 9.5.2.8</p> <p>10. Impacts on the marine environment (cetaceans, parasite transfer) are addressed in the marine impact assessment (see summary in BAR and specialist study in Appendix D).</p> <p>Visual impacts. The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Negative impact on vessel navigation routes (potential risk of collision of vessels with the aquaculture farms) have been assessed in Section 9.5.2.4. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures.</p> <p>Impact on small-scale and commercial fishing sector. The proposed Aquaculture Development Zone has the potential to reduce fishing grounds and this impact was assessed in Section 9.5.2.6 of the Basic Assessment Report. Impacts on the local fishery were rated of medium to low significance (medium for Algoa 1 and 7, low for Algoa 6). It should be noted that the impact at Algoa 1 before mitigation is high due to the overlap of the site with an important squid nursery area. The only way to reduce the impact at Algoa 1 to "Medium" significance is to avoid the southern part of Algoa 1, which is in conflict with the recommendations in the visual impact assessment (avoid northern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Impact on recreational activities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is</p>

No	Comment
.	<p>low) for finfish farming at Algoa 1 and 7. The impact by bivalve farming at Algoa 1 and 6 is lower and was rated as very low before and after mitigation. However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately. The proposed ADZ is likely to have a higher negative impact on these activities when compared to bathing and surfing. SCUBA diving (Section 9.5.2.3) (very low impacts after mitigation for all sites) and impacts on sailing navigation routes (Section Section 9.5.2.4) (medium impact after mitigation) have also been assessed in the socio-economic impact assessment.</p> <p>Sharks and safety: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>The impact on real estate value is assessed in Section 9.5.2.8. The impact of the proposed ADZ on the visual aesthetics of the coastal environment constitutes a primary factor in influencing real estate value. The Visual Impact Assessment shows that floating structures and maintenance vessels, as well as lights at night, could have a high visibility during the operational phase (both finfish and bivalve culture). The visual impact can be mitigated however, and mitigation measures are more effective for bivalve culture. The negative impact of Algoa 1 on real estate value with and without mitigation measures was rated as high and medium respectively. It is important to note that mitigation measures include a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>The impacts on cetaceans (dolphins, whales) were assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The negative impact on cetaceans has been rated as low significance after the implementation of mitigation measures, which include:</p> <ul style="list-style-type: none"> • Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case. Research by Koper et al. 2016 and Karczmarski et al 1999 confirm that the humpback dolphin <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 3-5 km offshore). • Ensure all mooring lines and nets are highly visible under water (use thick lines and bright antifoulant coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network). <p>Disease and parasite transfer. The potential transfer of diseases and parasites from farmed finfish to wild fish stocks (note this is not applicable to bivalve farming) is assessed in Section 4.1.5.1.1 of the Marine Specialist Report in Appendix D of the pre-application BAR. The impact was rated as Very High before and High before and after mitigation respectively.</p>
15	Joey Elphick

No	Comment
.	<p>Comment submitted: 07 March 2019</p> <p>I live in Cape Marina, opposite Pipe beach and I strongly object to a fish farm in this area. Go and find an area where no recreation takes place and where it does not impact on residents views of our beautiful ocean. Surfing competitions, pleasure cruises, swimming events to Bell Bouy could be affected. The dolphins that we are so privileged to see close to the shore is a major concern for me as well.</p> <p>Response by Anchor: 12 April 2019</p> <p>Your concerns are addressed in the socio-economic impact assessment of the BAR (main report Section 9.5.2 and socio-economic specialist studies in Appendix D). Impacts on cetaceans in Algoa Bay were assessed in the marine specialist study in Appendix D.</p> <p>Site alternatives. In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Impact on recreational activities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low) for finfish farming at Algoa 1 and 7. The impact by bivalve farming at Algoa 1 and 6 is lower and was rated as very low before and after mitigation. However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately. The proposed ADZ is likely to have a higher negative impact on these activities when compared to bathing and surfing. SCUBA diving (Section 9.5.2.3) (very low impacts after mitigation for all sites) and impacts on sailing navigation routes (Section Section 9.5.2.4) (medium impact after mitigation) have also been assessed in the socio-economic impact assessment.</p> <p>Humpback dolphins. Proposed Beach Aquatic Safety Zones (B.A.S.Z.) map provided in Section 8.5.2.1 (Figure 21) shows that the sanctuary zone extends approximately 800 m offshore from. Algoa 1 does not overlap with this sanctuary zone as the closest corner lies 2.1 km offshore. Research by Koper et al. 2016 and Karczmarski et al 1999 confirm that the humpback dolphin <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 3-5 km offshore).</p> <p>The impacts on cetaceans (dolphins, whales) were assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The negative impact on cetaceans has been rated as low significance after the implementation of mitigation measures, which include:</p> <ul style="list-style-type: none"> • Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case). • Ensure all mooring lines and nets are highly visible under water (use thick lines and bright antifoulant coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network).
16	<p>Lindsay Stephen</p> <p>Comment submitted: 21 March 2019</p> <p>The letter is included in full in Appendix F6.</p> <p>World Endurance Africa Holdings (Pty) Ltd - A subsidiary of IRONMAN® is concerned that the four sport events, including Ironman would have to be moved to a different location due to the following reasons (excerpt from the letter):</p> <ul style="list-style-type: none"> • Degradation of the sea water quality, due to known side effects of fish farming which will result in the water being declared unfit for the event by international standards as well as the South African Events Act. • Attracting predator fish and sharks to the waters used for the swim leg of the IRONMAN African Championship as the fish farming will result in the water being declared unfit for the event by international standards as well as the South African Events Act, Nelson Mandela Bay Beach Office and Disaster Management. • Waste, fish oil, fish meal, chemicals etc. will create a foul smell which will detract from the beauty of our coastline and negatively impact the IRONMAN African Championship event. The large cages will also spoil the visual beauty of the coastline and will look particularly unsightly on our television production broadcasted around the world. • Destruction and degradation of the natural Algoa Bay habitat and its bio diversity which will, in the long term destroy ecotourism in the area: Greater Addo with its Marine Protected Areas, Diving, Whale/Dolphin/Orea and

No	Comment
.	<p>other marine watching activities and their long-term sustainability</p> <ul style="list-style-type: none"> • This proposed development is not the best practice in fish farming as there are known side effects of this style of fish farming in holding pens in the open sea. There are better options available. <p>Has land based fish farming been investigated?</p> <p>Response by Anchor: 12 April 2019</p> <p>Please note that the project description has changed since 2014 and you are encouraged to consult the documents compiled as part of this application process. Most importantly, three alternatives are described in Section 3.5 and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming at Algoa 1, Option B is limited to bivalve farming and</p> <p>Your concerns have been assessed as part of the impact assessment (Basic Assessment Report (BAR) and specialist studies). Please consult the documents downloadable from our website at https://anchorenvironmental.co.za/node/344</p> <p>I have responded to the reasons listed why the Ironman would have to be moved and included references to the specific sections in the BAR for your attention:</p> <ol style="list-style-type: none"> 1. Water quality concerns: A) Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. B) General water quality and nuisance algae growth. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character). 2. Attraction of predators dangerous to humans impacting on events: Finfish cages have the potential to attract sharks. The concern is related to the fact that finfish cages may encourage otherwise migratory great white sharks to become resident in an area. The impacts have been assessed in the Socio-economic impact assessment (BAR Section 9.5.2.3). The marine specialist study recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures. 3. Foul smells emitted from the finfish cages. Algoa 1 is situated 3 km offshore and smells are unlikely to travel as far. A section on potential air pollution will be included in the next version of the impact assessment (Draft BAR) 4. Visual impacts have been assessed in the Basic Assessment Report in Section 9.4. The impact assessment provides mitigation measures to reduce the impact, which are also included in the Environmental Management Programme (Appendix F), which constitutes a legally binding document should Environmental Authorisation be granted. 5. A number of impacts on marine ecology and biodiversity have been assessed in the marine specialist study (Appendix D of the BAR). Knock on impacts on specialised tourism has been assessed in the socio-economic impact assessment (Section 9.5.2.3). <p>Sea-based farming is not best practice and land-based farming should be considered. DAFF intends to promote land-based AND sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. Each aquaculture type has its own challenges as well as varying negative impacts and degrees to which mitigation measures are realistically implementable. For example, land-based facilities must be supplied with clean seawater and various systems are available (flow-through, partial re-circulation and full re-circulation). Overall implementation of a land-based system is very expensive (either pumping cost, high electricity demand, or infrastructure costs). In contrast, cage culture makes use of the assimilative capacity of the receiving environment and if managed carefully (e.g. site selection for appropriate waste dispersion, not exceeding carrying</p>

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.	<p>capacity (in kg fish) of the site) can have a lower impact on coastal water quality and ecosystems than a land-based facility that discharges finfish effluent close to the shore where dispersion is poor. On the other hand, diseases are much more easily controlled on land, where treatments can be applied more effectively and effluent can be sterilised prior to discharge, thereby reducing the impact on native fish populations. The absolute prevention of impacts is impossible and it is therefore important to consider the types of mitigation measures that are available and how effective they are. Environmental monitoring (baseline and impact monitoring) are also key in detecting unacceptable impacts and mitigating their effects. Please refer to the Environmental Management Programme (EMPr) in Appendix F for more information.</p> <p>Additional comments:</p> <p>Economic impact. Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on the choice modelling study conducted by Britz et al 2016 and feedback from stakeholders thus far, it appears that potential ecological impacts of the fish farming and the perception of an increased risk of shark attacks occurring (whether this risk is real or not) were identified as the most important disturbing aspects of the proposed development (note this is finfish farm specific, the current proposal also recommends bivalve farming). While mitigation measures have been recommended for negative visual and marine ecological impacts, no meaningful mitigation measures are available for the other socio-economic impacts other than site selection or site reduction (reference to the visual buffer recommended in the specialist study 2013). All these aspects, primarily applicable to finfish farming at Algoa 1, are likely to impact negatively on tourism. However, the perceived higher risk of shark attacks could potentially have a profound direct negative impact on the local economy, should the Iron Man Event (and other events) be moved to a different location (Iron Man Organisers indicated during the 2013 appeal phase that the event would be moved should finfish cages be installed at Algoa 1). Furthermore, this impact could potentially be irreversible and occur during the pilot phase. For this reason, the 'medium' negative impact rating (after mitigation measures) on the specialised tourism and businesses (Section 9.5.2.3) will be re-assessed.</p> <p>Impact on open ocean swimming. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to have a different rating when compared to beach and shallow water users (i.e. more negative).</p> <p>Sharks and safety. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (Carcharodon carcharias), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
17	<p>Anthony Groom Comment submitted: 27 March 2019 (dated 25 March 2019)</p>

No	Comment
	<p>Port Elizabeth International Airport, Airports Company South Africa expressed the following concerns (please find full letter attached in Appendix F6):</p> <ol style="list-style-type: none"> 1. The South African Civil Aviation Environmental Department has not been recognised as a major stakeholder of the AMC.? 2. Airports Company SA initially requested for two specialist studies be undertaken namely: <ol style="list-style-type: none"> a. Bird study on potential aviation hazards by an ornithologist. b. Aeronautical study for any potential hazards on arrivals, departures, and the general aviation, flying low level coastwise passing Port Elizabeth, and/or training aircrafts doing circuits and landings. <p>Lastly Airports Company SA would like to know the positioning of the processing plant as this is an incompatible land use surrounding airports. The positioning relates to all three options.</p> <p>Response by Anchor: 15 April 2019</p> <ol style="list-style-type: none"> 1. The South African Civil Aviation Environmental Department has been added as a major stakeholder to the Aquaculture Development Zone Management Committee (AMC) as proposed in the Environmental Management Programme. 2. Specialist studies. In response to the concerns raised during the public meeting on 6 March 2019, the pre-application Basic Assessment Report (BAR) was amended to include an impact assessment on the increased risk of bird strikes affecting aircrafts landing and departing at the Port Elizabeth Airport. Please refer to Section 9.5.2.12 Potential Impact OP-SE12 in the BAR. Note that Anchor is, however, of the opinion that a specialist studies by an Ornithologist (i.e. standalone study) will not be required for the following reasons: <ol style="list-style-type: none"> a. Only piscivorous, low-flying sea birds will be attracted to large concentrations of fish and food in sea cages at Algoa 1 and 7 and include sea gulls, gannets, cormorants and terns. High-flying migratory flocks of birds such as geese, ducks, and starlings will not be attracted to the cages. b. Johnston <i>et al</i> 2014 modelled flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. They found that for all 25 seabird species investigated, the majority of flights occurred within 20 m of the sea surface. The risk of collision with seabirds is therefore improbable even without mitigation measures. c. Existing large sea bird colonies which perform daily migrations to and from the roosting sites and these flocks are likely currently passing Algoa 1 and 7 sites daily and are not impacting aircrafts. Essential mitigation measures to prevent seabirds from gaining access to the cages are proposed in the marine specialist assessment. The additional risk posed by the finfish cages is considered to be relatively small as the cages are unlikely to alter flight path height of the bird flocks. <p>Where possible, existing processing plants will be utilised by the individual investors should the development be granted environmental authorisation. Land-based structures are not considered in the impact assessment and positioning of the plants can therefore not be provided (they are currently unknown). It must be noted however, that processing will occur inside buildings and should not attract birds. Furthermore, it would be easy to recommend that birds should be prevented from gaining access to biological waste (i.e. waste management). The Port Elizabeth ACSA should register as a stakeholder should a new processing plant be built and Environmental Authorisation be required.</p>
18	<p>Claudia Marriott</p> <p>Comment submitted: 28 March 2019</p> <p>OBJECTION TO ALGOA 1 ZONE BEING SELECTED FOR FISH FARM ADZ</p> <p>I am a property owner in the Summerstrand residential area in close proximity to the Algoa 1 site. My daughter is a member / volunteer of the local Summerstrand Lifesaving Club. My husband is in the Eastern Province Longboarding team and I enjoy casual swimming all along the prime beach front area from Kings Beach, Hobie beach extending to Pollock Beach.</p> <p>My objections to the Algoa 1 zone being selected therefore are VERY STRONG and also very close to home for various reasons described below:</p> <p>Negative impact on Tourism – JOB LOSSES!!! I am not a professional but would definitely estimate job losses to far exceed any employment opportunities created by the proposed fishfarm in Algoa 1 zone.</p> <ul style="list-style-type: none"> • Ironman Africa (and last year 70.3 World champs was even hosted here), 3 beaches challenge, Bellbouy Challenge, yachting and boating races, Hobie races @ Hobie beach • Surfing competitions – we have several big surfing competitions held at Pipe and Cape Recife will be negatively impacted • Lifesaving Nationals are being held at Kings beach as I write this • All of the above will be negatively affected due to reasons below

No	Comment
.	<ul style="list-style-type: none"> ○ Increased shark activity in the bay – will be no more swimming for me and for our tourists who enjoy our lovely beaches ○ Increased Pollution on our swimming beaches ○ Increased crime in the area as more industrial based activities ○ Loose our status as water sport capital of the world including events planned in our bay both now and future development <p>Visual disturbance and decrease of property due to all of the above factors. Negative impact on diving / tourism and our beautiful reefs which we are really famous for.</p> <p>Response by Anchor: 15 April 2019</p> <ul style="list-style-type: none"> ● Indeed, jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. As you point out, job losses are a knock on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock on effects on existing jobs. The various impacts that could have a knock on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme, which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. Furthermore, Anchor recommends a phased approach to finfish farming, where the expansion from 1000 t per year to full scale (i.e. carrying capacity of a specific species at a specific location) will only be permitted should monitoring reveal acceptable impacts as defined by the environmental quality objectives, indicators and performance measures. Impacts with potential knock on effects on existing jobs and associated mitigation measures are listed below with reference to the BAR: <ul style="list-style-type: none"> ○ Marine ecological impacts (reef, benthos, water quality, predator behaviour, marine protected area etc.). Summary provided in Section 9.3 of the BAR and in the stand alone specialist study in Appendix D of the BAR. ○ Impact on specialist tourism and recreational businesses in Section 9.5.2.3 ○ Impact on water sports in Section 9.5.2.3 ● Visual aesthetics are addressed in Section 9.4 of the BAR, <p>The potential impact on coastal real estate due to aesthetic nature of views and sense of place is assessed in the socio-economic component of the report in Section 9.5.2.8</p>
19	<p>Kurt Kleinhans</p> <p>Comment submitted: 01 April 2019</p> <p>Vere my question is all aquaculture development you guys are speaking about is just fin fish, mussel and oysters. I hear divers will be involved but as I see it divers will only do the job an then everything is set then we as divers are again sitting at home whereby I am trying to do Ranching, Cages or artificial reefs farming of abalone anywhere in eastern cape to give commercial divers permanent jobs</p> <p>Miss Vere which department do decide which fish will be farmed in some locations</p> <p>I spoke to DAFF last year and asked them is it possible to farm abalone outside the port of Transnet they said Yes that is possible they are doing cage culture same way in Cape Town.</p> <p>Response by Anchor: 8 April 2019</p> <p>You are correct in that abalone are currently not considered in this application. Abalone are currently successfully either ranched (near natural conditions) or farmed on land (strictly controlled environmental conditions). Some companies have experimented with growing abalone in offshore baskets (like oysters) but this does not appear to be a viable culture method at present. Furthermore, protecting a sea-based abalone farm against abalone poachers would likely pose a serious challenge (land-based facilities are more easily protected).</p> <p>Unfortunately abalone will not be added to the species authorised in this project.</p>
20	<p>Rian Mooi</p> <p>Comment submitted: 01 April 2019</p> <p>This program will assist our communities on job creation, skill development and economic development and I'm also willing to introduce practicals which will involve processing and marketing. I would like these emerging farmers to be integrated to very new fish farming development that happens around NMBM metro. So I would like the minister of Environment to assist us with this training course and integrate them to your program.</p> <p>Response by Anchor: 8 April 2019</p> <p>Comment noted. Please note that as Environmental Consultants we were appointed by the Department of</p>

No	Comment
.	Agriculture, Forestry and Fisheries (DAFF) who intends to apply for Environmental Authorisation for the proposed Aquaculture Development Zone. This environmental process is the very beginning of this project, which can only go ahead if Environmental Authorisation is granted. As environmental consultants we are not involved in the implementation phase of the project.
21	<p>Clinton Wilson</p> <p>Comment submitted: 03 April 2019</p> <p>I object to the project on the following basis:</p> <p>The proposed Algoa Bay 1 site, off the cities main beaches will negatively affect water quality and attracted sharks into an area used for bathing, swimming and surfing, and all manner of water-sports. Polluting, degrading and creating very serious safety concerns to Port Elizabeth's beach front, the main attraction for tourists and water-sports visitors to the city, not to mention local residents. The site also affects the diving industry and the yachting / boating fraternity.</p> <p>Nelson Mandela Bay promotes itself as premium watersports destination in South Africa, attracting local and international athletes to events like the Iron - Man, and Triathlon Summer Series, Hobbie Cat National Championships and the Sea Harvest Grommet Games presented by Sport & Recreation SA.</p> <p>The negative affects to the environment, and potential to caused harm and job losses to the tourism industry, far out way the job creation potential of the proposed Algoa Bay 1 site.</p> <p>In fact the inevitable loss of the Iron - Man event, and it's economic contribution alone, must surely out way the fin fish Farm.</p> <p>While I am not apposed to Aquaculture, it seems that finfish farming is not friendly to the environment. Are there not other projects like the expansion of the mussel farming project, or land based projects like the Abalone farming project that resources can be channeled into, that can create growth without negatively impacting on the tourism industry and the environment of Nelson Mandela Bay.</p>
	<p>Response by Anchor: 15 April 2019</p> <p><u>Water quality concerns:</u> A) Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. B) General water quality and nuisance algae growth. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p><u>Attraction of predators dangerous to humans impacting on water sports and sport events:</u> Finfish cages have the potential to attract sharks. The concern is related to the fact that finfish cages may encourage otherwise migratory great white sharks to become resident in an area. The impacts have been assessed in the Socio-economic impact assessment (BAR Section 9.5.2.3). The marine specialist study recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures.</p> <p><u>Impacts on recreational sport participants, businesses and diving industry:</u> Section 9.5.2.3</p> <p><u>Impacts on boat traffic</u> (i.e. collision risk): Section 9.5.2.4</p> <p><u>Marine ecological impacts</u> are summarised in Section 9.3 of the BAR and detailed in the stand alone marine specialist study in Appendix D.</p> <p>Indeed, jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. As you point out, job losses are a knock on effect from water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock on effects on existing jobs. The various impacts that could have a knock on effect</p>

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.	<p>have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme, which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. Furthermore, Anchor recommends a phased approach to finfish farming, where the expansion from 1000 t per year to full scale (i.e. carrying capacity of a specific species at a specific location) will only be permitted should monitoring reveal acceptable impacts as defined by the environmental quality objectives, indicators and performance measures.</p> <p>DAFF intends to promote land-based AND sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. Each aquaculture type has its own challenges as well as varying negative impacts and degrees to which mitigation measures are realistically implementable. Please note that the project description has changed since the 2010-2014 process. Both Algoa 1 (Summerstrand) and Algoa 6 (situated at the PE harbour) are considered for mussel/oyster farming. Three alternatives (combination of precincts) are described in Section 3.5 and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Additional comment:</p> <p>Impact on recreational activities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low) for finfish farming at Algoa 1 and 7. The impact by bivalve farming at Algoa 1 and 6 is lower and was rated as very low before and after mitigation. However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately. The proposed ADZ is likely to have a higher negative impact on these activities when compared to bathing and surfing. SCUBA diving (Section 9.5.2.3) (very low impacts after mitigation for all sites) and impacts on sailing navigation routes (Section Section 9.5.2.4) (medium impact after mitigation) have also been assessed in the socio-economic impact assessment.</p> <p>Negative economic impacts (including tourism) as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. For finfish farming at Algoa 1, this impact is rated as high and medium before and after mitigation measures respectively (note that the impact is lower at Algoa 6 and 7 and for bivalve culture). Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Negative impact on vessel navigation. Negative impact on vessel navigation routes (potential risk of collision of vessels with the aquaculture farms) have been assessed in Section 9.5.2.4. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures.</p> <p>Marine ecological impacts. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p>
22	<p>Leslie Ter Morshuizen - Aquaculture Consultant & Trainer</p> <p>Comment submitted: 04 April 2019</p> <p>No commercial investor would invest in establishing cages in an area that experiences red tides as there is currently no defence against it in cages. For government to so invest is therefore extremely irresponsible, even continuing with the EIA process is wasteful as the ultimate answer is already known. A pump ashore option is the better solution as the red tide organisms can be removed from the water prior to the aquaculture infrastructure.</p> <p>Response by Anchor: 8 April 2019</p> <p>DAFF has internally assessed the need and desirability of declaring the Aquaculture Development Zone in Algoa Bay Area. Public comments received to date have highlighted numerous risks to aquaculture in Algoa Bay. Many of these were highlighted in the previous EIR process as well. DAFF is well aware of the challenges facing future aquaculture developments in Algoa Bay (the same or similar challenges are faced by land-based facilities). DAFF has nonetheless decided to proceed with the application for environmental authorisation. We have included a Chapter on the risks posed to the proposed development in the Basic Assessment Report (Chapter 7), which recognises the risk posed by Harmful Algal Blooms.</p>

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23	<p>Andrew Marriott Comment submitted: 04 April 2019</p> <p>OBJECTION TO ALGOA 1 ZONE BEING SELECTED FOR FISH FARM ADZ</p> <p>As a property owner and resident in the Summerstrand area, living less than 500 meters from the coastal high-water mark, the proposed ADZ of Algoa 1 Zone will have a direct and immediate effect on me, my family and my pets. I am a permanently employed lecturer at 2nd Avenue Campus Nelson Mandela University, which is some 700 meters from the high-water mark too. I am an active waterman as well, being a lifeguard and have my provincial Eastern Province Longboard Surfing colours (2016, 2017, 2018, 2019).</p> <p>Thus, my STRONG objections to the Algoa 1 Zone being selected are to be deemed valid and significant to the public participation process. Below are a few of the main reasons for objecting to Algoa 1 Zone being selected for the ADZ:</p> <ul style="list-style-type: none"> • Kings Beach and Humewood beach have Blue Flag status. The sea-based ADZ in Algoa 1 Zone could have a negative effect on water quality, and/or waste being present on these and other beaches. Hence, compromising their Blue Flag Beach status. • Loss of clean beaches and Blue Flag status beaches will have a negative effect on the local tourism industry. • Strong Easterly winds, together with storm surge swells and coinciding spring tides have and do occur in the Nelson Mandela Bay. These powerful events will negatively impact the sea-based fish farms potentially resulting in excessive waste (i.e. fish effluence, fish food, damaged equipment etc.) making its way to the shore-lines of the bay. • The sea-based structures are anchored to the reefs below which can be a physical damaging process. In addition, effluence from the fish can negatively affect the biodiversity of the reefs to which the structures are anchored. These negative agents will disseminate beyond just the anchorage points. • The sea-based fish farming will attract additional bird activity to the immediate fishing structures due to a possible new food source being established by the feeding, growing and harvesting of the fish. Over a period of time this will change the birds nesting and foraging behaviours. An increase in shore based nesting and bird activity will occur. This could create a negative impact on the Port Elizabeth Airports fly zone. Bird strikes on aircraft would be a major concern. • The sea-based fish farming will attract additional Marine activity to the immediate fishing structures due to a possible new food source being established by the feeding, growing and harvesting of the fish. Man-made disruptions in the marine ecology, such as those resulting from the sea-based fishing, can have negative effects on their populations and sustainability. Of concern is the increase in shark activity which could result from these activities. Increased shark activity can put a risk on human lives in the Bay. • Further Marine disruptions can include additional stress being placed on the local dolphin population due to the increase in the fish farming agricultural noises which become more present. The servicing of the sea-based fish farms increases noise resulting from human activities. In addition is the continuous noise being created underwater by the fish cages and the fish themselves. Sound travels 10x further under water than in the air, and with fish and other marine life having extremely sensitive sense of hearing they too will be distressed. • Loss of marine diversity which the Bay currently enjoys will result in loss in tourism revenue as well as loss in the positive ascetics the Bay affords to it population. • The promise of job creation as a result of Algoa 1 Zone sea-based fishing does not outweigh the negative impact and job losses which will result if Algoa 1 Zone is used. • Nelson Mandela Bay Development Agency is currently far along in the process of redeveloping the Bayworld Precinct as a hub for tourism and eco-conservation efforts. The Sea-based Fish Farming in ADZ Algoa 1 Zone flies right in the face of their vision. • Nelson Mandela Bay plays host to many water-based sports and is said to be the water sports capital of South Africa (Ironman, Bell Buoy Challenge, Ocean Race Series, World Hobie Cat Racing Champs, South African Lifesaving Surf Champs, South African Nippers Lifesaving Champs, Nelson Mandela Bay Surf Series, The City Surf Series, South African Longboard Surf Champs,... to name a few). Sea-based fish farming in Algoa 1 Zone would negatively impact on these events. Even if it is just based on the PERCEIVED dangers of the ADZ, this will have a real effect in declining participation from participants and investors to these events.
	<p>Response by Anchor: 15 April 2019</p> <ul style="list-style-type: none"> • Water quality concerns and blue flag status: A) Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. B) General water quality and nuisance algae growth. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that

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	<p>receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <ul style="list-style-type: none"> • Impacts on recreational sport participants, businesses and diving industry: Section 9.5.2.3 • It is in the best interest of the investor to ensure that the cage design can withstand the natural conditions in the area. However, the Environmental Management Programme (EMPr) requires the implementation of emergency response protocols, which include the retrieval of drifting equipment and debris and recovery of escaped fish. • Marine ecological impacts are summarised in Section 9.3 of the BAR and detailed in the stand alone marine specialist study in Appendix D. The assessment included anchoring of structures on the sea floor and impact on the benthos. As you have pointed out, reef areas are considered sensitive habitats. Note that the bathymetric survey confirmed that all precincts considered are positioned above sediment habitats and not reef habitat. The dispersion modelling study (Appendix D) confirmed the sustainable carrying capacity for two types of fish for Algoa 1 (Summerstrand) and Algoa 7 (Ngqura Harbour) precincts. Theoretical carrying capacity must be confirmed by means of environmental monitoring (see more detail in the EMPr). • Marine ecological impacts (including impacts on cetaceans and birds) are summarised in Section 9.3 of the BAR and detailed in the stand alone marine specialist study in Appendix D. The impact assessment recommends mitigation measures to prevent birds from gaining access to the cages. Fish processing on boats would not be permitted. The pre-application Basic Assessment Report (BAR) includes an impact assessment on the increased risk of bird strikes affecting aircrafts landing and departing at the Port Elizabeth Airport. Please refer to Section 9.5.2.12 Potential Impact OP-SE12 in the BAR for more information. • Attraction of predators dangerous to humans impacting on water sports and sport events: Finfish cages have the potential to attract sharks. The concern is related to the fact that finfish cages may encourage otherwise migratory great white sharks to become resident in an area. The impacts have been assessed in the Socio-economic impact assessment (BAR Section 9.5.2.3). The marine specialist study recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures. • The impact of noise by the aquaculture development has not been considered in the pre-application BAR. The marine specialist will consider including a section in the Draft BAR. • Visual aesthetics are addressed in Section 9.4 of the BAR. Impact on specialist tourism and recreational businesses in Section 9.5.2.3. • Indeed, jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. As you point out, job losses are a knock on effect from water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock on effects on existing jobs. The various impacts that could have a knock on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme, which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. Furthermore, Anchor recommends a phased approach to finfish farming, where the expansion from 1000 t per year to full scale (i.e. carrying capacity of a specific species at a specific location) will only be permitted should monitoring reveal acceptable impacts as defined by the environmental quality objectives, indicators and performance measures. • Bayworld precinct vision: Comment noted. • Watersport participants' perception of dangers. Comment is noted. More emphasis will be placed on the impact of a change in perception and the fact that the impact may be difficult to reverse once it has occurred even if the aquaculture development was prevented from entering the full production phase due to unacceptable impacts (see phased approach explained above).
24	<p>Grizel Hart Comment submitted: 01 April 2019</p> <p>As a member of The Mandela Bay Heritage Trust, I strongly object to the development of the Fish Farm in Algoa Bay. Surely this farm can be developed along the dunes of the Alexander coast line, or a less populated area. I know this</p>

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.	<p>has been widely discussed; pros and cons. It will kill tourism to PE and benefit only a few, i.e. the developers. Quite frankly I think it is planned to fail.</p> <p>Response by Anchor: 15 April 2019</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>Should you be concerned about maritime heritage, please consult the Heritage Specialist Study conducted by ACO Associated and included in Appendix D of the BAR.</p> <p>The impact on tourism businesses is considered in Section 9.5.2.3 of the Basic Assessment Report.</p>
25	<p>Wayne Gerber - Eastern Province Deep Sea Angling Association</p> <p>Comment submitted: 08 April 2019</p> <p>We as the Eastern Province Deep Sea Angling Association further known as EPDSAA hereby wish to lodge an official objection against the allocation and consideration of the proposed sea-based Aquaculture Development Zone (ADZ) in Algoa Bay located in the Eastern Cape by the Department of Agriculture Forestry and Fisheries.</p> <p>The complete letter is included in Appendix F6. The reasons for opposition are shown below:</p> <p>Pollution This density of fish creates problems like disease and pollution. The biggest source of pollution is the accumulation of fish waste and uneaten food beneath the sea pens which can degrade the quality of the surrounding water. The amount of pollution from fish farms also depends on how the fish are contained and the quantity contained. We further believe diseases carried by the farmed fish could jump to the wild fish which could have catastrophic consequences for our wild fish population which is already under severe threat.</p> <p>Who will control and monitor these fish farms? Daff unfortunately does not have the infra structure nor the funding or expertise. The department of environmental affair has also expressed its concern regarding aquaculture and its effects on our wild fish stocks.</p> <p>Weather We further believe the weather conditions to be to extreme in Algoa Bay for it to be viable for any type of fish farming and would request to see the results if any of studies with regards to the weather conditions. Pedsac one of our largest fishing clubs is situated in the Port Elizabeth Harbour. The ground swell in the harbour has caused catastrophic damage to the mooring inside this enclosed harbour not to mention what we believe the weather and swell could do to these enclosure or fish pens in the open sea.</p> <p>Predators Algoa Bay is well known for its shark population varying from the Ragged tooth sharks, Bronze Whalers to the Great White that frequent Bird Island seal population as well as the bay and St Croix area. There is the occasional tiger Shark as well as our seasonal Zambesi sharks. We fear these fish pens would increase the population and prevalence of these sharks in our waters changing the balance of the environment.</p> <p>Conclusion In conclusion we believe that there will be no economic benefit to the Algoa Bay area and no significant job creation to validate the creation of the ADZ. We also believe the amount of fish and protein that has to be used to fuel and grow these fish has a severely detrimental effect to the area in which these bait fish are harvested as well as a detrimental effect to the environment (in this case Algoa Bay) where they are farmed.</p>
	<p>Response by Anchor: 15 April 2019</p> <p>Pollution Marine ecological impacts (including impacts on cetaceans and birds) are summarised in Section 9.3 of the BAR and detailed in the stand-alone marine specialist study in Appendix D.</p> <p><i>Water quality and impact on benthos:</i> Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: "Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Cage culture makes use of the assimilative capacity of the receiving environment and if managed carefully (e.g. site selection for appropriate waste dispersion, not exceeding carrying capacity (in kg fish) of the site) the impacts can be minimised. The carrying capacity is calculated such that accumulation of biological matter below the cages does not occur. The theoretical carrying capacity must be confirmed by means of environmental monitoring studies. Operators would not be permitted to exceed the carrying capacity for a specific species and site.</p> <p><i>Diseases:</i> This impact is assessed in detail in the marine specialist study in Appendix D (Section 4.1.5.1). The impact is</p>

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.	<p>considered to be high with mitigation measures.</p> <p>Monitoring: Please refer to the Environmental Management Programme (EMPr) in Appendix F of the BAR. DAFF would be the holder of the Environmental Authorisation and would be responsible for the implementation of the ADZ level EMPr. Each operator would be required to implement an approved farm-level EMPr. The Aquaculture Development Zone Management Committee (AMC) would oversee the implementation of the EMPr. More information is provided in Chapter 4.</p> <p>Weather: Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. The site selection process is explained in more detail in Section 2.5 of the BAR (main report). Exposure to wind and waves were considered during the feasibility phase of this project. In addition to Section 2.5 of the BAR, please refer to economic feasibility study in Appendix D compiled by the Rhodes University in 2016.</p> <p>Predators: Attraction of predators dangerous to humans: Finfish cages have the potential to attract sharks. The concern is related to the fact that finfish cages may encourage otherwise migratory great white sharks to become resident in an area. The impacts have been assessed in the Socio-economic impact assessment (BAR Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities).</p> <p>Reference to the need and desirability of the project in the conclusion: The comment is noted. The socio-economic benefits have been considered in Sections 9.5.1, 9.5.2.1, 9.5.2.2, 9.5.2.5, 9.5.2.9 and 9.5.2.11 of the Basic Assessment Report.</p> <p>Concern regarding Food Conversion Ratio in the conclusion: Finfish will be fed pellets rather than wild caught fish. The food conversion ratio differs depending on the species farmed. The impact of excess food and waste produced has been assessed in the marine specialist impact assessment and dispersion modelling study (both in Appendix D of the BAR).</p>
26	<p>Pete Fielding</p> <p>Comment submitted: 16 April 2019</p> <p>The comment provided by Pete Fielding summarised below and is included in Appendix F6 in full (3 pages):</p> <p>While acknowledging that aquaculture development is an important potential economic development sector and that suitable sites for offshore aquaculture are very limited on the South African coastline, the proposal to develop aquaculture facilities at three sites in Algoa Bay has multiple flaws and I do not think DEA should approve the development. The following issues are of major concern.</p> <ul style="list-style-type: none"> • Conservation: Impacts on MPA are significant and excising Algoa 7 from the MPA is unacceptable. • Significant marine ecological impacts (including risk of escapes) • Poor water quality as a risk to the proposed development. Driftsands WWTW discharge is not indicated in the BAR map • Oceanographic conditions poses a high risk to proposed development • Land-based aquaculture should rather be considered in the application. <p>Correct abbreviation of the Food and Agriculture Organisation from FOA to FAO</p> <p>Response by Anchor 23 April 2019</p> <p>Conservation: Your comments have been noted. DEA and DAFF are aware of the concerns raised in your comments.</p> <p>Impacts: Your concerns have been noted.</p> <p>Water quality: DAFF is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. Please note that the Driftsands WWTW is situated 10 km west of Cape Recife and is therefore not considered to pose a direct risk to the proposed ADZ. The BAR will be amended accordingly.</p> <p>Physical oceanography: DAFF is aware of the risks posed by oceanographic conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. The potential impact caused by escaping fish is assessed in the Marine Specialist Report in Appendix D.</p> <p>Land-based aquaculture as an alternative: DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites as well. Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed</p>

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.	<p>shoreline of South Africa. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>Abbreviation correction: We appreciate your correction and will ensure that this is reflected in the next version of the BAR.</p>
27	<p>Peter Myles</p> <p>Comment submitted: 21 April 2019</p> <p>Peter Myles conducted a desktop research study in his capacity as Chairman of the Nelson Mandela Bay Maritime Cluster and as an acknowledged coastal & marine tourism specialist. The purpose of the research was to compare the challenges of marine aquaculture development in Algoa Bay with other countries e.g. Europe, Oceania and Asia, North and South America, and Africa. Peter is an advocate of marine spatial planning as the best management system for reducing potential conflicts of interest especially within the local maritime domain. The full comment is 4 pages long and has been attached in Appendix F6 of this report.</p> <p>Response by Anchor 23 April 2019</p> <p>Comments are noted.</p>
28	<p>Ralph West - Adventure Swims ZA</p> <p>Comment submitted: 22 April 2019</p> <p>I write on behalf of Adventure Swims ZA. We are a company nurturing, encouraging and assisting all ages in Open Water Swimming and are currently cementing various events on the swim calendar including ocean swims which regularly (all year round) take place between Pollok and Kings Beach in Port Elizabeth. Our recent successful application to the EPC for our annual Pier 2 Pub Swim is testament to our commitment and to the revenue generated by our municipality.</p> <p>As you are aware, Open Water Swimming is a fast growing sport with many now swimming for fitness and a healthy lifestyle and, as with any sport there is a need for equipment and swimming gear. This has had the resultant effect of creating employment for many through various sectors of industry.</p> <p>The sport in its current format has attracted the likes of Iron Man and Round one of the World Open Water Swimming Tour to our beachfront creating many opportunities for business in the hospitality and associated industries, etc etc and . More importantly Port Elizabeth has become well placed as the Watersports capital of SA hence known for its safe and pristine Blue Flag Status Beaches.</p> <p>With the above in mind and our knowledge of the Sea-Based Aquaculture, its medium and long term effects on tourism and all other related industries and beneficiaries, it is clear that this would negatively impact on these industries and our world class beachfront destination. We therefore strongly object to the idea of a Sea Based Aquaculture Development Zone in Algoa Bay.</p> <p>Response by Anchor 23 April 2019</p> <p>Water quality concerns and blue flag status A) Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Water quality concerns and blue flag status B) General water quality and nuisance algae growth. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Impacts on recreational sport participants, businesses and diving industry: Section 9.5.2.3</p> <p>Although you do not explicitly mention job losses as a result of the impacts on the tourism industry, I have assumed</p>

No	Comment
.	<p>that this is one of your concerns. Indeed jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock on effects on existing jobs. The various impacts that could have a knock on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. Furthermore, Anchor recommends a phased approach to finfish farming, where the expansion from 1000 t per year to full scale (i.e. carrying capacity of a specific species at a specific location) will only be permitted should monitoring reveal acceptable impacts as defined by the environmental quality objectives, indicators and performance measures. For example should the initial phase indicate that the hospitality industry would suffer unacceptable financial losses, expansion to full production would not be permitted. Independent socio-economic specialists would be required to conduct a detailed monitoring study and provide recommendations prior to expansion to full production.</p>
29	<p>Elize Kingston Comment submitted: 23 April 2019 Opposition to the proposed development for the following reasons:</p> <ol style="list-style-type: none"> 1. I believe there will be waste caused by the fish-feeding circulating in the water daily and a smell. This will have a detrimental affect on us using the ocean to swim in and therefore will take jobs away from the local people as Tourism will take a know too. 2. We have heard about the PE Waterfront for years now. I am sure that this proposed Fish farm will cause it to be cancelled completely-and I feel that the Waterfront will create jobs and bring Tourists to our City-look at what happened to Cape Town once their Waterfront took off! <p>Response by Anchor: 23 April 2019</p> <p>Water quality concerns: A) Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. B) General water quality and nuisance algae growth. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Foul smells emitted from the finfish cages. Algoa 1 is situated 3 km offshore and smells are unlikely to travel as far. A section on potential air pollution will be included in the next version of the impact assessment (Draft BAR).</p> <p>Potential impacts on the planned Waterfront at PE Harbour: Your concerns have been noted. A description of the compatibility of the proposed development with the planned Waterfront at PE Harbour will be included in the next version of the Basic Assessment Report. It is important to note that heavy industry (e.g. Manganese ore export) is planned to be moved to Ngqura harbour. However, Transnet envisions that the port will still operate as a service-driven harbour but with added arts and recreational landmarks and attractions. This means that ship hull cleaning, rig repair, ship repair and export activities will still occur in the harbour (i.e. mixed use harbour). It is highly unlikely that an aquaculture development 3 km offshore would bring the Waterfront development to a halt. It should be noted that Transnet has not raised concern regarding compatibility with us to date (an authority meeting involving Transnet was held on 6 March 2019).</p> <p>It should be noted that impacts on visual aesthetics have been assessed in the Basic Assessment Report in Section 9.4. The impact assessment provides mitigation measures to reduce the impact, which are also included in the Environmental Management Programme (Appendix F), which constitutes a legally binding document should Environmental Authorisation be granted.</p>

No	Comment
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30	<p>Nikki Dryden</p> <p>Comment submitted: 24 April 2019</p> <p>Comment provided by Nikki Dryden is in form of a password protected PDF and is one page long. The comment has therefore been summarised below. The original letter can be found in Appendix F6 of this report.</p> <p>The stakeholder does not oppose aquaculture <i>per se</i> but has provided comment against any type of aquaculture at Algoa 1. The stakeholder references two paragraphs from the BAR, which emphasise that the proposed development is in line with the Integrated Development Plan on condition that the mariculture industry develops organically without unfair and/or negative impacts on other priority projects/programmes (last paragraph on page 40). Furthermore, she refers Section 5.2 Desirability (first paragraph), which states that the benefit of the development is overstated if the project significantly impacts other projects in the area. She is of the opinion that Algoa 1 does not meet the Need and Desirability requirements due to the negative impacts on:</p> <ul style="list-style-type: none"> • Reef habitat near Algoa 1 • Tourism and associated economic benefits for Port Elizabeth • Chokka industry <p>Quote: "The individual benefits that have been put down in the proposal will overstate the true benefits as I feel that it will diminish the current benefits in the area. It will certainly not maximise the overall economic potential of an area."</p>
	<p>Response by Anchor: 26 April 2019</p> <p>Need and Desirability (paragraphs quoted from the BAR): Comment is noted. Impacts on recreational sport participants, businesses and diving industry are assessed in Section 9.5.2.3. The decision-making authority will consider the BAR in its entirety to decide whether the potential positive impacts are justified when considering the degree of negative impacts (after mitigation). The decision-making authority will also consider whether the recommended phased approach to finfish farming will be sufficient mitigation in preventing unacceptable negative impacts on other projects in the area.</p> <p>Marine ecological impacts (including impacts on cetaceans and birds) are summarised in Section 9.3 of the BAR and detailed in the stand-alone marine specialist study in Appendix D.</p> <p>Water quality and impact on benthos (including nearby reef environment): Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: "Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Cage culture makes use of the assimilative capacity of the receiving environment and if managed carefully (e.g. site selection for appropriate waste dispersion, not exceeding carrying capacity (in kg fish) of the site) the impacts can be minimised. The carrying capacity is calculated such that accumulation of biological matter below the cages does not occur. The theoretical carrying capacity must be confirmed by means of environmental monitoring studies. Operators would not be permitted to exceed the carrying capacity for a specific</p>

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.	<p>species and site.</p> <p><i>Diseases:</i> This impact is assessed in detail in the marine specialist study in Appendix D (Section 4.1.5.1). The impact is considered to be high with mitigation measures.</p> <p>Impacts on the chokka fishing industry: This impact is assessed in Section 9.5.2.6, which found that the only way to reduce the impact at Algoa 1 to "Medium" significance is to avoid the southern part of Algoa 1, which is in conflict with the recommendations in the visual impact assessment (avoid northern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Blue flag status: Please refer to this website to interrogate the criteria to be met to obtain Blue Flag status: http://beachawards.ie/blue-flag/blue-flag-beach-criteria/#1515513060940-b474393b-0353</p> <p>Water quality requirements would constitute the only relevant criteria:</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges and see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>With regards to water quality (nutrient enrichment and resulting nuisance algae growth), please refer to the Modelling Report as referred above. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Predators: Attraction of predators dangerous to humans: Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities).</p>
31	<p>António Bastos</p> <p>Comment submitted: 24 April 2019</p> <p>As the owner of seven properties in Port Elizabeth and, as a taxpayer in good standing I wish to register as an interested and affected party and to record my opposition to the proposed Algoa Bay Aquaculture Development Zone (ADZ), commonly referred to as the "Fish Farm", as contained in the Department of Agriculture, Forestry and Fisheries' (DAFF) new Basic Assessment (BAR) process.</p> <p>Fish farming is a way to create a large amount of fish quickly, cheaply and efficiently, similar to commercial chicken and beef growing operations. The conditions in which fish is farmed affects both the quality of the fish as well as the health of the ocean surrounding these farms, such as:</p> <p>(a) It has been shown that the density of fish fosters disease and pollution. The biggest source of pollution is the accumulation of fish waste and uneaten food beneath the sea pens which can degrade the quality of the surrounding water. Like commercial farming operations on land, the density of fish necessitates certain chemicals to keep animals from getting sick and to keep things clean. The chemicals used in marine aquaculture operations such as "antibiotics and vaccines", disinfectants, and substances used to prevent corrosion of equipment (cages, etc.), changes the composition of the surrounding aquatic ecosystem.</p> <p>(b) Aquaculture could have a negative impact on the biodiversity of aquatic systems by introducing farmed species into the wild. Even when measures are taken to prevent escapes, birds, sharks, equipment failure, human error, severe weather and other complications mean that escapes of farmed fish are inevitable. Since farmed fish often</p>

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	<p>Response by Anchor: 26 April 2019</p> <p>Diseases: This impact is assessed in detail in the marine specialist study in Appendix D Section 4.1.5.1.1. The impact is considered to be high with mitigation measures.</p> <p>Organic pollution and impact on benthos: This impact is assessed in detail in the marine specialist study in Appendix D Section 4.1.5.1.1.2. (Medium significance after mitigation). Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Cage culture makes use of the assimilative capacity of the receiving environment and if managed carefully (e.g. site selection for appropriate waste dispersion, not exceeding carrying capacity (in kg fish) of the site) the impacts can be minimised. The carrying capacity is calculated such that accumulation of biological matter below the cages does not occur. The theoretical carrying capacity must be confirmed by means of environmental monitoring studies. Operators would not be permitted to exceed the carrying capacity for a specific species and site.</p>

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32	<p>Kenneth Pattinson</p> <p>Comment submitted: 24 April 2019</p> <p>I attended a public meeting last week regarding the proposed fish farms here in Algoa bay – and found the presentation very informative and not biased in anyway – so the information shared was factual and input was from very knowledgeable people in the various fields relating to the oceans, Port Elizabeth and sustainable development. I represent a group people who are ocean users and in the ocean daily – we are all open water swimmers – the groups are varied, some are just regular early morning swimmers, known as the Hobie Polar bears, they have been swimming off Hobie for many years, the ages vary from 16 – 86 and the numbers vary as well, on a good morning there many swimmers, on other days slightly less – but they are there winter, summer.</p> <p>Another group is more serious and they swim any time during the day– there are many more of them, but swim in smaller groups and swim further out and longer distances, these groups include competitive open water swimmers and Tri – athletes who compete Nationally and Internationally. Our bay is probably the most perfect training environment in the country and would probably be amongst the best in the world – mainly because it is safe, warm and most of the time swimmable – it is highly rated by international athletes and swimmers. A large percentage of these groups swim all year – thanks to our water temperature and the rest swim in and around their racing schedules – every March / April these numbers increase drastically because of our African Champs Iron man event, and around that time these numbers are around 2000 swimmers – our summer months have a full calendar of ocean racing events and tri Athlons and again this leads to a lot more swimmers in the water daily training for these events – one of these events has just been put on the world series of ocean races – and is very well supported – and ironically this event takes swimmers to the Bell Bouy and back, which would be no longer be possible if the fish farms went ahead.</p> <p>We are most definitely an Interested and effected party, and strongly object to any interference in the natural balance of our bay, and believe putting a fish farm in close proximity to our bathing areas would be interfering with this delicate balance.</p> <p>The Nelson Mandela Bay tourism agency gave us a presentation to show at the Swimming South Africa Masters meeting late last year – and it was a stunning presentation showcasing our natural beauty, our magnificent coast line and all the water sports it offers, it is still pristine in so many ways and unspoilt. A fish farm would be totally against what is being promoted, and it would drastically change many peoples perspective on Port Elizabeth – and there is no doubt this would effect tourism and related industries here in Port Elizabeth.</p> <p>Response by Anchor: 26 April 2019</p> <p>Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures. However, based on the comments received thus far, we will try to obtain the swimming route of the Bell Buoy event, Iron man, as well as training routes and if considered necessary add an impact table that separately addresses these concerns (which may change the rating of this impact).</p>
33	<p>Mel Smethurst</p> <p>Comment submitted: 24 April 2019</p> <p>I merely wish to add the same views other Hospitality Industry players will have voiced. One of these will be that it does not make sense to make a decision to address unemployment on the one hand via this venture and lose , perhaps more jobs , due to a severe downturn in our Industry as a result of a dramatic drop-off in both domestic and International tourism, following our beaches becoming a “Shark-Tank” feeding frenzy , resulting from the introduction of a Fish Farm. [One may as well ask farmers to allow their live-stock to graze in a Lion -Park.]</p> <p>Port Elizabeth is not SA ‘s premier holiday destination at best of times and this could be the death-knell for current support and will render the good work already done, including money already spent, in attempts to promote PE as a ‘must -see “destination, with much more in the pipe-line, including the much -delayed Water -Front. Investors for such ventures are likely to turn their backs on a perceived no-go area, with more unemployment rather than less.</p>

No	Comment
	<p>The NMDA will be able to add to my short list in large measure.</p> <p>Response by Anchor: 26 April 2019</p> <p>Job losses: Indeed, jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. Independent socio-economic specialists would be required to conduct a detailed monitoring study in accordance with the Environmental Management Programme and provide recommendations prior to expansion from 1000 t to full production.</p> <p>Sharks: Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock <i>et al</i> 2013, Hewitt <i>et al</i> 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2." This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Investing in tourism future of PE: Your concerns have been noted. A description of the compatibility of the proposed development with the planned Waterfront at PE Harbour will be included in the next version of the Basic Assessment Report. It is important to note that heavy industry (e.g. Manganese ore export) is planned to be moved to Ngqura harbour. However, Transnet envisions that the port will still operate as a service-driven harbour but with added arts and recreational landmarks and attractions. This means that ship hull cleaning, rig repair, ship repair and export activities will still occur in the harbour (i.e. mixed-use harbour). It is highly unlikely that an aquaculture development 3 km offshore would bring the Waterfront development to a halt. It should be noted that Transnet has not raised concern regarding compatibility with us to date (an authority meeting involving Transnet was held on 6 March 2019).</p> <p>It should be noted that impacts on visual aesthetics have been assessed in the Basic Assessment Report in Section 9.4. The impact assessment provides mitigation measures to reduce the impact, which are also included in the Environmental Management Programme (Appendix F), which constitutes a legally binding document should Environmental Authorisation be granted.</p> <p>Impacts on specialist tourism and recreational businesses have been assessed in Section 9.5.2.3 of the Basic Assessment Report.</p>
34	<p>Wendy Claydon - Resident</p> <p>Comment submitted: 25 April 2019</p> <p>I Wendy Claydon resident of Port Elizabeth would like to raise my objection to a fish farm being established off the Port Elizabeth Beachfront. I am an Ocean swimmer and feel the negative impact on watersports and tourism in Port Elizabeth would be huge.</p> <p>Response by Anchor: 26 April 2019</p> <p>Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will try to obtain the swimming route of the Bell Buoy event, Iron man, as well as training routes and if considered necessary add an impact table that separately addresses these concerns (which may change</p>

No	Comment
.	the rating of this impact).
35	<p>Simon Burton - Zwembesi Farms (Pty) Ltd Comment submitted: 25 April 2019</p> <p>In terms of 8.5.2.5 you seem to have left us out. We have been operating an oyster farm in the existing aquaculture zone in Algoa Bay since 1998 (see image attached for the outline of the aquaculture zone). This zone seems to fall within Area 6. Zwembesi Farms is one of the biggest oyster producers in SA with a production of 100 tons and we are pushing for 140 tons this year. We employ 26 permanent staff on the farm, another 7 at our oyster bar and distribution centres in CPT and a further 20 temporary staff at the export packing facility.</p> <p>Further, the greatest challenge to shellfish aquaculture in Algoa Bay is pollution from wastewater and stormwater outlets. Illegal effluent spills, sewerage pump failures, burst pipelines and contamination following heavy rain cause fairly regular forced closures. The municipality does not seem concerned about this. The municipality will need to take steps to minimize effluent pollution in the bay as well as implementing an 'early warning' system to warn affected parties of spills before any serious development can take place.</p> <p>Response by Anchor: 26 April 2019</p> <p>My sincere apologies that we have not included your company in the pre-application BAR Section 8.5.2.5. This will certainly be changed. Thank you for the additional information. Do you by any chance have a Google Earth (KMZ/KML) file of the attached picture? If not, we can make use of the coordinates provided in the picture.</p> <p>DAFF is aware of the risks that you describe. Please refer to Chapter 7 of the BAR for more information on the risks identified. DAFF is working together with DEA and DWS to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo. As you mentioned in your comment DAFF would also have to work together with the Municipality to improve coastal water quality.</p>
36	<p>Malcolm Kinghorn Comment submitted: 25 April 2019</p> <p>I am an Interested and Affected Party in terms of the Basic Assessment Report (BAR) March 2019 and will be affected by the Algoa 1 development as a tourism industry small business owner in Port Elizabeth.</p> <p>While the Legal & Process Requirements listed in Chapter 4 of the BAR include relevant, possibly adequate, legislation, I am concerned that monitoring and governance to ensure compliance with the actions required for the essential mitigation of the negative impacts of the proposed Algoa 1 development on the tourism industry are insufficiently addressed in the BAR.</p> <p>I suggest that a marine conservation, non-governmental expert with veto right be included in the project as third-party auditor as the marine environmental impact of the proposed development of Algoa 1 will be irreversible.</p> <p>Response by Anchor: 26 April 2019</p> <p>Your comment is noted. Please note that the Competent Authority (National Department of Environmental Affairs) will consider the Draft Basic Assessment Report and Appendices provided during the next public participation round once the application for Environmental Authorisation has been submitted. The Competent Authority will provide feedback on whether additional studies are required and if another specialist would be required to review the specialist studies provided. It should be noted that the Anchor Group of Companies is a well established and experienced marine ecological consultant (over 20 years) and has compiled a very comprehensive marine specialist study (please refer to Appendix D, which contains a Dispersion Modelling Study, a Benthic Habitat Mapping study and a marine specialist study which draws on these and the 2013 study, which was also compiled by Anchor). It is unlikely that this will require further review. A specialist does not have veto power, only the Department of Environmental Affairs can evaluate the available information and make a decision whether to grant Environmental Authorisation for any of the Alternative Options assessed.</p>
37	<p>Nina Bodisch Comment submitted: 25 April 2019</p> <p>While I understand the importance of initiatives to boost economic growth in South Africa, and I appreciate the positive intentions behind Operation Phakisa and attempts to "unlock the ocean's economy", I think that the options A, B and C suggested in the Pre-application BAR will have an overall negative effect on the Nelson Mandela Bay economy, as well as our environment.</p> <p>A big concern I have, is that an Algoa Bay Sea-Based Aquaculture Development Zone will sound the death-knell for us as Africa's "Water Sports Capital" and all the tourism spend attached to that. The public perceptions about attracting apex predators like sharks into the Bay's waters, the pollution from farming fish in cages, and the</p>

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.	<p>unsightliness of fish cages anchored offshore would be enough to drive away water sport enthusiast locals and tourists alike. Since the mid 2000's, we have successfully hosted the African Ironman Championship, and each year the event has grown and attracted more participants from around the country and the world to our shores. A Google search I did brought up the below articles, with some figures for the full Ironman event from inception to 2013, bringing in around R400 million in direct spend to our city. And nine years on, the event has grown even more.</p> <p>Our city also won the bid to host the World Half Ironman Championship last year (in addition to hosting the full Ironman earlier in the year), and this in itself attracted around an additional R300 million in direct spend to our city. An ADZ with fish farm cages nearby would probably be reason enough for the organisers of these Ironman events to stop operating from Nelson Mandela Bay:</p> <p>https://www.nmbt.co.za/news/ironman_south_africa_boosts_sports_tourism_for_bay.html - "Nelson Mandela Bay Tourism CEO, Ms Mandlakazi Skefile says, ' We would like to thank all locals and spectators for supporting IRONMAN South Africa as it was the cheering crowds which made this event unique and one of a kind for our city. We encourage you to keep up this momentum with all events to our destination to ensure that we retain great events such as Ironman while gaining new events for the city ensuring that we become a well known events and sports destination.' Ironman falls into the sports tourism category and has an exceptional positive impact for the local economy of NMB. The event attracts professional athletes to our destination along with a large group of supporters and spectators from all around the globe. Since 2005 - 2013 IRONMAN South Africa has welcomed 11 838 finishers. This has resulted in a total of R400 million in direct spend revenue injected into NMB and a total of 314 530 overnight stays in the city for 2005 – 2013."</p> <p>https://www.rnews.co.za/article/15673/bay-starts-countdown-to-ironman-70-3-world-championship-2018 - "Speaking on economic benefits and all the spin offs from an event of this calibre, Member of the Mayoral Committee Councillor, Andrew Whitfield, who also chairs the high level committee responsible for this strategic event said: 'This event could not have come at a better time, a time when our economy has gone through serious contraction especially in the automotive sector. What this event does is to offer us the opportunity to capitalize on our latent potential in tourism'. 'This event will see more than four thousand athletes racing over two spectacular days in our City; nearly thirty thousand international visitors will descend on Nelson Mandela Bay over a period of at least ten days. The direct spend over that period is estimated at an impressive R300m in Nelson Mandela Bay' concluded Whitfield."</p> <p>As of this year, another event which has been hosted in our Bay since 2009, the Jendamark Bellbuoy Challenge (an ocean swim of 5km from Pollok Beach, around the cardinal marker bell buoy and back) has gained a spot on the prestigious international "Open Water World Tour" , which attracts open water swimmers from across the globe. An ADZ with fish farm cages within a few swimming strokes of the bell buoy would probably cause this event to be cancelled, too.</p> <p>https://www.zsports.co.za/bellbuoy/content/event-information - "Jendamark brings you ROUND 1 of the OPEN WATER WORLD TOUR by way of the Indian Ocean's most radical 5km swim from Pollok Beach around the Bell Buoy and back. The swim is hosted in Algoa Bay, a proclaimed marine biodiversity hotspot located at the juncture of two major oceanic systems, the Agulhas and the Benguela currents and is one of the few bays in the world surrounded by over one million hectares of diverse land based protected areas i.e. national parks, provincial nature reserves, private game reserves, and wilderness areas."</p> <p>It seems from the Pre-application BAR, that the estimated number of jobs created for every 1000 tonnes of fish farmed per annum, lies around only 50. I would also argue that these jobs would be fairly low-level type of "piece job" work with very little scope for job advancement beyond basic skills. Compare this to the jobs in the Hospitality and Tourism sector that are being kept secure because of annual large-scale events like the Ironman in Nelson Mandela Bay!</p> <p>Another aspect that has concerned me, is the reference made in the Pre-application BAR about the necessity to provide an alternative, cheap and nutritious form of protein food for all South Africans, in the light of our country's food security challenges among much of our population.</p> <p>Supposedly, the proposed Algoa Bay ADZ would be a step in the right direction as regards a supply of healthy and cheap protein for the poor. However, I have my doubts as to whether the farmed fish and bivalves will really make it on to the plates of mainly impoverished South Africans. I suspect that the dusky cob, yellowtail and mussels / oysters will rather make their way onto the plates of patrons of restaurants locally and abroad, for premium prices. I hardly imagine that all the effort and cost involved in setting up an ADZ would be for providing cheap protein for impoverished communities, when a handsome profit could be made selling the produce to market.</p> <p>Another very important consideration that speaks against specifically finfish farming in Algoa Bay, is that there is great concern about our African Penguin colony on St Croix Island, near the Algoa 7 Site. This is the world's largest colony of African Penguins and they are greatly under threat.</p> <p>http://www.rfalliance.org.za/projects/understanding-penguin-dynamcs-in-algoa-bay/ - "The African penguin – the</p>

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.	<p>only penguin species breeding on the African continent – is classified as endangered because it is undergoing a very rapid population decline. The numbers of these endemic penguins (<i>Spheniscus demersus</i>) have decreased drastically over the last few decades, with a massive 70% decline of this iconic species in the past ten years. This trend currently shows no sign of reversing, and immediate conservation action is required to prevent further declines.” “</p> <p>There is great concern, that the pellets used to feed the finfish in the fish farms will be made of ground pilchards and that these may be fished in the waters surrounding St Croix Island, thus reducing the penguins immediate food supply and forcing them to swim ever greater distances in search of food.</p> <p>These are my main concerns, but others I would mention are:</p> <ul style="list-style-type: none"> • Nelson Mandela University is currently involved with setting up a Marine Spatial Plan with the Department of Environmental Affairs. Will the Basic Application Report proposing an ADZ (for whatever Option is eventually recommended A, B or C) not be pre-empting this Marine Spatial Plan? • Should a full Environmental Impact Assessment not be conducted for all of the proposed sites? For example, I am a resident of Bluewater Bay suburb and I would like to know how Algoa 7 will affect us. • Why has the Pre-application BAR not provided us with more information about the current trend in global fish farming? Is it really such a viable way of farming? What have been the longer term impacts of existing established fish farms globally? • Does Algoa Bay really have ideal conditions for fish farms throughout the year? We are known for rough weather and high winds which could interfere with the nets in the fish cages. • Why has the alternative of land-based Aquaculture not been explored more in depth, beyond citing a project that supposedly did not product expected outcomes – see page 90 of Pre-application BAR - (the reasons for this project’s failure could have been varied)? <p>For the reasons highlighted above, I am not in favour of any of the proposed Options A, B or C. I would possibly support bivalve farming on all of the sites, excepting Algoa 1. And I would strongly support a land-based Aquaculture initiative in Nelson Mandela Bay within the Coega IDZ, if possible.</p>
	<p>Response by Anchor: 26 April 2019</p> <p>Water sport capital concerns: Based on the comments received thus far, we will try to obtain the swimming route of the Bell Buoy event, Iron man, as well as training routes and if considered necessary add an impact table that separately addresses the potential impact on water sport events in Algoa Bay (which may change the rating of this impact).</p> <p>Economic losses in the tourism sector: The 2013 Socio-economic assessment and the objections submitted by stakeholders to the proposed ADZ approval in Algoa Bay identified many possible external costs. However, Britz et al 2016 (Specialist study provided in Appendix D of the Basic Assessment Report) states that given the speculative estimates of the revenue production costs, precision in the calculation of external costs is not warranted. The impact assessment was therefore completed based on qualitative data, i.e. the perceptions expressed during the previous EIA process and the results of the social choice modelling experiment conducted by Britz et al. (2016). The rating confidence is considered medium and uncertainty exists regarding the significance rating of medium after mitigation measures for Algoa 1 (low for Algoa 7).</p> <p>Job opportunities: Comment noted.</p> <p>Contribution to food security: The EAP agrees with this statement and recognises that food security as a direct result of the proposed aquaculture project (i.e. the product will be used to feed poor communities) is not a likely outcome of the proposed project. Contributing indirectly to food security by providing job opportunities, contributing to the local and regional economy and providing opportunities is probably more appropriate (although this benefit is incumbent on ensuring that existing and planned projects and plans related to the tourism industry are not impacted negatively). Chapter 5 of the BAR will be amended accordingly. Note that the socio-economic impact assessment in the pre-application BAR excluded food security as a positive impact for the same reasons that you state (Section 9.5 Identification of potential impacts).</p> <p>Penguins: The impact on seabirds was assessed in Section 4.1.5.1.5. of the Marine Specialist Study in Appendix D of the Basic Assessment Report. Algoa 7 is situated within the area that has been set aside for the Addo Marine Protected Area (although DEA has indicated that the area could be excised should environmental authorisation be granted. Algoa 7 lies on the western boundary of the MPA adjacent to an existing anchorage area, shipping channel to Ngura Harbour and an existing dredge spoil dumping site) and the negative impact on seabirds, including penguins has been rated as medium with low confidence. Due to the proclamation of the MPA, which includes the St Croix Island group, feeding grounds of penguins and other seabirds will not be impacted.</p> <p>Marine spatial plan: Given that the spatial planning component of the Algoa ADZ was initiated as early as 2009 in the SEA phase, it certainly pre-dates (but not necessarily pre-empts) the recently established NMMU academic unit. The DAFF is a key Department in the Marine Spatial Planning process and is ensuring that fisheries and aquaculture is considered in this process.</p>

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	<p>Full Scoping and Environmental Impact Reporting (S&EIR) process instead of the Basic Assessment (BA) process: The proposed development does not trigger listed activities contained in the Environmental Impact Assessment (EIA) Regulations Listing Notice 2. Aquaculture was removed from the list of activities in this notice in the 2014 amendments of the EIA Regulations. However, it should be noted, that the the comprehensive Scoping phase that was conducted as part of the previous process (Strategic Environmental Assessments of 2009 and further site selection and elimination since 2011) and specialist studies conducted since 2011 (see list below) are comparable to a full S&EIR process. For example, Algoa 7 was subjected to the same marine ecological baseline study when compared to Algoa 1 (See Benthic Habitat Mapping specialist study in Appendix D). Finally, the public consultation process is also extensive (two rounds and a number of measures are undertaken in addition to the minimum requirements as per EIA Regulations. Please refer to the presentation that was given at the first public meeting on 6 March 2019, which is also available on our website). In short, a full S&EIR process would not mean that more studies or more public consultation would be undertaken.</p> <ul style="list-style-type: none"> • Marine specialist study 2019 (Algoa 1, 6 & 7) • Dispersion modelling 2019 (Algoa 1, 6 & 7) • Benthic habitat mapping (Algoa 1, 6 & 7) • Maritime and Underwater Cultural Heritage Impact Assessment 2019 (Algoa 1, 6 & 7) (ACO Associates) • Comparative Assessments (Rhodes University 2016) (Algoa 1 and 5, although 5 has been screened out) <ul style="list-style-type: none"> ○ Socio-economic Report ○ Ecological Report ○ Feasibility study • Marine specialist study 2013 (Algoa 1) • Visual specialist study 2013 (Algoa 1) • Socio-economic specialist study 2013 (Algoa 1) <p>Algoa 7 assessment: Algoa 7 has been assessed as part of the Basic Assessment Report. Please refer to the impact tables in Chapter 9 of the BAR and the marine specialist study in Appendix D.</p> <p>Current trend in global fish farming: Sea-based finfish farming is an established mariculture method throughout the world. More information is provided in Section 2.1 of the Marine Specialist Study in Appendix D of the BAR. Furthermore, the marine specialist study provides a lot of information on the impacts that are associated with finfish farming. In total seven operational impacts were identified, described and assessed. Please refer to Section 4.1.5.1 of the Marine Specialist Report of 2019.</p> <p>Risks to the propose development: DAFF is well aware of the challenges facing future aquaculture developments in Algoa Bay. DAFF has nonetheless decided to proceed with the application for environmental authorisation. We have included a Chapter on the risks posed to the proposed development in the Basic Assessment Report (Chapter 7), which recognises the risk posed by prevailing environmental conditions.</p> <p>Land-based aquaculture consideration: DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. As far as I am informed, a land-based aquaculture facility is currently being proposed in the Couga IDZ. https://www.coega.co.za/Content2.aspx?objID=189</p>
38	<p>Mrs B Thomas</p> <p>Comment submitted: 25 April 2019</p> <p>As a property owner and resident of many years in Port Elizabeth, I find it absolutely abhorrent that a farm of such huge proportions would even be considered appropriate for Port Elizabeth and our Eastern Cape coastline. Our beaches and coastline will be very much adversely affected in many ways and the the long term damage to our beautiful beaches and city as well as no real financial gain for our area is totally unthinkable. Also tourism to our city will be affected including the water sporting events which Port Elizabeth is so well known for will be lost forever! We will once again just be lining the pocket of some greedy developers and selling off our beautiful coastline as much of South Africa has been stolen by unscrupulous investors in the past decade. I therefore very strongly object to this project going ahead.</p> <p>Response by Anchor: 29 April 2019</p> <p>Socio-economic impacts: Section 9.5.2 addresses the potential positive and negative impacts you mention in your comment (other impacts are also assessed in the BAR):</p> <ul style="list-style-type: none"> • Investment in the local, regional and national economy; • Impact on direct and indirect employment during the establishment and operational phases • Specialist tourism and eco-tourism activities (e.g. shark cage diving, whale watching, recreation fishing);

No	Comment
.	<ul style="list-style-type: none"> • Impact on specialist tourism and recreational businesses • Impact on recreational water sport participants • Impact on SCUBA diving activities • Impact on coastal real estate due to aesthetic nature of views and sense of place; • Local community development; • Small business, individual and informal sector development. <p>Based on the comments received thus far, we will try to obtain the swimming routes of the Bell Buoy event, Iron man, as well as training routes and if considered necessary add an impact table that separately addresses the potential impact on water sport events in Algoa Bay (which may change the rating of this impact).</p> <p>Visual aesthetics are assessed in Section 9.4 of the BAR.</p> <p>Destruction of beaches: The proposed finfish and bivalve sites are situated 3-5 km offshore (with the exception of Algoa 6 in the inshore area east of the PE harbour). Please refer to Chapter 1 Figure 1 for a map of the proposed aquaculture development sites. The beaches are not anticipated to be "destroyed" as a result of the proposed ADZ. I have responded assuming that you may be concerned about water quality issues. Water quality issues impacting the natural environment are addressed in Section 9.3 (in summary), in the Marine specialist study (Appendix D of the BAR) and Dispersion Modelling Report (Appendix D of the BAR). Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p>
39	<p>Eckart Schumann</p> <p>Comment submitted: 26 April 2019</p> <p>Note that the comment was submitted as a 10 page letter, which has been included in Appendix F6. The main issues have been summarised below:</p> <ul style="list-style-type: none"> • Concerned that job losses as a result of an impact on the tourism industry will outweigh potential job gains as a result of the Aquaculture Development Zone. • Concerned regarding the negative economic impacts of the proposed development • Inadequate wave data was used for the feasibility assessment and a wrong impression is conveyed to potential investors as wave height records available at (for example) ftp://polar.ncep.noaa.gov/pub/history/waves/ shows significant wave height of over 9 m south-southeast of Cape Recife. • Requested additional information on how oceanographic data was collected. • Requirements for servicing of finfish cages was not considered in the pre-BAR. • Concern regarding the pollution status of Algoa 6 • Clarification regarding existing oyster farms at Algoa 6 is required. • Wind drift will cause pollution from the finfish cages to wash up on the beaches • The report does not describe how a near-surface (0-6 m) dynamic cell was made • The dispersion modelling study refers to "surface" current data, which must be corrected to "sub-surface". <p>Response by Anchor: 29 April 2019</p> <p>Employment opportunities, gains versus losses: Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Inadequate wave data: DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed</p>

No	Comment
.	<p>ADZ. This EIA process is for the declaration of an ADZ, where finfish and bivalves can be cultivated by operators (currently unidentified) in the future. As such the infrastructure details are not fully known, nor prescribed at this stage. The BAR does suggest the probable type of infrastructure (longlines, rafts for bivalves and circular floating cages for finfish) based on international practice and aquaculture development in South Africa to date. This infrastructure is not globally uniform in design and construction, with more robust material and mooring systems used in more exposed areas. It is true that very sheltered marine environments such as fjords are cheaper and easier to install and maintain aquaculture infrastructure in. For example floating circular fish cages are generally thought to be suitable for environments where significant wave heights of up to 3.5m are experienced (it is important to note the definition of significant wave height – this is not the largest waves but rather the average of the top 33.3% of measured wave heights- bigger individual waves are expected about 16.5% of the time). This is of course also not a “hard and fast rule” as cages could be constructed from more robust material to withstand greater significant wave heights (and other environmental stresses such as wind speed and current strength). The BAR (and associated specialists reports) highlights the fact that Algoa Bay at times experiences significant wave heights in excess of 3.5 m (based both on ADCP measured wave heights over a 12 month period and long term Voluntary Observing Ships data) and cautions that future operators will need to take cognisance of this risk when designing and implementing infrastructure. It should also be noted that floating circular fish cages were successfully installed and stocked with yellowtail and kob in Algoa Bay during the DST-Stellenbosch University trials a decade ago.</p> <p><u>The following paragraph was not included in the email and has been added subsequently to this report:</u></p> <p><u>It is important to note that Eckart Schumann claims the following: “The hindcast wave data from the above ftp site records a significant wave height of over 9 m south-southeast of Cape Recife (34.5 °S, 26 °E)”. The area south-southeast of Cape Recife is fully exposed to the predominant southerly swells and was excluded from the original Strategic Environmental Assessment for finfish culture for this very reason (Hutchings et al. 2011). The photographs used to illustrate the significant wave height of over 9 m are taken from land of the shore break. The aquaculture farms are, however, situated 1-5 km offshore and will not be exposed to breaking waves such as those shown in the comment.</u></p> <p>Days for servicing: The economic feasibility report conducted by the Rhodes University in 2016 (included in Appendix D of the BAR) uses the number of days available for servicing in their feasibility assessment. The guide to sea conditions for operating small research vessels in Algoa Bay compiled by the South African Environmental Observation Network (SAEON) based on five years of wind and swell data is considered to be sufficient to establish feasibility. The socio-economic specialist report of 2016 also states that: “As the Algoa 1 site is on close proximity of Port Elizabeth, it is possible to take advantage of smaller weather windows using smaller vessels. For example, the wind often comes up in the late morning allowing 3-4h of operational time if the port is in close proximity.” The same is applicable to Algoa 7 (Ngqura harbour site), which is situated 4 km from Ngqura harbour (when compared to screened out Algoa 5). It is unclear how WESSA concluded that the pre-application assessment is premised on calm water facilities. As mentioned above DAFF and the industry are aware of the risks posed by the wind and ocean conditions in Algoa Bay.</p> <p>Feasibility of proposed development: Exposure to wind and waves were considered during the feasibility phase of this project in 2010-2013. In addition to Section 2.5 of the BAR, please refer to economic feasibility study in Appendix D compiled by the Rhodes University in 2016. Please note that DAFF is aware of the risks involved with this project and the feasibility phase has been completed (2010-2016).</p> <p>Benthic Mapping report in Appendix D Section 2.1.1.1 corrections: The sentence: “collected over an 11 month period from Algoa 2, which lies approximately 4 km to the north of Algoa 7” in the Benthic Mapping Report was corrected to “south of Algoa 7” as suggested in the comment. An additional map will be included in the report to show where the oceanographic data was collected at Algoa 1, 2 and 5. The section will be amended to include more detail on the methodology used. Please note that the report states that the data was collected during the previous EIA process and that more detailed methods can be obtained from those studies. It must be noted that the original reports do not form part of this application and are therefore not included in Appendix D of the BAR.</p> <p>Pollution status of Algoa 6: It is correct that only limited water quality sampling was conducted at Algoa 6. Water quality. Water quality data for 2009 was taken from Nel, R. & Winter, D. 2009. The values from sites located 30 and 60 m away from the pilot study cages were averaged to get a single reading. The average co-ordinates of the cages was 33 °56'18.3"S and 25°37'48.26"E. The 2018 water quality sample was taken from a centre point within Algoa 6 - average co-ordinates 33 °56'0.53"S and 25°37'38.23"E. The report (Dawson et al. 2019) will be amended to clarify where the samples were collected. More detailed receiving water quality data would not contribute toward the decision-making by the competent authority. DAFF (and the industry) is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR). An existing oyster company is also battling with water quality at Algoa 6. DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot</p>

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.	<p>therefore be accepted as status quo. For this reason, the option of bivalve culture in Algoa 1 is being explored as an option. For the above reason, no detailed information is presented on the bacterial counts at the Algoa 6. However, a paragraph will be added to detail Zwembesi Farms (Pty) Ltd current challenges will be included in the BAR.</p> <p>Existing mariculture sites: The previous BAR (2010-2014) listed the NMU oyster site. A reference to indicate this will be included in the report. Zwembesi Farms (Pty) Ltd (Knysna Oyster Company) alerted us to the fact that we had not included their farm. This will be corrected in the Draft BAR.</p> <p>Wind drift and impact on beaches: More context on potential water pollution will be provided in the assessment of impacts on recreational users, especially in relation to the Blue Flag Status of the beaches near Algoa 1.</p> <p>Wind induced currents within the first metre of the water column is usually not considered when modelling dispersion of waste from finfish cages. Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes and remaining feed is often consumed by wild fish outside the cage. However, it would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. Some wastes such as oils or fats may float on the water surface, however, the proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Additional modelling will not be conducted at this stage of the project. Modelling at this point is a theoretical exercise and additional modelling would unlikely change the rating of the impact assessment with regards to the waste discharge into the marine environment. Adaptive management for this type of development is very important for this type of development and will help to verify the current modelling results.</p> <p>The following is stated on page 17 of the report: "The ADCP current measurements cannot take the movement of the very surface wind-blown layer into account, and hence any modelling will not take this into account."</p> <p>Report does not describe how a near-surface (0-6m) dynamic cell was made: It is important to note that the measurements for the near surface cell are for Algoa 2 (that was used as a proxy for Algoa 7) and NOT Algoa 1 where the "surface " depth bin dimensions are clearly indicated in the caption for Fig 2.2. surface (2.9-5.4m depth). The near surface (0-6m) current measurements at Algoa 2 were recorded using the ADCP instruments dynamic cell feature where the sampling volume changes with tidal fluctuations in water level. The following excerpt from the Argonaut-XR ADCP user manual describes how this works (we could include this in the benthic habitat report, but I think the technical details of instrument capabilities are probably not of interest to most stakeholders):</p> <p>"Since its introduction, the Argonaut-XR has differed from other Doppler current meters in a very special way. The size and extent of the XR's sampling volume is dynamic and can change with changing water level. This feature has been referred to in the past as the AutoTide feature. In basic terms, how the AutoTide works is that the Argonaut-XR uses its built-in pressure sensor to detect the surface boundary. The sampling volume (Cell) has both "Cell Begin" and "Cell End" parameters that can be pre-set by the user to be either fixed in place, or dynamic with changing water level. When using AutoTide, the Cell End is then automatically placed just below the water's surface using the formula:</p> $CE = 0.9 * (P - 2 * \sigma P)$ <p>Where:</p> <p>CE = "Cell End" or the maximum extent of the sampling volume near the water surface</p> <p>P = Water Level as calculated by the pressure sensor</p> <p>Note that the above formula accounts for wave fluctuations while also having a 10 % safety factor."</p> <p>The incorporation of the 10% safety factor does mean that the top 10% of the water column is not included in the current data for Algoa 7, nor for Algoa 1 where the "surface" bin starts at 2.9m depth. This is a fact that has never been overlooked and we have always acknowledged in public meetings that ADCP data cannot include the surface water layer. The response to concerns raised about wind driven surface currents (particularly easterly winds that are</p>

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.	<p>dominant in summer) carrying waste from the fish cages to popular swimming beaches, remains (as stated in public meetings and elsewhere in response to comments) that the majority of the waste from fish cages is uneaten food and faeces that sinks in the water column and currents operating at midwater or below the cages (approximately 15m depth) are the dominant drivers of waste dispersal. Dissolved nutrients e.g. ammonia, nitrate, phosphate will also enter the water column at the depth of the faeces or uneaten food and not the very surface water. Although vertical mixing or upwelling could theoretically transfer nutrients to the surface, there is no reason to expect a concentration of nutrients in the surface layer, in fact the frequent presence of a thermocline is a barrier to this. Oils and fats, present in food may float to the surface if pellets are left in the water column for a sufficient time to dissolve, but as farmers will aim to minimise food wastage and maximise food conversion ratios, as well as the documented feeding by wild fish on uneaten pellets that may sink below the cage floor, suggests that significant quantities of fats and oils on the sea surface (that could pose a pollution issue on beaches more than 2 km away) are unlikely to occur.</p> <p>Reference to "surface" current data from the ADCP. The modelling report (Wright et al. 2019) will be amended to refer to "near surface".</p>
40	<p>Estee Vermeulen - Marine Spatial Planning Research Group of the MSP SARChI Chair at Nelson Mandela University Comment submitted: 26 April 2019</p> <p>Note that the comment was submitted as a 2 page PDF, which has been included in Appendix F6. The main issues have been summarised below:</p> <p><u>Algoa 1 concerns:</u></p> <ul style="list-style-type: none"> • The new zoning areas fail to address spatial and dynamic conflicts of congruent marine users. • The report fails to mention the Marine Spatial Planning Bill under relevant legislation. • It is recommended that decisions regarding development in the marine domain are to be made with co-operative governance processes in mind, guided by abiding to MSP legislation. • Algoa 1 poses significant spatial and dynamic conflicts to congruent marine users as well as to residential users in the area. Several public meetings on this process have demonstrated that there are strong objections against the placement of ADZ Algoa 1 based on scientific research and public concerns. • 2016 studies in Appendix D of the BAR show that Algoa 1 is economically incompatible and not economically competitive with the current marine users of the area (e.g. tourism and recreation). • Deterioration of water quality affecting the marine environment and coastal users. • Feasibility concerns: Cape Recife Waste Water Treatment Works and swell <p><u>Algoa 6:</u></p> <ul style="list-style-type: none"> • Placement appears to be feasible and is of less concern to the majority of stakeholders. <p><u>Algoa 7:</u></p> <p>Although it is situated at the edge of the Addo Marine Protected Area and within the restricted use zone, this requires routine monitoring to ensure a healthy MPA and surrounding ecosystems, in addition to mitigation measures in case of an accident.</p>
	<p>Response by Anchor: 30 April 2019</p> <p>The socio-economic impact assessment in Section 9.5 of the BAR addresses impacts on all user groups identified in Section 8.5.2. These include (but are not limited to):</p> <ul style="list-style-type: none"> • Specialist tourism and recreational businesses • Water sport participants (note that the impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). • SCUBA Diving activities • Collision of vessels (drifting and navigational risks are assessed separately are) • Existing mariculture developments • Local fishing industry • Visual impacts are assessed in Section 9.4 of the BAR. <p>We have also made it clear in the Environmental Impact Statement that there is an apparent conflict between the northern and southern portions of Algoa 1 (northern more sensitive to ocean sporting events and visual impacts while the southern portion would restrict access to important nursery grounds for the squid industry).</p> <p>We would appreciate it if your comment could be more specific as to how to improve the spatial user conflict impact assessment in Section 9.5 of the BAR.</p>

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.	<p>Marine Spatial Planning Bill: Thank you for pointing this out. We will include a section on this Bill and highlight in the Impact Statement (Chapter 10 of the BAR) the importance of considering this Bill, its Guidelines and future legal ramifications in the decision-making process.</p> <p>Socio-economic feasibility of Algoa 1 (Britz and Sauer 2016 in Appendix D of BAR): Agreed.</p> <p>Deterioration of water quality (marine ecology and recreational users): Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>With regards to water quality (nutrient enrichment and resulting nuisance algae growth), please refer to the Dispersion Modelling Report in Appendix D of the BAR. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7) (Appendix D of the BAR), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: "Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources").</p> <p>Environmental Risks: DAFF is aware of the potential environmental risks to the proposed development. Please refer to Chapter 7 of the BAR for more information on the risks identified. This Chapter includes the results of a Dispersion Modelling Report. Algoa 1 is situated 3 km offshore and dispersion modelling shows that neither water quality nor the benthic environment will be impacted at such a distance away.</p> <p>Algoa 6: Comment noted.</p> <p>Algoa 7: Comment noted. Ongoing monitoring is a requirement in the Environmental Management Programme (Appendix F of the BAR).</p>
41	<p>Barbara Ann Kinghorn – Coral Tree Guesthouse</p> <p>Comment submitted: 27 April 2019</p> <ul style="list-style-type: none"> • Our small guest house is already experiencing difficulties with Tourist demand being down by 45% in PE. • Airbnb drives our prices down, but we're grateful for the business... (See recent email to us from Airbnb below) • Two recent articles predict a world-wide slowdown in the demand for leisure travel in 2020 (See links below) • Why would uncertain overseas travellers choose this long-haul destination... to swim in a fish farm? <p>Response by Anchor: 02 May 2019</p> <p>The impact on tourism operators and businesses benefiting from tourism has been assessed in Section 9.5.2.3 as part of the impact assessment (Basic Assessment Report (BAR) and Appendix D socio-economic specialist studies).</p>
42	<p>Margie Gaddin - Private</p> <p>Comment submitted: 28 April 2019</p> <p>I agree with the objections raised by Mickey O'Harer on the Facebook page Human Nature as follows:</p> <p>Here are some reasons why the fish farm cannot work in Algoa Bay:</p> <ol style="list-style-type: none"> 1. Algoa 1 isn't feasible as per the pre-BAR's own specialists: The economic feasibility study (Britz and Sauer 2016) that informs the pre-BAR finds that the conditions at Algoa 1 are marginal for economic aquaculture and limited mitigation possible. The BAR's visual impact assessment excludes a major portion of the northern section of Algoa 1, and its socio-economic study finds that the southern portion of Algoa 1 overlaps with a squid nursery area and excludes that portion. The BAR refers to this as an "apparent conflict" and proposes a phased approach (a 1000-ton start-up) with careful monitoring to mitigate. There is a much simpler conclusion to be drawn, namely that the three reports indicate that Algoa 1 is not feasible in its entirety. 2. Algoa 7 hasn't been evaluated in full: The newly added site, just off Ngqura harbour, has not gone through the same detailed assessment process as the other sites. The pre-BAR uses Algoa 2 and Algoa 5 assessment data as a proxy on issues of oceanography and economic prospects and concludes the site's positive viability off that basis. Using proxy data is problematic in itself, but importantly the BAR does not assess the impact on nearby

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.	<p>communities, nor is it informed by local communities' input. Algoa 7 is in close proximity to the beaches of Bluewater Bay and St Georges Strand and those communities must (as has happened with Algoa 1) be informed of potential impacts and be heard in the process. This has not happened.</p> <p>3. High levels of E.coli at Algoa 6 render it unviable: The extension of the current oyster farm, known as Algoa 6, is dedicated to bivalve only. What the BAR fails to evaluate is the impact of specific pollutants in that area on the economic prospects of any operation. Located opposite the mouth of the Papenkuils River, that section of coast is subject to high levels of industrial and human waste (see as reference the work of Dr. E Schuman). It is our understanding that the high levels of E.coli (and increasingly micro-plastics) in the water have required the current operation to close for extended periods and some of its product banned in European markets. Any extension of that current site will likely encounter the same conditions with the same impacts. This impact has not been evaluated by the pre-BAR.</p>
	<p>Response by Anchor: 02 May 2019</p> <p>1. Valid comment. The most important user conflict associated with Algoa 1 have been outlined in this comment. This means that the potential socio-economic impacts associated with Algoa 1 significant (although mostly unquantified). DAFF has decided to put this site forward in the application for environmental authorisation. Three Alternative options comprised of different combinations of precinct and activities have been put forward. Pertaining to Algoa 1, Option A allows finfish and bivalve culture at Algoa 1, Option B only bivalve and Option C excludes Algoa 1 from the ADZ. Please refer to the Background Information Document or the BAR (Section 3.5) for more information.</p> <p>2. Algoa 7. The marine specialists, who have more than 20 years of experience, are confident that the oceanographic data available to date is adequate for the Impact Assessment. Algoa 7 is less exposed (oceanographic term) than Algoa 5 (which was screened out based on the distance from the Ngqura harbour) and the Department of Agriculture, Forestry and Fisheries (DAFF) are aware of the risks associated with finfish farming in Algoa Bay. DAFF internally assessed economic viability of Algoa 7 prior to the start of the Basic Assessment process. With regards to the ecological impacts, Algoa 7 has undergone the same benthic macrofauna assessment and environmental impact assessment as as Algoa 1 (See Appendix D: Benthic mapping report, Dispersion Modelling study and Marine specialist report). Algoa 7 is situated 4.5 km offshore from the nearest swimming beach at Wells estate (St Georges Beach) and Bluewater Bay. Information posters were erected at Wells estate and the Life saving hut at Bluewater Bay beach on 7 March 2019 and the project was announced over the local radio Nkqubela FM in March 2019. The potential impacts on all beach users has been assessed in Section 9.5.2.3 of the BAR.</p> <p>3. Please note that the focus of the BAR is to evaluate the impacts of the proposed development on the environment. DAFF (and the industry) are aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR). An existing oyster company is also battling with water quality at Algoa 6. DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo. For this reason, the option of bivalve culture in Algoa 1 is being explored as an option. For the above reason, no detailed information is presented on the bacterial counts at the Algoa 6. However, a paragraph will be added to detail Zwembesi Farms (Pty) Ltd current challenges will be included in the BAR. The same is applicable to other pollutants that may be present at Algoa 6.</p>
43	<p>Norman Myers</p> <p>Comment submitted: 28 April 2019</p> <p>I have studied your report in some detail and wish to make the following observations, comments, objections and recommendations.</p> <p>At the outset any person reading your document will be struck the fact that you, despite the glaring lack of impartiality, purport to be independent. You clearly are not. Someone with deep pockets is going to take you to court and you are going to have to face huge costs and irreparable damage to your professional reputation.</p> <p>As to the report in general. I refer you to the excellent article by Guy Rogers which appeared in the edition of 27 April of the Weekend Post newspaper and thoroughly associate myself with it and insist that this objection be read as if this article was incorporated herein. The several fatal flaws to site 1 include devastating losses to tourism, employment and the huge environmental disaster and loss of life that the undeniable massive increase of sharks and other predators will bring in its train. To suggest that this should simply be monitored as a remedial measure is laughable and an insult to the intelligence of all people concerned.</p> <p>I wish to offer the following as a sensible alternative. Site 1 should be abandoned as totally and fatally flawed. The site east of the harbour wall be pursued for oyster and mussel farming. The site at Coega should be developed to its full potential.</p>

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.	<p>I believe this is a sensible and workable manner in which a messy, lengthy, enormously costly process can be avoided as I think the majority of sensible people will agree.</p> <p>I can, however, offer no solution to the one glaring and fatal flaw in the whole process as adverted to by Guy Rogers. WHERE IS THE ECONOMIC FEASIBILITY STUDY. Unfortunately you cannot hide behind the lack of funding.</p> <p>The net upshot is that your report is incomplete and premature and in itself this makes the whole process effectively dead in the water. I do however stand by my suggestions as set out above.</p> <p>Follow up comment in response to Anchor submitted on 7 May 2019.</p> <p>I omitted to point out the fact that the presence of protected species and the impact of the activities thereon has also been omitted apparently. I refer to orcas (killer whales) and the other species of mammals such as whales and dolphins that occur in numbers in and around Algoa Bay. Fish farming has had a devastating effect on these species in Canadian waters and ample anecdotal and scientific evidence exists and is freely accessible.</p> <p>What about the extremely negative impact an increase in predators will have on the rich abundance of reef fish (many of which are protected or endangered) to be found in and around Cape Recife.</p> <p>Lastly you have chosen to omit to comment on the evident invalidity of your report absent the Economic Feasibility Study. Possibly because it is simply not possible to defend the indefensible?</p>
	<p>Response by Anchor: 2 May 2019</p> <p>Independence. We have objectively conducted the impact assessment and will provide an objective recommendation to the Department of Environmental Affairs during the application process. The number impacts rated high and medium after mitigation measures have been implemented are a testimony of this (please refer to the impact statement in Chapter 10 of the BAR for a summary and Chapter 9 for the full impact assessment, as well as the marine specialist study in Appendix D). A biased assessment would show predominantly very low and insignificant impact ratings to encourage DEA to provide a positive decision. You are encouraged to provide a more detailed account of which ratings you feel are biased.</p> <p>Algoa 1. Indeed, a number of socio-economic impacts have been identified and have been assessed for Algoa 1 (Section 9.5 of the BAR). The concerns that you raise are potentially significant (as indicated in the choice modelling study conducted by Britz et al. 2016, see Appendix D) but not quantifiable using the information available. This means that if a positive decision is issued for Algoa 1, a precautionary approach would be appropriate in an effort to prevent/mitigate these impacts during the first phase of the development should the Department of Environmental Affairs be satisfied that this is indeed possible.</p> <p>Algoa 6 and 7. Please note that three Alternative Options comprised of different combinations of precinct and activities have been put forward. Pertaining to Algoa 1, Option A allows finfish and bivalve culture at Algoa 1, Option B only bivalve and Option C excludes Algoa 1 from the ADZ. Please refer to the Background Information Document or the BAR (Section 3.5) for more information. All three options with their associated degree of impact will be presented to the Department for decision-making.</p>
	<p>Response by Anchor: 10 June 2019</p> <p>Impacts on cetaceans (whales and dolphins): The impacts on cetaceans (dolphins, whales) were assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The primary impact is caused by entanglement and habitat modification. The negative impact on cetaceans has been rated as low significance after the implementation of mitigation measures, which include:</p> <ul style="list-style-type: none"> • Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case. Research by Koper et al. 2016 and Karczmarski et al 1999 confirm that the humpback dolphin <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 2-5 km offshore). • Ensure all mooring lines and nets are highly visible under water (use thick lines and bright antifouling coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network). <p>Impacts of predators on reef systems. Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. There is currently no evidence that predator presents on reefs adjacent to the proposed ADZ will be impacted by the</p>

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.	<p>proposed development.</p> <p>Economic feasibility study. My apologies that I missed the response to your concern. DAFF commissioned a feasibility study for Algoa 1 (in comparison to the screened out site Algoa 5-Sundays River site) in 2016. These studies assessed the economic, socio-economic and marine ecological feasibility of finfish farming at Algoa 1 and have been included in Appendix D of the pre-application BAR. The survey attempted to gauge whether the external costs (negative social and economic impacts on the tourism and conservation value and others) outweigh the income and employment benefits that could be gained as socially attractive elements. Concerns included perceived impacts on diving, yachting, ski-boating, property values, increased risk of shark attacks, and job losses. A high proportion of people surveyed (39%) found the perceived social cost to be unacceptable (Hosking, 2016). The findings of this study were considered in the current impact assessment process. However, a detailed costing of the potential socio-economic impact (i.e. externalises) of the ADZ has indeed not been completed. Instead, a social choice trade-off survey was undertaken by Britz et al. 2016 (refer to Appendix D of the BAR, Socio-economic specialist study and review of the Bloom 2013 study).</p>
44	<p>Arina Bohler</p> <p>Comment submitted: 28 April 2019</p> <p>I register my strong opposition to a fish farm in an area for human recreation. Hobie Beach is declared a blue flag beach and very popular among swimmers, sea fun activities and sailing. What restrictions will a fish farm hold in?? Please consider the environment before you act Shelfishly.</p> <p>Response by Anchor: 2 May 2019</p> <p>Water quality requirement criteria to obtain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <ul style="list-style-type: none"> A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted) B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below) C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below) D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below) E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below) <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. <i>Escherichia coli</i> and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Recreation and sporting activities and facilities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Potential risk of collision of vessels (including sailing vessels) with the aquaculture farms have been assessed in Section 9.5.2.4.</p>

No	Comment
45	<p>Willem du Plessis</p> <p>Comment submitted: 28 April 2019</p> <p>We would like to emphasize that we are not in favour of the fish farms in or near Port Elizabeth. We have read through several articles regarding this subject including the response from the WESSA – Algoa Bay Branch.</p> <p>We fully agree with the comments recorded in the response from the WESSA AB chairman Mr Gary Koekemoer.</p> <p>Based on what we have read, we do not believe that the EIA has been done carefully enough. It is clear that more research needs to be done to determine the positive and negative impacts that fish farms will have on our economy in general and on the employment levels in our city. New fish farms will certainly employ people but the increase in employment will not make up for the loss of jobs due to the negative impact on tourism. Tourism will be negatively affected because the fish farms will attract sharks and this will keep swimmers and surfers out of the water off our beaches. I am certain that our sea water will also become polluted by the fish farms. There is a serious risk that IronMan and Lifesaving events will be moved to safer areas away from Port Elizabeth. I certainly will not go and swim at our beaches and I will also stop my children and grandchildren from swimming there.</p> <p>Response by Anchor: 02 May 2019</p> <p>Your comment regarding the additional research required to quantify the potential negative economic impacts (including job losses) have been noted.</p> <p>Tourism. Potential impact on tourism dependent businesses and specialised tourism are assessed in 9.5.2.3 of the BAR.</p> <p>Pollution, deterioration of water quality. Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <ul style="list-style-type: none"> <li>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted) <li>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below) <li>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below) <li>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below) <li>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below) <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: "Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Events (Iron man and live saving): Recreation and sporting activities and facilities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Concern over shark numbers: Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks</p>

No	Comment
.	<p>(<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
46	<p>Moyna Joseph Comment submitted: 28 April 2019</p> <p>I would like to put on record my objection to the establishment of the proposed Algoa Bay Aquaculture Development Zone as contained in the DAFF's new Basic Assessment (BAR) process. My reasons for this are as follows.</p> <p>General Fish Farm pre-BAR Report Shortcomings</p> <ul style="list-style-type: none"> • It is imperative that full EIAs on ALL proposed sites are done before a valid, informed decision can be made about any of sites. To base an assessment of Algoa 7 on information from Algoa 2 or Algoa 5 is not feasible. • 30 days' for public comment is insufficient over this particular period – which included Easter weekend, school holidays, international events (Iron Man) etc • Previous fish farm attempts have been unsuccessful (I & J 2008). In addition, the present oyster farm has also experienced occasional periods of high e-Coli contamination, which has rendered product unusable. The report appears to have taken no cognisance of this. • No effective Economic Assessment has been done. It is ludicrous to use a sample of 150 uninformed opinions rather than collecting specific data from affected parties. <p>Particular Concerns:</p> <p>Further Job creation vs job loss</p> <p>It is estimated in the report that 100 jobs will be created in the pilot project (and upwards of 1000 if the entire project is completed) However, the establishment of the fish farm will negatively impact many more. With the establishment of a fish farm, Algoa Bay will be seen as an industrial rather than a recreational area.</p> <ul style="list-style-type: none"> • All facets of the Tourism Industry in Port Elizabeth and surrounding areas will be impacted by a reduction in the number of visitors. • Recreational diving businesses (Pro-Dive, Elite Scuba PE, Marine Training & Consulting etc) will not be able to use the closest, most popular reef, which may well make their businesses non-viable. • Associated businesses (diving equipment, scuba tank refilling etc) will likewise suffer/ close down. • Surfing businesses will be similarly affected. • Accommodation establishments whose clientele visit PE specifically because of its safe and aesthetically pleasing beaches will lose bed nights and this will lead to job losses. <p>Impact on PE Branding</p> <p>PE has recently aspired to, and gained, the tag of The Water sports' capital of SA.</p> <ul style="list-style-type: none"> • Events such as Iron Man, Bell Buoy Swim etc will not be able to be held. The International coverage of such events brings enormous acclaim to PE. The financial impact of this tourism promotion – and loss of such- is incalculable. • Surfing, yachting, etc will all be impacted • The Blue Flag status of our beaches will be jeopardised. • Impact on Communities near Algoa 7 • Bluewater Bay and St George's Strand are of extreme value to the adjacent communities because of proximity and ease of access compared to other beachfront areas. The aspects of potential water contamination, additional shark activity, aesthetic considerations etc are of very real concern and these communities must be afforded an opportunity to comment.

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.	<p>Impact on local fishing industry</p> <p>Local fishing boats take shelter from bad weather at the proposed location of Algoa 1. This will no longer be possible.</p> <p>Sustainability of marine eco-systems will be impacted.</p> <ul style="list-style-type: none"> • Farmed Kob will be fed on fishmeal, made from Pelagic fish such as anchovies, sardines, pilchards etc. Increased requirements to feed the farmed fish will deplete the resources of such species in the bay. It is not feasible to endanger certain species in order to increase others. • The islands in Algoa Bay support breeding colonies of the endangered African Penguin, which feed on the same Pelagic fish (anchovies, sardines, pilchards). Depleted resources of these will lead to the decimation of the penguin colonies. • The presence of artificially introduced feeding material, which may be lost below the farm nets, is likely to attract free-swimming fish, with a corresponding food chain upset. • Presence of antibiotics and other additives in the feeding material likewise introduces potential hazards to the natural order. • There is no way to prevent cross-infection between farm and free-swimming fish. <p>Marine Spatial Planning Disruption</p> <p>The establishment of the Fish farm will place artificial constraints on the MSP that is under consideration for Algoa Bay, obstructing optimum development in the bay.</p>
	<p>Anchor response: 6 June 2019</p> <p>General shortcomings:</p> <p>Insufficient studies and Full EIA should be conducted: The proposed development does not trigger listed activities contained in the Environmental Impact Assessment (EIA) Regulations Listing Notice 2. Aquaculture was removed from the list of activities in this notice in the 2014 amendments of the EIA Regulations. However, it should be noted, that the the comprehensive Scoping phase that was conducted as part of the previous process (Strategic Environmental Assessments of 2009 and further site selection and elimination since 2011) and specialist studies conducted since 2011 (see list below) are comparable to a full S&EIR process. For example, Algoa 7 was subjected to the same marine ecological baseline study when compared to Algoa 1 (See Benthic Habitat Mapping specialist study in Appendix D). Finally, the public consultation process is also extensive (two rounds and a number of measures are undertaken in addition to the minimum requirements as per EIA Regulations. Please refer to the presentation that was given at the first public meeting on 6 March 2019, which is also available on our website). In short, a full S&EIR process would not mean that more studies or more public consultation would be undertaken.</p> <ul style="list-style-type: none"> • Marine specialist study 2019 (Algoa 1, 6 & 7) • Dispersion modelling 2019 (Algoa 1, 6 & 7) • Benthic habitat mapping (Algoa 1, 6 & 7) • Maritime and Underwater Cultural Heritage Impact Assessment 2019 (Algoa 1, 6 & 7) (ACO Associates) • Comparative Assessments (Rhodes University 2016) (Algoa 1 and 5, although 5 has been screened out) • Socio-economic Report • Ecological Report • Feasibility study • Marine specialist study 2013 (Algoa 1) • Visual specialist study 2013 (Algoa 1) • Socio-economic specialist study 2013 (Algoa 1) <p>30 days commenting period insufficient: As Environmental Consultants it is our responsibility to provide reasonable opportunity for stakeholders to provide comment on the report. We would like to emphasise that we are providing stakeholders with an additional 30 days to the mandatory 30 day commenting period (i.e. stakeholders have 60 days in total to comment on the report), which include 2 stakeholder meetings that are also not mandatory in terms of the legislation.</p> <p>This means that any stakeholder who missed the deadline for the non-mandatory pre-application commenting period will have a chance to submit their comments in the next, mandatory commenting period, which will be held in June/July once the application for environmental authorisation has been submitted. Either way, their comments will be addressed before the Final BAR is submitted to the competent authority for decision-making.</p> <p>I&Js was not successful in finfish cage farming. This statement is not true. Please refer to Section 8.5.2.5 of the pre-application Basic Assessment Report. The Department of Science and Technology - in partnership with Irvin & Johnson Ltd - conducted a 2-year pilot project 1 km offshore near the Port Elizabeth harbour to ascertain the</p>

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.	<p>commercial, technical and environmental viability of sea-based cages for breeding three indigenous and overfished South African line-fish species, namely dusky kob (<i>Argyrosomus japonicus</i>), silver kob (<i>Argyrosomus inodorus</i>) and yellowtail (<i>Seriola lalandi</i>). Fish sampling after the third production month indicated an average weight of 74.73 g for kob and 17.57 g for yellowtail, compared to the respective target weight of 53.32 g and 15 g (Department of Science and Technology, 2011a). At the conclusion of the pilot project in July 2010, the cages and mooring system were removed. The second phase for yellowtail was not realised due to the lack of fingerling availability and the project was closed in 2013.</p> <p>E. coli issue at Algoa 6: Please note that the focus of the BAR is to evaluate the impacts of the proposed development on the environment. DAFF (and the industry) is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR). An existing oyster company is also battling with water quality at Algoa 6. DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo. For this reason, the option of bivalve culture in Algoa 1 is being explored as an option.</p> <p>Socio-economic study not detailed enough. A detailed costing of the potential socio-economic impact (i.e. externalises) of the ADZ has indeed not been completed. Instead, a social choice trade-off survey was undertaken by Britz et al. 2016 (refer to Appendix D of the BAR, Socio-economic specialist study and review of the Bloom 2013 study). The survey attempted to gauge whether the external costs (negative social and economic impacts on the tourism and conservation value and others) outweigh the income and employment benefits that could be gained as socially attractive elements. Concerns included perceived impacts on diving, yachting, ski-boating, property values, increased risk of shark attacks, and job losses. A high proportion of people surveyed (39%) found the perceived social cost to be unacceptable (Hosking, 2016). The findings of this study were considered in the current impact assessment process.</p> <p>Particular concerns:</p> <p>Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries.</p> <p>Negative economic impacts (including impact on tourism) as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. For finfish farming at Algoa 1, this impact is rated as high and medium before and after mitigation measures respectively (note that the impact is lower at Algoa 6 and 7 and for bivalve culture). Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Impact on SCUBA dive sites: The impact on SCUBA diving was assessed in Section 9.5.2.3 (Potential impact OP-SE3b) of the BAR. The overall the impact on SCUBA diving was rated to be very low with mitigation measures for all precincts (medium confidence). None of these diving sites overlap with any of the proposed precincts (one of the site selection criteria in the Strategic Environmental Assessment excluded known reef areas), and as such loss of access to any of these dive precincts by recreational scuba divers will not occur. It is, however, recognised that ecosystem degradation could reduce the recreational value of the reef systems surrounding Algoa 1. Impacts on benthic habitats below fish cages does tend to be localised to the area under the cages. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 7 (and 1), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. The impact on water quality and benthic habitat is rated as medium after the implementation of mitigation measures in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme, through which the benthic impact footprint can be determined.</p> <p>Impact on PE branding:</p> <p>Events and water sport activities: Recreation and sporting activities and facilities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address</p>

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.	<p>potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Blue flag status: Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 and 7 sites. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Algoa 7 (Ngqura harbour) communities: Algoa 7 is situated 4.5 km offshore from the nearest swimming beach at Wells estate (St Georges Beach) and Bluewater Bay. Information posters were erected at Wells estate and the Life saving hut at Bluewater Bay beach on 7 March 2019 and the project was announced over the local radio Nkqubela FM in March 2019. The potential impacts on all beach users has been assessed in Section 9.5.2.3 of the BAR.</p> <p>Impact on local fishing industry: I am not aware of an anchorage area near Algoa 1 and this will be investigated further, thank you for pointing this out. The assessment considered the Chokka industry, however, which utilises the southern portion of Algoa 1. The proposed Aquaculture Development Zone has the potential to reduce fishing grounds and this impact was assessed in Section 9.5.2.6 of the Basic Assessment Report. Impacts on the local fishery were rated of medium to low significance (medium for Algoa 1 and 7, low for Algoa 6). It should be noted that the impact at Algoa 1 before mitigation is high due to the overlap of the site with an important squid nursery area. The only way to reduce the impact at Algoa 1 to "Medium" significance is to avoid the southern part of Algoa 1, which is in conflict with the recommendations in the visual impact assessment (avoid northern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Sustainability of marine ecosystems: Feed: Pellet feed for finfish is made from fishmeal produced from anchovies and sardine off-cuts. However, individual operators will be required to purchase fish meal from existing right holders (fishing right applications are not included in the application). To ensure a sustainable fishery, DAFF determines the Total Allowable Catch (TAC) for each species. The TAC will therefore not increase to meet an increased demand in the aquaculture sector. Even if individual operators were allocated their own fishing quota, the quota would have to be allocated from the total national quota. Due to the proclamation of the MPA, which includes the St Crox Island group, feeding grounds of penguins and other seabirds will be protected in from over exploitation in future.</p> <p>Ecosystem impacts: The Marine Specialist Study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming listed here (impacts on Penguins, organic pollution, chemical pollution and disease). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p> <p>Marine spatial planning: Refer to the national Strategic Assessment for finfish culture in South Africa. Given that the spatial planning component (which takes into account other users) of the Algoa ADZ was initiated as early as 2009 in the SEA phase, it certainly pre-dates (but not necessarily pre-empts) the recently established NMMU academic unit. The DAFF is a key Department in the Marine Spatial Planning process and is ensuring that fisheries and aquaculture is considered in this process. A section on the Marine Spatial Planning Bill will be included in the Draft BAR and the</p>

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.	importance of considering this Bill, its Guidelines and future legal ramifications in the decision-making process will be highlighted in the Impact Statement (Chapter 10 of the BAR). The Department of Environmental Affairs will be required to take into account the Marine Spatial Planning Bill and its Guidelines and future legal ramifications in the decision-making process.
47	<p>Sameer Agherdien – Open water swimmer and water sports Comment submitted: 28 April 2019</p> <p>As an avid ocean sportsman I.e. long distance swimming , Supping and anything water related I would like to strongly object to this fish farm. Can I propose doing it in the sardinia bay Area or even along the tsitsikaama nature reserve area where zero human activity takes place. Port Elizabeth has very few tourist attractions and the ocean is probably our main attraction please dont destroy it by bringing this shark bait ball here.</p> <p>Response by Anchor: 03 May 2019</p> <p>Opposition to the proposed development is noted.</p> <p>Sharks: Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2." This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Impact on recreation and sporting activities and facilities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Site selection. Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p>
48	<p>John Saunders Comment submitted: 28 April 2019</p> <p>If must have this fish farm please do it at coega, well away from swimming beaches and can be exported easier if needs be</p> <p>Response by Anchor: 03 May 2019</p> <p>Opposition to Algoa 1 is noted. Algoa 7 is situated approximately 3 km from the Ngqura Harbour and is put forward in the application for environmental authorisation. In total three sites are considered, namely Algoa 1 (Summerstrand), Algoa 6 (PE Harbour) and Algoa 7 (Ngqura Harbour). Three alternatives (combination of precincts) are described in Section 3.5 and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
50	<p>Gary Koekemoer – Chairperson of the Wildlife and Environment Society of South Africa (WESSA) Comment submitted: 28 April 2019</p>

No	Comment
.	<p>The comments were submitted as a 16 Page document, which is included in Appendix F6. The most important points are summarised below:</p> <ul style="list-style-type: none"> • We are unequivocally opposed to the proposed Algoa Bay Aquaculture Development Zone (ADZ) • Algoa 1 isn't feasible as per the pre-BAR's own specialists • Algoa 7 hasn't been evaluated in full • High levels of E.coli at Algoa 6 render it unviable • Significantly increased Shark threat (real and perceived) to humans • Revised job creation numbers are overly positive • The negative (socio-economic) impact on human use of ocean resources and subsequent impact on local business remains an open question • Change to the Bay's reef eco-systems <ul style="list-style-type: none"> ○ Diseases, organic pollution and chemicals ○ Impact on nearby reef systems ○ Potential impact on apex predators • No consideration given to sand movement • Current movement is complex, the partial pre-BAR information leads to incorrect assumptions for Algoa 1 <ul style="list-style-type: none"> ○ Magnetic declination ○ Report does not describe how a near-surface (0-6m) dynamic cell was made ○ Current direction in Table 2-3 ○ Impact on Blue Flag Status • Impacts on the endangered African Penguin • Algoa Bay sea conditions require deep-sea aquaculture facilities, the pre-BAR's assessment appears to be premised on calm water facilities • Sea-based fish farms are not the only, nor necessarily best, approach to aquaculture <ul style="list-style-type: none"> ○ Sea-based aquaculture will not contribute to food security ○ Land-based facilities • Priority given to ocean users in the absence of a Marine Spatial Plan is arbitrary • The current public participation does not enable I&APs' informed engagement • The pre-BAR requires attention to detail • The Impact Assessment methodology is flawed • The 12-cage pilot phase as mitigation will not provide the necessary insight into a full scale 82-cage operation at both Algoa 1 and 7 • The risk of the ADZ on the endangered African Penguin (and other bird life) has not been assessed
	<p>Response by Anchor: 04 June 2019</p> <p>1. Algoa 1 isn't feasible as per the pre-BAR's own specialists: A significant user conflict associated with Algoa 1 have been outlined in this comment. During the 2010-2014 application and current pre-application stakeholder consultation processes, I&APs expressed concern regarding the southern part of Algoa 1 (Option 2), which overlaps with the squid breeding area targeted by chokka squid fishery. As breeding areas provide for the best catches, the establishment of a fish farm in the same area will most likely have a quantifiable, significant impact on the local squid industry. In contrast, aquaculture activities associated with the northern portion may affect numerous sensitive visual receptors (Marine Drive and Beach Road, beach users, main hotels along Marine Drive, as well as diving and yachting activities within the bay). The socio-economic knock on effects from visual impacts associated with aquaculture (particularly finfish) of the northern portion (Option 1) remain an unquantified, but valid concern and have played a part in the revision of the assessment of negative economic impacts on Port Elizabeth.</p> <p>2. Algoa 7 hasn't been evaluated in full: The marine specialists, who have more than 20 years of experience, are confident that the oceanographic data available to date is adequate for the Impact Assessment. Algoa 7 is less exposed to ocean swell entering the bay than Algoa 5 (which was screened out based on the distance from the Ngqura harbour) and the Department of Agriculture, Forestry and Fisheries (DAFF) are aware of the risks associated with finfish farming in Algoa Bay. DAFF internally assessed economic viability of Algoa 7 prior to the start of the Basic Assessment process with regards to proximity to the harbour, exposure to swell and location inside the proposed MPA (now approved Addo MPA boundaries exclude Algoa 7). With regards to the ecological impacts, Algoa 7 has undergone the same benthic macrofauna assessment, dispersion modelling, and marine specialist study as Algoa 1 (See Appendix D Benthic mapping report). A visual impact assessment was conducted for Algoa 7 in the pre-application BAR. Algoa 7 is situated 4.5 km offshore from the nearest swimming beach at Wells estate (St Georges Beach) and Bluewater Bay. Information posters were erected at Wells estate and the Lifesaving hut at Bluewater Bay beach and the project was announced over the local radio Nkqubela FM in March 2019. The potential impacts on beach users has been assessed in Section 9.5.2.3 of the pre-application BAR.</p>

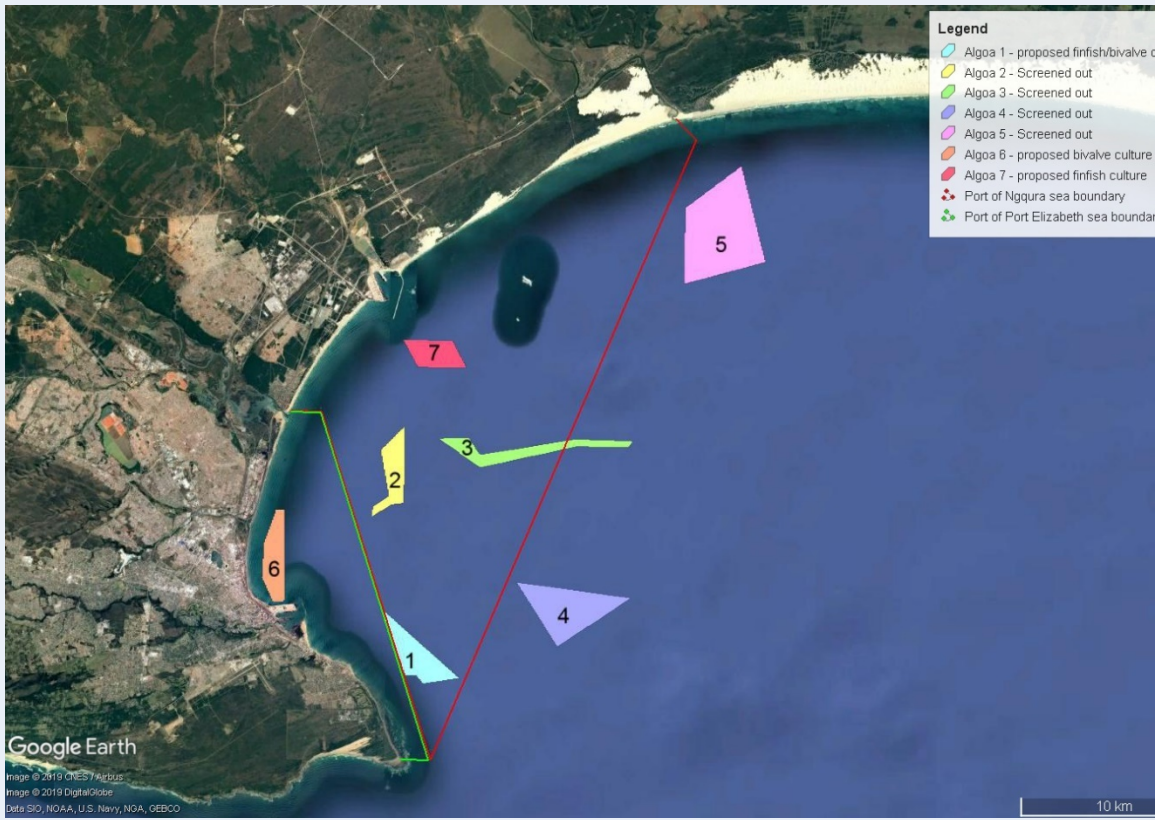
No	Comment
.	<p>3. High levels of <i>E.coli</i> at Algoa 6 render it unviable: The focus of the BAR is to evaluate the impacts of the proposed development on the environment. DAFF (and the industry) is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR. DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo.</p> <p>4. Significantly increased Shark threat (real and perceived) to humans. The concern regarding the perceived risk and uncertainty associated with the impact rating on the actual risk is noted. The risk is considered to be higher for Algoa 1 when compared to Algoa 7, where open water swimming occurs regularly for training purposes and competitive events. The impact assessment will be reassessed by considering more seriously the perceived increased risk of shark attacks (rather than only focusing on the potential real risk). Perception is an important unknown factor in determining the knock-on economic impacts on recreational businesses. Please also refer to response to comment 6b.</p> <p>With regards to the real risk, please also take into consideration the following. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2. This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>5. Revised job creation numbers are overly positive: The BAR will include a more detailed account of what types of jobs can be expected from the Aquaculture Development Zone. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The pre-application BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development. However, it is recognised that job losses have not been quantified in the socio-economic specialist study by Britz et al. 2016.</p> <p>6. The negative (socio-economic) impact on human use of ocean resources and subsequent impact on local business remains an open question:</p> <p><u>Appeal Statement by the Minister applicable to Algoa 1 was not met.</u> Quotes from the pre-application BAR are correctly summarised in this comment. Peter Britz from the Rhodes University, as the lead author on the comparative studies, responded to this concern by stating that: "The socio-economic report consisted of two components which need to be read together, visibly 1) the social choice survey which modelled the perceived negative/positive environmental and recreational effects establishing an Aquaculture Development Zone and 2) a detailed economic analysis of the feasibility of aquaculture in Algoa Bay which included a realistic projection of the production potential of the sites, income, costing, and jobs. The economic feasibility analysis which was compiled by aquaculture industry experts is quantitative and considered robust based on market demand, real costs and prices. Read together, the two components of the socio-economic report substantively address the Minister's brief and provide a basis for her making a decision."</p> <p>a) It is important to recognise that the public participation process has the purpose to engage with all stakeholders</p>

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As an example, Ironman Organisers indicated during the 2014 appeal phase and the pre-application consultation of the current BA process that the event would be moved should finfish cages be installed at Algoa 1 Option 1. This impact could potentially be irreversible and occur during the pilot phase. It appears that there are few effective mitigation measures available to influence the perception of water sport participants. Furthermore, the beaches and marine environment near Algoa 1 Option 1 precinct constitute the main area where water sport events and activities take place (i.e. sensitive environment). The EAP agrees that in the absence of a detailed, quantitative socio-economic study, a precautionary approach should be applied, and the impact assessment will be revised accordingly. In the light of the above, with regards to perception, it is recognised that a phased approach would not be effective. A phased approach is, however, important to verify effectiveness of mitigation measures implemented to reduce visual and marine ecological impacts.</p> <p>c) Your opinion that socio-economic impacts were not sufficiently addressed are noted. During the next public participation process, the competent authority will consider the Draft BAR (including comments provided by stakeholders) and provide input. The competent authority will request additional information if required.</p> <p>d) Noted</p> <p>7. Change to the Bay's reef eco-systems:</p> <p>Diseases, organic pollution and chemicals: Concern is noted.</p> <p>Impact on nearby reef systems: The impact significance ratings in the marine impact assessment were derived by taking cognisance of sensitive habitats and species surrounding the proposed ADZ sites.</p> <p>A) Untreated wastes resulting mainly from uneaten food and faeces of fish in sea cages are discharged directly into the sea and are not an insignificant source of nutrients. Impacts of organic pollution on benthic habitats below fish cages does tend to be localized to the area under the cages. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme. The impact on benthic habitats were assessed in the Marine Specialist Study in Appendix D of the pre-application BAR Section 4.1.5.1.2. Hydrodynamic model (Modelling–Ongrowing fish farm–Monitoring System - MOM) results do suggest that both Algoa 1 and Algoa 7 have acceptable dispersion potential and water quality standards are predicted to be met within the precinct boundaries (Wright et al 2019). The impact of organic waste discharge was rated as 'high' before and 'medium' after mitigation measures have been implemented. The marine ecological specialist maintains that a phased approach is considered a critical mitigation measure to facilitate adaptive management and to ground-truth the hydrodynamic modelling results with respect to carrying capacity of the site.</p> <p>The impact of chemical therapeutants and antifoulants in finfish cage culture (note that these chemicals are not used in bivalve culture) were assessed in Section 4.1.5.1.4. of the Marine Specialist Study in Appendix D of the pre-application BAR. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document, which contains all mitigation measures required to reduce the impact ratings. Responsible operators (& management) will implement recommended mitigation AND monitor the effectiveness thereof. This has been the case with historical experimental cages installed in Algoa Bay (the DST, Stellenbosch university trials with yellowtail and kob) where mitigation measure were implemented and extensive environmental monitoring was required (this was undertaken by NMMU researchers); This is also currently being implemented in trial sea cage culture in Saldanha Bay where aquaculture permit conditions require the operators to undertake amongst other requirements, water quality and benthic monitoring in accordance with their EMPr (note that the responsibility to uphold the Environmental Authorisation still lies with DAFF). The recent certification of two sea-based Japanese Yellowtail (<i>Seriola lalandi</i>) farms by the aquaculture stewardship council (https://www.eurofishmagazine.com/news/item/467-first-yellowtail-farms-to-be-asc-certified-are-japanese) suggests that it is possible to sustainably farm this species with effective mitigation of environmental impacts.</p> <p>Apex predators: The direct impacts on marine predators has been assessed in the Marine Specialist Report (Appendix D). There is no reason to believe that the interaction between apex predators as a knock-on effect would</p>

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.	<p>be different near fish cages when compared to a natural food source (e.g. whale carcass/seal colony/fish swarm). To the best of our knowledge published studies assessing a change in apex predator interactions as a result of finfish cage farming are currently not available. As a result, rating the impact of altered predatory interactions is extremely speculative and any impact rating associated would therefore be meaningless.</p> <p>8. No consideration given to sand movement. A hydrodynamic sediment modelling study was not conducted as part of this impact assessment. Based on the marine specialist's knowledge, the two mechanisms by which sand is supplied to beaches are primarily aeolian (i.e. sand transported by wind from the land into the sea) and by means of long-shore currents in the nearshore (<10m depth) (Rivers also supply the coastal environment with sediment). Long-shore drift is caused by currents flowing parallel to the shore, redistributing sediments along the coast. Algoa 1 (Summerstrand) is an offshore site and is situated well outside of the long-shore drift zone (20-40 m depth). Furthermore, cages and their moorings are unlikely to hinder sediment movement, unlike solid structures (such as jetties, groynes or reclamation of land).</p> <p>9. Current movement is complex, the partial pre-BAR information leads to incorrect assumptions for Algoa 1:</p> <p>a) Magnetic declination. Current direction data was presented as collected by the instrument, i.e. using the internal compass (magnetic- which was calibrated whilst attached to the mooring). There was no ulterior motive in not adjusting current directions to account for magnetic declination. The current roses are not depicted on a map and the caption clearly indicates that the directions shown are magnetic. A magnetic declination of -28 degrees is applicable if one wishes to orientate these current roses to true north, this equates to an approximate 8 % anticlockwise rotation. The most frequent current directions remain southerly to south easterly. The report also does not ignore the fact that currents did on occasion flow towards land - as quoted in comment below.</p> <p>b) Report does not describe how a near-surface (0-6m) dynamic cell was made: It is important to note that the measurements for the near surface cell are for Algoa 2 (that was used as a proxy for Algoa 7) and NOT Algoa 1 where the "surface " depth bin dimensions are clearly indicated in the caption for Fig 2.2. surface (2.9-5.4m depth). The near surface (0-6m) current measurements at Algoa 2 were recorded using the ADCP instruments dynamic cell feature where the sampling volume changes with tidal fluctuations in water level. The following excerpt from the Argonaut-XR ADCP user manual describes how this works (we could include this in the benthic habitat report, but I think the technical details of instrument capabilities are probably not of interest to most stakeholders):</p> <p>"Since its introduction, the Argonaut-XR has differed from other Doppler current meters in a very special way. The size and extent of the XR's sampling volume is dynamic and can change with changing water level. This feature has been referred to in the past as the AutoTide feature. In basic terms, how the AutoTide works is that the Argonaut-XR uses its built-in pressure sensor to detect the surface boundary. The sampling volume (Cell) has both "Cell Begin" and "Cell End" parameters that can be pre-set by the user to be either fixed in place, or dynamic with changing water level. When using AutoTide, the Cell End is then automatically placed just below the water's surface using the formula:</p> $CE = 0.9*(P - 2*\sigma P)$ <p>Where:</p> <p>CE = "Cell End" or the maximum extent of the sampling volume near the water surface</p> <p>P = Water Level as calculated by the pressure sensor</p> <p>Note that the above formula accounts for wave fluctuations while also having a 10 % safety factor."</p> <p>The incorporation of the 10% safety factor does mean that the top 10% of the water column is not included in the current data for Algoa 7, nor for Algoa 1 where the "surface" bin starts at 2.9m depth. This is a fact that has never been overlooked and we have always acknowledged in public meetings that ADCP data cannot include the surface water layer. The response to concerns raised about wind driven surface currents (particularly easterly winds that are dominant in summer) carrying waste from the fish cages to popular swimming beaches, remains (as stated in public meetings and elsewhere in response to comments) that the majority of the waste from fish cages is uneaten food and faeces that sinks in the water column and currents operating at midwater or below the cages (approximately 15m depth) are the dominant drivers of waste dispersal. Dissolved nutrients e.g. ammonia, nitrate, phosphate will also enter the water column at the depth of the faeces or uneaten food and not the very surface water. Although vertical mixing or upwelling could theoretically transfer nutrients to the surface, there is no reason to expect a concentration of nutrients in the surface layer, in fact the frequent presence of a thermocline is a barrier to this. Oils and fats, present in food may float to the surface if pellets are left in the water column for a sufficient time to dissolve, but as farmers will aim to minimise food wastage and maximise food conversion ratios, as well as the documented feeding by wild fish on uneaten pellets that may sink below the cage floor, suggests that significant quantities of fats and oils on the sea surface (that could pose a pollution issue on beaches more than 2 km away) are unlikely to occur.</p> <p>Current direction in Table 2-3: Wright et al. 2019 used the predominant current direction as input into the MOM model. The predominant current direction at Algoa 1 is southerly. The modelling report has been amended to clarify</p>

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.	<p>this.</p> <p>c) Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Impact on penguins. Comment noted. The organic waste produced by a cormorant or penguin colony is likely to outweigh the output of the proposed finfish farm at Algoa 7. It is noteworthy that colonies on South Africa's islands were historically depleted of guano to produce fertiliser. Other impacts on piscivorous birds (interactions and entanglement, impact of therapeutants and antifouling chemicals) may however occur and have been assessed in the Marine Specialist Study.</p> <p>10. Algoa Bay sea conditions require deep-sea aquaculture facilities, the pre-BAR's assessment appears to be premised on calm water facilities: DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. DAFF maintains that technology exists for offshore and exposed aquaculture sites and operators would install suitable equipment as both equipment and the product (fish/bivalves) have economic value.</p> <p>This EIA process is for the declaration of an ADZ, where finfish and bivalves can be cultivated by operators (currently unidentified) in the future. As such the infrastructure details are not fully known, nor prescribed at this stage. The BAR does suggest the probable type of infrastructure (longlines, rafts for bivalves and circular floating cages for finfish) based on international practice and aquaculture development in South Africa to date. This infrastructure is not globally uniform in design and construction, with more robust material and mooring systems used in more exposed areas. It is true that very sheltered marine environments such as fjords are cheaper and easier to install and maintain aquaculture infrastructure in. For example floating circular fish cages are generally thought to be suitable for environments where significant wave heights of up to 3.5m are experienced (it is important to note the definition of significant wave height – this is not the largest waves but rather the average of the top 33.3% of measured wave heights- bigger individual waves are expected about 16.5% of the time). This is of course also not a "hard and fast rule" as cages could be constructed from more robust material to withstand greater significant wave heights (and other environmental stresses such as wind speed and current strength). The BAR (and associated specialists reports) highlights the fact that Algoa Bay at times experiences significant wave heights in excess of 3.5 m (based both on ADCP measured wave heights over a 12 month period and long term Voluntary Observing Ships data) and cautions that future operators will need to take cognisance of this risk when designing and implementing infrastructure. It should also be noted that floating circular fish cages were successfully installed and stocked with yellowtail and kob in Algoa Bay during the DST-Stellenbosch University trials a decade ago.</p> <p>The guide to sea conditions for operating small research vessels in Algoa Bay compiled by the South African</p>

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Sea-based fish farms are not the only, nor necessarily best, approach to aquaculture</p> <p><u>Food security:</u> As discussed by Britz et al. (2016), food security is not a likely outcome of the proposed project. Feed for aquaculture is primarily made from anchovies, (sardine stocks have been largely depleted) which are high volume, low quality fish and the project is therefore more accurately described as one to convert low (market) value wild fish into high (market) value finfish. The end consumer of high market value fish, mussels or oysters will not be communities for whom food security needs to be improved. Accordingly, the original socio-economic impact assessment by Bloom (2013) had already been amended in the pre-application BAR to exclude the positive impact of improved food security. However, erroneously, the chapter on the ‘Need and Desirability’ of the pre-application BAR stated that the proposed sea-based ADZ could contribute directly towards food security (i.e. the product will be consumed by poor communities). This has been corrected in the Draft BAR. Feed for aquaculture is primarily made from anchovies, which are high volume, low quality fish, not currently contributing to food security in South Africa. Finfish farming would therefore not exacerbate the problem of food security.</p> <p><u>Land-based facilities:</u> DAFF intends to promote land-based AND sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega IDZ for hatcheries and holding facilities. Note however, that the land-based Coega ADZ has already been granted Environmental Authorisation and activities associated with the sea-based ADZ would have to fall within the authorised scope. The link of the sea-based ADZ to the land-based Coega ADZ will be explained more clearly in the Draft BAR. Each aquaculture type has its own challenges as well as varying negative impacts and degrees to which mitigation measures are realistically implementable. For example, land-based facilities must be supplied with clean seawater and various systems are available (flow-through, partial re-circulation and full re-circulation). Overall implementation of a land-based system is very expensive (due to pumping costs, high electricity demand, and infrastructure costs). In contrast, cage culture makes use of the assimilative capacity of the receiving environment and if managed carefully (e.g. site selection for appropriate waste dispersion, not exceeding carrying capacity (in kg fish) of the site) can have a lower impact on coastal water quality and ecosystems than a land-based facility that discharges finfish effluent close to the shore where dispersion may be limited. This is especially true if effluent is discharged into a sensitive environment such as an estuary.</p> <p>Land-based discharges into estuaries are now seldomly permitted in terms of the Integrated Coastal Management Act. Ground Rule 10 of the “Assessment Framework for the Management of Effluent from Land Based Sources Discharged into the Marine Environment” states that: “Discharges of land-based effluent to the offshore coastal waters through a coastal outfall should be considered as the preferred option over any estuary or surf zone discharge, unless the suitability of the areas to accommodate such activities are properly assessed.” Furthermore, farming finfish in an estuary (i.e. cages) could be detrimental to South Africa’s wild fish stock, as many species rely on estuaries as nursery sites. While the risk of disease transfer in the open ocean is a real risk (impact rated as ‘high’ after the implementation of mitigation measures, disease transfer in estuarine-based finfish culture would be even more risky. In fact, disease transfer from caged finfish to wild finfish has been most detrimental within Fjords in the northern hemisphere, where farmed salmon transferred diseases to wild salmon passing the cages in close proximity during the spawning season.</p> <p>On the other hand, diseases are much more easily controlled on land, where treatments can be applied more effectively and effluent can be sterilised prior to discharge, thereby reducing the impact on native fish populations. The absolute prevention of impacts is impossible, and it is therefore important to consider the types of mitigation measures that are available and how effective they are. Environmental monitoring (baseline and impact monitoring) are also key in detecting unexpected impacts and mitigating their effects. Please refer to the Environmental Management Programme (EMPr) in Appendix F for more information.</p> <p>12. Priority given to ocean users in the absence of a Marine Spatial Plan is arbitrary: We will include a section on this Bill (note that the Act was recently promulgated and a section has been included in the Draft BAR) and highlight in the Impact Statement (Chapter 10 of the BAR) the importance of considering this Bill, its Guidelines and future legal ramifications in the decision-making process. We are aware of the spatial planning unit at the Nelson Mandela University and will include a paragraph on this unit and its objectives in the Draft BAR.</p>

No	Comment
.	<p>Precincts Algoa 2 and 3 (named Port Elizabeth 2 and 3) were screened out from the EIA process as they were found to lie within an area of very high shipping traffic. Algoa 2 and 3 fell under the jurisdiction of the Port of Ngqura and the potential for collision of vessels with the area was considered a fatal flaw (note that the remainder of Algoa 3 that extends beyond the jurisdictional area would have been too small. Algoa 4 was not environmentally feasible (wave exposure and depth when compared to 1 and 7) and Algoa 5 was excluded predominantly due to very low economic feasibility as a result of the 25 km distance from Ngqura harbour for which no feasible mitigation measure was available (the MPA played a role as well, but economic feasibility is more critical in this instant as a closer proximity to a harbour means that smaller weather gaps can be utilised for farm maintenance).</p>
	
	<p>(a) North-End Beach to NMB Stadium precinct. Please provide a link to a document that provides evidence of such plans. Replenishing the beaches without removing the harbour would most likely be a futile exercise.</p> <p>(b) The Nelson Mandela Bay Southern Beaches: Proposed Beach Aquatic Safety Zones (B.A.S.Z.) map provided in Section 8.5.2.1 (Figure 21) shows that the sanctuary zone extends approximately 800 m offshore from. Algoa 1 does not overlap with this sanctuary zone as the closest corner lies 2.1 km offshore.</p> <p>(c) Section 8.5.2.1 (Affected user groups) of the pre-application BAR describes the area which is used by yachts (Figure 22). The impact of potential collision between vessels and the aquaculture facility are assessed in Section 9.5.2.4 of the BAR.</p>
	<p>13. The current public participation does not enable I&APs' informed engagement:</p> <p>a) We strongly believe that we are matching the effort to engage the public to the scale and impact of this project and that we are providing a reasonable opportunity for the public to provide comment on the proposed development. Hundreds of comments were submitted during the pre-application public participation phase (each comment will be responded to individually) on the project and the stakeholder database contains over 700 registered I&APs.</p> <p>As per the EIA Regulations, neither the Basic Assessment nor the Scoping&EIR processes require public meetings. The guidelines for the public participation process recommend that meetings should be held when appropriate. As per the guidelines, the meetings are held because we believe they provide additional opportunity to I&APs to engage with this project.</p> <p>As explained in the first public meeting (pre-application process) that was held in the town hall of Port Elizabeth on 6 March 2019 (presentation has been made available to the public), we are providing stakeholders with an additional 30 days, which is not mandatory (i.e. stakeholders have 60 days in total to comment on the report).</p> <p>This means that any stakeholder who missed the deadline for this current non-mandatory pre-application</p>

No	Comment
.	<p>commenting period will have a chance to submit their comments in the next, mandatory commenting period, which will be held in July/August once the application for environmental authorisation has been submitted. Either way, their comments will be addressed before the Final BAR is submitted to the competent authority for decision-making. Please see below a list the additional measures that we are implementing as per the presentation at the meeting:</p> <ul style="list-style-type: none"> • Additional 30 days to provide comment (pre-application phase completed) • 16 Radio announcements in isiXhosa on Nkqubela FM during drive time for both processes (1-6 March 2019, ~June 2019) • Two public meetings (6 March 2019 and application phase) • Additional posters at shops, pharmacies and libraries (application phase) <p>Minimum requirements as per NEMA regulations are as follows (evidence to be provided in the stakeholder consultation report in Appendix E of the Draft BAR):</p> <ul style="list-style-type: none"> • Compile and maintain a stakeholder list (response to comment d.) • The existing database served as a starting point for this stakeholder consultation process. Any non-deliverable emails were followed up and corrected if this was possible. In some cases, this was not possible as no valid phone number was available to correct the email address. • Fix a notice board at the site of the proposed development (dimensions specified in EIA Regulations) • Written notice to key stakeholders (specified in the EIA Regulations) • Placing an advertisement in a local newspaper or in the Government Gazette <p>Finally, it is not a requirement that each stakeholder is responded to in person. Usually a response to each comment is provided in a "Comment and Response Table" in the stakeholder consultation section of the BAR. It is questionable how many stakeholders, who provided comment, would consult the report at the end of the consultation period in search for the response to their comment. We therefore responded to each stakeholder comment via email and included the verbatim comment and response in the stakeholder consultation report. (Note that long comments such as those provided by WESSA were summarised and the full comment attached in Appendix F6 of the stakeholder consultation report). We believe that this communication method is more effective.</p> <p>b) Addressed in response to comment 2. above.</p> <p>c) Comments obtained during the pre-application process (including the meeting on 6 March 2019) are meant to inform the Draft BAR. Some issues raised at the meeting were addressed in the pre-application BAR. Explanations as to why some were not addressed are provided in the minutes of the meetings as additional notes.</p> <p>d) The stakeholder list from the previous process served as a starting point for building the database for the current process. Some email addresses from 2014 were no longer valid and in the absence of additional contact details, some of the stakeholder profiles could not be updated for this process. However, it should be noted that we have now 700 registered stakeholders, of which 450 stakeholders were registered as part of the pre-application process only.</p> <p>14. The pre-BAR requires attention to detail: Comment noted.</p> <p>a) The visual representation of Algoa 1 will be checked and corrected where required. The sensitive areas will be marked in the sections where this is relevant (i.e. description of the socio-economic environment and corresponding impact assessment).</p> <p>b) The error on page 67 of the pre-application BAR will be corrected.</p> <p>c) It is correct that the impact rating summary table for Options A, B and C will not exactly match up with the summary tables presented in Tables 42-46. The caption of the table states that "[...] however, these impacts are not additive and therefore the impact scoring for the best-case scenario (i.e. finfish only) was considered." (note that for the negative impact the worst-case scenario, i.e. finfish is considered). While the construction phase is shown in one table, the operation phase is split into the impact categories already. We will include a paragraph on the layout of the summary tables to clarify this.</p> <p>15. The Impact Assessment methodology is flawed: The socio-economic impact assessment categories were defined by the original socio-economic specialist study by Bloom 2013 and are common categories used in socio-economic impact assessments (the document is still available on the previous EAP website here: http://www.cape-eaprac.co.za/projects/NMM101%20Marine%20Aquaculture/DEIR/Appendix%20B3%20Socio-economic%20Impact%20Assessment.pdf).</p> <p>However, based on the comments received during the consultation process, the socio-economic impact assessment will be reviewed and amended where required.</p> <p>The economy of Port Elizabeth is complex. For example, positive knock on effects of hosting IronMan (and other events) include increased visitor numbers to Port Elizabeth, which brings income to the hospitality industry, tourism operators, curio shops and many other businesses. However, tourism unrelated to IronMan (and other events) has the same positive effects, although potentially to a lesser extent. It follows, that the potential negative economic</p>

No	Comment
	<p>impact should be assessed as a whole, rather than for individual contributors to the economy, as this may make it difficult to then summarise the overall negative economic impact (especially if different impact significance is found for different economic contributors). It is, however, important to describe the various aspects of the economy that could be negatively impacted. It is recognised that IronMan and other events contribute significantly to the local economy, providing income and jobs to a number of sectors in Port Elizabeth (e.g. hotels, B&Bs, restaurants, tourism operators etc.). The pre-application BAR will be amended to describe the complexity of this impact in more detail.</p> <p>Government prioritises entrepreneurship and the advancement of Small, Medium and Micro-sized Enterprises (SMMEs) as the catalyst to achieving economic growth and development in South Africa. Promoting SMMEs as part of the proposed ADZ would therefore constitute a 'benefit enhancing measure' to increase the positive impact on the local, regional and national economy. This impact assessment will therefore be integrated into Section 9.5.2.1 as suggested in the comment provided.</p> <p>16. The 12-cage pilot phase as mitigation will not provide the necessary insight into a full scale 82-cage operation at both Algoa 1 and 7:</p> <p>a) and b) Evaluating the efficacy of mitigation measures prescribed in the Environmental Management Programme within the context of an adaptive management approach is in line with the National Environmental Management Act (Act No 107 of 1998) (as amended).</p> <p>c) However, we recognise that the perception of the increased risk of shark attacks (whether this is true or not) is likely to contribute significantly to the negative economic impact on tourism, sport events and businesses reliant on tourism. This issue is mostly applicable to Algoa 1, where open water swimming training and a number of sporting events take place throughout the year. Perception is difficult to mitigate effectively, and impossible in the absence of data (which is the case here) (Refer to point 1 response).</p> <p>17. The risk of the ADZ on the endangered African Penguin (and other bird life) has not been assessed:</p> <p>a) The impact on seabirds was assessed in Section 4.1.5.1.5 (entanglement and habitat modification) and 4.1.5.1.6 (Interactions with piscivorous marine animals) of the Marine Specialist Study in Appendix D of the Basic Assessment Report. Algoa 7 is situated within the area that has been set aside for the Addo Marine Protected Area. The negative impact of Algoa 7 on seabirds, including penguins have been rated as low and medium after mitigation for the above listed impacts respectively.</p> <p>b) Pellet feed for finfish is made from fishmeal produced from anchovies and sardine off-cuts. However, individual operators will be required to purchase fish meal from existing right holders (fishing right applications are not included in the application). To ensure a sustainable fishery, DAFF determines the Total Allowable Catch (TAC) for each species. The TAC will therefore not increase to meet an increased demand in the aquaculture sector. Even if individual operators were allocated their own fishing quota, the quota would have to be allocated from the total national quota. Due to the proclamation of the MPA, which includes the St Crox Island group, feeding grounds of penguins and other seabirds will be protected in from over exploitation in future. DAFF has the mandate to regulate the fishing sector and the aquaculture sectors alike and will not jeopardise the one sector to promote the other.</p> <p>Conclusion comment: Noted. Please refer to responses in the respective sections.</p>
51	<p>Shena Wilmot - Port Elizabeth Metro B&B Association (PEMBBA)</p> <p>Comment submitted: 28 April 2019</p> <p>The comments were submitted as a 3 Page document, which is included in Appendix F6. The most important points are summarised below:</p> <ol style="list-style-type: none"> 1. Potential impact on Blue Flag beaches. 2. Loss of jobs in the tourism industry will far outweigh the jobs created by the ADZ. Assuming 40% occupancy of association members, 352 jobs could be lost and R47 520 000 potential loss in revenue if tourism is negatively affected and the industry of small accommodation businesses is lost. This can be extrapolated to money spent at restaurants. A conservative estimate of R19 million spent at restaurants per annum (only dinner at R150 per head) could be a knock-on effect as a result of losing the small accommodation business. Detailed numbers are included in the letter. Other examples where jobs and revenue could potentially be lost are: AirBnB, hotels, direct tourism businesses, restaurants. 3. Events may be lost, including Aquelle Ocean Series/Bellbouy Race/the nippers/lifesaving champs/ not to mention the possible loss of the Volvo Ocean Race which the city is bidding. 4. IronMan alone brought R400 million in revenue into the NMB between 2005 and 2013. R12 million is generated in the media industry during the IronMan event. Over 2000 entries were sold in 2014, including 22% of entrants from other countries (UK, Argentina, USA, France, and Germany amongst others). The full article is included in Appendix F6. IronMan have stated that they WILL find another venue/city if the Fish Farm goes ahead. 5. The PEMBBA were not contacted during the pre-application process despite their vocal involvement during the previous application process. PEMBBA is of the opinion that the socio-economic study in Appendix D of

No	Comment
.	<p>the current pre-application BAR does not address the potential economic losses associated with the proposed development. Reference was made to the Minister’s appeal request.</p> <p>Anchor response: 4 July 2019</p> <p>Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 and 7 sites. Note that the report, however, confirms that the finfish cages would contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Job losses: Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Economic impacts. Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. For finfish farming at Algoa 1, this impact is rated as high and medium before and after mitigation measures respectively (note that the impact is lower at Algoa 6 and 7 and for bivalve culture). Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Concerns regarding the socio-economic specialist study from 2016 is noted. A detailed costing of the potential socio-economic impact (i.e. externalises) of the ADZ has indeed not been completed. Instead, a social choice trade-off survey was undertaken by Britz et al. 2016 (refer to Appendix D of the BAR, Socio-economic specialist study and review of the Bloom 2013 study). The survey attempted to gauge whether the external costs (negative social and economic impacts on the tourism and conservation value and others) outweigh the income and employment benefits that could be gained as socially attractive elements. (This response also speaks to point 3 and 4 of the comments). <u>Appeal Statement by the Minister applicable to Algoa 1 was not met.</u> Peter Britz from the Rhodes University, as the lead author on the comparative studies, responded to this concern by stating that: “The socio-economic report consisted of two components which need to be read together, visibly 1) the social choice survey which modelled the perceived negative/positive environmental and recreational effects establishing an Aquaculture Development Zone and 2) a detailed economic analysis of the feasibility of aquaculture in Algoa Bay which included a realistic projection of the production potential of the sites, income, costing, and jobs. The economic feasibility analysis which was compiled by aquaculture industry experts is quantitative and considered robust based on market demand, real costs and prices. Read together, the two components of the socio-economic report substantively address the Minister’s brief and provide a basis for her making a decision.”</p>

No	Comment
.	<p>Lack of consultation with PEMBBA. We apologies that PEMBBA was not contacted by Anchor. The stakeholder list from the previous process served as a starting point for building the database for the current process. PEMBBA was not on the previous list and was therefore not contacted. It is noteworthy that PEMBBA registered on 11 February 2019, which was at the beginning of the stakeholder consultation process. It is important to recognise that the public participation process has the purpose to engage with all stakeholders and obtain input on the impacts assessed and the impact ratings. In providing comment on the pre-application BAR, you are assisting the revision of this document to produce the Draft BAR.</p>
52	<p>Francois Gous – Summerstrand Surf Lifesaving Club (SSLCL)</p> <p>Comment submitted: 29 April 2019</p> <p>My biggest concern is safety first and foremost to our bathers and our members in the form of nippers and active lifeguard doing voluntary patrol in our waters and beaches. The shark activity will no doubt increase if this project gets the go ahead.</p> <p>Pollution on the breaches and sea (reefs) itself with excrements from the fish in the proposed cages washing up on our beaches.</p> <p>The amazing view we currently have of the Be11Bouy and open sea will be obstructed.</p> <p>Our training ground will be affected, we use this area between Bellbouy, Cape Receive Lighthouse and the Pier as our prime training ground, from swimming, surf ski paddling and Malibu board training. (Shark activity ???)</p> <p>To mention the other sports activities we involved in as safety officers from Bellboy swimming event, Zsports swimming, diving, triathlons, biathlon's, surfing events, lifesaving events, kids parties, nippers, water safety programs, visitors from various countries and general public recreational swimming and body surfing. This is just to mention a few!</p> <p>We say NO to the proposed area in front of Summerstrand.</p>
	<p>Anchor response: 07 May 2019</p> <p>Shark activity: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Water quality: Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). The impact on water quality and benthic habitat is assessed in Section</p>

No	Comment
	<p>4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report.</p> <p>Water quality on beaches: Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore.</p> <p>Impact on reef ecosystems: Algoa 1 does not overlap with reef habitat (this was a site selection criterion for the Strategic Environmental Assessment conducted in 2009). Impacts on benthic habitats below fish cages does tend to be localized to the area under the cages. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme.</p> <p>Visual impact: The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p>
53	<p>Andre Clarke – Resident and water sports Comment submitted: 29 April 2019</p> <p>I am a property owner in Port Elizabeth and I surf all parts of the bay and the wild side.</p> <p>I feel the proposed fish farm would definitely damage Algoa bay from both an environmental and visual perspective - not to mention financially, as well as be dangerous to ALL water users - both in terms of pollution and attracting sharks and other predators.</p> <p>I don't think the potential benefits of a fish farm will outweigh the harm that would be done to the tourist industry (Iron Man alone brings in more than triple the annual output of the fish farm in one weekend) and property prices.</p> <p>I am also sure that all residents of the city who use the beach area's and facilities will be negatively impacted by fish farming, I don't believe it is a risk worth taking, it is also at complete odds with the city's vision of being the watersports capital of South Africa.</p> <p>In the last month we have had a couple of events that would probably not be held in Port Elizabeth if Algoa bay was covered in fish farms.</p>
	<p>Response by Anchor: 07 May 2019</p> <p>Marine ecological impacts: The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming listed here (impacts on Penguins, organic pollution, chemical pollution and disease). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p> <p>Visual aesthetics: The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Negative economic impact: Comment is noted. The current BAR assess this impact in Section 9.5.2.3. rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Impact on water sports and events: Recreation and sporting activities and facilities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address</p>

No	Comment
.	potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).
54	<p>Peter and Dianne Haarhoff – Residents Comment submitted: 29 April 2019</p> <p>Please register our strong objections to the establishment of the fish farms in Algoa Bay. WESSA and expert consultants have itemised how disastrous this will be to Port Elizabeth, its inhabitants and, most of all, to our precious environment. We are deeply concerned about the harm it will do to our natural world.</p> <p>Response by Anchor: 07 May 2019 Objection noted.</p>
55	<p>Wayne Mukheibir – Water sports Comment submitted: 29 April 2019</p> <p>I am a avid sportsman and use and enjoy the unique facilities of our bay for open water swimming, canoeing, diving, surfing and recreational swimming.</p> <p>I believe the fish farm will be detrimental to all the above activities as it will create an ecology of sealife under the nets and in turn will attract and keep large predators like sharks into our bay.</p> <p>I trust you will take this matter likely and will find an alternative location for your IDZ fishfarm.</p> <p>Response by Anchor: 07 May 2019</p> <p>Shark activity. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Alternative site: Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p>
56	<p>Grant Bresler Comment submitted: 29 April 2019</p> <p>I would also like this communication to be acknowledged as my complete and unequivocal objection to all 3 proposed positions of the proposed "fish farm" in Nelson Mandela Bay, and would hope that another position be sought several hundred kilometers away from the bay, so as to preserve the immaculate status of our coastline in Nelson Mandela Bay.</p>

No	Comment
.	<p>Response by Anchor: 7 May 2019 Opposition noted.</p> <p>Alternative site: Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p>
57	<p>Kim Nkumanda Comment submitted: 29 April 2019 My vote is against the fish farm Response by Anchor: 29 April 2019 Your opposition to the proposed aquaculture development has been noted.</p>
58	<p>Rodney Louis - Potential investor Comment submitted: 29 April 2019 I'm in supper of the fish farm and would like to know as a smme how can I be involved in the Construction phase of this project</p> <p>Response by Anchor: 30 April 2019 Comment noted. Please note that as Environmental Consultants we were appointed by the Department of Agriculture, Forestry and Fisheries (DAFF) who intends to apply for Environmental Authorisation for the proposed Aquaculture Development Zone. This environmental process is the very beginning of this project, which can only go ahead if Environmental Authorisation is granted. As environmental consultants were are not involved in the implementation phase of the project.</p> <p>If everything goes well, we will have a decision (positive or negative) from the Department of Environmental Affairs by February 2020. If the decision is positive and Environmental Authorisation is granted, then the project can go into the implementation phase. I suggest that you email Michelle Pretorius at the Department of Agriculture Forestry and Fisheries (MichellePR@daff.gov.za) to express your interest when the decision has been issued and if it is positive. You will be notified of the decision as you are now on the stakeholder database.</p>
59	<p>Pieter van Rhijn - NELSON MANDELA BAY SURFRIDERS Comment submitted: 29 April 2019 I hereby object to this Proposed project as a committee member of NELSON MANDELA BAY SURFRIDERS. Who form part of SURFING SOUTH AFRICA and SSA being a member of SASCOG. Response by Anchor: 30 April 2019 Comment noted.</p>
60	<p>Bridget Mcilroy Comment submitted: 29 April 2019 I strongly object to the Dept of Agriculture, Forestry and Fisheries (DAFF's) proposal of establishing an Aquaculture Development Zone (ADZ) (i.e. finfish fish farms and bivalves which are oysters, muscles etc) in Summerstrand (off Pollock Beach), at the harbour and between St George's Strand and Coega (3 sites). Response by Anchor: 30 April 2019 Comment noted.</p>
61	<p>Brenda and David Wampach - Haka Hana Bed & Breakfast Comment submitted: 29 April 2019 Looking at the EIA there are references to fish farming activities around the globe but there is nothing mentioned relating to incidents and other assessments carried out. Looking at salmon farming in Scotland, Europe and USA and the death rates being accounted 9m fish in Scotland and this is in farms not located within the confines of public beaches, what would the impact be on Hobie Beach and other beaches within Algoa Bay if such a tragedy were to occur? What measures must be implemented for the removal and disposal of these fish carcasses before a major environmental excursion manifests from rotten corpses?</p>

No	Comment
.	<p>There has been outbreaks of Red Tide along the whole of the Eastern Cape coast line as far down as Mossel Bay and the effect on our marine life has not been covered (Asian countries have concerns over farmed fish mortality rates due to poor oxygen levels related with hot climate conditions)?</p> <p>The effect of escaped farm fish on wild fish has been studied overseas, yet this has not been taken into consideration in the EPA findings?</p> <p>Protected areas are exactly what they are PROTECTED, and no person, Government or any other establishment has the right to encroach on the boundaries of such proclaimed area which is a part of our heritage and future welfare of people not yet born.</p> <p>EIA is done, dusted and implemented who takes ownership to manage and see that all regulations, future requirements are met and maintained, not one person who has been partisan to the EPA findings, not the DAFF who initiated the project or any other Provincial Government Department, BUT the Nelsen Mandela Bay Municipality as the farms are operating within their judicial area? (NMBM is ill equipped to handle the daily administration of the Municipality let alone the greater Metropolis)</p> <p>Whats done cannot be undone and the consequences of actions today can have an adverse result in the future, the Bay belongs to the people of Port Elizabeth, today, tomorrow and the years to come, there are other areas that should be looked at and not the BEACH FRONT OR PROTECTED AREAS.</p>
	<p>Response by Anchor: 24 May 2019</p> <p>References to other assessments: References to other aquaculture facilities and experiences gained with regards to potential impacts and appropriate mitigation measures is included in the impact assessment sections (see Chapter 9 of the BAR and Marine Specialist Study in Appendix D of the BAR) where this was relevant.</p> <p>Fish mortalities. The Environmental Management Programme (EMPr) in Appendix D of the BAR stipulates how biological waste must be disposed of (see below), which should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries.</p> <p>(1) Do not discard fouling organisms (note these are marine species that settle on structures) removed from farming structures, oysters or mussels into the marine environment (molluscs may have alien fouling organisms growing on their shells). Dispose biological waste at a registered Waste Management Facility.</p> <p>(2) Do not discard fouling organisms removed from netting taken onshore for maintenance back into the marine environment.</p> <p>(3) Do not discard sick or dead organisms into the marine environment.</p> <p>(4) Provide fish mortality to fishmeal farms in the area, where possible (only if biosecurity measures are met).</p> <p>(5) Where mortalities are sent for disposal to a fish meal processing facility, the farm shall receive documented proof that the facility is treating the material in an approved manner such that no transfer of pathogens may occur in the marine/aquaculture sector via the end use of the fishmeal or the disposal of any condemned material. This shall be ensured through either the treatment process method or the end product use (not being an aquaculture feed additive). Condemned material (waste/fish infected with confirmed OIE or controlled disease as opposed to normal mortalities, as confirmed and directed by the State Veterinarian), will be incinerated or disposed of at a licensed landfill site per the requirements of the Meat Safety Act (Act No 40 of 2000).</p> <p>If mass mortality occurs: "In the case of mass mortality of farm organisms, dispose of dead organisms at a licensed waste management facility. Alternatively where possible and if biosecurity measures are met provide mortalities to fish meal farms in the area."</p> <p>Fish mortality will not affect beach users.</p> <p>Red tide risk. DAFF is aware of the portential risks to the proposed development by Harmful Algal Blooms (HABs or red tides). Potential risks posed by the environment have been considered in the feasibility phase of the proposed development and DAFF has decided to go ahead with the application for Environmental Authorisation. Red tides are managed continuously through the shellfish monitoring programme and shellfish farms are closed temporarily until the product is deemed fit for consumption.</p> <p>Escapes. The risks of fish escapes has been assessed in Section 4.1.5.1.1 and .3 of the Marine Specialist Study in Appendix D of the BAR. The main concern is genetic contamination of wild fish stocks (mixing of bread genes and wild genes). This impact was rated of low significance after the implementation of mitigation measures. The transfer of diseases was rated of high significance after implementation of mitigation measures. Alien finfish species are not proposed as part of the ADZ and this impact was therefore not assessed.</p> <p>Addo Marine Protected Area and Algoa 7. The Addo MPA was recently approved by cabinet. The MPA has, however, not been formally declared in terms of the National Environmental Management: Protected Areas Act No (Act 57 of 2003). The Department of Environmental Affairs Branch Oceans and Coasts has indicated that the affected portion of this site could potentially be excised should Environmental Authorisation be granted for this precinct. A</p>

No	Comment
.	<p>number of the marine ecological impacts are rated as higher for Algoa 7 when compared to Algoa 1 due to the proximity to the Marine Protected Area.</p> <p>How will the project be implemented and who ensures environmental responsibility? The Department of Agriculture, Forestry and Fisheries as the holder of the environmental authorisation (EA) would be legally required to ensure adherence with the conditions of the EA. All mitigation measures recommended during the Basic Assessment process are included in the Environmental Management Programme (EMPr) in Appendix F of the BAR. DAFF would be required to ensure implementation of the ADZ-level EMPr. Each operator would be required to compile a farm-specific EMPr (i.e. depending on the species farmed). The implementation of the EMPr (at both levels) would be overseen by the AMC (Aquaculture Development Zone Management Committee), audited by the Environmental Control Officer and enforced by the Department of Environmental Affairs. Please refer to the EMPr in Appendix F for more information on the management structure of the proposed ADZ. This management system has been implemented for the Saldanha Bay Aquaculture Development Zone. The Municipality would not be required to manage the project.</p>
61	<p>Ursula Defferary – Resident Comment submitted: 29 April 2019</p> <p>I am a resident of Port Elizabeth and I totally, absolutely and completely object to a Fish Farm being established in our Bay. This is iniquitous and has already been objected to in the past. Why do they keep on and on? There must be a lot of money involved for someone.</p> <p>This will totally destroy our main beaches, water sports and all beach and water related activities, including the Iron Man Competition.</p> <p>No, no, no!!</p> <p>Response by Anchor: 7 May 2019</p> <p>Main beaches will be destroyed: Response to non-specific comment. A range of responses have therefore been included based on comments from other stakeholders.</p> <p>The proposed Algoa 1 site (Summerstrand) is situated 3.5 km from the beach and will not physically impact the beach itself.</p> <p><i>Water quality concerns have been raised by some stakeholders.</i> Water quality (organic pollution). Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: "Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). The impact on water quality and benthic habitat is assessed in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report.</p> <p><i>Other stakeholders have raised concern that uneaten food and faeces could wash up on the beach:</i> Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore.</p> <p><i>Some stakeholders are worried about water quality and safety to swimmers.</i> Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below)</p>

No	Comment
	<p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Visual aesthetic impacts: The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Water sports and beach related activities: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p>
62	<p>Emil Hougaard – Open ocean swimmer</p> <p>Comment submitted: 29 April 2019</p> <p>I am a regular user of the ocean in Algoa bay, swimming long distance between Kings beach and Polock beach. I fear that any fish farming in the Bay will have a negative impact on this sport & also a financial impact to businesses in Port Elizabeth. Hence I am against any form of fish farming in the Bay.</p> <p>Response by Anchor: 7 May 2019</p> <p>Opposition is noted.</p> <p>Thank you very much for the photos. Would it be possible for me to use your photos in the Basic Assessment Report if I reference the photographer? I assume these are taken by yourself.</p> <p>My assumption is that you refer to shark activity impacting on open ocean swimming and other water sports activities. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on open ocean activities and events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some</p>

No	Comment
	<p>length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Negative economic impact: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
63	<p>Lerryn Mew – Water sports and Lifesaver Comment submitted: 29 April 2019</p> <p>I would like to strongly object to the proposed fish farm at all sites. I have had the privilege of using this wonderful natural asset that we call Algoa Bay for most of my life. The thought that it may be ruined to make money and then also prohibited from using certain parts of the ocean is unacceptable!</p> <p>What about the impact on my training, not to mention all the water sport events held in the bay. Are we not the water sport capital of South Africa? The impact on the local economy if those events are removed because of the increased in predator activity is also very far from acceptable.</p> <p>Response by Anchor: 7 May 2019</p> <p>Water sports and events: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on open ocean activities and events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Negative economic impact: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
64	<p>Jenny Rubidge – Open water swimmer Comment submitted: 29 April 2019</p> <p>It is a very bad idea and would cause a complete and utter standstill of major water sport and in particular swimming activities which brings a huge amount of revenue and publicity to our City Port Elizabeth. I am a frequent open water swimmer and have participated in many sea swims and I personally with many others will stop supporting any race in fear of the attraction of sharks and other filthy waste that you will bring with this idea. I attach a picture of a recent swim to Bell Buoy and hope that everyone who swam this year will send a similar email in protest as we all</p>

No	Comment
.	<p>feel very strongly about this ridiculous money making investment.</p> <p>Response by Anchor: 9 May 2019</p> <p>Water sports and events: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on open ocean activities and events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Negative economic impact: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water quality: Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. <i>Escherichia coli</i> and <i>Enterococci</i> are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p>
65	<p>Jill Weakley – Open water swimmer</p> <p>Comment submitted: 29 April 2019</p> <p>I swim daily in the sea right through the year. I am also a regular participant in the Ocean Racing series every year. I also take part in regular long-distance swims with other swimmers from Humewood Beach. I have also taken part in two Bellbuoy swims and would like to be able to achieve 10 Bellbuoy swims. I am a great fan of the annual Ironman competition. It would be a great pity should Port Elizabeth no longer be able to enjoy this beautiful ocean right on our doorstep.</p> <p>Response by Anchor: 9 May 2019</p> <p>Water sports and events: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on open ocean activities and events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p>
66	<p>Patrick Brett</p> <p>Comment submitted: 29 April 2019</p>

No	Comment
	<p>I am totally against the fish farm being positioned off Port Elizabeth's beach front. Tourism is one of the cities main income earners, imagine the loss of income for hotels, B & B's , restaurants and even ice-cream sellers. Also there is the safety aspect, who would want to swim in the sea with all the attracted predators that will take up residence around the tanks. Port Elizabeth does not need this.</p> <p>Response by Anchor: 9 May 2019</p> <p>Water sports and events: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on open ocean activities and events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Negative economic impact: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
67	<p>Andre Lemmer - Schoenmakerskop Residents' and Ratepayers' Association (SRRA)</p> <p>Comment submitted: 29 April 2019</p> <p>WE believe that the proposed Algoa Bay Aquaculture Development Zone (ADZ) project is misconceived and will do harm to businesses (e.g. hotels, B & B establishments etc.), the tourism industry, sports events (e.g. the Iron Man competition) and recreational pursuits (e.g. beach-going, swimming and surfing in the sea etc.) in our metro. We do not think this ADZ project will provide sufficient sustainable employment for our Metro. The risk of environmental damage to our Bay eco-system is too great.</p> <p>The envisaged economic benefits of the proposed 'fish farm' could still be generated if the project were to be moved to a more appropriate zone, e.g. a more remote ocean site that does not impinge on tourist, business and urban hotspots like Nelson Mandela Bay Metro.</p> <p>Response by Anchor: 9 May 2019</p> <p>Negative economic impact: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water sports: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Sustainable employment: Comment noted. Your concerns regarding employment creation has been addressed in Section 9.5.2.2 of the BAR. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could</p>

No	Comment
.	<p>have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries.</p> <p>Marine ecological impacts: The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming listed here (impacts on Penguins, organic pollution, chemical pollution and disease). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p>
68	<p>Pat Minnaar - Resident</p> <p>Comment submitted: 29 April 2019</p> <p>As a rates paying resident in Port Elizabeth I wish to register my opposition to the proposed Fish Farm in Algoa Bay. A fish farm in the bay will negatively impact our beaches and the the diverse sea life in the bay as well. Besides spoiling our beautiful bay for the residents it will also have a negative impact on tourism in our area and thus affect the future growth of our area.</p> <p>Response by Anchor: 9 May 2019</p> <p>Response to non-specific impact on beaches: The proposed finfish and bivalve sites are situated 3-5 km offshore (with the exception of Algoa 6 in the inshore area east of the PE harbour). Please refer to Chapter 1 Figure 1 for a map of the proposed aquaculture development sites. Beaches will therefore not be physically impacted. Some other impacts that you may be referring to are responded to below:</p> <p>Water quality: Water quality issues impacting the natural environment are addressed in Section 9.3 (in summary), in the Marine specialist study (Appendix D of the BAR) and Dispersion Modelling Report (Appendix D of the BAR). Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Visual impacts: The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Marine ecology: The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming listed here (impacts on Penguins, organic pollution, chemical pollution and disease). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p> <p>Negative economic impact: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
69	<p>Chantal Bezuidenhout – Hospitality industry</p> <p>Comment submitted: 29 April 2019</p> <p>As an Interested & Affected Party, I would hereby like to raise my objection to the above development. Port Elizabeth is only now, becoming established as viable and sought after tourist destination in South Africa. It has taken a while to get to this point. Tourism's indirect contribution to the national GDP is 8.9% [stats SA: 2017].</p>

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	<p>Response by Anchor: 9 May 2019</p> <p>Water sports and events: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Potential impact on tourism dependent businesses and specialised tourism are assessed in 9.5.2.3. The current BAR rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming listed here (impacts on Penguins, organic pollution, chemical pollution and disease). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p>
70	<p>David Botha – Resident and open water swimmer</p> <p>Comment submitted: 29 April 2019</p> <p>My name is david Botha, i was born and grew up in Port Elizabeth. I swim long distances in our ocean on a daily basis, from the harbour wall to Pollock beach. I also boogie board and i body surf..... i also enjoy cycling along our coastline....</p> <p>I think the ADZ fish farm proposal is ludicrous and short sighted, we have the most amazing safe coastline in the world and they (ADZ) want to intrroduce fish farms into our Nelson Mandela Bay Ocean..... I am sure the Great man is spinning in his grave.</p> <p>I have seen the effect of the winds, csea urrents and tides as to the debris that washes up on our shores and know that the bits of food, faeces etc from the "pens"will do the same, attracting sharks to our shores.</p> <p>Look what happened to Reunion island..... tourism, swimming, surfing is all but dead due to the shortsighted introduction of Fish farms and the unprecedented increase in Shark numbers.</p> <p>They (ADZ) say they will employ 1200 people but 5000 people in the tourist and hospitality industry will lose their incomes.....</p> <p>The people who are to be employed - how many will be local ,,as usual i believe not too many.....</p> <p>Response by Anchor: 9 May 2019</p> <p>Sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the</p>

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	<p>BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>As far as I can tell from the research I have done, finfish farms are not the reason for the increase in Bullshark numbers at Reunion Island. Several other reasons (including overfishing, Marine Protected Area) are listed instead in the NYTimes article at the link below. (Note that finfish farms proposed on Mauritius triggered a strong response from the local communities due to fear of increased shark attacks. See response above).</p> <p>https://www.nytimes.com/2015/08/12/world/africa/reunion-once-a-surfers-paradise-finds-only-sharks-in-its-waters.html?_r=0</p> <p>Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faeces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore. Furthermore, sharks are not attracted to faeces and uneaten finfish food, but rather, are interested in the finfish itself.</p> <p>Job gains versus losses. Your concerns regarding employment creation has been addressed in Section 9.5.2.2 of the BAR. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries.</p>
71	<p>Eugène Ceronio – Resident</p> <p>Comment submitted: 29 April 2019</p> <p>As a Port Elizabeth resident, and frequent beach goer, i wish to hereby register my objection to the fish farm as currently proposed, as i believe this will have a major negative impact on myself, my family as well as the metro as a whole. I do not object to the idea as a whole, however the proposed location 2km off Pollack beach is not suitable. So, a change in location is imperative.</p> <p>Response by Anchor: 10 May 2019</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>However, it should be noted that three alternatives (combination of precincts) are described in Section 3.5 of the BAR and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7). The decision-making authority will weigh positive socio-</p>

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.	economic impact against negative environmental impacts (including socio-economic aspects) based on the impact assessment conducted in deciding whether any of the alternatives should be authorised.
72	<p>Ian Thomson – Resident and open water swimmer Comment submitted: 29 April 2019</p> <p>I have lived in Port Elizabeth for close on 60 years and have always enjoyed our beautiful bay. My family and I have been keen supporters, and participants, at numerous Ironman events. My main form of exercise is open water swimming and I, along with numerous others, spend many enjoyable, healthy, hours in the waters along the Humewood stretch. I have participated in numerous Bellbuoy Challenges and 3 Beach Challenges. My wife and I have also enjoyed many meals at eateries along the beach front, enjoying the unspoilt views. Hoping that our bay will remain as beautiful as it is.</p> <p>Response by Anchor: 10 May 2019</p> <p>Water sports: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Visual aesthetics: The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p>
73	<p>Ralph Ketzner – water sports Comment submitted: 29 April 2019</p> <p>I would hereby like to be registered as an interested and affected party against the proposed fish farm here in the Nelson Mandela Bay. I have been an avid Triathlete, ocean swimmer and surfer in the bay for the last 15 years and believe were this proposal to go ahead it would create multiple problems going forward!! The most obvious being the shark threat and of course the pollution created from the affluent this farm will produce. I am TOTALLY against the idea of this fish farm! Port Elizabeth is known as the WATER SPORTS CAPITAL of South Africa, if not the world and if this farm went ahead it would destroy that perception forever. Please stop it immediately.</p> <p>Response by Anchor: 10 May 2019</p> <p>Water sports: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Sharks: Concerns are noted. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African</p>

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.	<p>shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm.</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p>
74	<p>Rodney Idris – Algoa Bay Yacht Club Comment submitted: 29 April 2019</p> <p>On behalf of the Algoa Bay Yacht Club, I would like to submit our objection to the fish farm being proposed off the Hobie Beach area on the grounds that this will adversely affect water sports and sailing in the bay. We have one of the finest waters in the world for water sports, swimming and sailing, and have hosted numerous world events in the bay. There are greater opportunities in the not too distant future, of even better sailing events, which will showcase Port Elizabeth to the world, with huge opportunities for tourism and the consequent job opportunities. We have a wonderful climate which further enhances these facilities for our sport and tourism. We have been through this previously, I think in 2014/2015, and at that stage there were huge objections, so what has changed? Nothing has changed. Why destroy a good thing, which is exactly what this will do. The adverse effect on these sports as well as tourism would be devastating to the city, that desperately needs all the help it can get. Please stop this from happening.</p> <p>Response by Anchor: 10 May 2019</p> <p>Negative impact on vessel navigation routes (potential risk of collision of vessels, including sailing vessels with the aquaculture farms) have been assessed in Section 9.5.2.4 of the BAR. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures.</p> <p>We would like to request your input on the yachting section in the pre-application BAR. Please refer to page 73 to confirm whether the information provided in the pre-application BAR and associated map is still accurate with regards to the yacht sailing area (this information was obtained during the 2010-2014 process). We would very much appreciate your input. Page 73 has been attached to this email. Please note that Algoa 5 is no longer under consideration and has been replaced with Algoa 7 (Ngqura harbour site).</p> <p>The application process is different when compared to 2010-2014, in that three alternatives (combination of precincts) are described in Section 3.5 and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
75	<p>Charles du Toit – open water swimmer and resident, life saving Comment submitted: 29 April 2019</p> <p>I have lived in Port Elizabeth my entire life . I use the sea front on a daily basis. Have spent years coaching Nippers lifesaving building a love for the sea in young people of all cultures. I swim regularly including sea swimming around the peer, and enjoy the esthetic of our sea fount.</p> <p>I was part of an activist group which fought for the opening of the beachfront to all races in the 80's, and am thrilled by the increasing use of our sea front by all. I am horrified that we would give this asset in any way to a Comerial interest.</p> <p>How is it possible that a beachfront which serves a Metro population of R1m + people, and has done so for decades can be in any way put to risk by a Fish-farm and the potential of at best 1500 jobs in a Comerial Experiment which does not have a certainty of delivery.</p> <p>Apart from a small hope of jobs, I have not seen a single persuasive argument for such an experiment, yet we are again faced with the requirement to fight for the rights of the community again. This is extremely frustrating.</p> <p>Response by Anchor: 10 May 2019</p> <p>Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the</p>

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.	<p>comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>The decision-making authority will weigh up the probability of the proposed development realising its full benefits against the potential negative impacts of implementing the pilot stage of the Aquaculture Development Zone (as pointed out correctly by stakeholders, perception-related impacts on water sports, events and tourism may be realised prior to reaching full capacity).</p>
76	<p>Dr Ann Lourens - Nelson Mandela University</p> <p>Comment submitted: 29 April 2019</p> <p>As an Interested & Affected Party, I would hereby like to raise my objection to the proposed Aquaculture development. I believe the proposed development will</p> <ul style="list-style-type: none"> • negatively influence tourism in the area. Port Elizabeth is becoming a sought after tourist destination generating much needed income for the region • negatively influence the marine eco system of the Bay • negatively influence food resources of, for instance the African Penguin and humpback Dolphin <p>I do not support this proposed development and would appreciate your careful consideration of the long term impact that it would have on our city.</p> <p>Response by Anchor: 10 May 2019</p> <p>Potential impact on tourism dependent businesses and specialised tourism are assessed in 9.5.2.3. The current BAR rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming listed here (impacts on Penguins, organic pollution, chemical pollution and disease). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p> <p>The impact on seabirds and cetaceans was assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. Algoa 7 is situated within the area that has been set aside for the Addo Marine Protected Area (although DEA has indicated that the area could be excised should environmental authorisation be granted. Algoa 7 lies on the western boundary of the MPA adjacent to an existing anchorage area, shipping channel to Ngura Harbour and an existing dredge spoil dumping site) and the negative impact on seabirds (including penguins) and cetaceans have been rated as medium to low significance after the implementation of mitigation measures. Due to the proclamation of the MPA, which includes the St Crox Island group, feeding grounds of penguins and other seabirds will be protected in from over exploitation in future.</p>
77	<p>Jill McLellan – Resident</p> <p>Comment submitted: 29 April 2019</p> <p>I have lived in PE for the past 11 years and before that in Asia and the UK. I am deeply concerned about the damage</p>

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.	<p>to the pristine beaches here (which bring people and therefore MUCH NEEDED employment) to the area. I can see that this area is quite dependant on the motor vehicle industry and the economy needs (and has huge potential) for income from more tourism. This would be risked by potential fouling of our beaches, and killing of coral reefs from fish feeding, fish waste, antibiotics, plus the increase of predatory sharks attracted to fish farms. There are many open water swimmers here (year-round) in these waters. I will forward some photos separately. I have lived and travelled widely and can say that these beaches and waters are some of the most beautiful I have seen. Please do not jeopardise the jobs potential of Ironman, watersports, surf lifesaving, scuba diving by continuing on this path.</p> <p>Response by Anchor: 10 May 2019</p> <p>Impact on pristine beaches and water quality: The proposed Algoa 1 site (Summerstrand) is situated 3.5 km from the beach and will not physically impact the beach itself. Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faeces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore.</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Impact on marine benthos (reef): Algoa 1 does not overlap with reef habitat (this was a site selection criterion for the Strategic Environmental Assessment conducted in 2009). Impacts on benthic habitats below fish cages does tend to be localised to the area under the cages. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme. The impact on benthic habitats were assessed in the Marine Specialist Study in Appendix D of the pre-application BAR Section 4.1.5.1.2.</p> <p>General marine ecological impacts: The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming (including impacts organic pollution, chemical pollution and disease). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p> <p>Water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". 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78	<p>Marguerite Smit – Open water swimmer Comment submitted: 29 April 2019</p> <p>Herewith I would like to submit my personal objection as an open water swimmer to the proposed Algoa 1 fish farm. Not only from a water clarity and safety point of view as an open water swimmer but also from a tourism perspective. The loss of the Aquelle Ocean Series/Bellbouy Race/the nippers/lifesaving champs/ not to mention the possible loss of the Volvo Ocean Race which the city is bidding for will be great. All these events bring in huge amounts of money, not only in bed nights, but also revenue for the city. Their demise because they cannot have the events any more would be a huge loss to the city. From a safety perspective, shark activity will increase and what we now call blue flag beaches will be affected, this is one of the biggest positives the city has - its beaches. I strongly oppose to this process gaining any further traction.</p> <p>Response by Anchor: 10 May 2019</p> <p>Impact on water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Tourism and associated economy of PE: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Blue Flag status impacted by increased shark activity: Comment noted. Please refer to paragraph above. Should increased shark presence in the vicinity of the beaches be attributable to the finfish farms be detected (mitigation measure is to monitor the movement of Great White sharks) additional safety measures would probably have to be put in place to improve safety of bathers and water sports participants. A paragraph on this issue will be included in the Draft Basic Assessment Report.</p>
79	<p>Micholene O'HAHER Comment submitted: 29 April 2019</p> <p>Please note our very strong objections to the above application process subject from my family. We do not want the</p>

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.	<p>a fish farm in this area or any where. our waters must be protect</p> <p>Response by Anchor: 10 May 2019 Comment noted.</p>
80	<p>Pat Reen – Open water swimmer Comment submitted: 29 April 2019</p> <p>My fellow swimmers and myself are very concerned about the effect the fish farm would have on our safety when using our beautiful ocean for all our sea swims. You will notice on any given day (unless very bad weather conditions) many bay open water swimmers in our bay. Paddler and surfers as well. Our 3 beaches swim, pier to pub corporate Ironman, Ironman, ocean series, lifesaving clubs, paddlers , surfers and beach goers not to mention tourists are a few who will all be affected should this farm go ahead. The sea has a calming healing effect for many of us it helps to balance the stress of our lives surely we should protect this beautiful beach and allow all to enjoy it without the fear of the predators that would be lured closer to shores by a fish farm. I am well aware that sharks belong in the sea and there is always a chance that we could encounter one but the create a farm that would encourage them closer to our bay doesn't make sense.</p> <p>Response by Anchor: 10 May 2019</p> <p>Impact on water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
81	<p>Irene Ketzner – Open water swimmer Comment submitted: 29 April 2019</p> <p>I would hereby like to be registered as an interested and affected party against the proposed fish farm here in the Nelson Mandela Bay. I have been an avid Triathlete, ocean swimmer in the bay for the last 15 years and believe that this proposal of a Fish Farm should be stopped immediately. Besides that fact that it will create a shark problem for our bathers the pollution created from this farm will produce would be unsufferable. Our city has an influx of holiday makers which brings in revenue to this city which this city can ill afford to lose. I TOTALLY object to the proposal of a fish farm! Port Elizabeth is known as the WATER SPORTS CAPITAL of South Africa, if not the world and if this farm went ahead it would destroy that perception forever. Please stop it immediately.</p> <p>Response by Anchor: 10 May 2019</p> <p>Impact on water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this</p>

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Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Water quality: Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faeces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore.</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. 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82	<p>Charles Tregoning – Open water swimmer</p> <p>Comment submitted: 29 April 2019</p> <p>With reference to your proposal to establish a number of Fish farms in Algoa bay I would like to add to the huge ground swell that this is not a good idea , it has been mooted before and was proven to be more of a problem than a liability. I am one of the people who swim in the Bay on a regular basis and having a Fish Farm in the vicinity is not a good idea. Its like cattle ranching in the Kruger National Park. Not clever and will lead to a train load of legal litigation coming your way, this is for sure. Because you have been warned about what the farms will attract and are therefore liable. Maybe to the West of the Coega harbour mouth but nothing closer to the swimming area which starts at the Harbour Wall. This is a very bad idea I do not recall the scientific data painting the same picture but it is there.</p>

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	<p>Response by Anchor: 10 May 2019</p> <p>Feasibility: DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. Economic feasibility (ground and wind swell are considered one of the factors) were assessed for Algoa 1 in the socio-economic specialist study in Appendix D (Britz et al. 2016).</p> <p>Impact on water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Sites beyond the PE Harbour: Algoa 7 is situated approximately 3 km from the Ngqura Harbour and is put forward in the application for environmental authorisation. In total three sites are considered, namely Algoa 1 (Summerstrand), Algoa 6 (PE Harbour) and Algoa 7 (Ngqura Harbour). Three alternatives (combination of precincts) are described in Section 3.5 and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
83	<p>Tim & Isobel Douglass-Jones - Comment submitted: 29 April 2019</p> <p>Comment relating to the pre-BAR with regard to potential fish farms in Algoa Bay:</p> <p>The assessment brings to attention many of the potential and very real negative impacts of fish farms on Algoa Bay which because of its uniqueness, beauty, rich biodiversity and contribution to the ecology of the ocean, has earned the status of being a Hope Spot. This is a great draw card along with our magnificent Blue Flag beaches, for tourists and water sport competitors who know the Bay is a "sacred" place and that a special, safe visit is assured when they can enjoy the Bay with its good quality water and stunning features. We dare not risk this reputation: fish farms will generate great amounts of waste and pollutants affecting the beaches and water quality, and attract predators such as sharks. One shark attack will destroy the attraction of the Bay for visitors with an enormous resulting negative impact on the local economy including a serious loss of jobs. The jobs lost would appear to be far more than the hugely revised limited number gained by installing fish farms. The possible installation of a fish farm is counter-productive to efforts being made to improve the economy of the Bay through tourism.</p> <p>There are many other factors which are problematic with regard to fish farming in the Bay (particularly off Pollok Beach). These include (amongst others):</p> <ol style="list-style-type: none"> 1. Wind and wave patterns – these appear not to have been thoroughly researched. The damage or destruction of cages will be a catastrophe. Climate change and extreme weather events are increasing with extremely disastrous results. 2. Depleted pelagic fish stocks – our iconic endangered African Penguins are already battling to find enough food for themselves and their chicks with a huge impact on their numbers. It would seem the feeding of the finfish to be

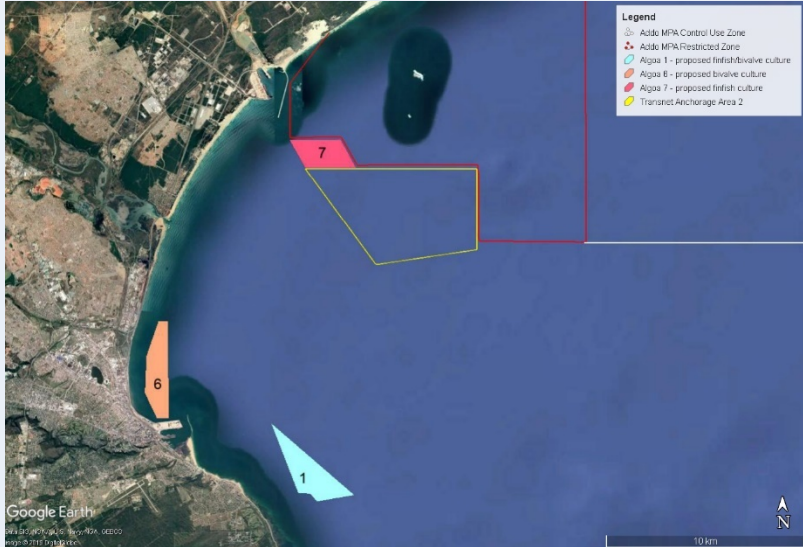
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.	<p>cultivated will further deplete stocks.</p> <p>3. Other options to Algoa Bay – it appears scant attention has been paid to various other options e.g. sites outside the Bay, land based aquaculture etc.</p> <p>4. Marine spatial planning – it appears the fish planning is being done in isolation without taking into account other plans that may impinge on the areas identified in the pre-BAR.</p> <p>I do in addition believe that the need for fish farming needs to be done in the broader socio-economic context and across various government departments. Are there going to have to be more and more fish farms to try and keep pace with our population growth thus resulting in potentially more and more environmental damage? We hear of increasing incidents of environmental damage e.g. in terms of deforestation, mining, climate change etc. impacting on our planet's ability to sustain us. A vicious circle! So, in summary please NO! to the potential fish farms in our beautiful, fragile Bay!</p>
	<p>Response by Anchor: 10 May 2019</p> <p>Water quality: Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faeces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore.</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. 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Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the</p>

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.	<p>leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa’s White Shark cage-diving industry -is their cause for concern?).</p> <p>Tourism and associated economy of PE: The current BAR assesses this impact in Section 9.5.2.3. and rates this impact as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Job losses: Indeed, jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries.</p> <p>Feasibility: DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. Economic feasibility (ground and wind swell are considered one of the factors) were assessed for Algoa 1 in the socio-economic specialist study in Appendix D (Britz et al. 2016).</p> <p>Penguins: The impact on seabirds was assessed in Section 4.1.5.1.5. of the Marine Specialist Study in Appendix D of the Basic Assessment Report and has been rated as medium with low confidence. Due to the proclamation of the MPA, which includes the St Crox Island group, feeding grounds of penguins and other seabirds will be protected in from over-exploitation in future. The Department of Agriculture, Forestry and Fisheries (DAFF) is responsible to ensure sustainable commercial fishing as well as aquaculture.</p> <p>Site selection: Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>Alternative aquaculture types: DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega Industrial Development Zone (IDZ) for hatcheries and holding facilities.</p> <p>Marine spatial planning: Refer to the national Strategic Assessment as referenced in the BAR. Given that the spatial planning component of the Algoa ADZ was initiated as early as 2009 in the SEA phase, it certainly pre-dates (but not necessarily pre-empts) the recently established NMMU academic unit. The DAFF is a key Department in the Marine Spatial Planning process and is ensuring that fisheries and aquaculture is considered in this process. A section on the Marine Spatial Planning Bill will be included in the Draft BAR and the importance will be highlighted in the Impact Statement (Chapter 10 of the BAR) the importance of considering this Bill, its Guidelines and future legal ramifications in the decision-making process.</p>
84	<p>Heather Dowling – Open water swimmer Comment submitted: 29 April 2019 I am an open water swimmer and totally against the proposed fish farms.</p> <p>Response by Anchor: 10 May 2019 Comment noted.</p>
85	<p>Cary-Lee Friend - Resident Comment submitted: 29 April 2019 As a resident of Port Elizabeth, please accept this as my objection to the Proposed Fish Farm.... for various reasons however the most obvious is that our bay is for swimming and with young children we frequent all the beaches along the Port Elizabeth Coast and I want my children to be able to continue to use the beaches and sea as it currently is.</p> <p>Response by Anchor: 10 May 2019</p>

No	Comment
.	Comment noted.
86	<p>Margo Shuin – Resident</p> <p>Comment submitted: 29 April 2019</p> <p>The full letter is attached in Appendix F6. The essential content has been included here.</p> <p>I am 69 years old and have been boogie boarding at Hobie Beach and Kings Beach since I was 6 years old and still do with my Grandchildren.</p> <p>Now because someone’s palm is being greased, we risk losing the most amazing swimming beaches in South Africa. Bring me any better beach along our South African coastline that is as safe and beautiful as Kings Beach, Hobie Beach and Pipe.</p> <p>Boogie boarding in Cape Town is unpleasant as the water is too cold, along the KZN coastline the waves break on the sand and there are strong currents.</p> <p>No more swimming as the fear of sharks will drive us all to the swimming pools. No wonder they want to build a water world where the Boet Erasmus Stadium used to be as this will have to be our new tourist attraction where you will have to pay like you do at Sun City.</p> <p>You won’t even be able to walk on the beaches because of the smell.</p> <p>Gone will be Iron Man that brings in Millions, Bellbouy swim, Nippers and life savers and Surfers.</p> <p>Imagine sitting and having your lunch or supper on the balcony of Ocean Basket or any other of our beachfront restaurants and all you smell is fish faeces and bait. You will think you are dining on a fishing trawler. Gone will be that most gorgeous view that draws us back there time and again.</p> <p>Imagine having paid top prices for your beachfront accommodation, including Hotels and townhouse complexes to be hit with this smell night and day.</p> <p>Please invite me to take those who think it is a good proposition along our Beachfront and ask them if they would like to spoil the pristine view with huge fish tanks protruding out of our super clean water and spoiling our sunrise and our view over the ocean.</p>
	<p>Response by Anchor: 10 May 2019</p> <p>The Department of Agriculture, Forestry and Fisheries (DAFF), as the lead agent for aquaculture management and development in South Africa has a mandate to develop the aquaculture sector as part of the Operation Phakisa project. Aquaculture is one of the sectors that form part of Operation Phakisa under the Ocean’s Economy in South Africa. Operation Phakisa is an initiative of the South African government which aims to implement priority economic and social programmes better, faster and more effectively.</p> <p>Water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa’s White Shark cage-diving industry -is their cause for concern?).</p>

No	Comment
.	<p>Foul smells emitted from the finfish cages. Comment noted. A section on potential air pollution will be included in the Draft BAR to investigate this issue further.</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p>
87	<p>Adrian de Villiers – Resident Comment submitted: 29 April 2019</p> <p>The Fish farm needs to be 60km east of King's beach, next to the ERic and Cornville train stations close to the Bird island where the sharks already live ! The reason is to keep the great white and tiger sharks far away from our main swimming beaches, which are King's beach, Millers and Pipe ie Humewood to Summerstrand ! Fish farms within 30 km's of our main beaches will in evivable draw sharks to our main beaches for a peak and which will inevitably result in shark bites !</p> <p>Response by Anchor: 10 May 2019</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>Water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
88	<p>Jan Lodge – Hospitality Comment submitted: 29 April 2019</p> <p>I have followed up on the proposed Aqua Fish Farm here and wish to object to this being set up in Nelson Mandela Bay. My reasons are that this will destroy the current tourism events held here. I have been involved in Tourism and hotels, guest houses, etc. will lose out if events such as the Iron Man and various other races which attract 1000s of international & local competitors do not happen. There will be many job losses and restaurants and businesses may close. Surely the Fish Farm could be located elsewhere to allow Nelson Mandela Bay to benefit from tourists and</p>

No	Comment
.	<p>special events?</p> <p>Response by Anchor: 10 May 2019</p> <p>Water sport events: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Job losses: Indeed, jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries.</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p>
89	<p>Andre Venter – Nelson Mandela Bay Surfriders</p> <p>Comment submitted: 29 April 2019</p> <p>I hereby object to this Proposed project as a committee member of NELSON MANDELA BAY SURFRIDERS. Who form part of SURFING SOUTH AFRICA and SSA being a member of SASCOC.</p> <p>Response by Anchor: 10 May 2019</p> <p>Comment noted.</p>
90	<p>Warren van der Merwe</p> <p>Comment submitted: 29 April 2019</p> <p>I would like to lodge my formal objection against the Aquaculture Development Zone in Algoa Bay based, on my current assessment of the studies done that are not conclusive in all aspects pertaining to long term outcomes.</p> <p>Response by Anchor: 10 May 2019</p> <p>Comment noted. No specifics provided.</p>
91	<p>Mieke Struwig</p> <p>Comment submitted: 29 April 2019</p> <p>Please find below my problems with the proposed fish farm. Please note that the concerns voiced is my own, despite the fact that I used the wording from the Algoa Bay Hope Spot Facebook page. They have clearly outlined my problems with the fish farm, hence I have decided to borrow their words.</p> <p>Please refer to WESSA's comment in Appendix F6 for the detailed comment:</p> <ul style="list-style-type: none"> • Comment 1: Algoa 1 isn't feasible as per the pre-BAR's own specialists • Comment 2: Algoa 7 hasn't been evaluated in full • Comment 3: High levels of E.coli at Algoa 6 render it unviable • Comment 4: Significantly increased Shark threat (real and perceived) to humans • Comment 6. The negative (socio-economic) impact on human use of ocean resources and subsequent impact on local business remains an open question • Comment 7. Change to the Bay's reef eco-systems <p>I also want to add that I find it highly unacceptable that such a nonchalant attitude is taken to the fact that Algoa 7 overlaps with a MPA. The fact that this area of the MPA can simply be excised is, in this age where conserving the</p>

No	Comment
.	<p>environment is of cardinal importance, disgusting.</p> <p>Response by Anchor: 04 July 2019</p> <p>Please refer to the response to comments 1,2,3,4,6 and 7 provided by WESSA.</p> <p>Additional comment regarding Marine Protected Areas: (MPAs)</p> <p>Stakeholders (including existing and potential users of the marine space) must be consulted prior to the declaration of a Marine Protected Area in terms of the National Environmental Management: Protected Areas Act (Act No 57 of 2003). Aside from the Algoa 7 area, the final layout of the gazetted Addo MPA also excludes the existing anchorage area that falls within the jurisdiction of the National Transnet Port Authority (see image below). The Marine Ecological Specialist Study found that marine ecological impacts are higher for Algoa 7 than for Algoa 1 due to its position adjacent to the MPA (Appendix D of the BAR).</p> 
92	<p>Sonja Willemse</p> <p>Comment submitted: 29 April 2019</p> <p>I strongly object to the proposed implementation of the Aquaculture Development Zone in Nelson Mandela Bay. Here are some of my strongest concerns:</p> <ul style="list-style-type: none"> • the 4 months of data used to determine the suitability is incredible insufficient. The balance of the months in the year shows exactly why it is NOT suitable. • the chemical disruption in our seawater will have a dramatic knock-on effect on the environment. This has not been sufficiently quantified. • as I recall that the last time this proposal was tabled, it was found that fish farming was far more controllable and cost efficient on LAND? • the benefits of an ocean and water sports destination, including existing and future jobs in the tourism and event industry, FAR outweigh any possible benefits that the ADZ can have. <p>The legally messy due diligence has not been done. Please stop the possibility of this development happening. The immediate and long term consequences will be devastating to our local economy.</p> <p>Response by Anchor: 14 May 2019</p> <p>Four months of data insufficient. It is unclear which data you are referring to and I am therefore unable to provide a response.</p> <p>Receiving water quality. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). The impact on water quality and benthic habitat is assessed in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact was rated high</p>

No	Comment
	<p>before the implementation of mitigation measures (provided in the impact table) and as medium after. While the confidence is high that this impact will occur, the confidence in the efficacy of mitigation measures is medium. The impact assessment was conducted based on the outcomes of the modelling study and available literature.</p> <p>The impact of chemical pollution arising from the finfish cages were assessed in Section 4.1.5.1.4 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. It must be noted that the confidence in the efficacy of the provided mitigation measures is low. The impact assessment was based on current literature available.</p> <p>Land-based versus sea-based aquaculture: DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega Industrial Development Zone (IDZ) for hatcheries and holding facilities.</p> <p>Each aquaculture type has its own challenges as well as varying negative impacts and degrees to which mitigation measures are realistically implementable. For example, land-based facilities must be supplied with clean seawater and various systems are available (flow-through, partial re-circulation and full re-circulation). Overall implementation of a land-based system is very expensive (pumping cost, high electricity demand, infrastructure costs). In contrast, cage culture makes use of the assimilative capacity of the receiving environment and if managed carefully (e.g. site selection for appropriate waste dispersion, not exceeding carrying capacity (in kg fish) of the site) can have a lower impact on coastal water quality than a land-based facility that discharges finfish effluent close to the shore where dispersion is poor. On the other hand, diseases are much more easily controlled on land, where treatments can be applied more effectively and effluent can be sterilised prior to discharge, thereby reducing the impact on native fish populations. The prevention of impacts is impossible with any development and it is therefore important to consider the types of mitigation measures that are available and how effective they are. Environmental monitoring (baseline and impact monitoring) and adaptive management are also key in detecting unacceptable impacts and mitigating their effects. Please refer to the Environmental Management Programme (EMPr) in Appendix F for more information.</p> <p>Water sports and sharks: Concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
93	<p>Chris Dunderdale Comment submitted: 29 April 2019 Please refer to WESSA's comment in Appendix F6 for the detailed comment:</p> <ul style="list-style-type: none"> • Comment 6. The negative (socio-economic) impact on human use of ocean resources and subsequent impact on local business remains an open question • Comment 7. Change to the Bay's reef eco-systems <p>Beyond what has already been stated above</p> <p>I am an avid open water swimmer that regularly makes use of the area. I find it unacceptable that no reasonable effort (or at least one that was not sufficiently public) was made to establish the effect on open water swimmers and how this negatively affects sport tourism in the area. Beyond the fact that I don't want these fish farms built because I would like to enjoy the beaches and open water swimming without fearing for my life, I don't think the total complexity of the economic impact is fully understood by people who are trying to undertake this project.</p> <p>Realistically, there is high likelihood that the Ironman, an event that brings in close to R100 million each year through direct and indirect tourism for the city, will be lost because we are unable to guarantee swimmers' safety. By losing any large event such as this, this undertaking is signing the death warrant to a number of businesses in the area which rely on events such as the Ironman in order to stay alive. Any large scale loss of business such as this has a ripple effect beyond just the persons affected, but also the families of the persons who rely on that income to</p>

No	Comment
.	<p>survive. The talk is about the jobs lost and gained, but has any economic impact assessment been done on the types of people who will lose their jobs and how this will ripple affect in the job market? We already have a very sensitive economy and large scale unemployment figures which are regularly reported.</p> <p>My question to you and all others involved is: Is this agency and associated persons willing to be marked in history for destroying a significant part of this city's economy because insufficient or misleading information was given?</p> <p>In addition to my aforementioned comments, my professional training is as a data scientist and, with an Honours degree through NMMU, I believe I can give an adequate review of the analysis performed. The social trade off analysis performed is essentially a useless metric for understanding the sentiment of the wider public. People can be employed to attend these meetings in order to skew results in the favour of those who are willing to pay. In addition to this, even if my previous factors were not taken into account, a sample of +-150 people is nowhere near enough to fully understand the sentiment of the wider public.</p> <p>I would like to point out that the impact assessment using qualitative data is inherently flawed. The problem with having to use qualitative data instead of quantitative data is that it is subject to bias depending on whose heuristic knowledge is asked. Additionally, how this data was processed also has potential bias written all over it as qualitative data will typically need to be screened very carefully to ensure that no statements are overreaching and biasing the greater picture. I would like to note that the academics Britz and Sauer who performed the impact analysis, whilst being stellar academics in ichthyology, are not statisticians. My question for this study is why was a data analyst specialising in Biology based research (e.g. Dr Victoria Goodall) not approached to validate any findings? A lack of proper data analysis casts significant doubt in my mind as to the accuracy of the findings and whether or not any bias has been applied.</p>
	<p>Response by Anchor: 4 July 2019</p> <p>Response to comment #6 for WESSA</p> <p>Appeal Statement by the Minister applicable to Algoa 1 was not met. Quotes from the pre-application BAR are correctly summarised in this comment. Peter Britz from the Rhodes University, as the lead author on the comparative studies, responded to this concern by stating that: "The socio-economic report consisted of two components which need to be read together, visibly 1) the social choice survey which modelled the perceived negative/positive environmental and recreational effects establishing an Aquaculture Development Zone and 2) a detailed economic analysis of the feasibility of aquaculture in Algoa Bay which included a realistic projection of the production potential of the sites, income, costing, and jobs. The economic feasibility analysis which was compiled by aquaculture industry experts is quantitative and considered robust based on market demand, real costs and prices. Read together, the two components of the socio-economic report substantively address the Minister's brief and provide a basis for her making a decision."</p> <p>a) It is important to recognise that the public participation process has the purpose to engage with all stakeholders and obtain input on the impacts assessed and the impact ratings. Input from the SCUBA diving, hospitality, recreational fishing and other industries were provided during the pre-application stakeholder consultation process. Their comments have been addressed and the Draft BAR will be amended where required. The verification of information contained in the pre-application BAR has been requested from these industries where required (e.g. sailing routes, dive sites, fishing sites).</p> <p>b) Your concern regarding the phased approach in terms of public perception has been noted. For finfish farming at Algoa 1 Option 1, the public participation process showed that the perceived higher risk of shark attacks alone could potentially have a profound impact on the local economy. As an example, Ironman Organisers indicated during the 2014 appeal phase and the pre-application consultation of the current BA process that the event would be moved should finfish cages be installed at Algoa 1 Option 1. This impact could potentially be irreversible and occur during the pilot phase. It appears that there are few effective mitigation measures available to influence the perception of water sport participants. Furthermore, the beaches and marine environment near Algoa 1 Option 1 precinct constitute the main area where water sport events and activities take place (i.e. sensitive environment). The EAP agrees that in the absence of a detailed, quantitative socio-economic study, a precautionary approach should be applied, and the impact assessment will be revised accordingly. In the light of the above, with regards to perception, it is recognised that a phased approach would not be effective. A phased approach is, however, important to verify effectiveness of mitigation measures implemented to reduce visual and marine ecological impacts.</p> <p>c) Your opinion that socio-economic impacts were not sufficiently addressed are noted. During the next public participation process, the competent authority will consider the Draft BAR (including comments provided by stakeholders) and provide input. The competent authority will request additional information if required.</p> <p>d) Noted.</p> <p>Response to comment #7 for WESSA</p> <p>Diseases, organic pollution and chemicals: Concern is noted.</p> <p>Impact on nearby reef systems: The impact significance ratings in the marine impact assessment were derived by</p>

No	Comment
.	<p>taking cognisance of sensitive habitats and species surrounding the proposed ADZ sites.</p> <p>A) Untreated wastes resulting mainly from uneaten food and faeces of fish in sea cages are discharged directly into the sea and are not an insignificant source of nutrients. Impacts of organic pollution on benthic habitats below fish cages does tend to be localized to the area under the cages. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme. The impact on benthic habitats were assessed in the Marine Specialist Study in Appendix D of the pre-application BAR Section 4.1.5.1.2. Hydrodynamic model (Modelling–Ongrowing fish farm–Monitoring System - MOM) results do suggest that both Algoa 1 and Algoa 7 have acceptable dispersion potential and water quality standards are predicted to be met within the precinct boundaries (Wright et al 2019). The impact of organic waste discharge was rated as ‘high’ before and ‘medium’ after mitigation measures have been implemented. The marine ecological specialist maintains that a phased approach is considered a critical mitigation measure to facilitate adaptive management and to ground-truth the hydrodynamic modelling results with respect to carrying capacity of the site.</p> <p>The impact of chemical therapeutants and antifoulants in finfish cage culture (note that these chemicals are not used in bivalve culture) were assessed in Section 4.1.5.1.4. of the Marine Specialist Study in Appendix D of the pre-application BAR. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document, which contains all mitigation measures required to reduce the impact ratings. Responsible operators (& management) will implement recommended mitigation AND monitor the effectiveness thereof. This has been the case with historical experimental cages installed in Algoa Bay (the DST, Stellenbosch university trials with yellowtail and kob) where mitigation measure were implemented and extensive environmental monitoring was required (this was undertaken by NMMU researchers); This is also currently being implemented in trial sea cage culture in Saldanha Bay where aquaculture permit conditions require the operators to undertake amongst other requirements, water quality and benthic monitoring in accordance with their EMPr (note that the responsibility to uphold the Environmental Authorisation still lies with DAFF). The recent certification of two sea-based Japanese Yellowtail (<i>Seriola lalandi</i>) farms by the aquaculture stewardship council (https://www.eurofishmagazine.com/news/item/467-first-yellowtail-farms-to-be-asc-certified-are-japanese) suggests that it is possible to sustainably farm this species with effective mitigation of environmental impacts.</p> <p>Apex predators: The direct impacts on marine predators has been assessed in the Marine Specialist Report (Appendix D). There is no reason to believe that the interaction between apex predators as a knock-on effect would be different near fish cages when compared to a natural food source (e.g. whale carcass/seal colony/fish swarm). To the best of our knowledge published studies assessing a change in apex predator interactions as a result of finfish cage farming are currently not available. As a result, rating the impact of altered predatory interactions is extremely speculative and any impact rating associated would therefore be meaningless.</p> <p>Response to other concerns:</p> <p>Lack of correspondence with open water swimmers. It is important to recognise that the public participation process has the purpose to engage with all stakeholders and obtain input on the impacts assessed and the impact ratings. In providing comment on the pre-application BAR, you are assisting the revision of this document to produce the Draft BAR.</p> <p>Your concerns regarding the impact on beach and ocean users have been addressed in the pre-application Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to have a different rating when compared to beach and shallow water users (i.e. more negative).</p> <p>Loss of IronMan and economic impact on PE. Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Decision-making. During the next public participation process (submission of Draft BAR and application form), the competent authority will evaluate whether enough information has been submitted to make an informed decision. In making their decision, the competent authority will weigh up the likelihood of the proposed development realising its full benefits against the potential negative impacts of implementing the pilot stage of the Aquaculture Development Zone. As pointed out correctly by stakeholders, perception-related impacts on water sports, events</p>

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	<p>and tourism (i.e. negative economic impact) may be realised during the pilot phase and could potentially be irreversible.</p> <p>Concerns regarding the data used and bias. The choice modelling study was conducted by the economist Professor Stephen Hosking (the second author in Britz et al. 2016). Such studies should be conducted by economists and not data analysts specialising in Biology based research. Furthermore, specialists conducting studies are, by law, required to be independent (i.e. the specialist must not have a personal interest in a particular outcome) and to provide an unbiased assessment. The limitations of the study were clearly stated in the report itself and in the Basic Assessment Report and the outcomes of the study are clearly reflected in the comments received during the pre-application process.</p> <p>Perception of increased shark attack risk could impact on local economy. Based on the choice modelling study conducted by Britz et al 2016 and feedback from stakeholders thus far, it appears that potential ecological impacts and the perception of an increased risk of shark attacks occurring (whether this risk is real or not) were identified as the most important disturbing aspects of the proposed development. While mitigation measures have been recommended for negative visual and marine ecological impacts, few meaningful mitigation measures are available for some of the other aspects (perceived increased risk of shark attack, loss of fishing grounds and area utilised for sailing) other than site reduction of and omitting finfish farming at Algoa 1 Option 1 (Summerstrand site). The perceived higher risk of shark attacks alone could potentially have a profound direct impact on the local economy, should the Ironman Event (and other events) be moved to a different location (Ironman Organisers indicated during the appeal phase that the event would be moved should finfish cages be installed at Algoa 1 Option 1). Furthermore, this impact could potentially be irreversible and occur during the pilot phase. For this reason, the negative economic impact on Port Elizabeth will be reassessed for finfish farming at Algoa 1.</p>
94	<p>Reg and Sheila Marshall</p> <p>Comment submitted: 29 April 2019</p> <p>Our main objections are that we feel it is quite likely to destroy the tourist industry of the city because of floating waste material landing up on our coastline & on the Blue Flag beaches here. The project will increase the probability of shark attacks on swimmers & surfers in The Bay ! The Iron Man Championship, Bell Buoy Challenge, Surfing Competitions etc bring in many visitors, including ones from overseas, and would make the continuation of these yearly events very risky ! Stopping these events will mean more jobs will be lost than gained by establishing the fish farms! – apart from all the jobs that benefit from these events!! We would appreciate these concerns relayed to the proposers of the project in the hopes that they will reconsider all the pros & cons. For the benefit of the future of Nelson Mandela Bay.</p>
	<p>Response by Anchor: 14 May 2019</p> <p>Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faeces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore.</p> <p>Sharks and water sports: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter</p>

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.	<p>programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
95	<p>Kathy Rath and Jack Dempsey – Hospitality industry (Dempsey's guest house)</p> <p>Comment submitted: 29 April 2019</p> <p>We are both 100% against the proposed sea-based Aquaculture Development Zone (ADZ) in Algoa Bay, Eastern Cape. We are not opposed to the fish farms and the employment they will generate, we are opposed to their location in Algoa Bay because:-</p> <ul style="list-style-type: none"> • The fish farms will mess with nature, Algoa Bay is a sacred section of nature, it is a Hope Spot. What is a Hope Spot?:- https://mission-blue.org/hope-spots/ • Algoa Bay is home to the largest African Penguin colony in the world; fish farms will threaten their existence. • The fish farms will spoil the magnificent horizon in the bay. • Expert oceanographer, Dr. Eckardt Schumann has warned that beaches will be covered in a slime of fish faeces and uneaten food if the fish farm goes ahead. • Algoa Bay is fast becoming the water sports capital of Africa, incredible near perfect conditions present for a myriad water sports, above and below water in Algoa Bay, many sporting events are hosted by Port Elizabeth, national and international. The possibility of the increase in marine predators in the bay due to the fish farms will create fear and loss of major events and tourists to Port Elizabeth and Algoa Bay. • For 15 years Port Elizabeth has successfully hosted the international IronMan Triathlon, as well as the 70.3 IronMan World Championship, bringing millions of rand into the city. If the fish farms go ahead, Port Elizabeth will lose the IronMan Triathlon hosting, there is no question about that. • Marine-related tour operators will suffer due to the perception that there will be an increase in shark attacks; reduced quality of water will also have a negative impact on water sports. • Tourism in Port Elizabeth/Algoa Bay is already hanging on by a thread due to an inefficient municipality, all we have left to offer tourists is the untouched and pristine nature in Algoa Bay; if the fish farms go ahead, job losses in the tourist industry will rise, nature will have been tampered with, detrimental changes will occur. We quote Guy Rogers, The Weekend Post 27th April 2019: "The potentially negative impact on specialist tourism and recreational businesses by the proposed development must be weighed against the benefit of creating new jobs and opportunity to develop skills in the mariculture sector" • We rather propose job creation in the tourism industry. <p>Response by Anchor: 14 May 2019</p> <p>The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming (including impacts on Penguins). A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer is considered 'high' after implementation of mitigation measures.</p> <p>The potential impact on the seascape character was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. With regards to Algoa 1 (Summerstrand site), the impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Uneaten food and faeces are negatively buoyant and sink to the bottom of the cage. Accumulation below the cages is generally considered to be the main concern associated with organic pollution from finfish cages (rather than the dispersion thereof). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. It is therefore unlikely that faeces and uneaten food will wash up on the beaches from a finfish farm situated 3.5 km offshore.</p>

No	Comment
.	<p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Sharks and water sports: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry - is their cause for concern?).</p> <p>Water quality: Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. <i>Escherichia coli</i> and <i>Enterococci</i> are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Job losses: Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document</p>

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.	to be implemented by the Department of Agriculture, Forestry and Fisheries.
96	<p>Aston Cain</p> <p>Comment submitted: 29 April 2019</p> <p>Lifesaving clubs are voluntary organisations who act on behalf of the city and the country as custodians to water safety and water safety awareness.</p> <p>Concerns around the fish farm along the NMB Beaches are as follows:</p> <ul style="list-style-type: none"> • chemicals used in fish farming to fight off parasites essential for the farming practices are harmful & lethal to the environment, organisms, mammals, birds and fish • interferes with public training route and run off of any chemicals can affect human health given it's proximity to public bathing areas. <p>We have also investigated further into fish farming practices that we don't object to sustainable and responsible fish farming, we do object to placing these farms so close to public bathing areas. The public are given opportunities to raise their concerns and objections, let's hope that our voice isn't ignored and that the public's interest is put first.</p> <p>Response by Anchor: 15 May 2019</p> <p>The impact of chemical pollution arising from the finfish cages were assessed in Section 4.1.5.1.4 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. The impact assessment was based on current literature available.</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Although chemicals can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>Interference with training routes. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as life saving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p>
97	<p>Dianne van Zyl – Resident</p> <p>Comment submitted: 29 April 2019</p> <p>I object to the fish farm.</p> <p>Response by Anchor: 10 May 2019</p> <p>Comment noted.</p>
98	<p>Michelle van Aardt – Dive industry (ProDive)</p> <p>Comment submitted: 30 April 2019</p> <p>ProDive provided a three-page letter, which is attached in Appendix F6 of this report. A summary of the most important issues raised, and our response is shown below:</p> <p>Pro Dive has been operating from Hobie Beach for 22 years and has been internationally recognised as a PADI 5 Star Career Development Centre. This brand is recognised worldwide drawing divers to Port Elizabeth from all over South Africa and abroad. We offer the following products: Snorkelling, Kayaking, Scuba diving training, Daily charters, Sales, Servicing and Travel packages.</p> <ul style="list-style-type: none"> • ProDive has not been consulted. • Finfish farming at the proposed Algoa 1 site will have a negative economic impact on ProDive for the

No	Comment
.	<p>following reasons:</p> <ul style="list-style-type: none"> ○ Reefs adjacent to Algoa 1 will be impacted (emphasis on Bell Buoy Reef) ○ Visibility will be reduced ○ Resident Tooth Sharks on the reef are "a huge draw card for divers worldwide" and could leave the reef to spend more time near the cages. ○ Increased shark activity (no species provided) could impact on diver safety <ul style="list-style-type: none"> ● There are major flaws in the sample sizing and testing that has taken place <p>Response by Anchor: 31 May 2019</p> <p>Alternatives: In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternative combinations of precincts are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7). The competent authority has to evaluate the information provided in the BAR and Appendices, as well as the comments provided by stakeholders and decide whether environmental authorisation should be granted, and if so, for which Alternative Option.</p> <p>Lack of consultation: It is important to recognise that the public participation process has the purpose to engage with all stakeholders and obtain input on the impacts assessed and the impact ratings. In providing comment on the pre-application BAR, you are assisting the revision of this document to produce the Draft BAR. Scuba diving activities in Algoa Bay and their proximity to Algoa 1 and 7 have been described on Page 75 of the pre-application BAR. We will include the additional information regarding the importance of the Bell Buoy Reef as provided in your comment. The background information to SCUBA diving in Algoa Bay also includes a map of popular diving sites in relation to Algoa 1. This map has been attached to this email. We would appreciate if you could provide direct input on this map for integration into the Draft BAR (next phase). Please send us coordinates of any additional sites, name changes or should you disagree with the locations of the diving sites indicated here. It would be great if I could include the routes that you take on your daily trips. Would you be able to provide us with a Google Earth file? Alternatively, we could speak on the phone to discuss the routes that you take and whether those routes would require you to traverse the proposed Algoa 1 area.</p> <p>Negative economic impact. Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Impact on the reef system and therefore on SCUBA diving: The impact on SCUBA diving was assessed in Section 9.5.2.3 (Potential impact OP-SE3b) of the BAR. The overall the impact on SCUBA diving was rated to be very low with mitigation measures for all precincts (medium confidence). None of these diving sites overlap with any of the proposed precincts (one of the site selection criteria in the Strategic Environmental Assessment excluded known reef areas), and as such loss of access to any of these dive precincts by recreational scuba divers will not occur. It is, however, recognised that ecosystem degradation could reduce the recreational value of the reef systems surrounding Algoa 1. Impacts on benthic habitats below fish cages does tend to be localised to the area under the cages. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 7 (and 1), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. The impact on water quality and benthic habitat is rated as medium after the implementation of mitigation measures in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme, through which the benthic impact footprint can be determined.</p> <p>Orcas in Cape Town. It is unclear how this information is relevant to the impact assessment.</p> <p>Increased shark (non-species specific) presence and diver safety. Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers, swimmers and divers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" A sentence will be included in Section 9.5.2.3 that increased shark presence near the cages could potentially impact on the safety of divers, especially at sites closer to the finfish farm. However, considering Ragged Tooth Sharks on the reef are "a huge draw card for divers worldwide", the additional presence of sharks (note that this may not necessarily happen) should not change the impact rating in Section 9.5.2.3 (Potential impact OP-SE3b) of the BAR.</p> <p>It should also be noted that research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006:</p>

No	Comment
.	<p>South Africa's White Shark cage-diving industry -is their cause for concern?). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements would constitute further mitigation measures. It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business.</p> <p>Reduced visibility. This impact on SCUBA diving is discussed in Section 9.5.2.3 of the BAR.</p> <p>Major flaws in the sample sizing and testing. It is unclear what study the comment refers to when stating that sample sizes were flawed (socio-economic aspects or marine-ecological impacts?). Furthermore, it is unclear what is meant by testing.</p>
99	<p>Dr Stephanie Plon – Ocean Health Researcher at Nelson Mandela University Comment submitted: 30 April 2019</p> <p>The selected site is in an ecologically sensitive area which presents a key habitat for the endangered Indian Ocean humpback dolphin (<i>Sousa plumbea</i>) in Algoa Bay. Faeces and excess food from sea-based aquaculture ventures have been shown to cause eutrophication of the area and thus will substantially impact on the selected site. A number of previous studies since the mid 1990's have identified the area as a key habitat for Indian Ocean humpback dolphins (<i>Sousa plumbea</i>), of which there are estimated to be less than 500 individuals left in South African waters.</p> <p>Response by Anchor: 16 May 2019</p> <p>The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with finfish farming (including impacts on cetaceans). The description of the receiving environment also includes information on this species. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures.</p> <p>Eutrophication. Finfish cages at Algoa 1 would be situated in 20-40 m water depth to allow for sufficient dispersion of food and faeces. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site (excerpt: " Assuming that all dissolved nitrogenous waste is in the form of ammonia nitrogen, the predicted, total annual dissolved nitrogen output, when converted into an instantaneous concentration value (based on the volume of the cages and the average current velocity) remains below the ANZECC (2000) WQ guideline of 0.1 mg.l-1 for both species under the different scenarios"). Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay (excerpt: "[...] considering the worst case scenario, mariculture operations in Algoa Bay at this scale is predicted to input less than 10% of the 870 000 kg DIN currently entering Algoa Bay from land based sources"). The impact on water quality and benthic habitat is assessed in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. Although cumulative effects on eutrophication in Algoa Bay are certainly a concern with regards to overall ecosystem health of the bay, the research by Koper et al. 2016 and Karczmarski et al 1999 confirm that <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 is situated 3 km offshore and is unlikely to significantly change inshore water quality, provided that finfish are farmed at carrying capacity and environmental monitoring informs an adaptive management approach.</p>
100	<p>Louis van Dyk - Resident Comment submitted: 30 April 2019</p> <p>While I understand the business benefits of building the proposed Fish Farms, I need to express my disapproval of using the proposed site adjacent to the city's beaches. As a resident, I know the joys and the beauty of our coastline. I have actually stayed at the Marine Protea Hotel and appreciated the view from up high. As such, I can imagine a tourist doing the same. Having that pristine view be marred by farming cages would most certainly detract from the appeal, and given the choice of holiday venues, may actually disqualify Port Elizabeth.</p> <p>Furthermore, the proposed sites are near to our Blue Flag beaches, and areas where many surfers enjoy the waves. Many fish swimming in an area - where they are being fed - equates to food for many predators, specifically sharks. Giving sharks a REASON to come near to the beaches where people are used to swimming safely is unfair on both the people, who have an increased risk of attack, as well as the sharks, who will be blamed for doing what sharks do to survive. I would request that a venue be chosen that is not adjacent to the city and its beaches - at least as far away from the city as the Coega area where the deepwater harbour has been built.</p> <p>Response by Anchor: 16 May 2019</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the</p>

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	<p>Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high. The Marine Drive Protea Hotel and all other hotels along Marine Drive are considered 'visual receptors' in the impact assessment.</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Rather use venue near Ngqura Harbour. Algoa 7 is situated approximately 3 km from the Ngqura Harbour and is put forward in the application for environmental authorisation. In total three sites are considered, namely Algoa 1 (Summerstrand), Algoa 6 (PE Harbour) and Algoa 7 (Ngqura Harbour). Three alternatives (combination of precincts) are described in Section 3.5 and assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
101	<p>Andrew Stewart - Resident Comment submitted: 30 April 2019</p> <p>As a stakeholder and a resident in Port Elizabeth I must object very strongly to the proposed positioning of Algoa 1 as part of the ADZ – It is in fact not feasible.</p> <p>I am an open water swimmer and a triathlete and make extensive use of the bay for various water sports. I am therefore also able to see directly how important this area is to the city in respect of other users, events and general tourism activities. It does not even require a survey to recognize the value to the city in terms of the beach area use and availability. The amount of holiday makers, open water events, diving operations etc that will be affected by the introduction of the fish farm at Algoa 1 The job generation in the summerstrand area alone is huge compared to what the Algoa 1 facility will ever achieve at full capacity. Not to mention the amount of tourism spend that will be lost as people decide not to visit as our beaches are either unsafe, polluted or just plain ugly with fish cages just off shore.</p> <p>I moved from Johannesburg to PE in 2007 and have made Port Elizabeth my home. I would seriously consider moving to another coastal city if I could not swim regularly in the bay in the areas around the proposed Algoa 1. I don't think its too far fetched to say that if Algoa 1 goes ahead there will be may others who decide that one of the best features of living in PE has been taken away and may look to move.</p> <p>In a nutshell.</p> <ul style="list-style-type: none"> • Tourism will be damaged – Resulting in huge financial loss's • As a result Jobs will be lost – A lot more than Algoa 1 could ever provide. • The Summerstrand area will no longer be attractive to investors and home buyers and will go into decline

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.	<ul style="list-style-type: none"> • People will leave this city to look for better alternatives – where one can swim on their beaches. • The higher potential for shark attacks (The fish farms will definitely attract predators) • The very good possibility of waste from the fish farms being deposited onto the beaches when the currents and tides are right. • The unsightly view from a pristine beach which will be destroyed by a horizon filled with fish cages. <p>Response by Anchor: 17 May 2019</p> <p>Tourism will be damaged: Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries.</p> <p>Loss of investment at Summerstrand area. The impact on real estate value is assessed in Section 9.5.2.8 of the BAR. The proposed fish farms will have a visual impact that could negatively impact the view – and thus the sense of place - from residential properties, which in turn could impact the perceived value of seafront and sea-view properties. The Visual Impact Assessment shows that floating structures and maintenance vessels, as well as lights at night, would have a high visibility during the operational phase. The negative impact of Algoa 1 on real estate value with and without mitigation measures was rated as high and medium respectively. Mitigation of visual impacts could effectively mitigate against the loss of real estate value. It is important to note that mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Loss of swimming beaches. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and</p>

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.	<p>recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p>
10 2	<p>Craig Venter -Resident Comment submitted: 30 April 2019</p> <p>We and thousands of others use the beaches nearby for swimming and a variety of other water related sports. The pollution from the concentration of fish faeces in the water will not only pollute the water but also kill any marine environment directly below it. I also believe this may attract larger predatory fish closer to swimming areas which is unacceptable.</p> <p>Response by Anchor: 17 May 2019</p> <p>Untreated wastes resulting mainly from uneaten food and faeces of fish in sea cages are discharged directly into the sea and are not an insignificant source of nutrients. The impact on benthic habitats were assessed in the Marine Specialist Study in Appendix D of the pre-application BAR Section 4.1.5.1.2. Hydrodynamic model (Modelling–Ongrowing fish farm–Monitoring System - MOM) results do suggest that both Algoa 1 and Algoa 7 have acceptable dispersion potential and water quality standards are predicted to be met within the precinct boundaries (Wright et al 2019 Appendix D of the BAR).</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of</p>

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10 3	<p>Bronwyn van den Berg Comment submitted: 30 April 2019</p> <p>My family and I use our beautiful bay every week. I do open water swimming, my husband paddles and the whole family is involved in lifesaving. We belong to summerstrand surf life saving club. We regularly swim and surf from Pollock Beach. I object to the fish farm plan as it will affect us directly as a result of increased shark activity or even if it's perceived increased shark activity.</p> <p>Response by Anchor: 17 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
10 4	<p>Earl Ingram – Nelson Mandela Bay Lifesaving Comment submitted: 30 April 2019</p> <p>We Lifesaving Nelson Mandela Bay are totally against fish farms in the bay. We have 7 clubs affiliated to Lifesaving Nelson Mandela Bay from Bluewater Bay through to Sardinia Bay and all clubs will be affected by fish farming. Fish farming in the bay will have a negative effect on the sport of lifesaving and any open water swimming event in our district. It is clear that fish farming will attract sharks to close bathing proximity in the bay. The possibility of shark attacks on our members will increase dramatically. Lifesaving Nelson Mandela Bay has hosted very successful National champs in the last 4 years with the municipality already committing to sponsor the next 3 years. This has been positive for the tourist industry and the community of Nelson Mandela Bay. Fish farming in the bay will result in the loss of these events. No fish farming in the bay please. Consider other areas but not in the Bay.</p> <p>Response by Anchor: 17 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section</p>

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10 5	<p>Tim Douglas-Jones Comment submitted: 30 April 2019</p> <p>Comment relating to the pre-BAR with regard to potential fish farms in Algoa Bay:</p> <p>I must admit that I am surprised that this matter of fish farms in Algoa Bay has been raised again after the thorough criticism of it previously. The many issues that are raised by this assessment are very serious for the wellbeing of our Bay and the risks are simply too high for the negative impact this will have on the health and economy of the Bay which presently offers so much.</p> <p>I therefore refer you to the submission made by the Algoa Bay Branch of the Wildlife and Environment Society of South Africa (WESSA) submitted on 28 April 2019 entitled: Comments on the proposed Algoa Bay Aquaculture Development Zone as contained in the DAFF's new Basic Assessment (BAR) process. I wholeheartedly endorse it as part of my submission of strong objection.</p> <p>Response by Anchor: 17 May 2019</p> <p>Your opposition to the proposed Aquaculture Development Zone (with emphasis on finfish farming) is noted. We will respond to the comments provided by WESSA in due course and trust that WESSA will forward our response to you.</p>
10 6	<p>Travis G (no surname provided) Comment submitted: 30 April 2019</p> <p>Whilst i certainly support job creation that is so desperately needed in PE, I equally believe that tourism to the PE swimming beaches will be no longer safe to swim in. When last did you hear of a shark attack in the bay between the harbour wall and the lighthouse? Furthermore, the city enjoys huge income from the Ironman competition each year, which will no longer take place due to shark attacks. My opinion is that this cultivation area be at its furthest point in Coega area.</p> <p>Response by Anchor: 17 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of</p>

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.	<p>white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Rather cultivate finfish at Coega. Algoa 7 is situated approximately 3 km from the Ngqura Harbour and is put forward for finfish culture in the application for environmental authorisation.</p> <p>In total three sites are considered for the Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. oyster and/or mussels) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
10 7	<p>Danny Darné Comment submitted: 30 April 2019</p> <p>I do Ironman events and will not swim the bay should there be a fish farm irrespective of an scientific studies. I will also convince all family that holiday in P.E that it is not safe to swim the Bay.</p> <p>Response by Anchor: 17 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
10 8	<p>Karen Mels – Open water swimmer Comment submitted: 30 April 2019</p> <p>My name is Karen Mels I live in PE and how u use the Bay mostly on an daily basis to train and swim. The sea is such a calm and and relaxing to you mind and is was diagnosed with epilepsy the medication is a wonder recipe and I don't swim alone but once I am in the water I am an different person after an hecric day at work you feel an different person after and swim in the ocean. I personally think the ADZ (fish farm) or bad idea as the sea that is our</p>

No	Comment
	<p>playground on an daily basis will not be safe anymore. I am an triathlete who participate in Ironman shorter tri competitions the the Bell bouy which has earned world class status and the ocean series etc and the fish farm will definitely not be safe for our Daily swimmers as well as visitors in port Elizabeth as this will be an breeding plays for fish and human beings will be to scared to swim in the ocean. This will be an lost city which no one will visit again and with businesses that is not doing so good but with Ironman brings in more money as well as tourist and school holidays will be an disaster to port elizabeth. I personally think it is a no go. Please take fish farm to another suitable place.</p> <p>Response by Anchor: 17 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
10 9	<p>Lorraine Hewett – Resident</p> <p>Comment submitted: 30 April 2019</p> <p>Port Elizabeth is a struggling city with a high unemployment rate. It has been proven that tourism is the biggest industry in the world. We have Ironman which benefits everyone and apart from bringing in a huge sum of money, it showcases our city. We have a beautiful blue flag beach at shark Rock pier, enjoyed by everyone daily. It's one of our main attractions. It's unbelievable that this site has been chosen. PE will die. What is wrong with these people. Have they no understanding? Place it elsewhere. We already have the ore on Kings Beach and now they want to destroy another one. The mind boggles.</p> <p>Response by Anchor: 17 May 2019</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Impact on employment: Your concerns regarding employment creation has been addressed in Section 9.5.2.2 of the BAR. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document</p>

No	Comment
	<p>to be implemented by the Department of Agriculture, Forestry and Fisheries.</p> <p>Blue flag beach status. Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Change location of the site. In total three sites are considered for the Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
110	<p>Tess Kotze – Lifesaving Eastern Cape</p> <p>We Lifesaving Eastern Cape are object to any fish farms in and around the bay. LEC have 7 local clubs affiliated to Lifesaving South Africa and Lifesaving Nelson Mandela Bay namely; Brighton Beach, Bluewater Bay, Kings Beach, Humewood Beach, Hobie Beach, Summerstrand and Sardinia Bay and all these clubs will be affected by fish farming. Fish farming in the bay will have a negative effect on the sport of lifesaving and any open water swimming event in our region. It is clear that fish farming will attract sharks to close bathing proximity in the bay. The possibility of shark attacks on our members will increase dramatically. Lifesaving Nelson Mandela Bay has hosted National Lifesaving Championships very successfully in the last 4 years with our municipality committing to sponsor the next 3 years to keep this event in the bay. This event and smaller competitions have a positive impact for the tourist industry and the community of Nelson Mandela Bay. Fish farming in the bay will result in the loss of these events. We urge you to reconsider and cancel any fish farming projects in and around the bay.</p> <p>Response by Anchor: 17 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (Carcharodon carcharias), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some</p>

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11 1	<p>Deborah Johnson – Resident Comment submitted: 30 April 2019</p> <p>As a Summerstrand resident of the bay for over 30 years I am compelled to write to you regarding the proposed fish farm. I am vehemently against this project to name a few reasons:</p> <ul style="list-style-type: none"> • the close proximity to our prized and cherished blue flag beaches will be seriously impacted as water quality & safety will be affected & threatened. • With our oftentimes prevailing easterly winds there is no doubt that there will be a possibility of a pervading fish smell, seriously impacting us residents & tourists. • Excrement/waste polluting the water & washing up on our much loved prime spots is highly likely. • our beloved wild dolphin pods that swim in our bay will be endangered with the nets of the farm. • dangerous sharks will be lured closer to shore. <p>I walk down to the beach with our dog regularly from our home 150 metres from the ocean and I do not want to have to constantly be on guard that our cherished animal picks up deadly waste to eat. Couple with this the farm will be an eyesore. I implore you to consider some other viable location for this venture.</p> <p>Sadly the selected location is a preposterous plan and one where monetary gain & job creation appear to be the only positives so I cannot endorse it.</p>
	<p>Response by Anchor: 17 May 2019</p> <p>Blue flag beach status.</p> <p>Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (See explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture and see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (See explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (See explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character). Same as human health, dog health will not be affected by the proposed development.</p> <p>Safety: The perception of increased shark attacks would most likely not warrant renouncing the Blue Flag status. The actual risk of finfish cages increasing the risk of shark attacks on bathers and surfers 3-4 km from away from the proposed sites is unknown due to the paucity data. Please refer to more detailed information below.</p>

No	Comment
.	<p>Air pollution. Comment noted. A section on potential air pollution will be included in the Draft BAR to investigate this issue further.</p> <p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>The impact on cetaceans (dolphins, whales) was assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The negative impact on cetaceans as a result of entanglement has been rated as low significance after the implementation of mitigation measures, which include:</p> <ul style="list-style-type: none"> • Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case. Research by Koper et al. 2016 and Karczmarski et al 1999 confirm that <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 3-5 km offshore). • Ensure all mooring lines and nets are highly visible (use thick lines and bright antifoulant coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network). <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted</p>

No	Comment
.	<p>for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>In total three sites are considered for the Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
11 2	<p>David Lipschitz – Water sports Comment submitted: 30 April 2019</p> <p>I strongly object to the proposed fish farm off the beaches in Port Elizabeth. I am an ocean user and have many reservations to this.</p> <p>Response by Anchor: 17 May 2019 Your opposition to the proposed Aquaculture Development Zone (with emphasis on finfish farming at Algoa 1 (Summerstrand site) is noted.</p>
11 3	<p>Andrew Austin – Open ocean swimmer Comment submitted: 30 April 2019</p> <p>I AM DEAD AGAINST IT. I use this bay and it's ocean many times per week – Open Water Swimming; Bell Buoy swims, Ocean Racing, NMB Summer Tri Series etc,etc. and eventually the full IRONMAN.</p> <p>Response by Anchor: 17 May 2019 Impact on open ocean swimming and sport events in PE. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p>
11 4	<p>Johan Gerrys – Open water swimmer Comment submitted: 30 April 2019</p> <p>I am a resident of PE and have been for +/- 30yrs and the sea / beaches of Port Elizabeth is for me a great recreational benefit and one of main reasons I remain in PE and promote the City. I visit Cape Recife often and take part in Ocean Swims and Triathlons. I feel this Fish Farm can kill the Tourism for our City and turn it into an Industrial 'dirty feel'</p> <p>Response by Anchor: 17 May 2019 Open ocean swimming and sport events. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Potential impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>The potential impact on the seascape character and sense of place at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone</p>

No	Comment
.	maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.
11 5	<p>Paul Middleton – Kings Beach Surf Lifesaving Club Comment submitted: 30 April 2019</p> <p>Lifesaving clubs are voluntary organisations who act on behalf of the city and the country as custodians to water safety and water safety awareness. Concerns around the fish farm along the NMB Beaches are as follows:</p> <ul style="list-style-type: none"> • Safety of all our competitors during lifesaving championships and training during the year on all our beaches • The increase of sharks and thus having a negative result on children/adults learning life skills in water • Chemicals used in fish farming to fight off parasites essential for the farming practices are harmful & lethal to the environment, organisms, mammals, birds and fish • The impact of chemicals can affect human health given its proximity to public bathing areas. <p>Further investigations into fish farming practices we object to placing these farms so close to public bathing areas and natural marine habitat. The public are given opportunities to raise their concerns and objections, let's hope that our voice isn't ignored and that the public's interest is put first.</p> <p>Response by Anchor: 20 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Chemicals used in aquaculture: Harm to marine environment. The impact of chemical pollution arising from the finfish cages were assessed in Section 4.1.5.1.4 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. The impact assessment was based on current literature available.</p> <p>Chemicals used in aquaculture: Harm to humans. Although chemicals can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p>

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11 6	<p>Karen Austin – Open water swimmer Comment submitted: 30 April 2019</p> <p>I AM DEAD AGAINST IT. I use this bay and it's ocean many times per week – Open Water Swimming,, Ocean Racing, NMB Summer Tri Series etc,etc. and feel that the fish farms will attract sharks and other predators which could lead to an attack on swimmers and paddlers.</p> <p>Response by Anchor: 20 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (Carcharodon carcharias), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
11 7	<p>Michelle MacLean - Resident Comment submitted: 30 April 2019</p> <p>I really do object to the plan to situate a fish farm close to Port Elizabeth's beaches. I do not object to a fish farm but I do object to where it is planned to be situated. The beaches that run along the whole Port Elizabeth coast are a place of relaxation, used for swimming, surfing, sailing and various other water sports. It is also a tourist attraction and utilized by the various tourists that either stay in PE or use PE as a starting point for their trips down the Garden Route. I feel that the fish farm could do better situated further away where there will be less impact on PE beach front. The fact that it will attract sharks and other predators is a serious concern.</p> <p>Response by Anchor: 20 May 2019</p> <p>Site selection: In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (Carcharodon carcharias), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of</p>

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11 8	<p>Benlloyd Roth – Resident and water sports, including open water swimming Comment submitted: 30 April 2019</p> <p>Shortly after moving here I got involved with open water activities such as scuba diving and open water swimming. I was a scuba diving instructor in my younger days and have always enjoyed swimming, snorkeling and scuba diving. I have enjoyed the wonderful opportunity to continue those activities here as well. Of late the ocean series (fortnightly races, running from October to April) have been a great way to meet new people and build friendships. I have also started doing a few triathlons in the last few years and enjoyed the wonderful triathlon community in PE. Few places can compete in offering such wonderful surroundings where runners, cycles, swimmers, canoeist, and even yachties can share their passions...and mingle.</p> <p>Just a few weeks ago I did a short run before an ocean swim, and joined guys preparing for the Comrades and two oceans ultra, for part of my run. Not that race is something to consider when deciding on where to build a fish farm or not, I was the only white guy, there was a white girl, a couple of black guys, an Indian and a 'colored' guy. All of us, not one knowing the other, having a wonderful conversation. Joking and sharing training tips. I have seen this so often at triathlons and ocean training swims. We all enjoy our activities and love for the ocean, no matter race, education, job status, sex, or socio-economic backgrounds.</p> <p>Our beach front, the water activities will be no more if the ADZ (fish farm) is built. Our beach front, the water activities and other activities that spring from this, these unifying activities I mentioned before, will be gone. Not to mention the tourists that will not come here anymore. The city, jewel of the Eastern Cape, cannot afford to loose our tourists. So many businesses will fold. I am not talking about just hotels and B&Bs but the second and third tier businesses that rely on these business will suffer.</p> <p>Not even to mention the safety factor these fish farm hold for swimmer and other people enjoying the beaches. Fish farms attract sharks. This endangers swimmers and will lead to high costs of putting up shark nets. The initial cost and maintenance cost on these nets are high. Combine that to the negative impact it has on the fish and other marine animal that can get caught in these nets. There are many other places to build a fish farm but not close to our beaches. I firmly believe this will be detrimental to the city as a whole.</p> <p>Response by Anchor: 20 May 2019</p> <p>Site selection: Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report). In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p>

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11 9	<p>Christina Van Niekerk - Resident Comment submitted: 30 April 2019</p> <p>Strongly object to a fish farm bordering on our pristine coastline. The City of Port Elizabeth are known for their sunseeker sea and beaches, Surely there are other areas more suitable for a fish farm. Why destroy what we have by planning an industry close to our shores.</p> <p>Response by Anchor: 20 May 2019</p> <p>Site selection: Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report). In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
12 0	<p>Gavin Rogers - Resident Comment submitted: 30 April 2019</p> <p>This is a bad idea as it would destroy tourism and sporting events that bring in revenue for the bay.</p> <p>Response by Anchor: 20 May 2019</p> <p>Sporting events: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Tourism and revenue loss to PE: Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>

No	Comment
12 1	<p>Retha Smit - Resident</p> <p>Comment submitted: 30 April 2019</p> <p>I just want to register as one of the Affected Party by the fish farm just across Retiefplein, of which I am one of the owners. They will chase all the tourists away and see that no one will come to the Beach Front!!!!</p> <p>Response by Anchor: 20 May 2019</p> <p>Tourism and revenue loss to PE: Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p>
12 2	<p>Greg Tucker - Resident</p> <p>As a seasoned beach user who was born in PE and has lived here over 50 years, I maintain that the proposal to establish a fish farm at the proposed site is a very bad idea that is destined to fail, and will kill the recreational value and tourism economy of PE in the process. The establishment of a fish farm will have a significant negative impact on the recreational use of PEs beaches, due to:</p> <ul style="list-style-type: none"> • the real and/or perceived danger of sharks being attracted to feed in the area; • the collection of fish waste washing up onto the beaches in the prevailing south easterly wind, and longshore current; • the negative visual impact of the fish farm from the beachfront, which is the foundation of the PE tourism economy. <p>This will have a significant negative impact on the recreational uses that are a major attraction to PE, for local residents and visitors alike. These include open water swimmers, surfers/body boarders, surf lifesavers, surfski paddlers, SUPs and small boat sailors. Algoa bay is one of very few bays on the SA coastline that is sheltered from the open sea conditions along with relatively warm water temperatures. These conditions therefore attract 1000s of locals and visitors to their favourite sea based sport every year.</p> <p>These conditions are the reason that Algoa Bay is chosen to host major sea based events which attract visitors and therefore much needed tourism revenue to the city. These events include Ironman (triathlon), Exterra (triathlon), Molo Challenge (triathlon), EP Triathlon events, Surf Lifesaving provincial and national championships, sailing regattas, Bellbuoy Challenge (open water swimming event that is now on the world tour), Ocean Racing Series (fortnightly open water swimming event), provincial surfing competitions, surfski races, to name a few. In addition to the organised events above, the sea and beaches are used daily by the local residents for the same activities (beachgoing, open water swimming, surfing, paddling, surf lifesaving, scuba diving, etc.)</p> <p>A fish farm at the proposed location will put a stop to all of this, with obvious consequences to the city's tourism revenue and the loss of jobs that would result.</p> <p>The conditions at the proposed site get extreme from time to time, particularly with a south easterly wind blowing, and particularly during the winter solstice. I have seen swells at the proposed site sometimes exceeding 10m in height. The likelihood of the fish farm infrastructure being damaged in such conditions is high, and in such events, the farm is likely to end up on the PE beaches. The financial cost of the damage and the cleanup, plus the environmental cost of the pollution involved, makes this an unviable site.</p> <p>We all recognise the benefit that a fish farm will create, in the form of food security and jobs, but there will be other more appropriate sites along the SA coastline that will not have such devastating impacts on the existing environment, the local tourism economy, and the existing beach/sea users (both local and visitors). It cannot be argued that the proposed fish farm will create jobs without considering the loss of jobs in the tourism industry (hotels and accommodation, car hire, restaurant/bars and other hospitality, event companies, etc.). It also cannot be argued that creating a new food source is more important than maintaining an existing tourism economy, when alternative fish farm sites and food sources are available.</p> <p>The removal of the recreational use of PE's beaches will possibly affect other economies of the city when people who are attracted to live here for the beach lifestyle lose their incentive to live here and choose to move to other cities with stronger economies.</p> <p>This letter is therefore a formal request and recommendation to cancel the proposal for the Algoa Bay site once and for all, and to take this fish farm somewhere else.</p> <p>Response by Anchor: 20 May 2019</p> <p>Tourism and revenue loss to PE: Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently</p>

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Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Negative impact on vessel navigation routes (potential risk of collision of vessels, including sailing vessels with the aquaculture farms) have been assessed in Section 9.5.2.4. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures.</p> <p>Feasibility of Algoa 1: DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. Economic feasibility (ground and wind swell are considered one of the factors) were assessed for Algoa 1 in the socio-economic specialist study in Appendix D (Britz et al. 2016).</p>

No	Comment
.	<p>Job gains versus losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to assess a net gain in job opportunities (currently increased job opportunities are assessed in isolation with the risk of losing existing jobs in other sectors), which will more clearly capture the risks associated with the proposed development.</p> <p>Site selection. Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report). In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Food security. The EAP recognises that food security as a direct result of the proposed aquaculture project (i.e. the product will be used to feed poor communities) is not a likely outcome of the proposed project. Contributing indirectly to food security by providing job opportunities, contributing to the local and regional economy and providing opportunities is probably more appropriate (although this benefit is incumbent on ensuring that existing and planned projects and plans related to the tourism industry are not impacted negatively). Chapter 5 of the BAR will be amended accordingly. Note that the socio-economic impact assessment in the pre-application BAR excluded food security as a positive impact for the same reasons that you state (Section 9.5 Identification of potential impacts).</p>
12 3	<p>Frank Greyling – Resident</p> <p>Comment submitted: 30 April 2019</p> <p>I am the owner of a unit in a prestigious block of flats overlooking Hobie Beach. I object to the fish farm, which will negatively impact tourism and the safety of bathers and the character of the beachfront. I believe also the values of properties overlooking and at the beach would be negatively impacted.</p> <p>Response by Anchor: 20 May 2019</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would</p>

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.	<p>significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa’s White Shark cage-diving industry -is their cause for concern?).</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>The impact on real estate value is assessed in Section 9.5.2.8. The Visual Impact Assessment shows that floating structures and maintenance vessels, as well as lights at night, would have a high visibility during the operational phase. The negative impact of Algoa 1 on real estate value with and without mitigation measures was rated as high and medium respectively. Mitigation of visual impacts could effectively mitigate against the loss of real estate value. It is important to note that mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p>
12 4	<p>Ashleigh Darné - Resident</p> <p>Comment submitted: 30 April 2019</p> <p>I feel the negatives outweigh the positives in this case and I will no longer swim in Algoa Bay should a fish farm be introduced. Please make note of my opposition.</p> <p>Response by Anchor: 20 May 2019</p> <p>Opposition is noted.</p>
12 5	<p>Janet Townsend – Resident</p> <p>Comment submitted: 30 April 2019</p> <p>1. The negative (socio-economic) impact on human use of ocean resources and subsequent impact on local business</p> <p>A condition of the suspension of the appeal in 2015, the Minister was clear that DAFF (the applicant) had to do a “detailed analysis of the projected revenue and employment opportunities likely to be created by the proposed project, measured against the perceived loss in revenue and employment opportunities as a result of the proposed project at Algoa 1” (see 4.2.2. Appeal decision LSA 138222 pg)</p> <p>This has not been done. While the “likely jobs created” assessment was revised and drastically reduced from over 90 000 jobs to just over 1000 jobs the “likely jobs lost” assessment was not done. No one has approached the current users of the bay as a tourist destination. This being B&B’s, Hotels, Restaurant’s, event organizers, tour operators. Has the city been consulted about the loss of the revenue and jobs created by events such as the Iron Man, and the Bell Buoy swim, which is now part of the first leg of an international swimming event? There are numerous surf competitions, which will also be affected. What about the local scuba diving industry? Has anybody counted the “jobs lost” and the “income to the city lost” ?</p> <p>We were informed at the meeting on the 6th March 2019 in the city hall that no Local business will be involved in the manufacturing, installation or maintenance of the Fish Farm Also from the minutes of this meeting on page 9 – ‘to quantify exactly how many local jobs will be created is not possible at this stage’ . It is of utmost importance that there is an assessment of jobs lost.</p> <p>2. Algoa 1 isn’t feasible as per the pre-BAR’s own specialists and Algoa 7 hasn’t been evaluated in full.</p> <p>The economic feasibility study (Britz and Sauer 2016) that informs the pre-BAR, finds that the conditions at Algoa 1 are marginal for economic aquaculture and limited mitigation possible. The BAR’s visual impact assessment excludes a major portion of the northern section of Algoa 1, and its socio-economic study finds that the southern portion of Algoa 1 overlaps with a squid nursery area and excludes that portion. The BAR refers to this as an “apparent conflict” and proposes a phased approach (a 1000-ton start-up) with careful monitoring to mitigate. Who will do the cleanup once There is a much simpler conclusion to be drawn, namely that the three reports indicate that Algoa 1 is not</p>

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.	<p>feasible in its entirety.</p> <p>Algoa 7 hasn't been evaluated in full: The newly added site, just off Ngqura harbour, has not gone through the same detailed assessment process as the other sites. The pre-BAR uses Algoa 2 and Algoa 5 assessment data. This is completely unacceptable, as it does not assess the impact on the Blue Water Bay and St Georges Strand community. This community has not been consulted. This area is also a popular stop for whales along our coast.</p> <p>Response by Anchor: 04 July 2019</p> <p>Negative economic impact. Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. For finfish farming at Algoa 1, this impact is rated as high and medium before and after mitigation measures respectively (note that the impact is lower at Algoa 6 and 7 and for bivalve culture). Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Jobs will be lost. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Have income loss and job losses been quantified? A detailed costing of the potential socio-economic impact (i.e. externalities, including job losses) of the ADZ has indeed not been completed. Instead, a social choice trade-off survey was undertaken by Britz et al. 2016 (refer to Appendix D of the BAR, Socio-economic specialist study and review of the Bloom 2013 study). The survey attempted to gauge whether the external costs (negative social and economic impacts on the tourism and conservation value and others) outweigh the income and employment benefits that could be gained as socially attractive elements. Concerns included perceived impacts on diving, yachting, ski-boating, property values, increased risk of shark attacks, and job losses. A high proportion of people surveyed (39%) found the perceived social cost to be unacceptable (Hosking, 2016). The findings of this study were considered in the current impact assessment process. <u>Appeal Statement by the Minister applicable to Algoa 1 was not met.</u> Peter Britz from the Rhodes University, as the lead author on the comparative studies, responded to this concern by stating that: "The socio-economic report consisted of two components which need to be read together, visibly 1) the social choice survey which modelled the perceived negative/positive environmental and recreational effects establishing an Aquaculture Development Zone and 2) a detailed economic analysis of the feasibility of aquaculture in Algoa Bay which included a realistic projection of the production potential of the sites, income, costing, and jobs. The economic feasibility analysis which was compiled by aquaculture industry experts is quantitative and considered robust based on market demand, real costs and prices. Read together, the two components of the socio-economic report substantively address the Minister's brief and provide a basis for her making a decision."</p> <p>Local business will not be involved. This statement is incorrect. Local business will be involved as far as possible and this is provided for in the benefit enhancing measures of the impact assessment (economic growth).</p> <p>Algoa 1 is not feasible (Point 1 in the comment provided by WESSA).</p> <p>A significant user conflict associated with Algoa 1 has been outlined in this comment. During the 2010-2014 application and current pre-application stakeholder consultation processes, I&APs expressed concern regarding the southern part of Algoa 1 (Option 2), which overlaps with the squid breeding area targeted by chokka squid fishery. As breeding areas provide for the best catches, the establishment of a fish farm in the same area will most likely have a quantifiable, significant impact on the local squid industry. In contrast, aquaculture activities associated with the northern portion may affect numerous sensitive visual receptors (Marine Drive and Beach Road, beach users, main hotels along Marine Drive, as well as diving and yachting activities within the bay). The socio-economic knock on effects from visual impacts associated with aquaculture (particularly finfish) of the northern portion (Option 1) remain unquantified, but valid concern and have played a part in the revision of the assessment of negative economic impacts on Port Elizabeth.</p> <p>Algoa 7 was not evaluated in full (Point 2 in the comment provided by WESSA).</p> <p>The marine specialists, who have more than 20 years of experience, are confident that the oceanographic data available to date is adequate for the Impact Assessment. Algoa 7 is less exposed to ocean swell entering the bay than Algoa 5 (which was screened out based on the distance from the Ngqura harbour) and the Department of Agriculture, Forestry and Fisheries (DAFF) are aware of the risks associated with finfish farming in Algoa Bay. DAFF</p>

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.	<p>internally assessed economic viability of Algoa 7 prior to the start of the Basic Assessment process with regards to proximity to the harbour, exposure to swell and location inside the proposed MPA (now approved Addo MPA boundaries exclude Algoa 7). With regards to the ecological impacts, Algoa 7 has undergone the same benthic macrofauna assessment, dispersion modelling, and marine specialist study as Algoa 1 (See Appendix D Benthic mapping report). A visual impact assessment was conducted for Algoa 7 in the pre-application BAR. Algoa 7 is situated 4.5 km offshore from the nearest swimming beach at Wells estate (St Georges Beach) and Bluewater Bay. Information posters were erected at Wells estate and the Lifesaving hut at Bluewater Bay beach and the project was announced over the local radio Nkqubela FM in March 2019. The potential impacts on beach users has been assessed in Section 9.5.2.3 of the pre-application BAR.</p> <p>Impact on cetaceans. The impacts on cetaceans (dolphins, whales) were assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The negative impact on cetaceans has been rated as low significance after the implementation of mitigation measures, which include:</p> <ul style="list-style-type: none"> • Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case. Research by Koper et al. 2016 and Karczmarski et al 1999 confirm that the humpback dolphin <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 3-5 km offshore). • Ensure all mooring lines and nets are highly visible under water (use thick lines and bright antifoulant coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network).
12 6	<p>Gary Koekemoer – Personal capacity Comment submitted: 30 April 2019</p> <p>I am an regular open-water swimmer, occasional diver (PADI 2), occasional sailor (participated in the Algoa Bay Continental Regatta's), have snorkelled the inshore reefs in Algoa Bay and even tried my hand at surfing. I use the Algoa Bay beaches recreationally on a regular basis and I also participate in beach clean-ups. I have had the privilege of travelling to St Croix Island on several occasions and diving on its surrounding reefs. I am thus well versed in the Bay's reefs and also close-to-shore surf zone and open water conditions.</p> <p>I am opposed to the ADZ as laid out in the pre-BAR for the following reasons:</p> <ol style="list-style-type: none"> 1. Having sailed (and power boated on dives) the areas in which Algoa 1 is intended under fairly heavy sea conditions, I cannot imagine that the mentioned HDPE surface gravity-type cages will sustain/cope in those conditions. 2. I consider the Bell Buoy reef one of the most beautiful in the Bay, and any negative impact from anti-fouling and antibiotics on that reef would be a tragedy. 3. I am deeply concerned that a commercial venture of this nature will exclude small scale fisherfolk as they will not have the necessary capital nor know-how to compete with multi-national commercial interests. Offering them seasonal work, or even bringing them in as shareholders will not address the issue. I would have hoped that DAFF's aquaculture focus would have been on the most vulnerable of our society and thereby exploring means to ensure that small scale fishing provided both an income and purpose to those excluded during our colonial/apartheid past. I think particularly of the South End community's close link to fishing and how that was impacted by forced removals. 4. The current pre-BAR's reasoning is to me biased, it appears to promote the cause of the applicant (DAFF) rather than act as an arbiter of sustainable development in the public interest. Having been involved in the Coastal Management Policy development myself in its early stages I am deeply saddened that South Africa's environmental commitment (from both Government and environmental consultants) has seemingly gone backwards. 5. As a facilitator, and having facilitated several public participation processes myself, I do not consider the current process to be best practice. While it may tick the boxes required by law, I do not get the sense that the public input has informed the pre-BAR, and to expect the public to engage with a 600+ page document without some form of enablement is in my mind negligent. <p>Anchor response: 4 July 2019</p> <p>1. Feasibility of finfish farming in rough sea conditions. Economic feasibility of Algoa 1 (ground and wind swell are considered as one of the factors) was assessed in the socio-economic specialist study in Appendix D (Britz et al. 2016). Economic feasibility is considered to be Low for Algoa 1 and 7 where conditions are marginal for economic aquaculture with limited mitigation possible. DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ.</p> <p>2. Bell buoy reef sensitivity. Impact significance ratings were derived by taking cognisance of sensitive habitats and</p>

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.	<p>species surrounding the proposed ADZ sites. The impact of chemical therapeutants and antifoulants in finfish cage culture (note that these chemicals are not used in bivalve culture) were assessed in Section 4.1.5.1.4. of the Marine Specialist Study in Appendix D of the pre-application BAR. For Algoa 1, the impact was rated as 'medium' before and 'low' after mitigation measures, although the confidence in the efficacy of the mitigation measure is low. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document, which contains all mitigation measures required to reduce the impact ratings. Responsible operators (& management) will implement recommended mitigation AND monitor the effectiveness thereof. This has been the case with historical experimental cages installed in Algoa Bay (the DST, Stellenbosch university trials with yellowtail and kob) where mitigation measure were implemented and extensive environmental monitoring was required (this was undertaken by NMMU researchers); This is also currently being implemented in trial sea cage culture in Saldanha Bay where aquaculture permit conditions require the operators to undertake amongst other requirements, water quality and benthic monitoring in accordance with their EMPr (note that the responsibility to uphold the Environmental Authorisation still lies with DAFF). The recent certification of two sea-based Japanese Yellowtail (<i>Seriola lalandi</i>) farms by the aquaculture stewardship council (https://www.eurofishmagazine.com/news/item/467-first-yellowtail-farms-to-be-asc-certified-are-japanese) suggests that it is possible to sustainably farm this species with effective mitigation of environmental impacts.</p> <p>3. ADZ will exclude small-scale fisherfolk. Response by DAFF: The pursuit of an Aquaculture Development Zone (ADZ) in Algoa Bay is not at the cost of the Small-Scale Fisheries sector, but rather is an additional initiative from the DAFF to assist new entrants into the aquaculture sector. The small-scale fisheries policy makes mention of alternative livelihoods that may include aquaculture. Therefore, the planned ADZ is also well-positioned to present opportunities to small-scale fishing co-operatives to access and participate in the aquaculture space as new entrants into the aquaculture sector.</p> <p>While finfish cage culture has not been undertaken commercially to date, bivalve culture (mussel and oyster) which is also catered for in the proposed ADZ is not as capital intensive as other land based aquaculture and could be seen as an option for small to medium enterprises, as has been shown in Saldanha Bay ADZ. There are various government funding programmes such as the Aquaculture Development and Enhancement Programme and Comprehensive Agriculture Support Programme which can be accessed by PPI's to enter the sector. As in Saldanha Bay, mentor partnerships can be established with the existing sector to assist new entrants with the technical skills required. Most employment opportunities are long term and not seasonal. Cage culture operations also provide downstream and upstream opportunities in terms of job creation through processing, equipment requirements and maintenance requirements which are other opportunities for the small scale fisherfolk, should they wish to get involved in the proposed aquaculture opportunities.</p> <p>4. The Basic Assessment Report is biased. We are compelled by law to objectively assess potential impacts of the proposed development on the receiving environment and to provide realistic mitigation measures to minimise the potential impacts. Submitting an application for Environmental Authorisation on behalf of DAFF in itself should not be seen as being biased toward the proposed development. The Environmental Impact Statement in Chapter 10 of the BAR clearly summarises the positive and negative impacts of the proposed development and concludes that Alternative Option C (Bivalve farming at Algoa 6 and Finfish farming at Algoa 7) has the lowest farming intensity while also being predicted to have the lowest negative environmental impact, which is, primarily due to the significant negative socio-economic impacts that Algoa 1 could potentially cause. It is up to the decision-making authority to evaluate this information, consider the limitations of the impact assessment, and to decide whether enough information has been provided to make an informed decision (positive or negative for the applicant).</p> <p>5. Public participation. It is important to note that a pre-application BAR is the first generation document and is generally not informed by the comments provided by stakeholders. Comments submitted at the public meeting and during the pre-application commenting period have informed the next version of the BAR, i.e. the Draft BAR, which will be submitted to the DEA together with the application for environmental authorisation. The Draft BAR will once again be amended to incorporate comments (where relevant) provided during the application phase public participation period, producing the Final BAR, which is submitted for decision-making to the competent authority.</p> <p>We strongly believe that we are matching the effort to engage the public to the scale and impact of this project and that we are providing a reasonable opportunity for the public to provide comment on the proposed development. thus far we have registered over 700 stakeholders and received almost 200 comments during the pre-application phase and each comment was responded to individually via email (it is more commonly practiced that the responses are only contained in the comment and response table as an Appendix to the BAR). As per the EIA Regulations, neither the Basic Assessment nor the Scoping&EIR processes require public meetings. The guidelines for the public participation process recommend that meetings should be held when appropriate. As per the guidelines, the meetings are held because we believe they provide additional opportunity to I&APs to engage with this project. As explained in the first public meeting (pre-application process) that was held in the town hall of Port Elizabeth on 6 March 2019 (presentation has been made available to the public), we are providing stakeholders with an additional 30 days to the mandatory 30 day commenting period (i.e. stakeholders have 60 days in total to comment on the</p>

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.	<p>report). This means that any stakeholder who missed the deadline for non-mandatory pre-application commenting period will have a chance to submit their comments in the next, mandatory commenting period, which will be held in June/July once the application for environmental authorisation has been submitted. Either way, their comments will be addressed before the Final BAR is submitted to the competent authority for decision-making.</p> <p>We are certainly not simply ticking the regulatory requirements. Please see below a list the additional measures that we are implementing as per the presentation at the meeting:</p> <ul style="list-style-type: none"> • Additional 30 days to provide comment (pre-application phase completed) • 16 Radio announcements in isiXhosa on Nkqubela FM during drive time for both processes (1-6 March 2019, ~June 2019) • Two public meetings (6 March 2019 and application phase) • Additional posters at shops, pharmacies and libraries (application phase) • Each comment was responded to individually during the pre-application phase <p>Minimum requirements as per NEMA regulations are as follows (evidence to be provided in the stakeholder consultation report in Appendix E of the Draft BAR):</p> <ul style="list-style-type: none"> • Compile and maintain a stakeholder list (response to comment d.) • The existing database served as a starting point for this stakeholder consultation process. Any non-deliverable emails were followed up and corrected if this was possible. In some cases, this was not possible as no valid phone number was available to correct the email address. • Fix a notice board at the site of the proposed development (dimensions specified in EIA Regulations) • Written notice to key stakeholders (specified in the EIA Regulations) • Placing an advertisement in a local newspaper or in the Government Gazette
12 7	<p>Cloverley Lawrence – SANParks</p> <p>Comment submitted: 30 April 2019</p> <p>SANParks submitted a three page letter, which is attached in Appendix F6 of this report. A summary of the specific comments has been provided below:</p> <p>SANParks does not support a sea-based aquaculture development zone (ADZ) in Algoa Bay. The environmental and socio-economic risks related to an ADZ remain substantive with minimal recourse from the proposed mitigation measures. The highly exposed coastline, prevalence of strong easterly winds, and frequency of harmful algal blooms in Algoa Bay are among many significant environmental limiting factors, while existing developments including two major ports and increasing ship traffic, more recently due to bunkering operations, pose additional risks to the viability of an ADZ. Furthermore, an ADZ will impact and threaten existing socioeconomic- bearing industries i.e. marine-based tourism such as accommodation establishments, boat-based tour operations (whale watching, SCUBA diving, sailing etc), fisheries, as well as local and international sporting events. For example the southern portion of the proposed Algoa 1 zone overlaps with a squid nursery area and could therefore impact recruitment and stock status of the squid fishery. The visual impact of the ADZ will permanently alter the sense of place of the Port Elizabeth beachfront and discourage recreational and other users. Previously, SANParks had supported the expansion of the bivalve mariculture zone within the Coega IDZ (Algoa 6), however, increasing levels of pollutants from industrial and human waste, and the specifically high levels of E. coli in this area of the bay, which has led to periodic closure of the operation as well as its product prohibited from international export, renders further expansion unviable. This example demonstrates the challenges in marine species culture in Algoa Bay, and highlights the lack of technical and management technologies to undertake a viable operation with long term benefits to the local and national economy.</p> <p>Point 1.1: The list of impacts does not include the disturbance to ecologically significant and biologically sensitive habitats such as reefs which support a unique diversity of invertebrates and are a key feeding and aggregation site for fish. The introduction of alien species was not considered.</p> <p>Point 1.2: Astute animal husbandry and adaptive management strategies not effective.</p> <p>Point 3: The socio-economic report. A rigorous quantitative socio-economic study should be conducted. The perception of increased risk of shark attacks could impact tourism industry.</p> <p>Point 4: Algoa 7 was not assessed at the same scale as Algoa 1 and 5.</p> <p>Point 5: Cumulative risk of fuel spillage to the islands and seabird breeding habitats as a result of collision risk were not considered.</p> <p>Conclusion: Despite several years of research and development, the financial and technical feasibility of seabased finfish culture has not been demonstrated in South Africa. This is clearly stated in the feasibility study where both the socio-economic and economic feasibility is moderate to low. The insistence of DAFF in developing an ADZ in Algoa Bay seems contrary to most of the economic and environmental considerations, as well as the supporting studies and the will of the people of Port Elizabeth. SANParks supports finfish mariculture focused on shore-based, recirculating systems that pose lower environmental and economic risk. The success of this technology has been</p>

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.	<p>demonstrated on a commercial scale through the operations in the East London IDZ.</p> <p>Anchor response: 6 June 2019</p> <p>Your general comments are noted. With regards to the specific comments we would like to respond to:</p> <p>Point 1.1:</p> <p><u>Impact on sensitive reef habitat has not been considered:</u></p> <p>The marine specialist report describes the conservation status and biodiversity importance of Algoa Bay and takes cognisance of sensitive habitats in the assessment of impacts. Benthic mapping was completed for each of the sites to ensure there were no sensitive reefs below the sites. Section 4.1.5.1.4 considers the impact of chemical pollution arising from finfish cages. Here, the risk of these chemicals bioaccumulating up the food chain is considered to be higher for Algoa 7, which is situated adjacent to the Addo MPA. The impact of organic waste discharge from finfish cages is considered 'high' before and 'medium' after the implementation of mitigation measures. This rating takes into account the proximity of Algoa 1 to the adjacent critically endangered reef and proximity of Algoa 7 to the Marine Protected Area. We have, however, added a sentence explicitly mentioning sensitive temperate reef habitats of Algoa Bay in the impact assessment section 4.1.5.1.2.</p> <p><u>Introduction of alien species was not considered:</u> This statement is incorrect. This application includes only indigenous finfish species. The potential impact of farming <i>Mytilus galloprovincialis</i> and <i>Crassostrea gigas</i> have been assessed in the marine specialist study Section 4.1.5.2.1. The impact of farming <i>M. galloprovincialis</i> was rated as very low, due to the fact that mussels are not actively seeded onto ropes, which means that no additional propagules are introduced into the marine environment. The ropes will be left to be colonised by naturally occurring offshore mussel larvae pools (part of the mussel life history is spent offshore). Larvae pools are carried inshore by (1) upwelling-related circulation, (2) internal tidal waves and bores, (3) the local diurnal (or diel) sea breeze, and (4) waves and ocean swell (Pfaff 2015). The potential impact of introducing Pacific oyster <i>C. gigas</i> was rated as 'medium' before and 'low' after the implementation of mitigation measures. Pacific oyster <i>C. gigas</i> has already been farmed in the area for over 20 years and therefore impacts have already been realised. Furthermore, Section 4.1.5.2.2 assessed the impact of introducing alien fouling species to the wild and provision of habitat for alien fouling species (applicable to both bivalve species). The impact was rated as 'medium' before and 'low' after the implementation of mitigation measures.</p> <p>Point 1.2: Astute animal husbandry and adaptive management strategies not effective</p> <p>It is true that the marine finfish cage culture industry in SA is in its infancy, and that historically mitigation of environmental impacts of finfish cage culture around the world was either not considered, or poorly implemented. Indeed, in the early period of finfish farming internationally, particularly salmon farming in the pioneering countries, a lack of good environmental management and poor farming practices led to significant, negative environmental impacts occurring. This resulted in negative attitudes and opinions amongst the public and conservation organisations towards the industry. This negative sentiment towards sea cage fish farming persists to this day, despite an increasing focus on sustainability by both governments and industry. Responsible operators (& management) will however, implement recommended mitigation AND monitor the effectiveness thereof. This has been the case with historical experimental cages installed in Algoa Bay (the DST, Stellenbosch university trials with yellowtail and kob) where mitigation measure were implemented and extensive environmental monitoring was required (this was undertaken by NMMU researchers); This is also currently being implemented in trial sea cage culture in Saldanha Bay where permit conditions require the operators to undertake amongst other requirements, water quality and benthic monitoring in accordance with their EMPr. So it is not strictly true that mitigation technologies and strategies for adaptive management of finfish culture are lacking in South Africa. It is however, acknowledged that this has not been tested at commercial scale production, and hence the low confidence ratings associated with many assessments and the repeated recommendations in the BAR and specialist studies for scaled development in order to monitor impacts with aquaculture growth. Some comfort can be taken from the recent certification of two Japanese Yellowtail (<i>Seriola lalandi</i>) farms by the aquaculture stewardship council (https://www.eurofishmagazine.com/news/item/467-first-yellowtail-farms-to-be-asc-certified-are-japanese), which suggest that it is possible to sustainably farm this species with effective mitigation of environmental impacts.</p> <p>Point 3. The Socio-economic report.</p> <p><u>A rigorous quantitative study should be conducted.</u> Comment noted. A detailed costing of the potential socio-economic impact (i.e. externalises) of the ADZ has indeed not been completed. Instead, a social choice trade-off survey was undertaken by Britz et al. 2016 (refer to Appendix D of the BAR, Socio-economic specialist study and review of the Bloom 2013 study). The survey attempted to gauge whether the external costs (negative social and economic impacts on the tourism and conservation value and others) outweigh the income and employment benefits that could be gained as socially attractive elements. Concerns included perceived impacts on diving, yachting, ski-boating, property values, increased risk of shark attacks, and job losses. A high proportion of people surveyed (39%) found the perceived social cost to be unacceptable (Hosking, 2016). The findings of this study were</p>

No	Comment																																			
.	<p>considered in the current impact assessment process. These impacts are primarily related to the finfish farming at Algoa 1 and therefore Option A.</p> <p><u>Perception of increased risk of shark attacks could impact tourism industry.</u> Based on the choice modelling study conducted by Britz et al 2016 (see table 4 from the report below) and feedback from stakeholders thus far, it appears that potential ecological impacts and the perception of an increased risk of shark attacks occurring (whether this risk is real or not) were identified as the most important disturbing aspects of the proposed development after marine ecological impacts (note this is finfish farm specific and is mostly applicable to Algoa 1. The current proposal also recommends bivalve farming) While mitigation measures have been recommended for negative visual and marine ecological impacts, no meaningful mitigation measures are available for the other aspects other than site selection or site reduction (reference to the visual buffer recommended in the specialist study 2013). All these aspects are likely to impact negatively on tourism. However, the perceived higher risk of shark attacks could potentially have a profound direct impact on the local economy, should the Iron Man Event (and other events) be moved to a different location (Iron Man Organisers indicated during the appeal phase that the event would be moved should finfish cages be installed at Algoa 1). Furthermore, this impact could potentially be irreversible and occur during the pilot phase. For this reason, the impact rating on the specialised tourism and businesses benefiting from tourism in the area will be reassessed for finfish farming at Algoa 1 (Section 9.5.2.3).</p> <p>When considering the three alternative options, the decision-making authority must take into account that the impact on tourism (and benefiting businesses) of Option A (involving finfish farming at Algoa 1) may potentially be high, may occur during the pilot phase and may be irreversible. The impact on the squid fishing industry is highly likely and irreversible, should the southern portion of Algoa 1 be approved as part of the ADZ. Site reduction and selection is the only effective mitigation measure (See Section 9.5.2.6 of the pre-application BAR).</p> <table border="1"> <thead> <tr> <th>Disturbing Aspect</th> <th>Very Important</th> <th>Of some importance</th> <th>Unimportant</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Spoils natural sea view</td> <td>60</td> <td>61</td> <td>33</td> <td>154</td> </tr> <tr> <td>Takes away area otherwise for recreational boat use</td> <td>37</td> <td>65</td> <td>52</td> <td>154</td> </tr> <tr> <td>Reduces the appeal of diving</td> <td>47</td> <td>64</td> <td>43</td> <td>154</td> </tr> <tr> <td>Attracts large sharks closer to PE swimming beaches</td> <td>100</td> <td>38</td> <td>16</td> <td>154</td> </tr> <tr> <td>Negative ecological impacts</td> <td>108</td> <td>34</td> <td>12</td> <td>154</td> </tr> <tr> <td>Other</td> <td>21</td> <td>0</td> <td>1</td> <td>22</td> </tr> </tbody> </table> <p>Point 4. Algoa 7 was not assessed at the same scale as Algoa 1 and 5. The marine specialists, who have more than 20 years of experience, are confident that the oceanographic data available to date is adequate for the Impact Assessment. Algoa 7 is less exposed to ocean swell entering the bay than Algoa 5 (which was screened out based on the distance from the Ngqura harbour) and the Department of Agriculture, Forestry and Fisheries (DAFF) are aware of the risks associated with finfish farming in Algoa Bay. DAFF internally assessed economic viability of Algoa 7 prior to the start of the Basic Assessment process with regards to proximity to the harbour, exposure to swell and location inside the proposed MPA (now approved Addo MPA boundaries exclude Algoa 7). With regards to the ecological impacts, Algoa 7 has undergone the same benthic macrofauna assessment, dispersion modelling, and marine specialist study as Algoa 1 (See Appendix D Benthic mapping report). A visual impact assessment was conducted for Algoa 7 in the pre-application BAR. Algoa 7 is situated 4.5 km offshore from the nearest swimming beach at Wells estate (St Georges Beach) and Bluewater Bay. Information posters were erected at Wells estate and the Life saving hut at Bluewater Bay beach and the project was announced over the local radio Nkqubela FM in March 2019. The potential impacts on beach users has been assessed in Section 9.5.2.3 of the BAR.</p> <p>Point 5. Cumulative risk of fuel spillage to the islands and seabird breeding habitats as a result of collision risk. Collision of a ship with the aquaculture infrastructure is unlikely to result in a hydrocarbon spill, as the aquaculture infrastructure is much more likely to be damaged than the ship itself. Navigation impediment could lead to a ship grounding, but given the proximity of the sites to the ports and availability of tugs, this impact is highly unlikely to be realised. Furthermore, a hydrocarbon spill would constitute a secondary impact to the collision risk already assessed in Section 9.5.2.4. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures.</p>	Disturbing Aspect	Very Important	Of some importance	Unimportant	Total	Spoils natural sea view	60	61	33	154	Takes away area otherwise for recreational boat use	37	65	52	154	Reduces the appeal of diving	47	64	43	154	Attracts large sharks closer to PE swimming beaches	100	38	16	154	Negative ecological impacts	108	34	12	154	Other	21	0	1	22
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No	Comment
12 8	<p>Herman van Thiel – The Dunes Home Owners Association</p> <p>Comment submitted: 30 April 2019</p> <p>We as HOA The Dunes, comprising of 68 town houses in Summerstrand, PE we object to the implementation of the proposed Fish Farms in our beautiful Algoa Bay, Please find another site for your commercial en devours.</p> <p>Response by Anchor: 20 May 2019</p> <p>Opposition noted.</p>
12 9	<p>Eileen Shepherd</p> <p>Comment submitted: 30 April 2019</p> <p>After listening to this podcast (link to podcase on Algoa FM provided) I am extremely concerned that the investigations into the possible/probable effects of this development have not been adequate. Algoa Bay is a national treasure with its amazing biodiversity and present and future potential to attract scientific research and tourism. We CANNOT afford to make a mistake and destroy our natural heritage.</p> <p>Response by Anchor: 20 May 2019</p> <p>Opposition noted.</p>
13 0	<p>Gail Pullen – Ward 1 Committee member and resident</p> <p>Comment submitted: 30 April 2019</p> <p>A two page letter was submitted, which is attached in Appendix F6 of this report. The concerns of this stakeholder have been summarised below:</p> <ol style="list-style-type: none"> 1. Negative impact on tourism along a pristine beach at Algoa site 1 (emphasis on recreation and events) 2. Fish food waste and fish faeces as well as the antibiotics fed to the fish will result in an oily slime and pollute the waters which will be unpleasant for bathers, surfers, divers etc. 3. The fish farm cages will no doubt attract more sharks into the bay 4. The Humewood area falls directly beneath the flight path of aircraft coming in to land at the airport. This could pose a serious threat to aircraft from seabirds, especially at harvest time. 5. Feasibility of ADZ when considering wind and swell conditions. 6. Anchovies, sardines and bait fish, which are the main food sources for our endangered African penguins will be depleted in order to manufacture fish pellets to feed the fish farms. 7. The high levels of <i>E.coli</i> at Algoa 6 site render it unviable where there is currently an oyster farm (next to the harbour). 8. The new site at Algoa 7 (between St Georges Strand and Coega) has not been extensively researched and the consultants are relying on the research done at other sites in the bay. 9. The consultants have somehow missed the importance of the squid nursery which Algoa site 1 will overlap. 10. It is my view that DAFF should rather be looking at hydroponics or aquaponics on land – farming lettuces and other greens above, with fish below the water at Coega IDZ. <p>Response by Anchor: 24 May 2019</p> <p>Negative impact on tourism: Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water pollution: Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of</p>

No	Comment
.	<p>waste will remain in the water column at the beaches.</p> <p>Chemical pollution, impact on human health. Although chemicals can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. <i>Escherichia coli</i> and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Consideration of wind direction applicable to point 2 of the comments submitted: It is unclear what is meant by stating that only data from 4 months of the year was considered in the impact assessment. The wind regime is well known for Port Elizabeth and there was no need to conduct additional studies. Please refer to https://www.windfinder.com/windstatistics/port_elizabeth. Port Elizabeth experiences strongest winds from the west-south-west (on average 20 knots) and weaker wind from the east generally less than 10 knots. This means that waste is mostly going to be dispersed in a north-easterly direction. In summary, (i) chemical pollution from finfish cages is not known to impact humans as a result of recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 3 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses. Therefore, water quality deterioration as a result of the proposed development has not been assessed when referring to recreational beach users (including bathing and surfing). Note however, that, as much as the risk of shark attack is higher for open water swimmers than bathers, training and event routes passing Algoa 1 in proximity may be impacted reduced water quality mainly related to visibility (not a health concern though).</p> <p>Water sports and sharks: Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Flight path and bird collision risk. In response to the concerns raised during the public meeting on 6 March 2019, the pre-application Basic Assessment Report (BAR) was amended to include an impact assessment on the increased risk of bird strikes affecting aircrafts landing and departing at the Port Elizabeth Airport. Please refer to Section 9.5.2.12 Potential Impact OP-SE12 in the BAR. The impact was rated as very low before and insignificant after the implementation of mitigation measures. The impact assessment was based on the following information:</p> <ul style="list-style-type: none"> • Only piscivorous, low-flying sea birds will be attracted to large concentrations of fish and food in sea cages at Algoa 1 and 7 and include sea gulls, gannets, cormorants and terns. High-flying migratory flocks of birds such as geese, ducks, and starlings will not be attracted to the cages.

No	Comment
.	<ul style="list-style-type: none"> • Johnston et al 2014 modelled flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. They found that for all 25 seabird species investigated, the majority of flights occurred within 20 m of the sea surface. The risk of aircrafts colliding with seabirds is therefore improbable even without mitigation measures. • Existing large sea bird colonies which perform daily migrations to and from the roosting sites and these flocks are likely currently passing Algoa 1 and 7 sites daily and are not impacting aircrafts. Essential mitigation measures to prevent seabirds from gaining access to the cages are proposed in the marine specialist assessment (Appendix D). The additional risk posed by the finfish cages is considered to be relatively small as the cages are unlikely to alter flight path height of the bird flocks. <p>Wind and swell feasibility. DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. Economic feasibility (ground and wind swell are considered one of the factors) were assessed for Algoa 1 in the socio-economic specialist study in Appendix D (Britz et al. 2016). The risks of fish escapes has been assessed in Section 4.1.5.1.1 and .3 of the Marine Specialist Study in Appendix D of the BAR. The main concern is genetic contamination of wild fish stocks (mixing of bread genes and wild genes). This impact was rated of low significance after the implementation of mitigation measures. The transfer of diseases was rated of high significance after implementation of mitigation measures. Alien finfish species are not proposed as part of the ADZ and this impact was therefore not assessed.</p> <p>Impact on penguins. The direct impact on seabirds was assessed in Section 4.1.5.1.5. of the Marine Specialist Study in Appendix D of the Basic Assessment Report. Algoa 7 is situated within the area that has been set aside for the Addo Marine Protected Area and the negative impact on seabirds, including penguins has been rated as medium with low confidence. Indeed, pellet feed for finfish is made from fishmeal produced from anchovies and sardine off cuts. These species indeed are important for the endangered penguin. However, individual operators will be required to purchase fish meal from existing right holders (fishing right applications are not included in the application). To ensure a sustainable fishery, DAFF determines the Total Allowable Catch (TAC) for each species. The TAC will therefore not increase to meet an increased demand in the aquaculture sector. Even if individual operators were allocated their own fishing quota, the quota would have to be allocated from the total national quota. Due to the proclamation of the MPA, which includes the St Crox Island group, feeding grounds of penguins and other seabirds will be protected in from over exploitation in future.</p> <p>E. coli at Algoa 6. The focus of the BAR is to evaluate the impacts of the proposed development on the environment. However, environmental risks have been outlined in Chapter 7 of the BAR. DAFF (and the industry) is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR). An existing oyster company is also battling with water quality at Algoa 6 (Zwembesi Farms (Pty) Ltd). DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards an improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo. For this reason, the option of bivalve culture in Algoa 1 is being explored as an option. A paragraph will be added to detail Zwembesi Farms (Pty) Ltd current challenges will be included in Chapter 7 of the BAR.</p> <p>Algoa 7: The proposed development does not trigger listed activities contained in the Environmental Impact Assessment (EIA) Regulations Listing Notice 2. Aquaculture was removed from the list of activities in this notice in the 2014 amendments of the EIA Regulations. However, it should be noted, that the the comprehensive Scoping phase that was conducted as part of the previous process (Strategic Environmental Assessments of 2009 and further site selection and elimination since 2011) and specialist studies conducted since 2011 (see list below) are comparable to a full S&EIR process. For example, Algoa 7 was subjected to the same marine ecological baseline study when compared to Algoa 1 (See Benthic Habitat Mapping specialist study in Appendix D). Finally, the public consultation process is also extensive (two rounds and a number of measures are undertaken in addition to the minimum requirements as per EIA Regulations. Please refer to the presentation that was given at the first public meeting on 6 March 2019, which is also available on our website). In short, a full S&EIR process would not mean that more studies or more public consultation would be undertaken.</p> <ul style="list-style-type: none"> • Marine specialist study 2019 (Algoa 1, 6 & 7) • Dispersion modelling 2019 (Algoa 1, 6 & 7) • Benthic habitat mapping (Algoa 1, 6 & 7) • Maritime and Underwater Cultural Heritage Impact Assessment 2019 (Algoa 1, 6 & 7) (ACO Associates) <p>Algoa 7 is situated 4.5 km offshore from the nearest swimming beach at Wells estate (St Georges Beach) and Bluewater Bay. Information posters were erected at Wells estate and the Lifesaving hut at Bluewater Bay beach on 7 March 2019 and the project was announced over the local radio Nkqubela FM in March 2019. The potential impacts on all beach users has been assessed in Section 9.5.2.3 of the BAR.</p>

No	Comment
.	<p>Consideration on squid nursery at Algoa 1: The comment is valid. The Marine Specialist Study in Appendix D will include an impact assessment on the squid nursery area at Algoa 1. Squid nursery areas are sensitive to increases in turbidity. Nursery areas are predominantly distributed between Plettenberg Bay and southern Transkei. The percentage nursery area impacted may be small, however, aquaculture at Algoa 1 is likely to contribute to the cumulative impact on squid nursery sites (existing impacts by dredge spoil disposal near harbours and the fishing industry itself).</p> <p>Land-based integrated aquaculture as an alternative: DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega Industrial Development Zone (IDZ) for hatcheries and holding facilities.</p>
13 1	<p>Gianluca Acquisto – Resident and water sports Comment submitted: 30 April 2019</p> <p>I believe that the fish farm would be unsightly particularly in the prime tourist area of the bay. Tourism will be affected negatively in my eyes and i would imagine that there are other environmental aspects the the project as well which may relate to the safety of our bay and its flora and fauna both in and out of the ocean. The bay should be for the enjoyment of all. This project it seems would be a largely unilateral benefit to a few individuals and their agenda. I am strongly opposed to the proposed fish farm.</p> <p>Response by Anchor: 21 May 2019</p> <p>Tourism and revenue loss to PE: Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>The potential impact on the seascape character at Algoa 1 (Summerstrand site) (as well as Algoa 6 and 7) was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Marine ecological impacts. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p>
13 2	<p>Renaldo Gouws – Ward 2 Councillor Comment submitted: 30 April 2019</p> <p>The current format of the BAR, the EIA and the Economic Impact does not come across as having been properly considered or investigated. The impact of the proposed development would have dire consequences to the Wards beachfront, as well as impact negatively on the current events and tourism that is taking place in Ward 2 and the broader beachfront in Nelson Mandela Bay.</p> <p>The following are just some of the concerns that has not been alleviated by the study:</p> <ul style="list-style-type: none"> • The Ward has three Blue Flag Beaches. These have the potential of being polluted by effluent, excess fish food and fish faeces which will wash up on the beaches during our frequent easterly/south easterly winds. • The loss of jobs in the tourism industry due to events like the Ironman, Aquelle Ocean Series, Bellbouy Race, the Nippers National Championships withdrawing from the city due to the proposed ADZ. <p>The concerns raised above is already enough to question whether the proposed ADZ is financially viable for the metro as it has huge cost implications with water sports events withdrawing from Nelson Mandela Bay.</p> <p>Added to the above the BAR doesn't alleviate the concerns with regards to the environmental impact assessment and it even contradicts findings by its very own specialists. The statement that it will be beneficial to both the Bay's ecosystem and the human use of the Bay's resources is therefore flawed.</p>

No	Comment
.	<p>Due to the high uncertainty of the impact of the proposed Algoa Bay Aquaculture Development Zone (ADZ) we simply cannot in good conscience support it. Another important aspect to consider is the Marine Spatial Plan for Algoa Bay that has not been passed. This plan will provide a better understanding of the different uses of the Bay as it will consider the various uses of the area in question.</p> <p>With reference to the above mentioned, as the Ward 2 Councillor in Nelson Mandela Bay and as the elected public representative to speak on behalf of the residents of Ward 2 in Nelson Mandela Bay, I cannot support the proposed ADZ plan in its current form as there are just too many uncertainties and questions that are left unanswered. I therefore also strongly object to this development in its entirety in its current format.</p> <p>Response by Anchor: 21 May 2019</p> <p>Recreational activities: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately. The proposed ADZ is likely to have a higher negative impact on these activities when compared to bathing and surfing. SCUBA diving (Section 9.5.2.3) and impacts on sailing navigation routes (Section Section 9.5.2.4) have also been assessed in the socio-economic impact assessment.</p> <p>Tourism (economic impact): Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Blue Flag Status. Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <ul style="list-style-type: none"> A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted) B. The beach must fully comply with the standards and requirements for water quality analysis. (not impacted, see explanation below) C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture, see explanation below) D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (not impacted, see explanation below) E. The beach must comply with Blue Flag requirements for physical and chemical parameters (not impacted, see explanation below) <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status.</p> <p>Although chemicals used in aquaculture can harm biota living near or under the cages (mainly finfish and invertebrates, see Marine Specialist Study), chemicals used in finfish aquaculture are not known to affect human health via contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed</p>

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	<p>within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches. The wind regime is well known for Port Elizabeth. Please refer to https://www.windfinder.com/windstatistics/port_elizabeth. Port Elizabeth experiences strongest winds from the west-south-west (on average 20 knots cross/offshore) and weaker wind from the east generally less than 10 knots. This means that waste is mostly going to be dispersed in a north-easterly direction.</p> <p>In summary, (i) chemical pollution from finfish cages is not known to impact humans as a result of recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 3 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses. Therefore, water quality deterioration as a result of the proposed development has not been assessed when referring to recreational beach users (including bathing and surfing). Note however, that, as much as the risk of shark attack is higher for open water swimmers than bathers, training and event routes passing Algoa 1 in proximity may be impacted reduced water quality mainly related to visibility (not a health concern though). A paragraph will be included in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character) to address the misconception that the proposed development could harm human health or jeopardise the Blue Flag status as a result of water quality deterioration.</p> <p>Job losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Contradiction with specialists: It is unclear what contradiction is referred to in this comment. This claim should be substantiated by referring to the BAR and relevant sections in the specialist studies (benthic habitat mapping, dispersion modelling, marine specialist study and maritime heritage resources study).</p> <p>Benefit to ecosystem and Metropolitan Municipality: The BAR does not state that the proposed development is beneficial to the ecosystem. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures. The BAR clearly states this in Chapter 10 (Environmental Impact Statement). The BAR also recognises that socio-economic cost to the tourism and recreation sectors of developing the Algoa 1 ADZ constitutes a real but not fully quantified concern. The competent authority will be required to evaluate the information (potential benefits to the aquaculture sector and risks of negatively impacting other sectors) critically and decide whether environmental authorisation should be granted, and if so which Alternative Option (refer to Section 3.5 of the BAR for more information).</p> <p>Marine spatial plan. Refer to the national Strategic Assessment. Given that the spatial planning component of the Algoa ADZ was initiated as early as 2009 in the SEA phase, it certainly pre-dates (but not necessarily pre-empts) the recently established NMMU academic unit. The DAFF is a key Department in the Marine Spatial Planning process and is ensuring that fisheries and aquaculture is considered in this process. A section on the Marine Spatial Planning Bill will be included in the Draft BAR and the importance of considering this Bill, its Guidelines and future legal ramifications in the decision-making process will be highlighted in the Impact Statement (Chapter 10 of the BAR).</p>
133	<p>Andrew Baker Comment submitted: 30 April 2019 Commercial fish farm will adversely affect tourism in the Bay.</p> <p>Response by Anchor: 21 May 2019 Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic</p>

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.	Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.
13 4	<p>Dr Shirley Parker – Nance Comment submitted: 30 April 2019</p> <p>The comment was submitted in form of a 12 page long PDF file, which has been attached to this document in Appendix F6. The main issues have been summarised below.</p> <ul style="list-style-type: none"> • Algoa 1 (Summerstrand Site): Not feasible • Algoa 5: Lack of sufficient number of operational days for maintenance using small vessels. • No new jobs will be created by the proposed development • High <i>E. coli</i> occurrence at Algoa 6. Would the product be fit for human consumption? • Table 8 caption requires correction. • How would antifouling strategies and treatment of fish in the enclosures effect the wild fish populations? Many of the sparid species (popular angling fish such as Red Roman, White Stumpnose) are considered threatened or vulnerable. How would pollutants and pharmaceuticals influence the fitness of wild population of fish in the bay? Especially in Algoa 1 where the aquaculture activities will take place next to Endangered Reef System (NBA 2011). • What is the loss of income if the recreational fisheries in Algoa Bay decrease or collapses? This would include loss in sale of fishing equipment, boats and loss of employment due to the decrease of this natural resource. • Impact assessment for Algoa 7 was not done and BAR consider is similar to Algoa 5 (proxy site). • What would the effect of pollution due to large shipping activity and Bunkering be on fish held enclosures (fish cannot swim away from pollutants) at Algoa Bay 7. • Bivalve culture: Preventing further introduction and spread of invasive species is a Priority Action listed in NBA 2011. • Potential disease transfer via frozen fish feed is of great concern. • Where will the food for these farmed fish come from. Do we see increased stress on our pelagic stock to accommodate the need? • Is there a fish meal factory on the horizon for Algoa Bay? • Job gains in the aquaculture sector should be carefully weighed against potential job losses in other sectors. • There are a number of reasons for supporting the NO GO option in this Aquaculture application by DAFF • Request is made to make three reports available to the public. <p>Anchor response: 04 July 2019</p> <p>Feasibility: The comment provides contradictory information on the interpretation of the Britz and Sauer (2016) study. While the diagram states that the development of aquaculture at Algoa 1 is not economically feasible, the bullet points summarise the conclusions correctly (i.e. low feasibility).</p> <p>Operational days for maintenance: The socio-economic specialist report of 2016 also states that: “As the Algoa 1 site is on close proximity of Port Elizabeth, it is possible to take advantage of smaller weather windows using smaller vessels. For example, the wind often comes up in the late morning allowing 3-4h of operational time if the port is in close proximity.” The same is applicable to Algoa 7 (Ngqura harbour site), which is situated 4 km from Ngqura harbour (when compared to screened out Algoa 5).</p> <p>DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ.</p> <p>Job creation: The study explicitly states that “The actual number of employment opportunities is difficult to estimate as the existing industries in the region will most likely be able to meet the demand for services in an <i>initial marine aquaculture development phase</i>”. This sentence is quoted in the comment provided. This statement is not applicable to the full commercial scale.</p> <p><i>E. coli</i> at Algoa 6: Please note that the focus of the BAR is to evaluate the impacts of the proposed development on the environment. DAFF (and the industry) is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR). DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo.</p> <p>Table 8 caption correction. Comment noted, Table 8 will be corrected.</p> <p>Chemical pollution. The impact of chemical pollution arising from the finfish cages were assessed in Section 4.1.5.1.4 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact for Algoa 1 and</p>

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.	<p>Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. The impact assessment was based on current literature available.</p> <p>Predator distribution. The direct impacts on marine predators has been assessed in the Marine Specialist Report (Appendix D). Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times. The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks and piscivorous cetaceans from gaining access to the cages. It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Decrease or collapse of recreational fishing sector. The recreational skiboat linefishing sector was described in Section 8.5.2.1 of the BAR. "Should the ADZ be declared "no go" areas this would result in a loss of available fishing ground to the recreational boat fishery. All of the proposed ADZ straddle areas reported by Chalmers (2012) as having both high and relatively low recreational ski boat fishing effort (Figure 24). However most of the skiboat fishing effort does appear to take place inshore of Algoa 1 and 7; and indeed bathymetry surveys have indicated no reef habitat (Algoa 1, 6 and 7) around which targeted line fish (and fishers) aggregate (see description of affected marine environment). Recreational boat line-fishers would therefore appear to be little affected by loss of fishing ground should the ADZ be declared off limits." Navigational impacts are anticipated and are addressed in Section 9.5.2.4 of the BAR. The significance of potential impacts relating to disease and parasite transmission and genetic contamination of wild fish stocks and fisheries are dealt with in the marine ecology impact assessment.</p> <p>Algoa 7 has not been assessed adequately: Algoa 7 was subjected to the same marine ecological baseline and impact study, dispersion modelling, marine specialist study and maritime underwater cultural heritage impact assessment 2019 when compared to Algoa 1 (See list below):</p> <ul style="list-style-type: none"> • Marine specialist study 2019 (Algoa 1, 6 & 7) • Dispersion modelling 2019 (Algoa 1, 6 & 7) • Benthic habitat mapping (Algoa 1, 6 & 7) • Maritime and Underwater Cultural Heritage Impact Assessment 2019 (Algoa 1, 6 & 7) (ACO Associates) <p>Anchor has over 20 years of experience in marine ecology and marine impact assessments and is confident that the data used in the reports listed above is adequate for the scope and purpose of the studies.</p> <p>Feasibility: pollution, offshore bunkering, sudden changes in temperature, harmful algal blooms: DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. It must be noted that the purpose of the Environmental Impact Assessment is to establish the impact of the development on the environment and not vice versa. Environmental Risks are nevertheless covered in Chapter 7 of the BAR.</p> <p>Farming of invasive <i>Mytilus galloprovincialis</i> (Mediterranean mussel): Mussels are not actively seeded onto ropes, which means that no additional propagules are introduced into the marine environment. The ropes will be left to be colonised by naturally occurring offshore mussel larvae pools (part of the mussel life history is spent offshore). Larvae pools are carried inshore by (1) upwelling-related circulation, (2) internal tidal waves and bores, (3) the local diurnal (or diel) sea breeze, and (4) waves and ocean swell (Pfaff 2015). The impact of alien bivalves have been assessed in the Marine Specialist Study in Appendix D Section 4.1.5.2.1.</p> <p>Disease transfer via frozen fish feed is of great concern. Concern is valid. The following mitigation measure will be included in the Draft BAR: "o Fresh or frozen whole fish must not be used as feed prevent the potential introduction of pathogens and parasites via this route."</p> <p>Pelagic fish stocks: Pellet feed for finfish is made from fishmeal produced from anchovies and sardine off-cuts. However, individual operators will be required to purchase fish meal from existing right holders (fishing right applications are not included in the application). To ensure a sustainable fishery, DAFF determines the Total Allowable Catch (TAC) for each species. The TAC will therefore not increase to meet an increased demand in the aquaculture sector. Even if individual operators were allocated their own fishing quota, the quota would have to be allocated from the total national quota. Due to the proclamation of the MPA, which includes the St Crox Island group, feeding grounds of penguins and other seabirds will be protected in from over exploitation in future.</p> <p>Fish processing factory: It is anticipated that processing facilities currently have some spare capacity, but that additional capacity will eventually be required. Detailed (design) information on (new) land-based facilities, as would be required for the authorisation of such facilities in terms of NEMA and the ICMA, cannot be provided as part of</p>

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.	<p>this study, as there is no available information from potentially interested operators as to the nature and capacity of such facilities (such facilities will not be operated by DAFF). As such, no land-based facilities that require EA are included in this assessment and obtaining authorisation will be the responsibility of individual operators. Where these require permits or authorisations, these must be obtained by the operators.</p> <p>Critically endangered reef adjacent to Algoa 1: The impact on benthic habitats were assessed in the Marine Specialist Study in Appendix D of the pre-application BAR Section 4.1.5.1. The impact assessment ratings consider the presence of sensitive habitats adjacent to the propose sites. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme, through which the benthic impact footprint can be determined.</p> <p>Job gains versus job losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks to existing job opportunities.</p> <p>Appeal Statement by the Minister applicable to Algoa 1 was not met. Peter Britz from the Rhodes University, as the lead author on the comparative studies, responded to this concern by stating that: “The socio-economic report consisted of two components which need to be read together, visibly 1) the social choice survey which modelled the perceived negative/positive environmental and recreational effects establishing an Aquaculture Development Zone and 2) a detailed economic analysis of the feasibility of aquaculture in Algoa Bay which included a realistic projection of the production potential of the sites, income, costing, and jobs. The economic feasibility analysis which was compiled by aquaculture industry experts is quantitative and considered robust based on market demand, real costs and prices. Read together, the two components of the socio-economic report substantively address the Minister’s brief and provide a basis for her making a decision.”</p> <p>Section 24 of the Bill of Rights: The Environmental Impact Assessment process and requirement of an Environmental Authorisation to proceed with developments that have the potential to harm the environment is one of the many regulatory tools that ensure that Section 24 of the Bill of Rights is protected.</p> <p>No-go option. Comment noted. Refer to responses above where applicable.</p> <p>Make reports available to public:</p> <p>We will make documents available to stakeholders upon request. We will not upload other documents on our website as this may cause confusion to some stakeholders who are not well informed. Please see our individual response to your queries below.</p> <p>Nel and Winter D. 2008-2009. Finfish Outgrowing in Sea Cages near the Port Elizabeth Harbour Environmental Monitoring Programme Reports (1- 4). Prepared for the Department of Environmental Affairs and Tourism and Irvin and Johnson Pty Ltd.</p> <p><i>Response:</i> These documents were provided to us by the authors and are currently not available for the public unless specifically requested through the Nelson Mandela University website (see link below), where these documents are listed under “Confidential Reports”. Unfortunately, we are not at liberty to disclose these.</p> <p>https://cmr.mandela.ac.za/Consulting/Past-Projects/Confidential-Reports</p> <p>CCA Environmental 2008. Final Basic Assessment Report for Irvin & Johnson’s Proposed Aquaculture Project, Mossel Bay. Prepared for: Department of Environmental Affairs and Tourism.</p> <p><i>Response:</i> We have attached the document in our response to your comment.</p> <p>CSIR (2007): Environmental Impact Assessment for the proposed extension to the container berth and construction of an administration craft basin at the Port of Ngqura. Draft Scoping Report: Chapter 6 -Marine Ecology, Sediment Toxicology and Dredging. Report prepared for Transnet, Durban</p> <p><i>Response:</i> This document is available at the link provided below and has been attached to the response.</p> <p>https://www.transnet.net/BusinessWithUs/EnvPubDoc/Port%20of%20Ngqura/Final_Scoping/Chapter%206%20-%20Marine%20Ecology,%20Sediment%20Toxicology%20and%20Dredging.pdf</p>
13 5	<p>Jaydeen Ras – Student</p> <p>Comment submitted: 30 April 2019</p> <p>My concerns with the development of the Aquaculture in Algoa Bay include the following:</p>

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.	<p>1. There are many species at risk if an aquaculture is built, but these species and the impacts on them are not outlined very specifically. Furthermore, each species may be impacted differently, and I thus feel as though each species should be considered individually in regard to the impacts on them, but also the mitigation options that will be implemented for these species.</p> <p>2. Aquaculture is the farming of fish species, but in the Basic Assessment, I feel as though there needs to be more information relating to which species will be farmed, under which conditions, and perhaps even a section stating the chemicals which are going to be used, and evidence relating to the safety of these chemicals on the fish, but also if digested by humans.</p> <p>3. Information was summarized as graphs within the Basic Assessment, which I did not appreciate, as the graphs can be misunderstood by interested parties, and they do not convey enough information, as there is no analysis stating or interpreting what all the graphs mean.</p> <p>4. I would also like to have information on the regulation which will be implemented with the development of the Aquaculture, and those which will be applied to the fishermen, or whoever is in charge of the Aquaculture, and able to use it.</p> <p>Response by Anchor: 21 May 2019</p> <p>Impacts on various species are provided in detail: Anchor has more than 20 years of experience in marine ecology and marine impact assessments and confirms that it is not possible to evaluate all species individually (there are thousands and thousands of species that would have to be assessed). This is why marine ecological impacts are usually assessed by categorising groups of marine organisms and how they could be impacted. For example, entanglement is applicable to cetaceans, sharks, piscivorous birds and turtles. Entanglement can be reduced by means of a number of mitigation measures, which are listed in the marine specialist study in Appendix D Section 4.1.5.1. Another example is benthic macrofauna, which is comprised of hundreds of invertebrate species. The impact of finfish cages is deposition of organic material on the benthos and is assessed for all species at once. Please refer to the specialist study in Appendix D of the BAR.</p> <p>More detail on farming methods are required: Aquaculture is not only the farming of finfish. Aquaculture is the farming of any aquatic organisms (including seaweeds, bivalves, sea urchins, fish etc.). Aquaculture can be done using sea water for marine organisms, in which case this sector is often referred to as mariculture. The BAR Section 3.2 elaborate on the infrastructure, layout plan and carrying capacity. Section 3.3. described which species are considered for the application. More detailed information is also provided in the Marine Specialist Study in Appendix D. The reports summarise the available information on finfish farming.</p> <p>Chemicals used in aquaculture: The impact of chemical pollution arising from the finfish cages were assessed in Section 4.1.5.1.4 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. This section contains a summary of the chemicals that are used in sea-based aquaculture. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. The impact assessment was based on current literature available.</p> <p>Although chemicals can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>Graphs in BAR. It would help if this comment was more specific. Graphs are considered an important way to display information (in many cases the only way). Perhaps you can tell me which graph you don't understand and I can help you understand it.</p> <p>Point 4, regulatory requirements. It is unclear what is meant by the comment. DAFF will be required to obtain Environmental Authorisation (current process) in order to implement the ADZ. DAFF will be responsible for ensuring that the EA is adhered to by individual operators. Ongoing and adaptive management will be implemented by means of the ADZ and farm level Environmental Management Programmes (See Appendix F of the BAR).</p>
13 6	<p>Alex Lopes</p> <p>Comment submitted: 30 April 2019</p> <p>Fish farm is a bad idea take it somewhere else not where we hold Ironman. We are supposed to developing our coastline for tourism which is far more lucrative.</p>

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.	<p>Response by Anchor: 21 May 2019</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Water sports and events: Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p>
13 7	<p>Jenny Rump – Zwartkops Conservancy</p> <p>Comment submitted: 30 April 2019</p> <p>The Zwartkops Conservancy is opposed to Algoa 1, 6 & 7 fish farms for the following reasons:</p> <ul style="list-style-type: none"> • These fish farms will affect tourism adversely as Nelson Mandela Bay beaches are known to be safe for swimming, snorkeling, diving, eco tourism & sport events like Iron Man. Fish farms will attract sharks to them. In addition the uneaten fish food and faeces will pollute the water and beaches. There are 3 Blue Flag beaches near Algoa 1 – we cannot afford to lose them. • In addition Algoa 6 is near Brighton Beach and Algoa 7 is near Wells Estate & St George’s Strand Beachs all very popular with township residents. In between both sites is Bluewater Bay Beach which is also popular & there is a well established and respected Life Saving Club which does a lot of training and holds national competitions. These would all be adversely affected. Have all these communities been informed of the proposed fish farms near them and consulted? • The choice of position for Algoa 6 is unwise as there is bad pollution here from industries at times when Fish Water Flats WWTW malfunctions. In addition waste water from industries along the canal flow into the canal which is considered to be always polluted. This will all come out where the fish farm is! • Algoa 7 is right at St Croix Island home of the endangered African Penguin colony. Pollution & increased numbers of sharks will critically endanger them. • How will both Algoa 6 & 7 affect the Swartkops Estuary which DEA has declared as a National Project to clean up and save? The Swartkops is a very important nursery for the sea where young fish etc come for part of their life. If it is harmed it will affect fish populations in the sea. • With Climate Change storms are proving to be stronger and more violent. This could cause the fish farms to be broken up and destroyed. Would it not be better for the environment, especially the declared Algoa Bay Hope Spot, if there was land based aquaculture?
	<p>Response by Anchor: 21 May 2019</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds</p>

No	Comment
.	<p>(Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Blue flag status. Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (not impacted, see explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture, see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (not impacted, see explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (not impacted, see explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status. Note that Anchor will include a paragraph in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character).</p> <p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the finfish cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. All swimming beaches are situated at least 2.8 km from the aquaculture sites and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>In summary, (i) chemical pollution from finfish cages is not known to impact humans as a result of recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 2.8 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses.</p>

No	Comment
	<p>Therefore, water quality deterioration as a result of the proposed development has not been assessed when referring to recreational beach users (including bathing and surfing). Note however, that, as much as the risk of shark attack is higher for open water swimmers than bathers, training and event routes passing Algoa 1 in proximity may be impacted reduced water quality mainly related to visibility (not a health concern though). A paragraph will be included in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character) to address the misconception that the proposed development could harm human health or jeopardise the Blue Flag status as a result of water quality deterioration.</p> <p>Algoa 6 and 7 proximity to various beaches. As described above, the impact on bathers has been assessed in Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures. This is applicable to all beaches. See also discussion on Blue Flag status above, the same principles apply to the beaches situated at least 3 km away from the aquaculture site. It is noteworthy that Algoa 6 is earmarked for bivalve (i.e. mussel and oyster) production only, as it is too shallow for finfish production. Pollution levels (organic waste) is much lower than finfish farming as bivalves are not fed and produce much less organic waste. Algoa 7 is situated 4.5 km offshore from the nearest swimming beach at Wells estate (St Georges Beach) and Bluewater Bay. Information posters were erected at Wells estate and the Lifesaving hut at Bluewater Bay beach on 7 March 2019 and the project was announced over the local radio Nkqubela FM in March 2019.</p> <p>Algoa 6 positioning. Please note that the focus of the BAR is to evaluate the impacts of the proposed development on the environment. DAFF (and the industry) is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR). An existing oyster company is also battling with water quality at Algoa 6. DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo. For this reason, the option of bivalve culture in Algoa 1 is being explored as an option. For the above reason, no detailed information is presented on the bacterial counts at the Algoa 6. However, a paragraph will be added to detail Zwembesi Farms (Pty) Ltd current challenges will be included in Chapter 7 of the BAR.</p> <p>Impact on penguins. The direct impact on seabirds was assessed in Section 4.1.5.1.5. of the Marine Specialist Study in Appendix D of the Basic Assessment Report. Algoa 7 is situated within the area that has been set aside for the Addo Marine Protected Area and the negative impact on seabirds, including penguins has been rated as medium with low confidence. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 7 (and 1), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. The impact on water quality and benthic habitat is rated as medium after the implementation of mitigation measures in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. With regards to the shark issue, please refer to excerpt on shark populations in Algoa Bay above.</p> <p>Impact on Swartkops Estuary. As mentioned above, Algoa 6 will be put forward as a bivalve site only, with much reduced organic waste when compared to a finfish farm. Algoa 6 is situated 5 km south of the estuary and is unlikely to impact on rehabilitation efforts. Algoa 7, although earmarked for finfish, is situated 7 km northeast of the estuary and will not impact on rehabilitation efforts of the estuary (please refer to discussion on water quality above).</p> <p>Climate change. Valid comment. Climate change is likely to increase the frequency and intensity of storms in Algoa Bay. DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. Economic feasibility was assessed in the socio-economic specialist study in Appendix D (Britz et al. 2016).</p> <p>Land-based alternative. DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega Industrial Development Zone (IDZ) for hatcheries and holding facilities.</p>
138	<p>Stanford Slabbert – Lifesaving South Africa</p> <p>Comment submitted: 30 April 2019</p> <p>A two-page letter was submitted and has been attached in Appendix F6. The main issues have been summarised below:</p> <ul style="list-style-type: none"> • Lifesaving SA has hosted General Tire LSA National Surf Lifesaving Championships at Kings Beach in PE for the past 3 years and would have to consider moving this event should finfish farms be installed at Algoa 1. • It is a known and established fact that “Fish Farms” attract marine predators, and Algoa Bays existing shark

No	Comment
.	<p>population will most certainly double or triple in size which would have an enormously detrimental effect on the usage of the waters of Algoa Bay.</p> <ul style="list-style-type: none"> • Concern regarding pollution of beaches from uneaten food and faeces. • Tourism will be impacted by the ADZ • Increased shark presence at Algoa 7 will decimate penguin colonies. • Loss of jobs within the tourism industry • Unpleasant smells on PE beach front • Increase in seagull numbers on the beaches resulting in additional mess along the beach front • Impact on whales and dolphins (and therefore sightings and impact on tourism) • Impact on water sport events • Impact on SCUBA diving industry
	<p>Response by Anchor: 21 May 2019</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. There is no evidence that we are aware of that supports your claim that shark populations will double or triple in size as a result of finfish farms. Please read the excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the finfish cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. All swimming beaches are situated at least 2.8 km from the aquaculture sites and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered</p>

No	Comment
.	<p>and discussed with the specialists.</p> <p>Impact on penguins. The direct impact on seabirds was assessed in Section 4.1.5.1.5. of the Marine Specialist Study in Appendix D of the Basic Assessment Report. Algoa 7 is situated within the area that has been set aside for the Addo Marine Protected Area and the negative impact on seabirds, including penguins has been rated as medium with low confidence. Please refer to excerpt on shark populations in Algoa Bay above.</p> <p>Job losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Air pollution. Comment noted. A section on potential air pollution will be included in the Draft BAR to investigate this issue further (note that literature may indicate that this is not considered a significant impact).</p> <p>Increase in nuisance bird activity (seagulls). If left unmitigated, bird predation at aquaculture farms can lead to significant stock losses. Farm owners therefore install predator nets and lines to prevent piscivorous birds gaining access to the cages. It is unlikely that bird populations on the beach front will increase as a result of the finfish farm 3 km offshore.</p> <p>Impact on cetaceans and reduced sightings. The impacts on cetaceans (dolphins, whales) were assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The negative impact on cetaceans has been rated as low significance after the implementation of mitigation measures, which include:</p> <ul style="list-style-type: none"> • Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case. Research by Koper et al. 2016 and Karczmarski et al 1999 confirm that <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 3-5 km offshore). • Ensure all mooring lines and nets are highly visible (use thick lines and bright antifoulant coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network). <p>Impact on water sports and recreational activities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). SCUBA diving (Section 9.5.2.3) and impacts on sailing navigation routes (Section Section 9.5.2.4) have also been assessed in the socio-economic impact assessment.</p>
13 9	<p>Simone Williams – Resident and water sports Comment submitted: 30 April 2019</p> <p>I would like to be registered as an I&AP regarding the proposed fish farm in the NMB area. I use the beach regularly for leisure and sporting activities including surfing, swimming and other activities. I am also a resident of Humewood. I believe that the fish farm would be unsightly particularly in the prime tourist area of the bay. Tourism will be affected negatively in my eyes and i would imagine that there are other environmental aspects the the project as well which may relate to the safety of our bay and its flora and fauna both in and out of the ocean. The bay should be for the enjoyment of all. This project it seems would be a largely unilateral benefit to a few individuals and their agenda. I am strongly opposed to the proposed fish farm.</p> <p>Response by Anchor: 21 May 2019</p> <p>Tourism and revenue loss to PE: Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>The potential impact on the seascape character at Algoa 1 (Summerstrand site) (as well as Algoa 6 and 7) was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the</p>

No	Comment
.	<p>Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Marine ecological impacts. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p>
140	<p>Jane Histed – Resident and sailing Comment submitted: 30 April 2019</p> <p>We are sailors and make use of our beautiful bay. We are vehemently objecting to this proposed fish farm. I cannot fathom why they would destroy established industries i.e. tourism and events, not to mention the destruction of a magnificent beach front. PE has amongst the nicest beaches in the world, we've travelled to a number of countries and our coastline is worth saving!</p> <p>I understand the need for jobs but by putting the fish farm on the proposed site, any jobs gained will be meaningless because established jobs will be lost.</p> <p>Surely there can be another site nearby that could work for everyone. As far as I am aware there are more suitable sights so I cannot understand why this is even a debate!</p> <p>Response by Anchor: 21 May 2019</p> <p>Negative impact on vessel navigation routes (potential risk of collision of vessels, including sailing vessels with the aquaculture farms) have been assessed in Section 9.5.2.4. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures.</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Beaches will be destroyed. The proposed Algoa 1 site (Summerstrand) is situated 3.5 km from the beach and will not physically impact the beach itself. We assume that the following impacts are alluded to in the comment provided:</p> <p><i>The potential impact on the seascape character</i> at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Job gains versus losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in</p>

No	Comment
.	<p>more detail in Section 2.5 of the BAR (main report).</p> <p>Alternatives. In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
14 1	<p>Gillian McAinsh – Resident and Open water swimmer</p> <p>Comment submitted: 30 April 2019</p> <p>I would like to register as an interested & affected party (I&AP) for the proposed Aquaculture Development Zone fish farm. This is because I live in Port Elizabeth and am an open water swimmer who love to swim off our coast, often venturing deep into the sea, sometimes fairly close to the Bell Buoy which is next to one of the proposed sites for a potential fish farm. I also enjoy harvesting mussels fresh from the rocks at low tide off our beaches. In short, I think it is a very bad idea for a fish farm to be established in the immediate vicinity of Nelson Mandela Bay. This mail therefore is to register my strong objection to the sites proposed so far.</p> <p>Response by Anchor: 21 May 2019</p> <p>Open ocean swimming and events. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Mussel harvesting. The proposed finfish and bivalve aquaculture facility should no impact the rocky shores where you collect mussels. Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Filter feeders such as mussels assimilate bacteria and viruses causing gastrointestinal illnesses of the consumer. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p>
14 2	<p>Cyndi Gilbey</p> <p>Comment submitted: 30 April 2019</p> <p>This bay is too special to have fish farming introduced here. I'm sure there are other more suitable places.</p> <p>Response by Anchor: 21 May 2019</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p>
14 3	<p>Tim Norris – Water sports</p> <p>Comment submitted: 30 April 2019</p> <p>I use the bay for swimming, fishing and boating and am concerned that by placing a fish farm in close proximity to the beach area that it will pollute the water and bring unwanted larger fish into the swimming, boating and fishing areas making it dangerous and unhealthy to partake in my various pastimes. Port Elizabeth's beaches help to bring many visitors and sports people to the city and placing such a facility in the area used by tourists and local people alike will result in the city losing credibility as a great destination. There is also a concern regarding the smell and that the sea life on the bottom and in the surrounding sea will be influenced negatively.</p>

No	Comment
	<p>Response by Anchor: 21 May 2019</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Water pollution. Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. <i>Escherichia coli</i> and <i>Enterococci</i> are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Air pollution. Comment noted. A section on potential air pollution will be included in the Draft BAR to investigate this issue further (note that literature may indicate that this is not considered a significant impact).</p> <p>Marine ecological impacts. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p>
14 4	<p>Hennie Marais – Home Owners Association of Amadada</p> <p>Comment submitted: 30 April 2019</p> <p>The Excom would like to advise that on behalf of the Amadada HOA, located in Happy Valley Drive, Summerstrand, they formally object to the fish farm being located in the proposed Algoa Site 1, and note that although the below list is not exhaustive it does detail a number of concerns that the HOA has:</p> <ul style="list-style-type: none"> • It will have a significantly negative impact on our tourism; • Port Elizabeth has built itself as a water sports centre in South Africa and each year there are holiday makers and overseas tourists who come to Port Elizabeth for the activities available on our beachfront, these activities may be severely affected by the fish farm. Even if the activities themselves are not directly affected, the perception of Port Elizabeth as having warm, clean and safe sea waters will be severely affected and this will result in a decline in tourists seeking these types of activities • There is potential for the sea water around the farm to be polluted and potentially affect other marine life • Increased debris and pollution from this farm will make its way to our shore;

No	Comment
.	<ul style="list-style-type: none"> • There may be smells emanating from the farm which will be blown onshore in the easterly wind direction • Port Elizabeth is currently trying to clean up our beachfront area by removing the coal terminal and the fuel tanks, and this just flies in the face of that exercise, and will replace it with another problem <p>Response by Anchor: 22 May 2019</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Water pollution. Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. <i>Escherichia coli</i> and <i>Enterococci</i> are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Although chemicals used in aquaculture can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and</p>

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	<p>faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Air pollution. Comment noted. A section on potential air pollution will be included in the Draft BAR to investigate this issue further (note that literature may indicate that this is not considered a significant impact).</p> <p>Marine ecological impacts. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>Waste debris on the beach. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document and contains clauses that instruct the holder of the Environmental Authorisation to ensure that solid waste is managed carefully. Equipment lost offshore must be cleaned up immediately (refer to environmental management measures for the operational phase in Section 7.3 of the EMPr).</p>
14 5	<p>Lorien Pichegru – Algoa Bay Hope Spot Chairperson</p> <p>Comment submitted: 30 April 2019</p> <p>Please refer to Appendix F6 for the full letter. The concerns have been summarised below:</p> <p>All the ecosystems and species would be threatened by the development of an ADZ in the bay. The impact of fish fecal matter, antibiotics to caged fish, and the chemicals used in anti-fouling will fundamentally damage our rich local reef communities. Algoa Bay contains some of the world's most diverse and colourful cold-water reef systems. To jeopardise local wild fish stocks and reef systems on the speculative possibility of an ADZ, is not a risk-adverse approach.</p> <p>St Croix Island is the world largest colony of the endangered African Penguin. Populations of African penguins are crashing in South Africa due to a lack of food, and every single conservation effort is currently made to save their numbers. Algoa Bay is the last safe haven for them with stable populations (although not increasing). I am deeply concern that Algoa 7 ADZ will negatively impact penguins, as the associated pollution may likely drive their prey further afield from the penguins' natural feeding habitat. As penguins are already threatened due to lack of food and local competition with industrial fisheries on their small pelagic prey, additional pressure has to be strictly avoided.</p> <p>In addition, I am concerned that the pelagic fish for the caged fish's food pellets may be sourced locally, thereby strongly increasing the existing competition between the seabirds and the local fisheries (see further reading below). In that case, that local competition will also affect the Endangered Cape gannets, 70% of which are breeding on Bird Island in Algoa Bay, and the Endangered Cape cormorants. All three species are endemic to South Africa and their numbers are decreasing rapidly.</p> <p>Response by Anchor: 22 May 2019</p> <p>Marine ecological impacts, including impacts on reef systems. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>Impact on African Penguin (and other endemic seabirds). Information on the African Penguin (and other important birds in this region) is provided in Section 3.3.5 of the Marine Specialist Study in Appendix D of the BAR. The direct impact on seabirds was assessed in Section 4.1.5.1.5. of the Marine Specialist Study. Algoa 7 is situated within the area that has been set aside for the Addo Marine Protected Area and the negative impact on seabirds, including penguins has been rated as medium with low confidence. Indeed, pellet feed for finfish is made from fishmeal produced from anchovies and sardine off cuts. These species indeed are important for the endangered penguin. However, individual operators will be required to purchase fish meal from existing right holders (fishing right applications are not included in the application). To ensure a sustainable fishery, DAFF determines the Total Allowable Catch (TAC) for each species. The TAC will therefore not increase to meet an increased demand in the aquaculture sector. Even if individual operators were allocated their own fishing quota, the quota would have to be allocated from the total national quota. Due to the proclamation of the MPA, which includes the St Crox Island group, feeding grounds of penguins and other seabirds will be protected in from over exploitation in future.</p>

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14 6	<p>Comment submitted: 30 April 2019</p> <p>Mark Scherer - Body Corporate of Retiefplein</p> <p>The trustees would like to advise that on behalf of the Retiefplein Body Corporate, located in Marine Drive, Summerstrand, they formally object to the fish farm being located in the proposed Algoa Site 1, and note that although the below list is not exhaustive it does detail a number of concerns that the body corporate has:</p> <ul style="list-style-type: none"> • It will have a significantly negative impact on our tourism; • Port Elizabeth has built itself as a water sports centre in South Africa and each year there are holiday makers and overseas tourists who come to Port Elizabeth for the activities available on our beachfront, these activities may be severely affected by the fish farm. Even if the activities themselves are not directly affected, the perception of Port Elizabeth as having warm, clean and safe sea waters will be severely affected and this will result in a decline in tourists seeking these types of activities • There is potential for the sea water around the farm to be polluted and potentially affect other marine life • Increased debris and pollution from this farm will make its way to our shore; • There may be smells emanating from the farm which will be blown onshore in the easterly wind direction • Port Elizabeth is currently trying to clean up our beachfront area by removing the coal terminal and the fuel tanks, and this just flies in the face of that exercise, and will replace it with another problem
	<p>Response by Anchor: 22 May 2019</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry - is their cause for concern?).</p> <p>Water pollution. Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. <i>Escherichia coli</i> and <i>Enterococci</i> are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Although chemicals used in aquaculture can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and</p>

No	Comment
.	<p>national regulatory requirements).</p> <p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Air pollution. Comment noted. A section on potential air pollution will be included in the Draft BAR to investigate this issue further (note that literature may indicate that this is not considered a significant impact).</p> <p>Marine ecological impacts. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>Waste debris on the beach. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document and contains clauses that instruct the holder of the Environmental Authorisation to ensure that solid waste is managed carefully. Equipment lost offshore must be cleaned up immediately (refer to environmental management measures for the operational phase in Section 7.3 of the EMPPr).</p>
14 7	<p>Michelle Trask van Heerden</p> <p>Comment submitted: 30 April 2019</p> <p>I live in Port Elizabeth and go for walks weekly along the coast line. I STRONGLY OBJECT to the ADZ being implicated as it is a seriously bad idea. Firstly, the DOLPHIN POPULATION is at threat. They swim in huge massive schools every day from Jeffery's Bay to Coega , all along the cost line . Their lives will be in serious danger and jeopardy as their food intake will be depleted. Too many disadvantages to mention- sea life tampered with and destroyed, sharks increase and pollution to the sea life around. I pray you consider my objection in the seriousness it is presented.</p> <p>Response by Anchor: 22 May 2019</p> <p>Dolphin population. The impacts on cetaceans (dolphins, whales) were assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The negative impact on cetaceans has been rated as low significance after the implementation of mitigation measures, which include:</p> <p>Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case. With regards to the endangered humpback dolphin, research by Koper et al. 2016 and Karczmarski et al 1999 confirm that <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 3-5 km offshore).</p> <ul style="list-style-type: none"> • Ensure all mooring lines and nets are highly visible (use thick lines and bright antifoulant coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network). <p>Food resources of dolphins will not be depleted by the proposed development itself (farmed fish are hatched on land and not caught in the wild), but may be impacted negatively by genetic contamination and disease transfer from farmed fish to wild fish stocks. These impacts are assessed in Sections 4.1.5.1.1 and 4.1.5.1.3 of the Marine Specialist Report in Appendix D of the BAR.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section</p>

No	Comment
	<p>9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Water quality and pollution. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 7 (and 1), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. The impact on water quality and benthic habitat is rated as medium after the implementation of mitigation measures in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact of chemical pollution arising from the finfish cages were assessed in Section 4.1.5.1.4 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. The impact assessment was based on current literature available.</p>
148	<p>Steve and Bev MacDonald – Resident, water sports and events</p> <p>Comment submitted: 30 April 2019</p> <p>We both swim from Hobie to the 6 pillars and beyond 3/4 times weekly. I participate in the Ironman which I have done for the last 4 years and this brings my family and friends to PE from all over the world. Money brought into our city is huge filling hotels, restaurants, B and B's and the like over a 2 week period incl Addo, Shamwari etc. The Ocean Series over the summer months has attract many people both young and old, to participate in varying swim distances. Over the past few months we have witnessed successful and well sponsored surfing events at a high level. Surfing is very popular off the PE beaches. Paddling and canoeing as well as kite surfing is another of our popular water sports which will no doubt go into decline if the fish farm happens. This not to mention the snorkelers and divers. If our family cannot participate and enter the sea into the future we would seriously consider relocating to elsewhere where there would be less danger. I agree the fish farm should attract employment but the financial and recreational value of the water sports to be lost as a result of this outweighs the benefits of the fish farm in such close proximity. As a win-win to everybody could the fish farm not be situated elsewhere where the lives of humans will not be in danger of sharks and other potentially dangerous species.</p> <p>Response by Anchor: 22 May 2019</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the</p>

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14 9	<p>Paula Archibald – Resident and sailor</p> <p>I am a private resident of Port Elizabeth and an avid sailor. I wish to lodge my opposition to the proposal of the Fish farm off the Hobie beach , as this will severely impact the ability to host world class sailing events in the bay, which we have done successfully over the years. I feel the impact of these farms on tourism and the general health of our sensitive bay will be extremely detrimental .</p> <p>Response by Anchor: 22 May 2019</p> <p>Yachting in Algoa Bay as a recreational user group is described in Section 8.5.2.1 of the BAR (including a map showing the area used regularly by the yacht club and competitions. It is acknowledged that yachting may be affected by ADZ development within Algoa Bay, however, the relatively large area utilised by yachts within Algoa Bay and relatively small proposed ADZ areas, means that these activities should not be mutually exclusive. Negative impact on vessel navigation routes (potential risk of collision of vessels, including sailing vessels with the aquaculture farms) have been assessed in Section 9.5.2.4. The impact on navigation is considered to be of medium significance before and after the implementation of mitigation measures.</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Impacts on marine ecology. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the</p>

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150	<p>Nicholas Forsythe – Resident and water sports Comment submitted: 30 April 2019</p> <p>I am lodging a formal objection to this proposal of the fish farm in the bay. I swim in these waters each week, my children swim and surf and object to this. You will destroy the blue beach status and swimming in the bay</p> <p>Response by Anchor: 22 May 2019</p> <p>Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (not impacted, see explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture, see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (not impacted, see explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (not impacted, see explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status.</p> <p>Some stakeholders have expressed concern over uneaten food and faeces ending up on the blue flag beaches. Uneaten feed and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Finally, some stakeholders are concerned that chemicals used in aquaculture could impact on people engaging in contact recreation in the bay. Although chemicals can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health as a result of contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international</p>

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.	<p>guidelines and national regulatory requirements).</p> <p>In summary, (i) chemical pollution from finfish cages is not known to impact humans as a result of recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 3 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses. Therefore, water quality deterioration as a result of the proposed development has not been assessed when referring to recreational beach users (including bathing and surfing). Note however, that, as much as the risk of shark attack is higher for open water swimmers than bathers, training and event routes passing Algoa 1 in proximity may be impacted reduced water quality mainly related to visibility (not a health concern though). A paragraph will be included in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character) to address the misconception that the proposed development could harm human health or jeopardise the Blue Flag status as a result of water quality deterioration.</p>
15 1	<p>Lise Claassen – Open water swimmer</p> <p>Comment submitted: 30 April 2019</p> <p>As an open water swimmer that often participate in sea swimming and that prefer sea swimming to lagoon/river swimming, I object to the planned fish farm just off the Bell Buoy in Algoa Bay. I cannot believe that the project is still considered. The amount of jobs created by the Iron Man and the various tri Athlon events hosted on the Port Elizabeth beach front far exceed the anticipated jobs that the fish farm will deliver. Also, Port Elizabeth is a perfect swimming ocean with warm water and no major shark attacks in its history. None of the other cities in South Africa offers the same conditions to open water swimmers from around the globe. Do you truly want to risk this, one of the only tourist attractions that has put Port Elizabeth on the map in South Africa, for a fish farm which could probably be located at an alternative position in our bay. Even if such alternative location is not as optimal as the envisaged location, surely all the factors need to be considered and all in all the positives of our beach front tri-athlon attraction of Port Elizabeth will prove to outweigh the benefits of a fish farm. How long has PE Tourism tried to bring tourists to Port Elizabeth to spend more than a mere night on their way to Cape Town. With the Iron Man and similar tri-athlons, foreigners are discovering the beauty of our city. Is this really worth risking. Personally I will not be swimming in the sea with a fish farm located a mere 2km from me. Even if the research shows that the great white and the zambezi sharks should not venture closer to shore, I will not want to be the statistic to prove them wrong. I request, please consider an alternative location for the fish farm to avoid ruining the little bit of tourism that Port Elizabeth has.</p>
	<p>Response by Anchor: 22 May 2019</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries is going to apply for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Job gains versus losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section</p>

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15 2	<p>Michelle Barnett – Resident and water sports Comment submitted: 30 April 2019</p> <p>As a regular user of the bay I am concerned about this development and the affect that it will have on the bay. I am a swimmer and swim in the bay probably 4-5 days a week. Additionally, my family are regular users of the Algoa Bay beaches. We also participate in numerous sporting activities in the Bay. I believe that the development of the fish farm will attract predators to the Bay which will impact on these activities. I understand that the fish farm will create jobs but the sporting activities in our Bay also creates jobs and brings tourism money to Port Elizabeth. However, it is not only sporting activities that will be affected but also recreational use of the beaches. This will result in a loss of jobs and money as well when one considers the lifeguards, the ice-cream vendors, restaurants, etc.</p> <p>Additionally, there is potential risk to our marine life. Can we afford to further endanger the population of dolphins and penguins, already endangered in our Bay? Can we afford to damage our coral reefs? Apart from the damage to the marine environment, this could potentially result in a loss of jobs and money in the scuba-diving industry in our Bay. The cons far outweigh the pros for this development. We have the most stunning asset in Algoa Bay. Let's keep it that way.</p>
	<p>Response by Anchor: 22 May 2019</p> <p>Alternatives. In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)".</p>

No	Comment
	<p>Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Job gains versus losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Impacts on the marine environment. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>The impact on SCUBA diving was assessed in Section 9.5.2.3 (Potential impact OP-SE3b) of the BAR. None of these diving sites overlap with any of the proposed precincts (one of the site selection criteria in the Strategic Environmental Assessment excluded known reef areas), and as such loss of access to any of these dive precincts by recreational scuba divers will not occur. It is however recognised that ecosystem degradation could reduce the recreational value of the reef systems surrounding Algoa 1. Impacts on benthic habitats below fish cages tends to be localised to the area under the cages. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme, through which the benthic impact footprint can be determined. Corrective action would be required if nearby reef systems are indeed impacted. The impact on benthic habitats were assessed in the Marine Specialist Study in Appendix D of the pre-application BAR Section 4.1.5.1.2.</p>
15 3	<p>Brian Bezuidenhout – Association for the Physically Disabled Eastern Cape Port Elizabeth Comment submitted: 30 April 2019</p> <p>The full letter has been attached in Appendix F6.</p> <p>On behalf of the Association for the Physically Disabled, also known as APD NMB, we hereby lodge our objection to the proposed Fish Farms that might be established off our coastline.</p> <p>We have a large team at our premises at 55 Paterson Road, North End, as pictured below, and all our workers livelihoods will be negatively impacted by the enormously detrimental effect that these farms will have on the adjacent areas. Factories such as ours are close to the shoreline, and these fumes will permeate everything.</p> <p>The proposed "Algoa 6" site is directly opposite our factory in North End, and our entire workforce of 92 people, of which 75% are disabled, and most come from impoverished households within Nelson Mandela Bay, will suffer.</p> <p>Easterly winds are dominant at certain times of the year, and these onshore winds will blow straight onto our premises. The fumes will permeate into everything, including our stocks of materials and clothing, and we are most concerned that we will lose business when clients reject our manufactured products because of the fishy smell.</p> <p>Response by Anchor: 22 May 2019</p> <p>Please note that Algoa 6 is too shallow for finfish culture and has been set aside exclusively for oyster and mussel culture. This site has been set aside by Transnet for Aquaculture and currently accommodates two existing oyster farms of which Zwembesi Farms (Pty) Ltd is the largest oyster producer in South Africa.</p>

No	Comment
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15 4	<p>Tracey Hartwig – Resident</p> <p>As a conservationist, there are too many concerns around establishing these fish farms in Algoa Bay. These include the following;</p> <ul style="list-style-type: none"> • With unpredictable weather bringing extreme tides & storms, the cages will regularly be damaged, or destroyed, leaving the remains to land on the beaches, or float around causing further damage to the marine and shore environments. • The pollution from excess fish food, faeces and antibiotics will wash onto the sensitive endemic soft coral reefs and sand beds, as well as onto the bay shoreline and islands, having negative effects on marine and shore ecosystems!!! • The cages will attract more; and bigger sharks and predators which will further deplete the endangered African penguin, Cape gannet & seal populations, etc. <p>As an echo-tourism operator; due to the above negative impacts, this will decrease the allure for marine and coastal tourism activities, negatively impacting these types of businesses.</p> <p>As a Hospitality provider; as tourism decreases, so occupancy will drop and hospitality businesses will have no choice but to close down.</p> <p>As this Algoa Bay is an international sporting event host, including lifesaving champs, Bell Buoy Swim, Sailing Nationals, IRONMAN, etc, establishing the ADZs in Algoa Bay will force the event organisers to move their events to other locations with less shark, pollution and illness risks that will result from the Fish farming practices. When these events collectively generate over R350 million for local businesses annually, the area cannot afford the negative financial impact this will have.</p> <p>As a concerned resident; the local fishing industries will be impacted by the increase in predator species further decimating harvest species, including those for the lucrative export market. This will result in massive job losses from the fishing industry and related businesses.</p> <p>All the above will lead to massive job losses from the fishing, hospitality, eventing and related support industries, far more than the 1500 jobs the Fish Farms might create. This means much higher unemployment rates, which leads to even higher crime in an already poorer, crime riddled region.</p> <p>The very small list of Pro's in favour of the ADZ activities is far out-weighed by the long list of negative impacts this will have on the local residents, businesses, established marine based industries, international sporting events, not to mention the unique ecosystems in and around Algoa Bay.</p> <p>The bottom line is that on no level can we afford for this proposal to go ahead as it stands.</p> <p>If this could be modified to a land based model - the Coega IDZ already has some now disused facility that could be expanded and modernised to suit the proposal. This would be less expensive in the long run and negate all the concerns listed above, while still creating the expected jobs. This combined with negating the risk of high job losses as outlined above, will be a much more positive contribution to the local industry base and economy.</p>
	<p>Response by Anchor: 22 May 2019</p> <p>Debris on beaches. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document and contains clauses that instruct the holder of the Environmental Authorisation to ensure that solid waste is managed carefully. Equipment lost offshore must be cleaned up immediately (refer to environmental management measures for the operational phase in Section 7.3 of the EMPr).</p> <p>Pollution of natural environment.</p> <p>The impact of chemical pollution arising from the finfish cages were assessed in Section 4.1.5.1.4 of the Marine Specialist Report in Appendix D of the Basic Assessment Report. The impact for Algoa 1 and Algoa 7 were assessed separately due to the proximity of Algoa 7 to the Addo Marine Protected Area. Without mitigation measures, the impact significance was rated medium for Algoa 1 and high for Algoa 7 with medium confidence in the assessment. With the implementation of mitigation measures (provided in the impact table), the impact was reduced to low and medium for Algoa 1 and 7 respectively. The confidence in the efficacy of the provided mitigation measures is low. The impact assessment was based on current literature available.</p> <p>Nutrient enrichment. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 7 (and 1), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of</p>

No	Comment
.	<p>the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. The impact on water quality and benthic habitat is rated as medium after the implementation of mitigation measures in Section 4.1.5.1.2 of the Marine Specialist Report in Appendix D of the Basic Assessment Report.</p> <p>Pollution of swimming beaches. Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Sharks and their prey. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. Currently there is no evidence that finfish cages attract sharks that would normally not be found in an area. A knock on effect on African Penguin populations is therefore not expected. The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Impact on tourism and hospitality industry (assessed as negative economic impact). Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Open water swimming and sport events. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Impact on fishing sector. Refer to sharks and their prey response above. The same principle is applicable to exploited fish species. The proposed Aquaculture Development Zone has the potential to reduce fishing grounds and this impact was assessed in Section 9.5.2.6 of the Basic Assessment Report. Impacts on the local fishery were rated of medium to low significance (medium for Algoa 1 and 7, low for Algoa 6). It should be noted that the impact at Algoa 1 before mitigation is high due to the overlap of the site with an important squid nursery area. The only way to reduce the impact at Algoa 1 to "Medium" significance is to avoid the southern part of Algoa 1, which is in conflict with the recommendations in the visual impact assessment (avoid northern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Job gains versus losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in</p>

No	Comment
.	<p>behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Land-based alternatives. DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega Industrial Development Zone (IDZ) for hatcheries and holding facilities.</p>
15 5	<p>Morag Gray - Resident Comment submitted: 30 April 2019</p> <p>I am again objecting very strongly to the Zone #1 site for the proposed aquaculture fish farm. I am not opposed at all to the concept at other sites, but at Site #1 where you want to put it is ridiculous.</p> <p>The impact on tourism will be extremely high as it will negatively impact all of the major sporting events that are held in PE which bring in large numbers of participators and their families and which NMB has worked so hard over the past decade to promote.</p> <p>This will impact the number of current jobs that provide employment, and these cannot be offset by the relatively small number of jobs that aquaculture will provide.</p> <p>It is not just the visual impact on tourism (would it be wonderful to look out at the fishfarm from your hotel room??? NO), but also the negative impact of sharks coming close to our swimming beaches. Nobody wants to have a beach holiday at a place where sharks are attracted because of the fish farms.</p> <p>I also know that the area around Bellbuoy has huge waves and currents that cannot possibly make it the #1 site. There are also a number of reefs in the area that would be negatively impacted. Why do this to magnificent reefs?? SO ONCE AGAIN I OBJECT STRONGLY.</p>
	<p>Response by Anchor: 22 May 2019</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic</p>

No	Comment
	<p>Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Job gains versus losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Impact on reef habitat. Algoa 1 does not overlap with reef habitat (this was a site selection criterion for the Strategic Environmental Assessment conducted in 2009) (none of the proposed sites are situated above reef). Impacts on benthic habitats below fish cages does tend to be localised to the area under the cages. It is however recognised that ecosystem degradation could reduce the recreational value of the reef systems surrounding Algoa 1. Should Environmental Authorisation be granted, marine monitoring during the operational phase will be required in terms of the legally binding Environmental Management Programme, through which the benthic impact footprint can be determined. Corrective action would be required if nearby reef systems are indeed impacted (by smothering, eutrophication or chemicals from the aquaculture farm). The impact on benthic habitats were assessed in the Marine Specialist Study in Appendix D of the pre-application BAR Section 4.1.5.1.2.</p>
15 6	<p>Lyn Haller – Umzantsi Africa Tours Comment submitted: 30 April 2019</p> <p>As a tourism body I outright object to the Fish Farm being built on our main beachfront area where all our tourists visit and our whale and dolphin cruises take place. Port Elizabeth / Nelson Mandela Bay is a town that's loves water sports and that is why the tourists come here apart from our beautiful game reserves and wildlife. Our pristine beaches are stunning. If we have this farm right in our bay this will have a major effect on the recreation area for surfing, swimming, canoeing etc etc. We have so little to offer our tourists. So many activities and sites have been closed, demolished or stopped due to lack of funds and I feel if the farm is built this is going to take more away of what we can offer our visitors.</p> <p>Response by Anchor: 22 May 2019</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists. Concerns regarding cumulative impacts on tourism is noted.</p> <p>Water sports and sharks (it is assumed that you refer to this concern). Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)".</p>

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15 7	<p>Maria Scott – Resident and AirBnB Comment submitted: 30 April 2019</p> <p>I wish to lodge my objection to the fish farm in Algoa Bay 1. I am an open water swimmer as well as an owner of an Airbnb establishment. The placement of a fish farm in our prime tourist area would be a disaster for a multitude of reasons. The suggested figures for job creation can never equal the the loss of jobs that a compromised tourist/hospitality trade will suffer. As a swimmer & competitor in Bellbuoy Challenge, Ocean Racing Series, 3 Beaches Challenge & an Ironman mom - there is no way I could continue to compete if there was a fish farm in the area. These events have put PE on the map as the watersports capital and it has taken 14 years to grow into an internationally acclaimed open water swimming event destination. A fish farm could destroy this in less than one year!! I pray with all my heart that the protection of the environment and not greed & power will be the deciding factor when the decision is made, and this does not become another failure like the Tea farm.</p>
	<p>Response by Anchor: 22 May 2019</p> <p>Water sports and sharks (it is assumed that you refer to this concern). Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists. Concerns regarding cumulative impacts on tourism is noted.</p> <p>Job gains versus job losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could</p>

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.	<p>have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p>
15 8	<p>Rob Green – Resident Comment submitted: 30 April 2019</p> <p>As a concerned resident of Port Elizabeth I herewith am submitting my opposition to the implementation of the proposed fish farms project in Algoa Bay.</p> <p>Though I am not directly involved with water sport and other activities in the bay I have attended presentations and read authoritative articles by well respected local marine biologists and conservationists detailing the ecological problems associated with this type of venture.</p> <p>The concerns raised by watersport enthusiasts and big event organisers, as well as those of thousands of tourists, need to be carefully considered before embarking on such a enterprise so close to our beautiful beaches.</p> <p>In view of the fact that certain aspects have not been considered in the study, such as the unknown effects of the strong shoreward currents on the faecal and other pollution produced by the fish farms, and the probability of an increase in predator presence in the vicinity of the facility, including the shore/beaches, the proposed siting of a pilot project off the Summerstrand shore must be reconsidered.</p> <p>In light of the above rationale, looking at the other two fish farms, namely the harbour and Coega sites, these proposed locations also need careful consideration before implementing such controversial facilities.</p>
	<p>Response by Anchor: 22 May 2019</p> <p>Marine ecological impacts. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>Water sports and sharks (it is assumed that you refer to this concern). Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Water pollution. I have responded assuming that you are concerned about uneaten food and faeces washing up on the beaches and human health concerns with regards to the waste emitted from finfish farms. Our response also speaks to the concern about losing Blue Flag status as a result of the proposed development.</p>

No	Comment
	<p>Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains.</p> <p>Although chemicals used in aquaculture can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>In summary, (i) chemical pollution from finfish cages is not known to impact humans as a result of recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 3 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses. Therefore, water quality deterioration as a result of the proposed development has not been assessed when referring to recreational beach users (including bathing and surfing). Note however, that, as much as the risk of shark attack is higher for open water swimmers than bathers, training and event routes passing Algoa 1 in proximity may be impacted reduced water quality mainly related to visibility (not a health concern though). A paragraph will be included in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character) to address the misconception that the proposed development could harm human health or jeopardise the Blue Flag status as a result of water quality deterioration.</p> <p>Algoa 6 (PE Harbour) and Algoa 7 (Ngqura Harbour) sites have been subjected to the same impact assessment as Algoa 1.</p> <p>The decision-making authority will weigh up the probability of the proposed development realising its full benefits against the potential negative and irreversible impacts of implementing the pilot stage of the Aquaculture Development Zone (as pointed out correctly by stakeholders, perception-related impacts on water sports, events and tourism may be realised prior to reaching full capacity).</p>
15 9	<p>Maurice Millard – Senior lifeguard at the Summerstrand Lifesaving Club</p> <p>Comment submitted: 30 April 2019</p> <p>I am a senior lifeguard and member of the Summerstrand Surf Lifesaving Club. I use the beach on a daily basis. The construction of a fish farm off the coast of Summerstrand and Humewood will dire consequences on the tourism and ocean sports in Port Elizabeth. It will attract high number of sharks to the area. Port Elizabeth is known for its strong winds, and a strong East wind will push the fish farm closer and closer towards the shore. Taking the above into consideration, I highly object towards the construction of the fish farm.</p> <p>Response by Anchor: 23 May 2019</p> <p>Drifting of cages. Unlike a temporarily anchored ship, which can drift in strong winds, finfish cages are moored onto the sea floor by means of concrete blocks and mooring lines. Cages are usually moored in a grid pattern with the moorings and anchor lines extending outwards from the cage perimeter. This will result in the seafloor footprint being ~5-10 times greater than the sea surface footprint. Please refer to Section 2.1.1 of the Marine Specialist Study</p>

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.	<p>in Appendix D of the BAR for more information on farming technologies. Should environmental authorisation be granted, the aquaculture farms have to be placed (and must remain) within the Aquaculture Development Zone footprint authorised.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
16 0	<p>Warrick Stewart – Resilience Environmental Advice</p> <p>Comment submitted: 30 April 2019</p> <p>My comments on the proposed ADZ in my personal capacity, but also as the primary author of the first Coastal Management Programme for Nelson Mandela Bay (SRK, 2007), are as follows:</p> <p>Beach and Watersport Tourism Economy</p> <p>Nelson Mandela Bay has established itself as a major beach and watersport tourism destination in South Africa and globally, with the city playing host to the IRONMAN African Championship Triathlon and a World Qualifying Series surfing event as part of the World Surf League, amongst others. The potential negative socio-economic impacts of the proposed Algoa ADZ (including the various options) on Specialist tourism and recreational businesses (9.5.2.3 Potential impact OP-SE3) has been assessed in the BA. However, the information upon which this negative impact has been assessed does not take cognisance of the current status of the city's beach and watersport tourism industry. Furthermore, the socio-economic specialist study (Britz et al., 2016) and feasibility study (Britz & Sauer 2016b), have not reflected the substantial financial data available for this component of the local economy. It is fundamentally important that these studies be updated with accurate beach and watersport tourism economic data to inform the assessment of this impact. In addition, the current beach and watersport contextual information in the BA is outdated by more than a decade and does not even reflect the contextual available in the first Coastal Management Programme for Nelson Mandela Bay (SRK, 2007), let alone the most recent gazetted version.</p> <p>In addition, the number and frequency of shark encounters and attacks in Algoa Bay have been limited compared to other coastal destinations in South Africa (https://www.sharkattackfile.net/incidentlog.htm). The majority of incidences and attacks in Nelson Mandela Bay have taken place outside of Algoa Bay (e.g. Cape Recife wildside, Noordhoek, Sardinia Bay etc.). Should a significant increase in frequency of shark activity, encounters or attacks take place in Nelson Mandela Bay after commence of operation of the finfish component of the Algoa ADZ, the effect on the Nelson Mandela Bay beach and watersport tourism industry could be devastating, particularly should an attack take place during a major event. This would likely result in such events being cancelled permanently, with vast loss in tourism revenue, current employment and potential access restrictions to certain beaches for current and future users. The BA proposes monitoring of shark activity, however what practical and effective mitigation measures can and will be implement should an increase in shark activity, encounters and/or attacks take place? The most effective measure would the decommissioning of the facility/ies, but such closure would have vast financial implications for the operators, which that the competency authority would likely not be willing to implement due to the extent of the initial capital investment. As a result, such negative impacts would most likely be externalised to the tourism</p>

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.	<p>industry and beach users of Algoa Bay, not the ADZ developers, which would constitute a social and economic injustice.</p> <p>A detailed assessment of the risks and impacts to the Beach and Watersport Tourism Economy must be undertaken, with any potential mitigation measures ENSURING the protection of the Nelson Mandela Bay's tourism brand, current tourism economy, and the safety and current rights of beach users.</p> <p>Unless additional assessment of this impact is undertaken based on comprehensive data and practical and socially equitable mitigation measures can be implemented to reduce both the impact and risk to very low levels, the severity of the risk of a major shark incident subsequent to the commissioning of a finfish operation offshore of Pollok Beach (Algoa 1) is too substantial to justify the development and operation of such a facility.</p> <p>Response by Anchor: 04 July 2019</p> <p>Impact on specialist tourism and recreational businesses should be re-assessed after detailed cost-benefit study</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. For finfish farming at Algoa 1, this impact is rated as high and medium before and after mitigation measures respectively (note that the impact is lower at Algoa 6 and 7 and for bivalve culture).</p> <p>A detailed costing of the potential socio-economic impact (i.e. externalises) of the ADZ has indeed not been completed. Instead, a social choice trade-off survey was undertaken by Britz et al. 2016 (Appendix D of the BAR). The survey attempted to gauge whether the external costs (negative social and economic impacts on the tourism and conservation value and others) outweigh the income and employment benefits that could be gained as socially attractive elements. Concerns included perceived impacts on diving, yachting, ski-boating, property values, increased risk of shark attacks, and job losses. A high proportion of people surveyed (39%) found the perceived social cost to be unacceptable (Hosking, 2016). The findings of this study were considered in the current impact assessment process.</p> <p>Based on the choice modelling study conducted by Britz et al 2016 and feedback from stakeholders thus far, it appears that potential ecological impacts and the perception of an increased risk of shark attacks occurring (whether this risk is real or not) were identified as the most important disturbing aspects of the proposed development. While mitigation measures have been recommended for negative visual and marine ecological impacts, few meaningful mitigation measures are available for some of the other aspects (perceived increased risk of shark attack, loss of fishing grounds and area utilised for sailing) other than site reduction of and omitting finfish farming at Algoa 1 Option 1 (Summerstrand site). The perceived higher risk of shark attacks alone could potentially have a profound direct impact on the local economy, should the Ironman Event (and other events) be moved to a different location (Ironman Organisers indicated during the appeal phase that the event would be moved should finfish cages be installed at Algoa 1 Option 1). Furthermore, this impact could potentially be irreversible and occur during the pilot phase. Consequently, the revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Contextual information on current watersports is outdated. Comment noted. Anchor has obtained the ungazetted but final version from the authors at CEN Integrated Environmental Management Unit. The relevant maps will be consulted to update the contextual information where required.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative). Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research</p>

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.	by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).
16 1	<p>Dr AJ Ribbink – Sustainable Sea Trust</p> <p>The effect the fish farm will have on you/your business/Algoa Bay in general</p> <p>Our research with Norwegian laboratories on microplastic associated and other toxins has shown that sea-food from Algoa Bay may have five times the safe level for human consumption in the tissues after only six months. This suggests that bivalves and fish grown in the proposed fish-farm will be unfit for consumption in South Africa and will not be accepted in the export market.</p> <p>The changes you want to see in the application</p> <p>Either a full analysis is undertaken with us and internationally recognized laboratories in Norway to thoroughly and independently investigate the issue or the entire endeavour to have a fish farm in Algoa Bay is abandoned, which is probably the sensible route.</p> <p>Response by Anchor: 3 June 2019</p> <p>Alternatives. In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment.</p> <p>Option A: Finfish and bivalve at Algoa 1 + Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>Option B: Bivalve at Algoa 1+ Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>Option C: Exclude Algoa 1. Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>Microplastics and food safety: Please refer to the Food Standard website for Australia and New Zealand: http://www.foodstandards.gov.au/consumer/generalissues/Pages/Microplastics-in-food-.aspx</p> <p>“The scientific evidence on potential exposures and health risks of microplastics in the food supply is still evolving. However, available scientific studies and reports suggest that:</p> <ul style="list-style-type: none"> • Human exposure to microplastics from eating finfish is likely to be negligible. This is because the microplastics are found in the gills, liver and intestines of the finfish, which are organs that are not typically eaten. • Eating shellfish is a possible route of human exposure because bivalves are eaten without the removal of the gastrointestinal tract. However this exposure is also expected to be very low, e.g. the European Food Safety Authority (EFSA) estimated that consuming 225 grams of mussels with the highest reported amount of microplastics would result in an exposure of about 7 micrograms of plastic. • Absorption of intact plastic particles from the gut is likely to be very limited ($\leq 0.3\%$). In addition, because of the small mass of plastic consumed it is expected that there is unlikely to be significant increases in exposures to environmental chemicals such as PCBs, PAHs or bisphenol A that may adsorb to the plastic surface. • In light of this information, our current view is that plastic contamination of the food chain is unlikely to result in immediate health risks to consumers. This view is supported by EFSA, which considers that while further work is required, it seems unlikely microplastics are harmful to consumers.” <p>Further evidence is provided here:</p> <p>“Microplastics have only been observed in the gastro-intestinal tract of fish and, as most fish species are gutted before consumption by humans; direct human exposure to microplastics from fish will be negligible” (refer to page 52 of FAO 2017: Microplastics in fisheries and aquaculture).</p> <p>This is applicable to the finfish species proposed for the Aquaculture Development Zone in Algoa Bay. There is currently no threshold suggested by Food and Agriculture Organization of the United Nations (FAO) above which microplastics amounts would not be safe for human consumption. Additionally, scientists have found that more microplastics land on food while cooking and eating than what is in the organism that is consumed.</p>
16 2	<p>Russel Julie – Resident</p> <p>Comment submitted: 30 April 2019</p> <p>I wish to add my objection to the I'll considered fish farm.</p> <p>The environmental impact on the surrounding marine life has not been considered in my opinion. Nature is about balance and this artificial curating of marine life can have side effects that could harm more than help. Another concern is the effect from "over feeding" fish to promote rapid growth on the actual fish itself? Fish farms in other parts of the world are not job creators, being fairly "automated". We have one of the longest coastlines in the world he world with numerous blue flag beaches which will be endangered. Not too mention the effect on tourism which will suffer. From a safety point of view, there is a flight path that passes over the beach where one of the farms are</p>

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.	<p>proposed. Surely birds will become a safety concern?</p> <p>Response by Anchor: 23 May 2019</p> <p>Marine ecological impacts have not been considered. This statement is incorrect. Anchor has more than 20 years of experience in assessing anthropogenic impacts on the marine environment and has compiled a 105 page marine specialist study, which is available for stakeholders in Appendix D of the BAR (see internet link to the BAR above). This report describes the receiving environment and assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures. Impacts by bivalve (mussel and oyster farming) have also been assessed in this report. The impact assessment was based on a Benthic Habitat Mapping report (Appendix D, Dawson et al. 2019, 49 pp) and a Dispersion Modelling report (Appendix D, Wright et al. 2019, 44pp). The Basic Assessment Report integrates the results of this specialist study.</p> <p>"Overfeeding fish." Fish will be fed to achieve the best food conversion ratio possible for a species (i.e. kg of feed used per kg of fish produced) to minimise costs and maximise production.</p> <p>Job opportunities. Your concerns regarding employment creation has been addressed in Section 9.5.2.2 of the BAR. The socio-economic specialist study by Britz et al (2016) estimated the number of jobs that could be created by this development: "Direct employment in the production component of an offshore finfish farm in Algoa Bay is expected to roughly 50 employees for a 1000t/annum scale operation (1 employee per 20 ton) and 80 employees for a 3000t/annum commercial unit (1 employee per 37.5 tons) (Britz et al. 2016)". Jobs will include unskilled and semi-skilled labourers, skippers, divers, farm maintenance staff, fish processing facility, aquaculture consultants, food safety technicians, aquatic animal health vets, environmental officers, and associated staff. Services could include boat maintenance, net manufacturing and repairs and commercial diving.</p> <p>Water quality requirement criteria to maintain blue flag status (relevant requirement criteria refer to http://beachawards.ie/blue-flag/blue-flag-beach-criteria/):</p> <p>A. The beach must fully comply with the water quality sampling and frequency requirements of the Blue Flag programme. (not impacted)</p> <p>B. The beach must fully comply with the standards and requirements for water quality analysis. (not impacted, see explanation below)</p> <p>C. No industrial, waste-water or sewage-related discharges should affect the beach area. (Refers to land-based discharges, not aquaculture, see explanation below)</p> <p>D. The beach must comply with the Blue Flag requirements for the microbiological parameters E.coli and intestinal enterococci. (not impacted, see explanation below)</p> <p>E. The beach must comply with Blue Flag requirements for physical and chemical parameters (not impacted, see explanation below)</p> <p>Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Anchor conducted a Dispersion Modelling study for finfish farming at Algoa 1 (and 7), which shows that receiving water quality guidelines for the marine environment are likely to be met on the boundary of the Algoa 1 site. Note that the report, however, confirms that the finfish cages will contribute to the total nutrient loading in Algoa Bay. Based on the specialist studies conducted, it is unlikely that water quality at the Blue Flag beach off Algoa 1 (3 km offshore) will be impacted such that it could jeopardise the status.</p> <p>Some stakeholders have expressed concern over uneaten food and faeces ending up on the blue flag beaches. Uneaten feed and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as</p>

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	<p>feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Finally, some stakeholders are concerned that chemicals used in aquaculture could impact on people engaging in contact recreation in the bay. Although chemicals can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health as a result of contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p>In summary, (i) chemical pollution from finfish cages is not known to impact humans as a result of recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 3 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses. Therefore, water quality deterioration as a result of the proposed development has not been assessed when referring to recreational beach users (including bathing and surfing). Note however, that, as much as the risk of shark attack is higher for open water swimmers than bathers, training and event routes passing Algoa 1 in proximity may be impacted reduced water quality mainly related to visibility (not a health concern though). A paragraph will be included in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character) to address the misconception that the proposed development could harm human health or jeopardise the Blue Flag status as a result of water quality deterioration.</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Flight path, collision of aircrafts with birds. In response to the concerns raised during the public meeting on 6 March 2019, the pre-application Basic Assessment Report (BAR) was amended to include an impact assessment on the increased risk of bird strikes affecting aircrafts landing and departing at the Port Elizabeth Airport. Please refer to Section 9.5.2.12 Potential Impact OP-SE12 in the BAR. The impact was rated as very low before and insignificant after the implementation of mitigation measures. The impact assessment was based on the following information:</p> <p>Only piscivorous, low-flying sea birds will be attracted to large concentrations of fish and food in sea cages at Algoa 1 and 7 and include sea gulls, gannets, cormorants and terns. High-flying migratory flocks of birds such as geese, ducks, and starlings will not be attracted to the cages.</p> <p>Johnston et al 2014 modelled flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. They found that for all 25 seabird species investigated, the majority of flights occurred within 20 m of the sea surface. The risk of aircrafts colliding with seabirds is therefore improbable even without mitigation measures. Existing large sea bird colonies which perform daily migrations to and from the roosting sites and these flocks are likely currently passing Algoa 1 and 7 sites daily and are not impacting aircrafts. Essential mitigation measures to prevent seabirds from gaining access to the cages are proposed in the marine specialist assessment (Appendix D). The additional risk posed by the finfish cages is considered to be relatively small as the cages are unlikely to alter flight path height of the bird flocks.</p>
16 3	<p>Lindy Green</p> <p>Comment submitted: 30 April 2019</p> <p>A quick note against a big problem. Port Elizabeth has a beautiful bay with so much potential. I am sure all the sporting events and tourism will prove to be much better investment for Port Elizabeth and its people than the unsightly fish farms. I do hope that good sense will prevail. I heard that it would better to develop fish farms in the Coega area. Why is that not investigated?</p> <p>Response by Anchor: 23 May 2019</p> <p>Impact on water sports and events. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately, which is likely to change the rating of this impact (i.e. more negative).</p>

No	Comment
	<p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Visual impacts. The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Land-based facilities as an alternative. DAFF intends to promote land-based and sea-based aquaculture, not one or the other. Land-based aquaculture is therefore not an alternative activity in this application. DAFF has already identified other land based ADZ sites around the country and is moving forward with these sites. A paragraph explaining why land-based aquaculture is not considered as an alternative in this application will be included in the Draft BAR for clarity. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega Industrial Development Zone (IDZ) for hatcheries and holding facilities, which has already been authorised by the Department of Environmental Affairs.</p> <p>Each aquaculture type has its own advantages/disadvantages. For example, land-based facilities must be supplied with clean seawater and various systems are available (flow-through, partial re-circulation and full re-circulation). Overall implementation of a land-based system is very expensive (either pumping cost, high electricity demand, or infrastructure costs). In contrast, cage culture makes use of the assimilative capacity of the receiving environment and if managed carefully (e.g. site selection for appropriate waste dispersion, not exceeding carrying capacity (in kg fish) of the site) can have a lower impact on coastal water quality and ecosystems than a land-based facility that discharges finfish effluent close to the shore where dispersion is poor (especially if effluent is discharged into a sensitive environment such as an estuary or into the retentive surf zone). On the other hand, diseases are more easily treated on land, where treatments can be applied more effectively and effluent can be sterilised prior to discharge, thereby reducing the impact on native fish populations. The absolute prevention of negative impacts is impossible with any development and it is therefore important to consider the types of mitigation measures that are available and how effective they are. Environmental monitoring (baseline and impact monitoring) is key in ensuring impacts are mitigated effectively and for detecting unexpected impacts and mitigating their effects. Please refer to the Environmental Management Programme (EMPr) in Appendix F for more information.</p>
16 4	<p>Wally Gray Comment submitted: 30 April 2019</p> <p>The email in its entirety is attached to this report in Appendix F6. The most important issues have been extracted from this email. The comment was comprised of citations from the BAR and specialist studies.</p> <ul style="list-style-type: none"> • Algoa 1 is in direct major conflict with tourism and with the brilliant marketing that Port Elizabeth and the Eastern Cape has accomplished in a growing way over at least 10 years now. Tourism is a major job creator and opportunity for SMMEs, and Algoa 1 will undo what has been accomplished. • Total numbers of jobs created by aquaculture is miniscule compared to job losses of negatively impacted undertakings & negative for future POTENTIAL jobs from Tourism. • The proper recognition & ranking of the negative impacts in Algoa 1 do not result in symbiotic relationships. • This statement following is not correct needs to be re-assessed & corrected: Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF? Both the IDP and SDF support the potential for sustainable job creation, sustainable environmental resources, and sustainable economic development and would therefore not be compromised by the proposed development. • Fish Farm in Algoa 1 is definitely not "Risk Averse." It damages Existing Investment & Investor Confidence going forward. • High visual impact at Algoa 1 and a buffer zone is an unacceptable mitigation measure. I don't agree with this next sentence at all: With mitigation, Algoa 1 was found to have a visual impact significance of moderate and very low for finfish and bivalve farming respectively BAR report itself shows very high negative impact Table 13, page 107. You can't water down high negative impacts which are facts, by using "mitigating measures" which may or may not be applied. • The BAR statement that follows is totally contradictory: Humewood beach is South Africa's oldest blue flag beach and with the recent approval of the Addo MPA, Algoa Bay now balances conservation and environmental protection with economic growth fairly well. It can therefore be concluded that cumulatively, the proposed ADZ

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.	<p>will not impact significantly on specialist tourism and recreational activities. This sentence is a direct contradiction, and is not true.</p> <ul style="list-style-type: none"> • Mitigation measures regarding ship/boat lanes actually WORSEN the visual impact. • Declining real estate values WILL have a big negative effect on the economy in Nelson Mandela Bay: "It is likely that real estate values in the area may decrease if there are multiple mariculture farms or similar developments that negatively impact on the sense of place." • In a number of cases, like scuba diving & others, the report combines a zone with a high negative impact with a zone with low negative impact, to conclude that the impact is low. That is illogical & totally incorrect. • This worsens the visual impact: The most effective and common mitigation measure is to install predator nets on the cages which prevents seabirds from gaining access from the air. In addition, visual deterrents (e.g. tori line type deterrents for birds) can also be installed. • The impact on whale and dolphin watching was also a particular concern in Mossel Bay where a mariculture project encompassing 36 finfish cages was proposed by Irvin & Johnson. What actually happened to this project proposed by a long experienced business? Did a commercial business like I&J, try it & failed? Why should this particular proposed venture succeed? • Aquaculture at Algoa 1 is CONTRARY TO OUR RIGHTS. Reference is made to Section 24 of the Bill of Rights. • No allowance has been made for rehabilitation measures, impacts or costs in the report. • A phased approach into an unsuitable area Algoa 1, is NOT A SENSIBLE SOLUTION. • Algoa 7 looks like to most sensible option. Supports Algoa 7 • The impact of finfish culture at Algoa 7 is likely to have a low intensity and therefore is likely to constitute a very low impact after mitigation measures are implemented. • Algoa 1 should emphatically not be done: SHARKS & PREDATORS • Flight path, risk of collision of aircrafts with birds: One can't use & extrapolate data from the North Sea & by guessing apply it to a significantly different environment like PE, particularly for highly important flight paths and risks to flights. • Report assumes that mitigating measures will be implemented & adhered to: What track record? Who enforces? What cost? • Fishing and Shipping lanes. It lies within the movement area of the squid fishing vessels which move often through the Algoa 1 area depending on fishing conditions & winds. It's a mistake to conclude that it does not affect squid fishing vessels. • This statement is factually not correct: After mitigation measures are implemented, none of the alternative options have high negative impacts on the socio-economic environment. • The ratings & rankings in Tables 36 & 37 are subjectively biased & should be rigorously re-assessed. Page 142 • Table 43 on pages 150 & 151, a number of high impact/high risk factors you state become medium or low. This should be rigorously reviewed. Same applies to table 44. • Definitely disagree with the softening of the high negative/high risk aspects becoming medium or low by subjective mitigating factors. • General comment: One should not promote a project of this nature with significant impacts based on premises like "may" or "could" or "usually" or "likely". This indicates high risk & low probabilities, or just plain guessing.
	<p>Response by Anchor: 24 May 2019</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists. The section on cumulative impacts on specialised tourism businesses will also be revised for the next version of the BAR.</p> <p>Job gains versus job losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>The proposed development compromises the integrity of the municipal IDP and SDF. The BAR on page 40 states that: "The proposed development is therefore in line with the projects and programmes identified in the IDP on condition that the mariculture industry develops organically without unfair and/or negative impacts on other priority</p>

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.	<p>projects/programmes". The paragraph on page 43 will be amended to reflect the same sentiment, referring to the outcomes of the socio-economic study and comments provided by stakeholders.</p> <p>Visual impacts at Algoa 1 and mitigation measures. A buffer zone as recommended by the visual specialist is a very effective mitigation measure as it reduces the total footprint of the development and visibility from the shore. The mitigation measures provided by the specialist are industry standard, considered best practice and constitute legally binding requirement as part of the Environmental Management Programme (Appendix F) (EMPr). Should Environmental Authorisation be granted, the EMPr must be implemented to ensure compliance with the Environmental Authorisation. The ADZ level EMPr (Appendix D) will form the basis for individual farm EMPrs. The implementation of the EMPr (at both levels) will be overseen by the AMC (Aquaculture Development Zone Management Committee), audited by the Environmental Control Officer and enforced by the Department of Environmental Affairs. Please refer to the EMPr in Appendix F for more information on the management structure of the proposed ADZ.</p> <p>Visual impact is worsened by mitigation measures provided for other impacts.</p> <p><i>Navigation mitigation:</i> One of the mitigation measures in the visual impact assessment states: "Utilise the minimum number of safety / warning buoys as far as possible. Only demarcate the corner points of each precinct and the minimum interval distance along the precinct boundary to meet Ports Authority (Transnet) safety requirements." This means that mitigation measures provided to ensure safety reduces the efficacy of the mitigation measure that requires grey-based hues for all project components. It does, however, not worsen the impact. The safety markers will be no more visible than the Bell Buoy marker accepted as part of the visual landscape in the Algoa 1 area.</p> <p><i>Bird deterrent:</i> To prevent birds from gaining access to finfish cages will be installed across the top of the cage (i.e. on the same level as the top of the cage), which will not increase the visual impact of finfish cages.</p> <p>Real estate value will definitely be impacted. The probability of realising an impact is rated as part of the impact assessment. For OP-SE8 - Impact on coastal real estate (Section 9.5.2.8 of the BAR), the probability before mitigation measures are implemented is "probable" for Algoa 1 and "possible" for Algoa 6. As real estate value is primarily driven by the visual impact of a development, reducing the visual impact will also reduce the probability of the impact occurring to "possible" for both sites.</p> <p>"In a number of cases, like scuba diving & others, the report combines a zone with a high negative impact with a zone with low negative impact, to conclude that the impact is low. That is illogical & totally incorrect." It is not clear to the EAP what is meant by this comment.</p> <p>What happened to I&Js: "In 2010 I&J obtained environmental authorisation but terminated its marine finfish aquaculture programme and closed its fish processing facility in Mossel Bay in 2011 after the municipality withdrew its support. As technology and methodology have changed, many of the concerns raised by locals at the time no longer should be of concern. The cages fishing should hardly be visible from land. At best a few fishing vessels should be noticeable." (le Roux 2018) https://www.mosselbayadvertiser.com/News/Article/General/sea-cage-farming-explored-201804250350</p> <p>Bill of Rights: Comment noted. The Environmental Impact Assessment process and requirement of an Environmental Authorisation to proceed with developments that have the potential to harm the environment is one of the many regulatory tools that ensure that Section 24 of the Bill of Rights is protected.</p> <p>Rehabilitation measures: There are no practical rehabilitation measures applicable to sea-based aquaculture developments other than removing the infrastructure should the operation be decommissioned.</p> <p>A phased approach into an unsuitable area Algoa 1, is NOT A SENSIBLE SOLUTION. From an ecological impact point of view the development of the ADZ should be phased in so that cumulative impacts can be detected as they arise, and adaptive management implemented. This will be achieved through the monitoring of potential impacts as required in the Environmental Management Programme (EMPr in Appendix F of the BAR).</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large</p>

No	Comment
.	<p>shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Flight path and risk of collision. Anchor has more than 20 years of experience as biologists, ecological specialists and conservationists and is of the opinion that the information provided in the section on potential collision of seabirds with aircrafts departing and landing at Port Elizabeth Airport is sufficient to rate the impact as insignificant after mitigation measures are implemented. It is their professional opinion that no additional studies are required.</p> <p>Impact on squid fishing industry. The impact on vessel navigation assessed in Section 9.5.2.4 is applicable to all vessels passing Algoa 1. The proposed Aquaculture Development Zone has the potential to reduce fishing grounds and this impact was assessed in Section 9.5.2.6 of the Basic Assessment Report. Impacts on the local fishery were rated of medium to low significance (medium for Algoa 1 and 7, low for Algoa 6). It should be noted that the impact at Algoa 1 before mitigation is high due to the overlap of the site with an important squid nursery area. The only way to reduce the impact at Algoa 1 to "Medium" significance is to avoid the southern part of Algoa 1, which is in conflict with the recommendations in the visual impact assessment (avoid northern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>This statement is factually not correct: After mitigation measures are implemented, none of the alternative options have high negative impacts on the socio-economic environment. In the pre-application report, none of the negative socio-economic impacts were rated as high after the implementation of mitigation measures. However, based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>The ratings are biased and should be reviewed. The socio-economic ratings (and other EIA components) were derived by suitably qualified specialists, who are independent (i.e. no personal interest in the project) and must use appropriate information to assess the impacts. These specialists must also provide mitigation measures (usually industry standard and best practice in the field).</p> <p>General comment: One should not promote a project of this nature with significant impacts based on premises like "may" or "could" or "usually" or "likely". This indicates high risk & low probabilities, or just plain guessing. Comment noted. The decision-making authority will weigh up the probability of the proposed development realising its full benefits against the potential negative impacts the Aquaculture Development Zone.</p>
16 5	<p>Neal Green - Resident</p> <p>Comment submitted: 30 April 2019</p> <p>As a lifelong resident of Port Elizabeth I have the city and its character close to my heart. I find beauty in its architectural history, its people and its natural beauty. The beachfront is a key component of this beauty. I feel that there is too much risk that we will compromise this beauty for the fish farming industry and that we may lose what makes Port Elizabeth an amazing place to live.</p> <p>Response by Anchor: 24 May 2019</p> <p>The potential impact on the seascape character at Algoa 1 was assessed in Section 9.4.1 of the pre-application Basic Assessment Report. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p>Alternatives: In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only)</p>

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.	and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).
16 6	<p>Debbie Bodley – Resident Comment submitted: 2 May 2019</p> <p>I am not in favour as the artificial feeding and resulting effluent, and supporting activities and infrastructure will change and damage the ecology of the area, and has the potential to attract predators away from their normal hunting grounds to this area which is a prime sport, tourism and leisure spot.</p>
	<p>Response by Anchor: 24 May 2019</p> <p>Impacts on marine ecology. The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>Please refer to some additional information below. Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p>
16 7	<p>Stanford Slabbert Comment submitted: 30 April 2019</p> <p>I hereby wish to lodge the strongest objection to the proposed Aquaculture Zones in Algoa Bay. Please take note of the points raised below and please list me as an interested and affected party. I reserve my rights in this matter.</p> <p>I am an avid Open Water swimmer and swim off Pollok Beach throughout the year. Sadly, should the establishment of an Aquaculture Zone proceed off Port Elizabeth's beachfront, and notably the Algoa 1 fish farm, between Flat Rocks and Kings Beach, I, and many others, will be forced to stop swimming in the ocean.</p> <p>Safety is always my most important concern, and the increased presence of predators, such as sharks, will just make it too dangerous to venture into the water. Add to this the pollution of the water, caused by excess fish feed, fish faeces, and algae. Venturing into the water will just be too unpleasant, and the constant smell will be nauseating.</p> <p>All open water swimming events along the PE beachfront will cease to exist, including the Jendamark Bell Buoy Challenge, which was recently completed for the tenth consecutive year. I am one of four swimmers to have completed every race, and proponents of the Fish Farm catastrophe must hang their heads in shame for causing the likely demise of what is known as one of the toughest open water swims in Africa.</p> <p>The Bell Buoy was the first round of the new World Open Water Swim series, so the impact of cancelling it in future</p>

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.	<p>years will result in hugely negative press for our tourism industry. Those behind the fish farm will be have to account for the impending collapse of our local tourism industry, as holidaymakers will not want to bathe in shark infested waters. The whole world will soon know of the short-sightedness of the proponents of this diabolical proposal.</p> <p>It is an established fact that “Fish Farms” attract marine predators, and Algoa Bays existing shark population will most certainly increase exponentially, which will cripple all our watersport events, including triathlon, ironman, surf ski paddling, scuba diving, surfing, swimming and sailing. Algoa Bay’s waters will just be too dangerous and too polluted.</p> <p>Local beaches will require shark nets. Will the proponents of this farcical scheme fund the daily servicing of all the nets hat will be required off Wells Estate, Bluewater Bay, Brighton, Kings Beach, Humewood, Hobie and Pollok beaches? Has this cost even been considered? Or is it seen as creating a new industry? Really??</p> <p>What about the destruction of our beloved dolphin population? The massive schools of dolphins that swim past our beaches on a daily basis will soon move away because of the increased shark population and the intrusive nature of hundreds of cables / ropes / buoys and anchors that will block off massive portions of the bay. Whale sightings will certainly drop as these migratory mammals will soon find other places to visit. The famous penguin colonies on the islands of Algoa Bay will also be decimated once the sharks move in.....the destruction will be irreversible.</p> <p>Sharks and other predators will also move inshore when all the fish feed and faeces are carried inshore by the various coastal currents. Our local beaches will become polluted and both locals and visitors will start avoiding these beaches. We will no longer be a holiday destination of choice. In fact, Nelson Mandela Bay will become known as a coastal city that threw away its potential because of industrial greed and plain stupidity.</p> <p>As an experienced surf ski paddler, I know how big and how powerful the massive Easterly windblown swells can be in the vicinity of the Bell Buoy, and I predict that if the fish farm is put in place (heaven help us), it will be a matter of time before the whole infrastructure ends up on the coastal stretch between Pollok and Hobie beach. Who will remove it, and at what cost? Remember the tyre breakwater built off Hobie Beach in the 1980’s!!</p> <p>Tourism is one of the major industries within Nelson Mandela Bay, generating thousands of jobs and millions of rands into the local hospitality trade. The fish farms might create 1200 jobs, but they will destroy thousands more as the negative impact creates havoc within the local economy.</p> <p>Those behind this farce must be named and shamed.....please advise the names of those who are driving and proposing that these Fish Farms be created. Will these idiots compensates all those who are denied their daily use of Algoa Bay? Will they compensates all those who lose their jobs in the shrinking tourism industry?</p> <p>Port Elizabeth and Nelson Mandela Bay deserves better. We must stop this diabolical and stupid scheme right now.</p>
	<p>Response by Anchor: 24 May 2019</p> <p>Alternatives: In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment. This is particularly important for Algoa 1: Option A includes finfish and bivalve farming, Option B is limited to bivalve farming and Option C excludes Algoa 1 from the ADZ (i.e. farming will be restricted to bivalves at Algoa 6 and finfish at Algoa 7).</p> <p>Water sports and sharks. Your concerns are noted and have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, and Lifesaving Club training grounds separately, which is likely to change the rating of this impact (i.e. more negative).</p> <p>While it has been shown that shark cage diving operators can cause small scale changes in movement patterns of resident sharks (several papers have been published to demonstrate this), there is no evidence, however, that finfish cages would attract more sharks into Algoa Bay, causing an exponential increase in shark populations. Shark nets are not considered as a mitigation measure in this Basic Assessment report. Shark nets are not exclusion nets and don't provide a barrier to the inshore waters used for recreation. Instead, shark nets are intended to catch sharks with the ultimate goal to reduce shark populations and reducing the probability of a shark attack. Shark nets have a very high impact on marine life due to by-catch, aside from pressures on apex predator populations. Mitigation measures that are recommended are explained below.</p> <p>Please refer to some additional information on existing shark populations in Algoa Bay below.</p> <p>Excerpt from the marine specialist study in Appendix D of the BAR p31: "Algoa Bay is the eastern most distribution of the Cape fur seal and breeding takes place on Black Rocks (Mills & Hes, 1997). The presence of this breeding colony may act as an important factor for the aggregation of Great white sharks (<i>Carcharodon carcharias</i>), which are known to target seal breeding colonies as feeding grounds (Kock et al 2013, Hewitt et al 2018). While a range of sizes of</p>

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.	<p>white sharks can be found around Seal Island, the inshore areas of Algoa Bay are home to the greatest proportion of young-of-year sharks (Dicken & Booth 2013)". Finfish cages have the potential to attract sharks (BAR Section 9.5.2.3). Data on the influence of fish cages on large shark behaviour is scarce, however. They are undoubtedly attracted to fish cages at times, but the risk to bathers and swimmers is unknown. This issue is discussed at some length in the "Description of the affected environment Section 8.5.2" This issue remains a concern and although is assessed as low significance, there is low confidence associated with this assessment (Section 9.5.2.3). The marine specialist study assesses the impact of the development on shark populations (predators in general) and recommends the installation of predator nets, which prevents sharks from gaining access to the cages. Monitoring of shark movements and implementing a shark spotter programme would constitute further mitigation measures (specific to water sport activities). It should also be noted that it is in the farmer's best interest to prevent predators (predatory fish including sharks, cetaceans, seals and birds) from gaining access to the cages as stock losses would significantly impact their business. Research by the leading South African shark scientists has shown that positive conditioning can only arise if white sharks gain significant and predictable food rewards (Johnson and Kock 2006: South Africa's White Shark cage-diving industry -is their cause for concern?).</p> <p>Water quality concerns. Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. Generally, most particles settle within the first few hundred meters of the cages (see more information in the Dispersion Modelling study in Appendix D of the BAR). The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p>Odour nuisance. Aquaculture farming generally does not generate smells that are atypical of the marine environment. The Environmental Management Programme (EMPr) in Appendix F makes provision for a complaints register. The EMPr requires that air emissions are minimised and requires corrective action if complaints about unpleasant odours are received.</p> <p>Impact on whales and dolphins (cetaceans). The impacts on cetaceans (dolphins, whales) were assessed in Section 4.1.5.1.5 and 4.1.5.1.6 of the Marine Specialist Study in Appendix D of the Basic Assessment Report. The negative impact on cetaceans has been rated as low significance after the implementation of mitigation measures, which include:</p> <ul style="list-style-type: none"> • Do not locate ADZ sites in important cetacean habitats (fortuitously this is the case. Research by Koper et al. 2016 and Karczmarski et al 1999 confirm that the humpback dolphin <i>Sousa plumbea</i> predominantly occurs within a few hundred meters from the shore. Algoa 1 and Algoa 7 are situated 3-5 km offshore). • Ensure all mooring lines and nets are highly visible underwater (use thick lines and bright antifoulant coatings). • Keep all lines and nets tight through regular inspections and maintenance. • Ensure that mesh size on primary and secondary nets does not exceed 16 cm stretched mesh, use square mesh. • Establish a rapid response unit to deal with cetacean entanglements (collaboration with the South African Whale Disentanglement Network). <p>Sharks and their prey. Refer to response to increasing shark populations above.</p> <p>Note that finfish will be kept in cages. Ranching (i.e. described in the comment as concern over finfish moving inshore) does not form part of the application.</p> <p>Swell and wind feasibility. DAFF and the industry are aware of the risks posed by environmental conditions in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ. Economic feasibility (ground and wind swell are considered one of the factors) of Algoa 1 were assessed in the socio-economic specialist study in Appendix D (Britz et al. 2016).</p> <p>Debris on the beach. Should Environmental Authorisation be granted, the Environmental Management Programme (Appendix F of the BAR) becomes a legally binding document and contains clauses that instruct the holder of the Environmental Authorisation to ensure that solid waste is managed carefully. Equipment lost offshore must be</p>

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.	<p>cleaned up immediately by the operator (refer to environmental management measures for the operational phase in Section 7.3 of the EMPr).</p> <p>Impact on tourism. Your concern has been addressed in Basic Assessment Report Section 9.5.2.3 of the Basic Assessment Report. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Job gains versus job losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p>
16 8	<p>Cllr Tracy Weise – Ward 1 Councillor</p> <p>Comment submitted: 30 April 2019</p> <p>The comment was submitted as a four-page letter, which has been attached in Appendix F6. The issues have been summarised below:</p> <p>Ward 1 strongly objects this development in its entirety, in its current format.</p> <ul style="list-style-type: none"> • The BAR, the EIA and the Economic Impact has not been thoroughly carried out and requires increased investigation and assessment of all impact aspects the development will have on the community, environment and economy. • The development should be put on hold until the assessment of all impacts has been fully researched and the BAR & EIA have been completed. • Concern that the public will perceive the process as not being transparent due to the uncertainty associated with the economic impacts. • The development should be postponed until the Marine Spatial Plan for Algoa Bay has been passed. • Potential impacts of the proposed development are high and could be realised during the pilot phase. This will be an expensive experiment for Nelson Mandela Bay. The net job gain should be established. A cost-benefit analysis should quantify the economic value of the return on investment of this development compared to the tourism industry of the Bay. A quantitative study should raise the confidence in the impact assessment rating of negative economic effects. • Algoa Bay will be industrialised for this development to function optimally. • The impact on beach recreation, water sports and competitive events should be taken into consideration. • Specific concerns: <ul style="list-style-type: none"> ○ Pollution of beaches as a result of finfish farming ○ Impact of water quality (<i>E. coli</i>) on the proposed development ○ Impact of red tides on the proposed development ○ Economic impact if IronMan and big investors no longer contribute toward the Metro's economy ○ Economic impact on local commercial fisheries ○ Only Algoa 1 has gone through a full EIA process. Site 6 and 7 have not gone through a full EIA process. • Concerns regarding the management of the ADZ: <ul style="list-style-type: none"> ○ If this project has been approved, who will be responsible for delegating the proposed precincts to individual operators and what are the requirements for individual operators? ○ Will there be a management plan? ○ How will compliance be monitored? ○ Will authorities make sure that individual operators adhere to Marine Aquaculture Rights and Permits? <p>Anchor response: 4 June 2019</p> <p>Alternatives. The comments did not elucidate whether the Councillor refers to bivalve (mussel and oysters) and finfish farming, or finfish farming only. Some additional information on the Alternative Options has therefore been provided below for clarity.</p> <p>In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment.</p>

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.	<p>Option A: Finfish and bivalve at Algoa 1 + Bivalve at Algoa 6 +Finfish at Algoa 7 Option B: Bivalve at Algoa 1+ Bivalve at Algoa 6 +Finfish at Algoa 7 Option C: Exclude Algoa 1. Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>The BAR and BA process are not thorough, development to be put on hold until impacts on the environment have been fully researched and BAR and BA process have been completed. This process represents the environmental authorisation process. The proposed development cannot go ahead without approval from the Department of Environmental Affairs. During the next public participation process (submission of Draft BAR and application form), the competent authority will provide input and request additional information if required. In making their decision on the Final BAR, the competent authority will weigh up the likelihood of the proposed development realising its full benefits against the potential negative impacts of implementing the the Aquaculture Development Zone.</p> <p>Transparency. As the EAP, it is our responsibility to ensure that the Basic Assessment process is transparent and that the public is provided with a reasonable opportunity to comment on the BAR. The BAR clearly states what information was used to arrive at specific impact ratings and clearly justifies the level of confidence in the impact ratings. The public has engaged during the pre-application process and will be provided with another opportunity during the application-phase</p> <p>Marine spatial plan must be considered. Chapter 8 of the pre-application BAR provides a detailed description of the receiving environment, which includes a description of the affected user groups. This Chapter will be revised for the Draft BAR by incorporating input from stakeholders where such input was provided.</p> <p>Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries will submit an application for environmental authorisation for the three sites included in the Environmental Impact Assessment (although note that the Alternative precinct configurations and activities (Options A, B and C) are assessed). This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p> <p>Given that the spatial planning component of the Algoa ADZ was initiated as early as 2009 prior to the start of the 2010-2014 EIA process, it certainly pre-dates (but not necessarily pre-empts) the recently established NMU academic unit. The DAFF is a key Department in the Marine Spatial Planning process and is ensuring that fisheries and aquaculture is considered in this process. A section on the Marine Spatial Planning Bill will be included in the Draft BAR and the importance of considering this Bill, its Guidelines and future legal ramifications in the decision-making process will be highlighted in the Impact Statement (Chapter 10 of the BAR). The Department of Environmental Affairs will be required to take into account the Marine Spatial Planning Bill and its Guidelines and future legal ramifications in the decision-making process.</p> <p>Job gains versus losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists. As pointed out correctly by stakeholders, perceived increased risk of shark attacks as a result of finfish farms cannot be mitigated and could result in a negative impact on water sports, events and tourism (i.e. negative economic impact). This impact may even be realised during the pilot phase and could, to a certain extent, be potentially irreversible.</p> <p>Quantitative study should be conducted to raise the confidence level in the impact assessment. Comment noted. A detailed costing of the potential socio-economic impact (i.e. externalises) of the ADZ has indeed not been completed. Instead, a social choice trade-off survey was undertaken by Britz et al. 2016 (refer to Appendix D of the BAR, Socio-economic specialist study and review of the Bloom 2013 study). The survey attempted to gauge whether the external costs (negative social and economic impacts on the tourism and conservation value and others) outweigh the income and employment benefits that could be gained as socially attractive elements. Concerns included perceived impacts on diving, yachting, ski-boating, property values, increased risk of shark attacks, and job losses. A high proportion of people surveyed (39%) found the perceived social cost to be unacceptable (Hosking,</p>

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.	<p>2016). The findings of this study were considered in the current impact assessment process. During the next public participation process (submission of Draft BAR and application form), the competent authority will provide input and request additional information if required.</p> <p>Industrialisation of Algoa Bay as a result of the proposed development. The potential impact on the seascape character was assessed in Section 9.4.1 of the pre-application Basic Assessment Report.</p> <p>For Algoa 1, the impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a 1 km buffer zone maintained around the Bell Buoy and a 3 km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Algoa 6 is situated within the Port Elizabeth harbour within an industrial context. The only visual receptors for this site are the Settlers Highway, which hugs the coastline at the site. This road is, however, also situated landward of the railway and is not a known scenic route. The bivalve site will likely also be visible from central Port Elizabeth, although only within close range of the R 102. In most areas, the views are blocked by other residential houses and industrial buildings. The impact on the seascape character at Algoa 6 was assessed as low before and very low after mitigation measures (note that only bivalve farming is proposed at this site). Furthermore, two oyster farms currently operate within the proposed footprint.</p> <p>Most ADZ-related activities would occur at sea at the proposed sites. Land-based activities related to the proposed ADZ would include hatcheries, holding facilities and the processing of mariculture products. The sea-based facility will to a certain extent rely on the land-based aquaculture facility at the Coega Industrial Development Zone (IDZ) for hatcheries and holding facilities, which has already been authorised by the Department of Environmental Affairs.</p> <p>Impact on beach recreation, water sports and competitive events. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low). However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately. The proposed ADZ is likely to have a higher negative impact on these activities when compared to bathing and surfing. SCUBA diving (Section 9.5.2.3) and impacts on sailing navigation routes (Section Section 9.5.2.4) have also been assessed in the socio-economic impact assessment.</p> <p>Pollution of beaches as a result of finfish farming. Note that this impact is not applicable to Algoa 6 (bivalve culture only).</p> <p><i>Human health aspect:</i> Human health concerns in the marine environment are generally related to microorganisms such as bacteria, viruses and parasites. Contaminated water can be ingested during contact sports and result in gastrointestinal illnesses. Escherichia coli and Enterococci are generally used as indicators for the presence of these harmful microorganisms. It is important to note that finfish farms are not a source of bacteria, viruses and parasites that could harm humans. Harmful microorganisms are excreted by warm-blooded animals (e.g. cow, pig, ostrich, humans) and are washed into the sea via rivers, or land-based outfall pipelines or stormwater drains. Furthermore, although chemicals used in aquaculture can harm biota living near or under the cages (mainly finfish and invertebrates, see impact description above), chemicals used in finfish aquaculture are not known to affect human health in contact recreation. The concern lies more with bioaccumulation of chemicals in the food chain of the natural environment and effects on the organism itself and the consumer. Administration of drugs and application of antifouling chemicals are strictly controlled by biosecurity protocols (in accordance with international guidelines and national regulatory requirements).</p> <p><i>Aesthetics.</i> Uneaten food and faeces are negatively buoyant and begin settling as soon as they enter the water column. Settling of waste below and around the cages is generally considered to be the main concern associated with organic pollution from finfish cages. For this reason, dispersion modelling was conducted for finfish farming at Algoa 1 and 7, which determined the carrying capacity for farmed finfish in an area based on the requirement waste accumulation under the cages is not harmful to the benthic communities. Water depth, current speed and quantities of waste output are critical in understanding how much fish can be sustainably produced within an area. The sustainable amount of fish that can be produced at Algoa 1 is currently estimated around 3-5 tons per annum, depending on the type of fish farmed (refer to the Dispersion Modelling study in Appendix D of the BAR for more detail). With regards to feed, Martinez-Porches and Martinez-Cordova (2012) state that finfish are fast swimmers and consume feed within minutes. It would be in the best interest of the farmer to ensure that feed is not washed out of the cage as feed is the highest running cost of a finfish farm. Mitigation measures proposed in the impact assessment include implementation of sustainable feeding practices, which should minimise the settling of excess feed. After defecation, water circulation and fish activity within cages will naturally lead to fragmentation of</p>

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.	<p>particles. Excess feed and faeces particles are then dispersed by currents and will settle at variable rates (and therefore, at different distances from the farm, depending on particle size) on the sea floor around the finfish cages. The proposed Algoa 1 site is situated approximately 3 km offshore and it is unlikely that a significant amount of waste will remain in the water column at the beaches.</p> <p><i>Blue Flag status.</i> In summary, (i) chemical pollution from finfish cages is not known to impact humans as a result of recreational activities, (ii) uneaten food and faeces/organic waste are not expected to wash up on the beaches situated more than 3 km from the proposed sites, and (iii) finfish farms are not a source of harmful bacteria and viruses. Therefore, water quality deterioration as a result of the proposed development was not assessed as a stand-alone impact in the pre-application BAR when referring to recreational beach users (including bathing and surfing). The pre-application BAR Section 9.5.2.3 will be amended to include a paragraph on potential impacts as a result of water pollution on recreational user groups. A paragraph will also be included in the description of the affected environment on this matter (Chapter 8 Section 5 on the Socio-economic character) to address the misconception that the proposed development could harm human health or jeopardise the Blue Flag status as a result of water quality deterioration.</p> <p>Impact of sewage spills (E. coli counts) on the proposed development. Please note that the focus of the BAR is to evaluate the impacts of the proposed development on the environment. DAFF (and the industry) is aware of the risks posed by existing land-based activities in Algoa Bay and has nevertheless decided to go ahead with the application for environmental authorisation for the proposed ADZ (Refer to Chapter 7 of the BAR). An existing oyster company is also battling with water quality at Algoa 6. DAFF is working together with DEA, DWS and the Metropolitan municipality to ensure co-ordinated monitoring of water quality in the bay and ultimately work towards improved situation. Any current challenges around water quality need to be improved for all users in the Bay, not just aquaculture and cannot therefore be accepted as status quo. A paragraph will be added to detail Zwembesi Farms (Pty) Ltd current challenges will be included in Chapter 7 of the BAR.</p> <p>Red tides (referred to Harmful Algal Blooms in the BAR). DAFF is aware of the potential risks to the proposed development by Harmful Algal Blooms (HABs or red tides). Potential risks posed by the environment have been considered in the feasibility phase of the proposed development and DAFF has decided to go ahead with the application for Environmental Authorisation. Red tides are managed continuously through the shellfish monitoring programme and farms are closed temporarily until the product is deemed fit for consumption. Chapter 7 of the BAR details potential environmental risks to the proposed development.</p> <p>Economic impact if IronMan and important investors no longer contribute towards the local economy. The economy of Port Elizabeth is complex. For example, positive knock on effects of hosting IronMan (and other events) include increased visitor numbers to Port Elizabeth, which brings income to the hospitality industry, tourism operators, curio shops and many other businesses. However, tourism unrelated to IronMan (and other events) has the same positive effects, although potentially to a lesser extent. It follows, that the potential negative economic impact should be assessed as a whole, rather than for individual contributors to the economy, as this may make it difficult to then summarise the overall negative economic impact. It is, however, important to describe the various aspects of the economy that could be negatively impacted. It must also be recognised that IronMan and other events contribute significantly to the local economy, providing income and jobs to a number of sectors in Port Elizabeth (e.g. hotels, B&Bs, restaurants, tourism operators etc.). The pre-application BAR will be amended to describe the complexity of this impact in more detail.</p> <p>Economic impact on local fishing industry. The proposed Aquaculture Development Zone has the potential to reduce fishing grounds and this impact was assessed in Section 9.5.2.6 of the Basic Assessment Report. Impacts on the local fishery were rated of medium to low significance (medium for Algoa 1 and 7, low for Algoa 6). It should be noted that the impact at Algoa 1 before mitigation is high due to the overlap of the site with an important squid nursery area. The only way to reduce the impact at Algoa 1 to "Medium" significance is to avoid the southern part of Algoa 1, which is in conflict with the recommendations in the visual impact assessment (avoid northern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ).</p> <p>Algoa 6 and 7 have not gone through a full EIA process. The proposed development does not trigger listed activities contained in the Environmental Impact Assessment (EIA) Regulations Listing Notice 2, which requires a Scoping and Environmental Impact Reporting (EIR, commonly referred to as a 'Full EIA'). Aquaculture was removed from the list of activities in this notice in the 2014 amendments of the EIA Regulations. However, it should be noted, that the comprehensive Scoping phase that was conducted as part of the previous process (Strategic Environmental Assessments of 2009 and further site selection and elimination since 2011) and specialist studies conducted since 2011 (see list below) are comparable to a full S&EIR process. For example, Algoa 7 was subjected to the same marine ecological baseline study when compared to Algoa 1 (See Benthic Habitat Mapping specialist study in Appendix D). Furthermore, the public consultation process is also extensive (two rounds and a number of measures are undertaken in addition to the minimum requirements as per EIA Regulations. Please refer to the presentation that</p>

No	Comment
.	<p>was given at the first public meeting on 6 March 2019, which is also available on our website). In short, a full S&EIR process would not mean that more studies or more public consultation would be undertaken.</p> <ul style="list-style-type: none"> • Marine specialist study 2019 (Algoa 1, 6 & 7) • Dispersion modelling 2019 (Algoa 1, 6 & 7) • Benthic habitat mapping 2019 (Algoa 1, 6 & 7) • Maritime and Underwater Cultural Heritage Impact Assessment 2019 (Algoa 1, 6 & 7) (ACO Associates) • Comparative Assessments (Rhodes University 2016) (Algoa 1 and 5, although 5 has been screened out) <ul style="list-style-type: none"> ○ Socio-economic Report ○ Ecological Report ○ Feasibility study • Marine specialist study 2013 (Algoa 1) • Visual specialist study 2013 (Algoa 1) • Socio-economic specialist study 2013 (Algoa 1) <p>Concerns regarding the management of the ADZ. If granted, the applicant (Department of Agriculture, Forestry and Fisheries (DAFF)) would be the holder of the Environmental Authorisation and responsible for upholding the conditions thereof. All mitigation measures recommended during the Basic Assessment process are included in the legally binding Environmental Management Programme (EMPr) in Appendix F of the BAR. DAFF would be required to ensure implementation of the ADZ-level EMPr and monitoring programmes. Monitoring programmes are used to verify the impact significance of the development and whether mitigation measures are indeed effective. Monitoring facilitates adaptive environmental management. Each operator would be required to compile a farm-specific EMPr (i.e. depending on the species farmed). The implementation of the EMPr (at both levels) would be overseen by the AMC (Aquaculture Development Zone Management Committee), audited by the Environmental Control Officer and enforced by the Department of Environmental Affairs. Please refer to the EMPr in Appendix F for more information on the management structure of the proposed ADZ. This management system has been implemented for the Saldanha Bay Aquaculture Development Zone. DAFF is the competent authority for issuing aquaculture rights and permits in terms of the Marine Living Resources Act (Act No 18 of 1998). Aquaculture rights and permits often require the monitoring of environmental impacts, which in this case will be aligned with the requirements of the Environmental Authorisation.</p>
16 9	<p>Keith Buhr</p> <p>Comment submitted: 30 April 2019</p> <p>I, as a avid user of the P.E. sea and beaches between the reserve and Kings beach would like to register myself as an interested and affected party on a private basis. I am against such intention for locating a fish farm opposite these beaches.</p> <p>Response by Anchor: 24 May 2019</p> <p>Comment noted.</p>
17 0	<p>Sharon Tarboton</p> <p>Comment submitted: 30 April 2019</p> <p>As a resident of Port Elizabeth, I hereby notify you of my objection to the proposed development of a Fish Farm in Algoa Bay.</p> <p>Response by Anchor: 30 April 2019</p> <p>Comment noted.</p>
17 1	<p>Anonymus</p> <p>Comment submitted: 30 April 2019</p> <p>I totally object against it</p> <p>Response by Anchor: 30 April 2019</p> <p>Comment noted.</p>
17 2	<p>Martin Smith - Addo Secrets Safaris</p> <p>Comment submitted: 30 April 2019</p> <p>Goodday i wish to register as an interested party in this debate and strongly object to such a developement being made in the Bay.</p> <p>Response by Anchor: 02 May 2019</p> <p>Comment noted.</p>

No	Comment
17 3	<p>Molly Reed</p> <p>Comment submitted: 30 April 2019</p> <p>Please register my objection to the fish farm in Algoa Bay</p> <p>Response by Anchor: 02 May 2019</p> <p>Comment noted.</p>
17 4	<p>Howard Loftus</p> <p>Comment submitted: 30 April 2019</p> <p>I wish to formally object to the Proposed Fish Farm Algoa Bay, Eastern Cape.</p> <p>Response by Anchor: 02 May 2019</p> <p>Comment noted</p>
17 5	<p>Marie Hoensbroech</p> <p>Comment submitted: 30 April 2019</p> <p>I hereby share with you my concern about the planned fish farms close to the Summerstrand beaches. I am opposed to the idea.</p> <p>Response by Anchor: 02 May 2019</p> <p>Comment noted.</p>
17 6	<p>Sian O'Keeffe</p> <p>Comment submitted: 30 April 2019</p> <p>Please add me to your database of affected persons regarding the incredibly short sighted, ignorant and just plain BAD idea of a fish farm off hobie beach.</p> <p>Response by Anchor: 02 May 2019</p> <p>Comment noted.</p>
17 7	<p>Dennis Thompson (and family) – Residents</p> <p>Comment submitted: 2 May 2019</p> <ol style="list-style-type: none"> 1. We believe that the negative impact that this will have on our city could lead to great financial hardship for our and many other businesses in the city. 2. The negative publicity that the city will receive were any of our international sporting events to be relocated to another venue because of the location of the fish farm would further cause incalculable damage to our city as these events give our city worldwide TV coverage which promotes a substantial amount of immediate and follow on tourism to our city which also disappear. This damage to our tourism industry will definitely cause a loss of direct revenue to the tourism industry in the city and also to all other business in the city that feeds off of this tourism activity. 3. Our biggest concern is for the loss of employment in the tourism sector and also in all other business that supports and feeds off the tourism industry like car rental companies, airlines, restaurants, tour operators and many others too numerous to mention. 4. Besides the negative image that the loss of our international events would have on our city it would further have a devastating effect on many businesses that generate much needed income from these events. They would also probably be forced to reduce staffing as a result of the downturn resulting in even further job losses. <p>It is actually astounding that there are individuals and companies that are even entertained by the powers that be with fish farm type proposals, which are even considered.</p> <p>When selling a proposal one would always highlight the possibilities of potential benefit the product will have for the “buyer” or in this case, for our city, in some way or another. The seller/investor on the other hand will always be on the lookout for profitability as this is the motive that drives business and will also play down any negative aspects which may be raised. At the end of the day this is actually all about business and how much the investor can be make from the project.</p> <p>However, to even consider a project at the risk of damaging an existing working industry that has taken many years to develop and grow, which does generate substantial income for business in the city, it has created much needed employment for the people of our city, it has done so for a number of years and will continue to do so given the chance, can only be considered as TOTALLY RECKLESS.</p> <p>I strongly propose that the fish farm should find another home that will not have a negative effect on the existing business in our city. I trust that the powers that be will make the correct decision and locate the fish farm at a</p>

No	Comment
	<p>location that will not damage existing business in a struggling economy.</p> <p>Response by Anchor: 05 May 2019</p> <p>Alternatives. Although it is clear that the comment refers to finfish only, it is unclear whether the comment refers to Algoa 7 (Ngqura Harbour site) as well. Some additional information on the sites and activities considered, as well as Alternative Options that are being assessed has therefore been provided below for clarity.</p> <p>In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment.</p> <p>Option A: Finfish and bivalve at Algoa 1 + Bivalve at Algoa 6 +Finfish at Algoa 7 Option B: Bivalve at Algoa 1+ Bivalve at Algoa 6 +Finfish at Algoa 7 Option C: Exclude Algoa 1. Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>Economic impact. Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on the choice modelling study conducted by Britz et al 2016 and feedback from stakeholders thus far, it appears that potential ecological impacts of the fish farming and the perception of an increased risk of shark attacks occurring (whether this risk is real or not) were identified as the most important disturbing aspects of the proposed development (note this is finfish farm specific, the current proposal also recommends bivalve farming). While mitigation measures have been recommended for negative visual and marine ecological impacts, no meaningful mitigation measures are available for the other socio-economic impacts other than site selection or site reduction (reference to the visual buffer recommended in the specialist study 2013). All these aspects, primarily limited to finfish farming at Algoa 1, are likely to impact negatively on tourism. However, the perceived higher risk of shark attacks could potentially have a profound direct negative impact on the local economy, should the Iron Man Event (and other events) be moved to a different location (Iron Man Organisers indicated during the 2013 appeal phase that the event would be moved should finfish cages be installed at Algoa 1). Furthermore, this impact could potentially be irreversible and occur during the pilot phase. For this reason, the 'medium' negative impact rating (after mitigation measures) on the specialised tourism and businesses (Section 9.5.2.3) will be re-assessed.</p> <p>Job losses. Jobs could potentially be lost if tourism and water sports activities are negatively impacted by the proposed development. Job losses are a knock-on effect from visual impacts, water quality impacts, change in behaviour of ocean predators, ecosystem degradation etc. Job creation as a positive impact associated with the ADZ is therefore incumbent on preventing knock-on effects on existing jobs. The various impacts that could have a knock-on effect have been assessed in the Basic Assessment Report and mitigation measures are provided (essential and recommended). These mitigation measures are included in the Environmental Management Programme (EMPr, Appendix F of the BAR), which, should Environmental Authorisation be granted, become a legally binding document to be implemented by the Department of Agriculture, Forestry and Fisheries. The BAR Section 9.5.2.2 Potential impact OP-SE2: Increased employment, income and skills development will be amended to more clearly capture the risks associated with the proposed development.</p> <p>Site selection. Site selection has been based on several Strategic Assessments (national and Algoa Bay specific) conducted since 2009. Algoa Bay was identified as one of the few sites where sea-based aquaculture is possible along the very exposed shoreline of South Africa. Over the last 10 years, seven sites have been considered within Algoa Bay and the Department of Agriculture Forestry and Fisheries will submit an application for the three sites included in the Environmental Impact Assessment. This process is no longer about considering new sites. The site selection process is explained in more detail in Section 2.5 of the BAR (main report).</p>
17 8	<p>LQ van Staden - Resident</p> <p>Comment submitted: 2 May 2019</p> <p>As a resident of Port Elizabeth having family and associates that frequently use the Bay for recreation and income I am an interested party that objects to the proposed operation of a fish farm or aquaculture anywhere within Algoa Bay.</p> <p>Algoa Bay is a pristine bay and a watersport tourist destination with events such as international Ironman competitions, fishing charters etc and has a fishing trawler industry and a tourist industry that sustains employment and income to the city as well as enormous recreational value. There are many scientifically backed examples of environmental damage by fish farming throughout the world as well a negative impact on tourism revenue and and this information is readily available on the www. Any EIA or economic assessment that claims fish farming benefits or acceptable impact will be highly questionable as the proof of degradation of the marine environment by fish farming is already a proven fact.</p> <p>I thus oppose and demand the permanent cessation of any ocean based fish farm, aquaculture or marine farming proposal for Algoa Bay on the basis that the environmental, economic and recreational loss it will bring will by far</p>

No	Comment
	<p>out weigh any perceived benefit it may bring it's investors and the small employee group it will serve.</p> <p>Response by Anchor: 05 May 2019</p> <p>Impact of finfish farming is well documented. It is true that historically international mitigation of environmental impacts of finfish cage culture was either not considered, or poorly implemented. Indeed, in the early period of finfish farming internationally, particularly salmon farming in the pioneering countries, a lack of good environmental management and poor farming practices led to significant, negative environmental impacts occurring. This resulted in negative attitudes and opinions amongst the public and conservation organisations towards the industry. This negative sentiment towards sea cage fish farming persists to this day, despite an increasing focus on sustainability by both governments and industry. Responsible operators (& management) will however, implement recommended mitigation AND monitor the effectiveness thereof. This has been the case with historical experimental cages installed in Algoa Bay (the DST, Stellenbosch university trials with yellowtail and kob) where mitigation measure were implemented and extensive environmental monitoring was required (this was undertaken by NMU researchers); This is also currently being implemented in trial sea cage culture in Saldanha Bay where permit conditions require the operators to undertake amongst other requirements, water quality and benthic monitoring in accordance with their EMPr. Some comfort can be taken from the recent certification of two Japanese Yellowtail (<i>Seriola lalandi</i>) farms by the aquaculture stewardship council (https://www.eurofishmagazine.com/news/item/467-first-yellowtail-farms-to-be-asc-certified-are-japanese), which suggest that it is possible to sustainably farm this species with effective mitigation of environmental impacts.</p> <p>Economic impact. Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. This impact is rated as high and medium before and after mitigation measures respectively. Based on the choice modelling study conducted by Britz et al 2016 (see table 4 from the report below) and feedback from stakeholders thus far, it appears that potential ecological impacts of the fish farming and the perception of an increased risk of shark attacks occurring (whether this risk is real or not) were identified as the most important disturbing aspects of the proposed development (note this is finfish farm specific, the current proposal also recommends bivalve farming). While mitigation measures have been recommended for negative visual and marine ecological impacts, no meaningful mitigation measures are available for the other socio-economic impacts other than site selection or site reduction (reference to the visual buffer recommended in the specialist study 2013). All these aspects, primarily limited to finfish farming at Algoa 1, are likely to impact negatively on tourism. However, the perceived higher risk of shark attacks could potentially have a profound direct negative impact on the local economy, should the Iron Man Event (and other events) be moved to a different location (Iron Man Organisers indicated during the 2013 appeal phase that the event would be moved should finfish cages be installed at Algoa 1). Furthermore, this impact could potentially be irreversible and occur during the pilot phase. For this reason, the 'medium' negative impact rating (after mitigation measures) on the specialised tourism and businesses (Section 9.5.2.3) will be re-assessed.</p> <p>The marine specialist study in Appendix D of the BAR Section 4.1.5.1 assesses the marine ecological impacts associated with the proposed Aquaculture Development Zone. These include (but are not limited to) organic pollution (water quality and benthos), disease transfer (applicable to finfish), entanglement and habitat modification (both bivalve and finfish), impact of chemicals used in aquaculture. A number of these impacts have been rated of 'medium' significance after the implementation of mitigation measures and disease transfer in finfish culture is considered 'high' after implementation of mitigation measures.</p> <p>During the next public participation process (submission of Draft BAR and application form), the competent authority will provide input and request additional information if required. In making their decision on the Final BAR, the competent authority will weigh up the likelihood of the proposed development realising its full benefits against the potential negative impacts of implementing the the Aquaculture Development Zone.</p>
17 9	<p>Andrew Whitehead – Resident and water sports 29 April 2019</p> <p>I am a property owner in Summerstrand who scuba dives and does open water swimming. I fear the proposed fish farm and at its intended scale could potentially damage Algoa bay from both an environmental and visual perspective. I don't think the potential benefits of a fish farm will outweigh the harm that would be done to the tourist industry and property prices. I am also sure that all residents of the city who use the beach area's and facilities will be negatively impacted by fish farming, I don't believe it is a risk worth taking, it is also at complete odds with the cities vision of being the watersports capital of South Africa. In the last month we have had a couple of events that would probably not be held in Port Elizabeth if Algoa bay was covered in fish farms.</p> <p>Anchor response: 6 June 2019</p> <p>Alternatives. The comments are specific to finfish farming in Algoa Bay and mostly makes reference to Algoa 1 - Summerstrand site. Please note that the proposed development also includes bivalve (mussel and oysters) farming. Some additional information on the Alternative Options has therefore been provided below for clarity.</p>

No	Comment
.	<p>In total three sites are considered for the Algoa Bay Sea-Based Aquaculture Development Zone, namely Algoa 1 (Summerstrand - bivalve (i.e. mussels and/or oysters) and finfish), Algoa 6 (PE Harbour - bivalve culture only) and Algoa 7 (Ngqura Harbour - finfish culture only). Three alternatives (combination of precincts) are described in Section 3.5 of the BAR and are assessed in the impact assessment.</p> <p>Option A: Finfish and bivalve at Algoa 1 + Bivalve at Algoa 6 +Finfish at Algoa 7 Option B: Bivalve at Algoa 1+ Bivalve at Algoa 6 +Finfish at Algoa 7 Option C: Exclude Algoa 1. Bivalve at Algoa 6 +Finfish at Algoa 7</p> <p>Negative economic impacts as a result of the proposed development are assessed in Section 9.5.2.3. of the pre-application BAR. For finfish farming at Algoa 1, this impact is rated as high and medium before and after mitigation measures respectively (note that the impact is lower at Algoa 6 and 7 and for bivalve culture). Based on comments submitted to date, revision of the impact ratings and categories are currently being considered and discussed with the specialists.</p> <p>Impact on recreational activities. Your concerns have been addressed in the Basic Assessment Report Section 9.5.2.3. The impact on water sport recreational activities have been rated of low negative significance after implementation of mitigation measures (although due to the paucity of data the confidence of this assessment is low) for finfish farming at Algoa 1 and 7. The impact by bivalve farming at Algoa 1 and 6 is lower and was rated as very low before and after mitigation. However, based on the comments received thus far, we will address potential impacts on events such as Iron Man, Bell buoy challenge, as well as lifesaving events and training separately. The proposed ADZ is likely to have a higher negative impact on these activities when compared to bathing and surfing. SCUBA diving (Section 9.5.2.3) (very low impacts after mitigation for all sites) and impacts on sailing navigation routes (Section 9.5.2.4) (medium impact after mitigation) have also been assessed in the socio-economic impact assessment.</p> <p>Visual and aesthetics. The potential impact on the seascape character was assessed in Section 9.4.1 of the pre-application Basic Assessment Report.</p> <p><i>Algoa 1:</i> Algoa 1 is situated in a visually sensitive area. The impact was rated as medium and low after the implementation of mitigation measures for finfish and bivalve farming respectively. Mitigation measures includes a one km buffer zone maintained around the Bell Buoy and a three km exclusion zone around the Summerstrand beach front, which conflicts with the recommendations in the impact assessment on the local chokka fishing industry (avoid southern portion of Algoa 1). The decision-making authority must carefully consider this trade-off should Environmental Authorisation be granted for Alternative Option A (finfish and bivalve at Algoa 1) or Option B (only bivalve at Algoa 1) (note that Option C excludes Algoa 1 from the ADZ). Without the mitigation the impact on the seascape character resulting from finfish and bivalve culture at Algoa 1 was rated as high.</p> <p><i>Algoa 6:</i> Algoa 6 is situated within the Port Elizabeth harbour within an industrial context. The only visual receptors for this site are the Settlers Highway, which hugs the coastline at the site. This road is, however, also situated landward of the railway and is not a known scenic route. The bivalve site will likely also be visible from central Port Elizabeth, although only within close range of the R 102. In most areas, the views are blocked by other residential houses and industrial buildings. The impact on the seascape character at Algoa 6 was assessed as low before and very low after mitigation measures (note that only bivalve farming is proposed at this site). Furthermore, two oyster farms currently operate within the proposed footprint.</p> <p><i>Algoa 7:</i> Algoa 7 is situated approximately 3 km from the Port of Ngqura adjacent to the shipping channel leading into the harbour and immediately north of an anchorage area. Algoa 7 is situated within the main yachting route in Algoa Bay. Ecotourism and diving activities also take place in this area, although with lower intensity when compared to Algoa 1. Due to the remoteness of the site in terms of access by visual receptors, the intensity of the visual impact would be low without, and very low with mitigation.</p> <p>Impact on real estate. The impact on real estate value is assessed in Section 9.5.2.8. The impact of the proposed ADZ on the visual aesthetics of the coastal environment constitutes a primary factor in influencing real estate value. The visual impact can be mitigated however, and mitigation measures are more effective for bivalve culture. The negative impact of Algoa 1 on real estate value with and without mitigation measures was rated as high and medium respectively.</p>

APPENDIX F5: EMAILS SENT TO STAKEHOLDERS

APPENDIX F6: SUBSTANTIVE COMMENTS

APPENDIX F7: MINUTES OF MEETINGS HELD

APPENDIX F8: ATTENDANCE REGISTERS



agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



ANCHOR

research & monitoring