Application in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Amended Environmental Impact Assessment Regulations, 2014.

DRAFT BASIC ASSESSMENT REPORT

DEA&DP NOI Reference nr: 16/3/3/6/7/1/A6/79/2004/16

Simon's Town Marina Expansion

COMPILED BY: Helene Botha & Pieter Badenhorst
Pieter Badenhorst Professional Services
DATE: March 2016

Executive Summary of the Content of the Basic Assessment Report:

A. PROJECT BACKGROUND AND DESCRIPTION

Background

The False Bay Yacht Club was founded in 1958 and is situated in the naval town Simon's Town (Figure 1). The Marina is situated next to the Navy Base.

False Bay Yacht Club's marina is one of only two marinas in the Western Cape, South Africa to have been awarded 'Blue Flag' status. Blue Flag status indicates that the marina is clean, safe and secure, and adheres to international safety and tourism standards.

The club welcomes many National and International visitors and can accommodate vessels up to approximately 20tons on either swing moorings or walk-on marinas.

The Simon's Town Marina Company and applicant (STMC) was established in 2004 by the marina owners to look after the floating walk-on marinas. Their operation includes the management of the marinas, the slip and hard facilities. STMC rents the facilities from FBYC.

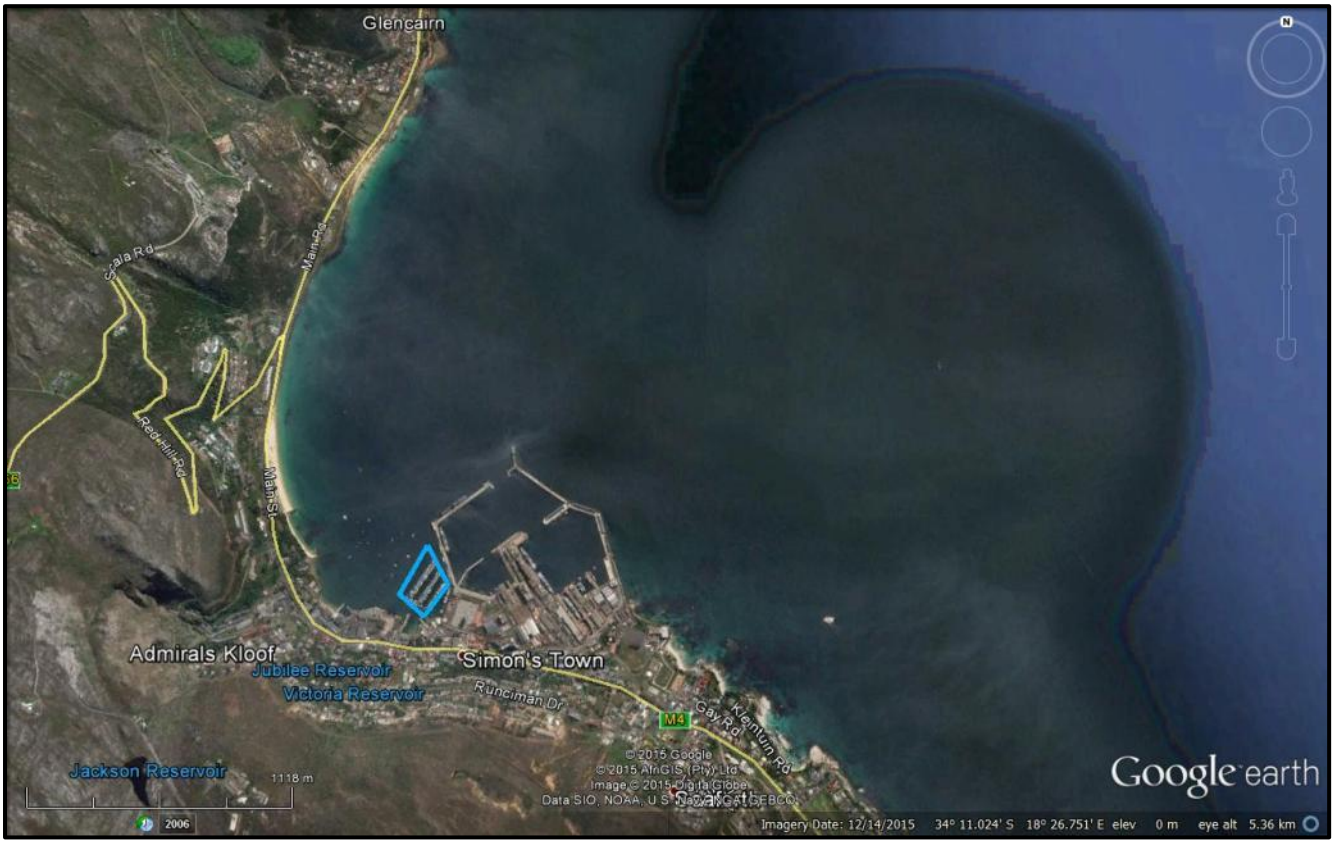

Figure 1: Locality of Simon's Town Marina

The boats in the Marina are exposed to the North-West and North-East winds. To protect the boats in the Marina, a rubber pipe was acquired, made buoyant and anchored to the sea bottom, with chains, to create a floating breakwater structure (Figure 2 & Figure 3). The pipe was anchored with engine block and other structures heavy enough to keep the pipe anchored. The 250m pipe has reached the end of its lifespan and is falling apart.

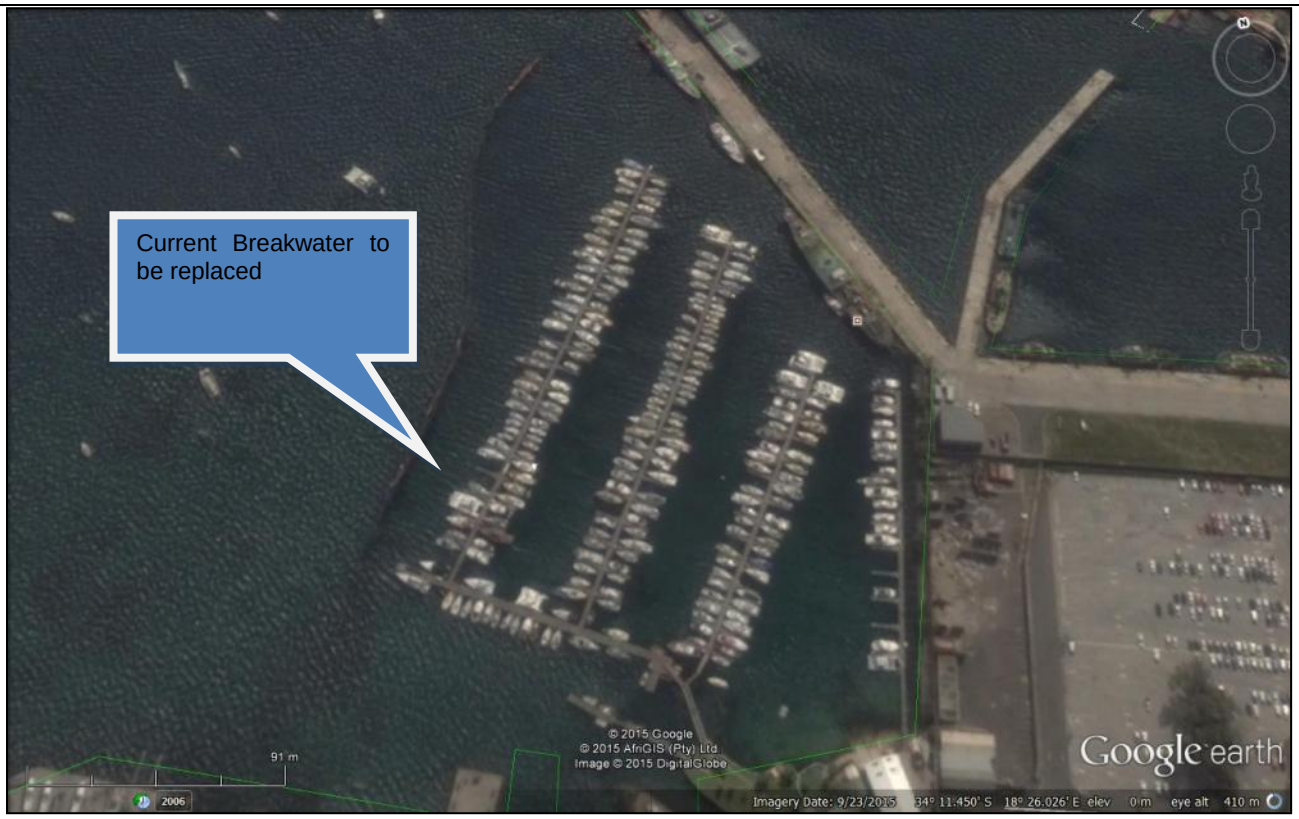

Figure 2: The Marina as it is currently, with the breakwater to protect yachts.

Figure 3: Breakwater structure currently present at the Marina

STMC has appointed Pieter Badenhorst Professional Services as independent environmental consultant to undertake the environmental impact assessment as the replacement of the structure triggers a Basic Assessment Process.

Project Description

The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a floating breakwater structure and will provide additional moorings for visiting vessels (Figure 5).

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 4).

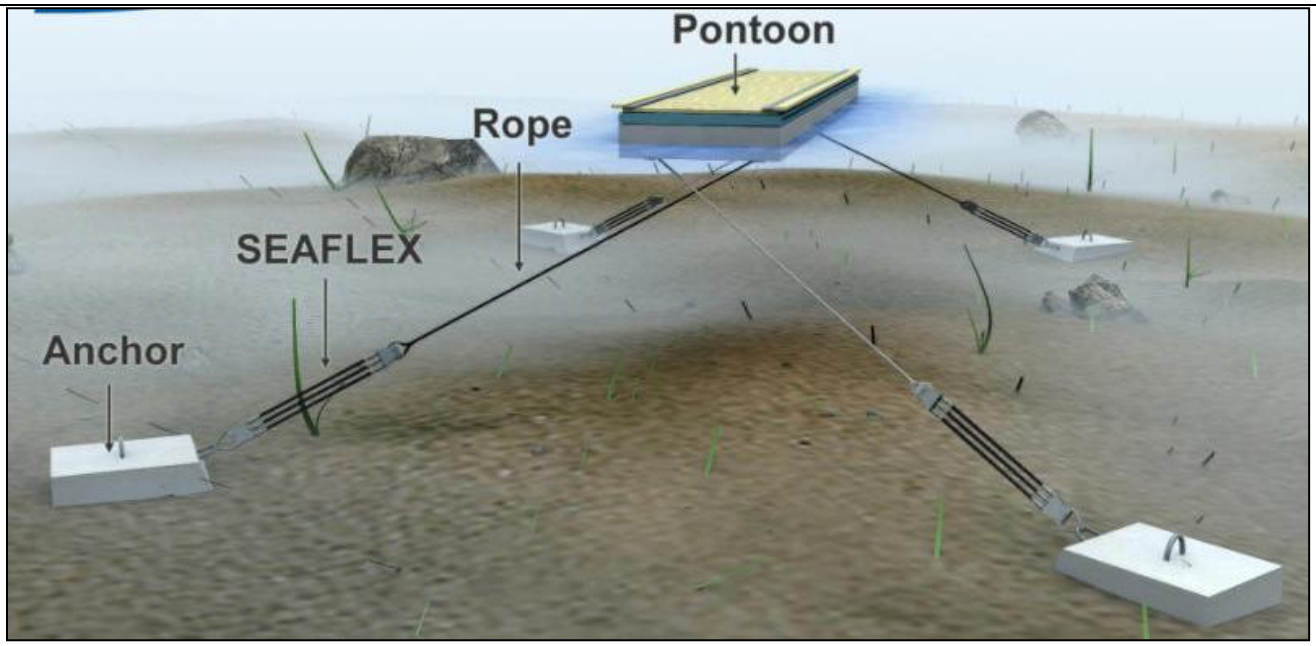

Figure 4: Schematic example of how the breakwater jetty will be anchored by the Seaflex

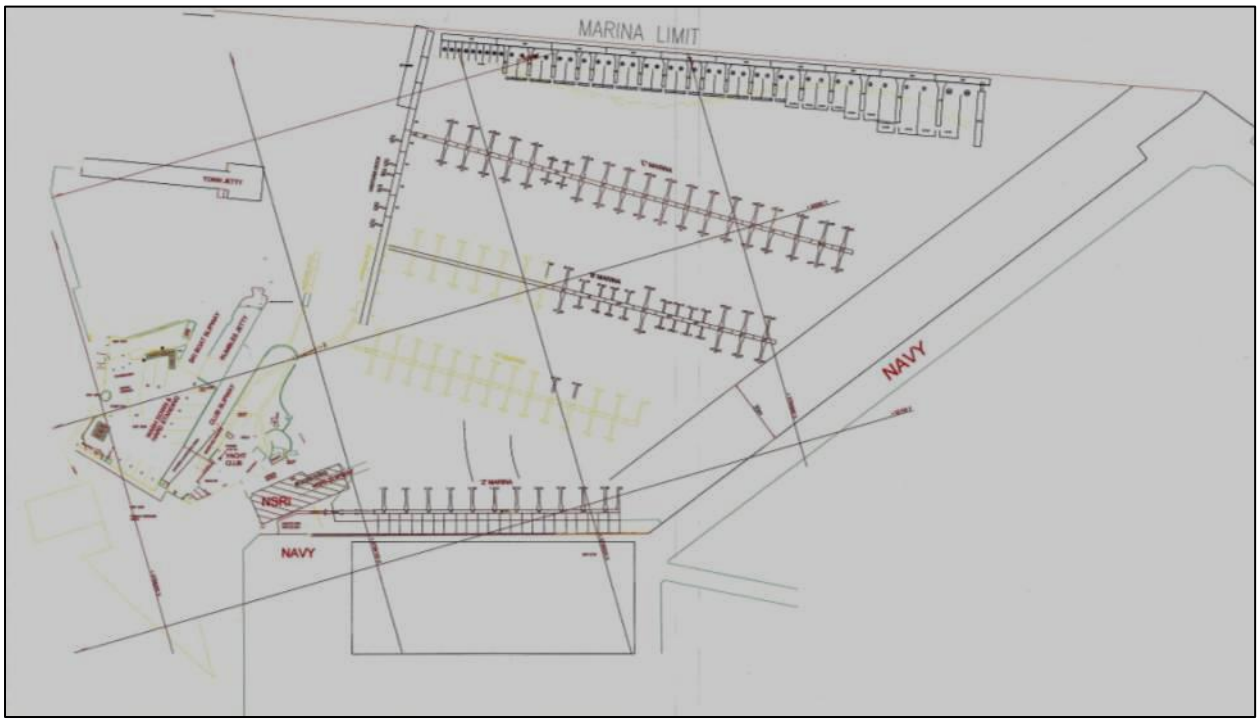

Figure 5: Proposed Layout plan for expansion.

B. PUBLIC PARTICIPATION

Public participation included the following:

REGISTRATION AND ADVERTISEMENT

An Advertisement was placed in the False Bay Echo on Thursday 16 March 2016, notifying I&AP's of the proposed development and of the opportunity to register for the public participation process and notification to provide comments on the dBAR. The dBAR is part of the pre-application public participation process and will be distributed for 30 day PPP before the submission of the Application.

This advertisement served as a notice for registration as an Interested and Affected Parties and provides comments on the dBAR as part of the unofficial public participation process. The registration/comment period was from the Tuesday 22 March 2016 until Monday 25 April 2016.

NOTICE BOARD

A Notice Board was placed at the False Bay Yacht Club entrance on the Tuesday 22 March 2016.

INFORMATION AND REPORTING FOR THE FORMAL PROCESS

A notice that included the Executive Summary was made available and distributed by registered post to all registered I&APs and neighbours for the 30 day commenting period, from 22 March 2016 until 25 April 2016. The notice also informed all I&AP's of the availability of the draft Basic Assessment Report which could be obtained from the EAP. Comments received will be placed in the Final Basic Assessment Report. The actual comments received on the Executive Summary and Draft Basic Assessment Report, as part of the public participation is shown in section. Digital copies were made available to those who requested it.

Hard copies or digital copies of the report were sent to DEA&DP: Coastal Development Unit, Heritage Western Cape, Department of Environmental Affairs (Oceans and Coasts), Cape Nature, Department of Agriculture, Forestry and Fisheries, Department of Defence and the City of Cape Town Municipal Manager and Ward Councillor.

I&AP DATABASE

The I&AP database was compiled from registered and listed I&APs. The database will be updated to include new I&AP's that have submitted comments on the Draft Basic Assessment Report

COMMENTS AND RESPONSES

The actual comments received on the draft report will be included in the fBAR and in the Comments and Response Sheet.

C. NEEDS AND DESIRABILITY

In achieving sustainable development the focus therefore may not be restricted to environmental or nature conservation factors only. It should include economic and social realities and also consider social factors such as those that determine income, quality of life, social networks, and other means aimed at maintaining and improving the well-being of people. Economic factors deal with the affordability of processes, their potential to generate an income over an extended period (into future generations) and to maintain its ability to support both the environmental and social needs of an area.

In short, if people are impoverished, there will be no environment to protect; if a project is not attractive economically, it will not be launched.

One way of testing whether a project meets with the demands of sustainability in development is to establish whether or not a project increases environmental, social, and economic values. Sustainable development mainly has as its aim the maintenance of environmental capital. This is achieved if the project that will be established in the developmental process is likely to provide at least the same value as is likely to be destroyed by its development.

Looking at the three tiers of NEMA principles, this development should be socially, environmentally, and economically viable.

They are summarised for this project as follows:

SOCIALLY:

The development will meet the local and regions needs through securing job opportunities as the additional docking bays for local and international visitors will lead to the use of the activities, products and services provided by the locals of Simon's Town and the bigger Cape Town metropolitan area. Construction will also provide job opportunities for local contractors and their labour.

ECONOMICALLY:

The development will have a positive impact by improving the economy of local workers through providing job opportunities during construction. The proposed development will secure the employment of current local employees of Simon's Town and the businesses, services and activities it has to offer. International visitors may see investment opportunities in the area and bring with them their international currencies which will help further economic growth for the area and the country.

ENVIRONMENTALLY:

The development will have a small negative impact on any natural vegetation on the ocean but this is outweighed by the current damaging and eroding structures that keep the broken breakwater a float and anchored. It will, however, have many positive impacts that include:

Will provide temporary job opportunities for local workers during construction.

Contributing to local economy by local and international visitors docking at the Marina to visit the Peninsula.

Creating a habitat for living organisms to attach to

Removing the damaging and eroding chains and engine blocks

Providing shelter for boats from the changing winds and waves in the Peninsula.

D. ALTERNATIVES

1. ACTIVITY ALTERNATIVES

ALTERNATIVE A: EXPANSION OF CURRENT JETTY TO ACT AS A BREAKWATER AND DOCKING BAYS

The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a breakwater structure and will provide additional moorings for visiting yachts. The layout design can be seen in Figure 7.

The current broken breakwater structure will be removed including the engine block, chains and other structures used to anchor it. This will be discarded in an appropriate manner by the contractor.

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 6). The blocks will not be moved around by sea currents like the current anchoring systems and the Seaflex is designed to accommodate the rise and fall of oceans currents, thus will result in less damage to the ocean floor.

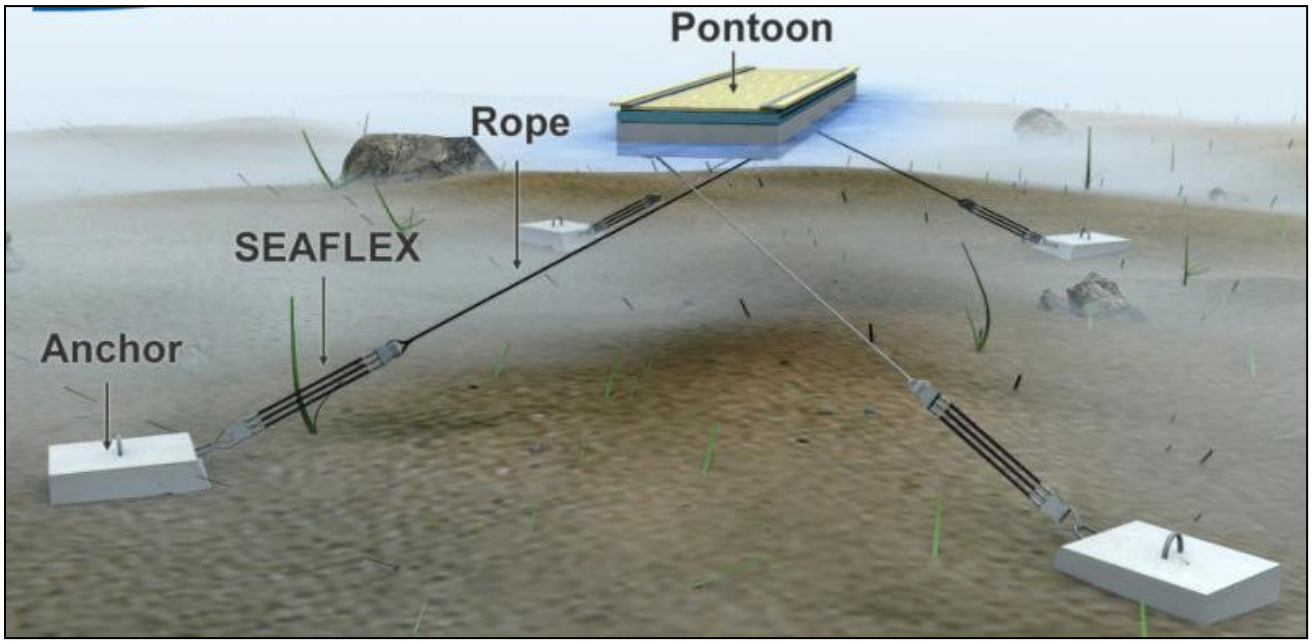

Figure 6: Schematic example of how the breakwater jetty will be anchored by the Seaflex

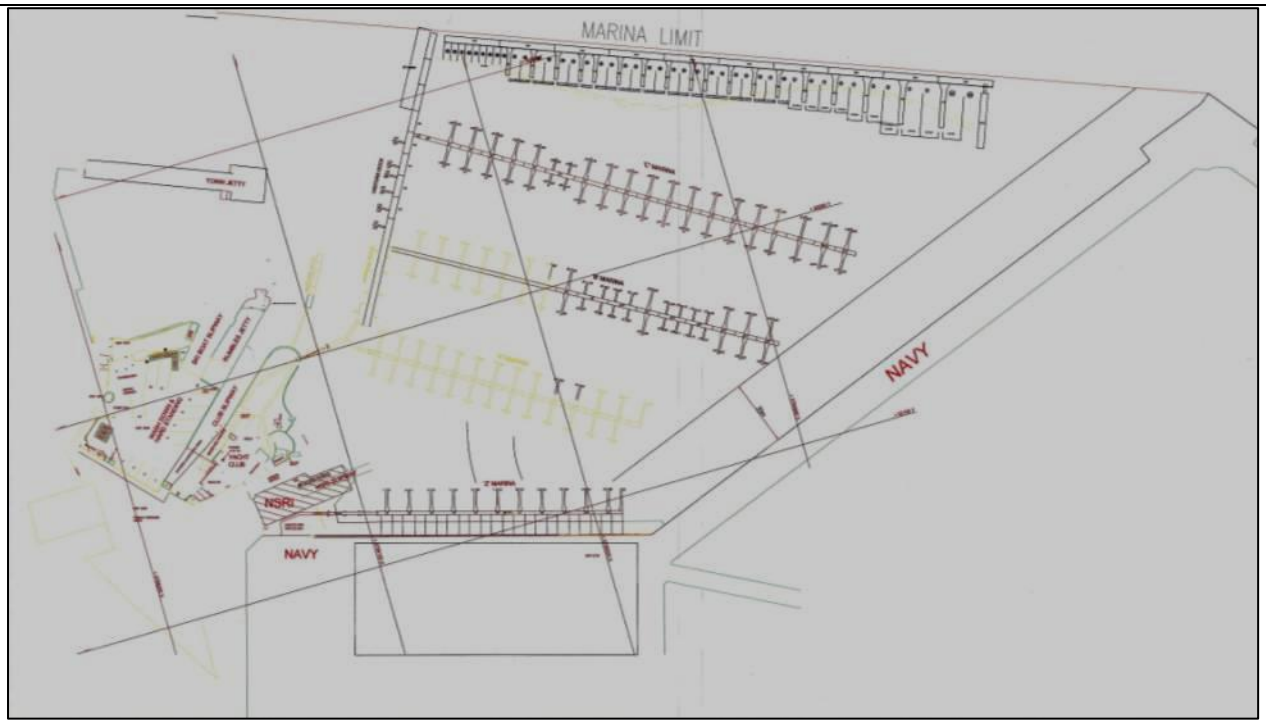

Figure 7: Proposed Layout plan for expansion.

The proposed project will initially link to the current jetty structure and run for approximately 40 m (Figure 8, A). The structure will then swing north where the floating breakwater structure of 250 m will be installed and will double as docking bays for visitors to the Marina (Figure 8, B). An additional section of 40m, swinging North East, will be installed to protect the yachts in the Marina and this will also be a floating breakwater structure and jetty double(Figure 8, C).

Figure 8: Proposed layout of jetty extension

This is the preferred alternative for the following reasons:

- The structure will replace the outdated breakwater structure with a modern structure which will not change the character of the site.

- The proposed expansion will protect docked vessels from waves created by strong winds.
- The old eroding and damaging materials anchoring the current breakwater structure will be removed resulting in less environmental damage to the ocean floor.
- The Sealflex will have less damaging effects on the ocean floor due to no dragging with changing tide levels.
- The concrete blocks will not move and can therefore be used by sea life to establish a habitat.
- The Seaflex structure has a guarantee of 30 years and include regular monitoring and upkeep.
- Docking bays can be sold/rented to yacht owners to cover costs of construction.
- Additional docking bays for vessels will result in socio-economic benefits from local and international visitors.

ALTERNATIVE B: REPLACEMENT OF THE OLD BREAKWATER WITH A NEW BREAKWATER

Alternative B will entail replacing the current breakwater structure with a new breakwater structure of the same type of design (Figure 9). Old materials will be removed and replaced by newer technology other than the Seaflex.

A rubber pipe will be made buoyant and will be installed by means of anchoring the pipe with concrete blocks and chains or equivalent means.

This alternative is not the preferred alternative for the following reasons:

The lifespan of the rubber pipe is not guaranteed and will need to be replaced if broken or damaged.

Chains or equivalent means of anchoring the structure has high damaging effect on the ocean floor and if eroded can release harmful toxins into the ocean.

This alternative doesn't provide a means of funding the project and will result is large financial loss to the STMC and the members. Because the lifespan is not guaranteed, the financial loss will be reoccurring if the structure breaks.

The alternative will not have any socio-economic benefits like additional docking bays for local and international visitors which utilises the services, activities and businesses in the Peninsula and Simon's Town.

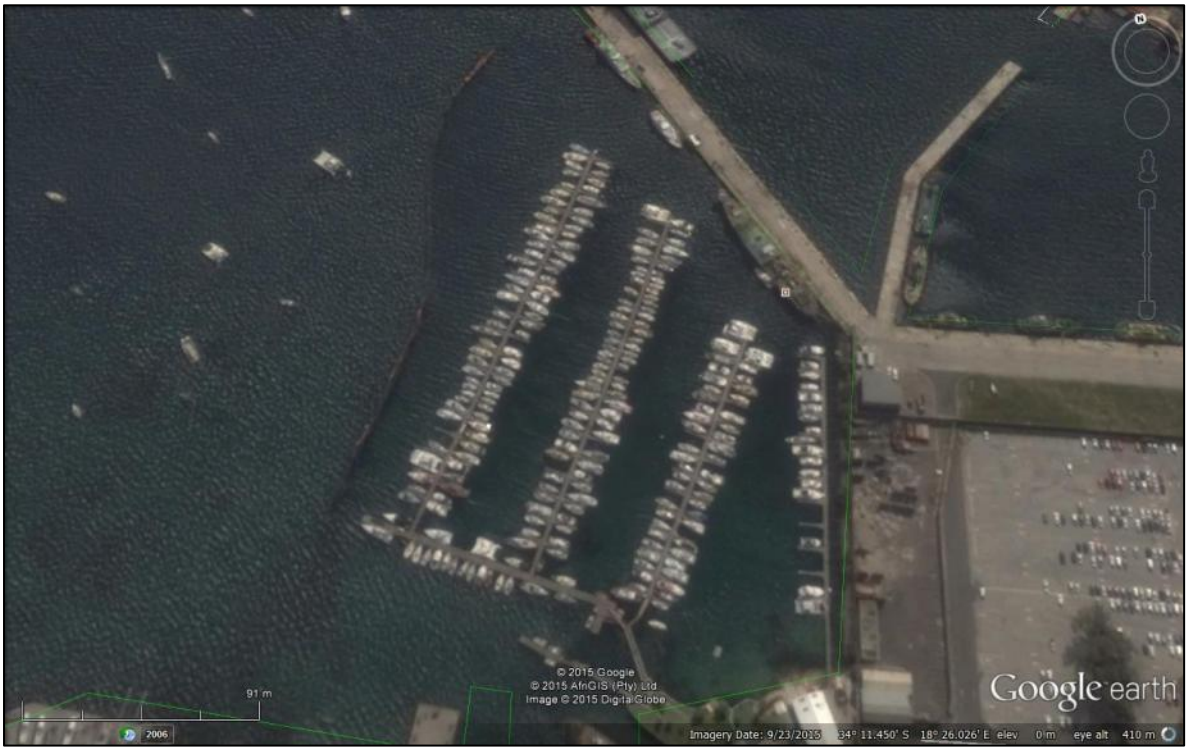

Figure 9: Current breakwater installed at Simon's Town Marina

ALTERNATIVE C: LEAVING THE CURRENT BREAKWATER STRUCTURE AS IT IS

This will mean the current breakwater structure will be left in the same deteriorating state as it is currently. The breakwater will keep falling apart and will pollute the ocean with parts breaking off. The anchoring materials and chains will stay where it is and will erode and damage the ocean floor with the rise and fall of tides.

Vessels will be damaged by wave actions from strong winds and this will result in memberships being withdrawn and local and international visitors not visiting Simon's Town and the Cape Town metropolitan. Socio economic benefits will be lost to

the local community.

ACTIVITY ALTERNATIVES OUTCOME

Alternative A: Expansion of current jetty to act as a breakwater and docking bays was found to be the feasible and reasonable alterative for the project

2. TECHNOLOGY ALTERNATIVES

ALTERNATIVE 1: SEAFLEX

SEAFLEX is the most modern and technologically advanced mooring system on the market today, providing secure moorings even under the worst weather conditions. The main part of a SEAFLEX is a reinforced homogeneous rubber hawser; attached together with a high quality stainless steel plate (Figure 10 & Figure 11).

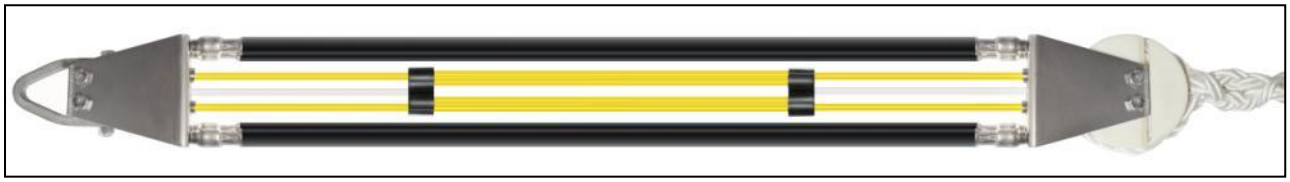

Figure 10: The main part of a Seaflex

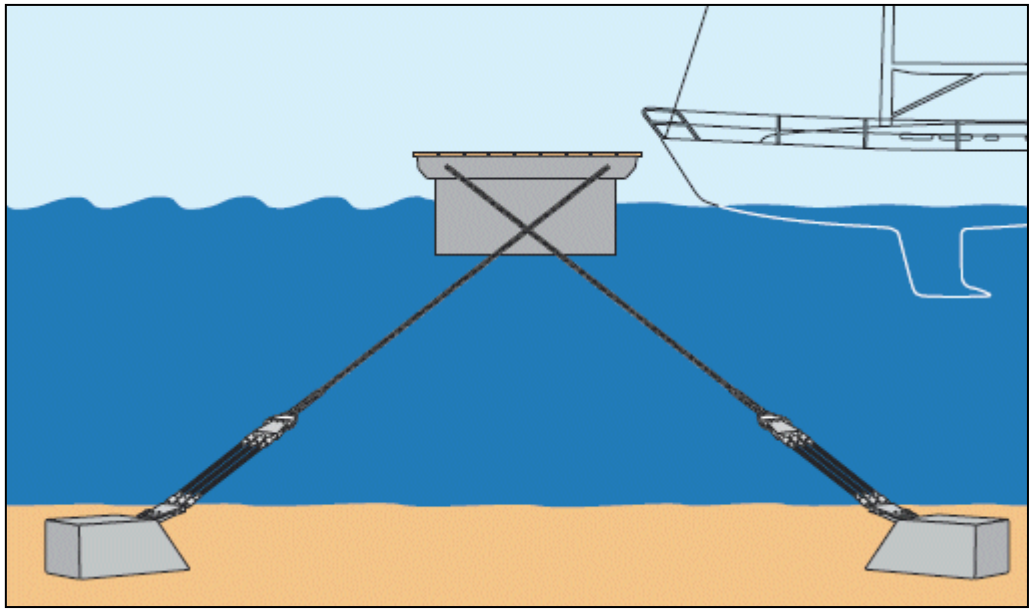

Figure 11: Typical installation of a Seaflex system

One single SEAFLEX rubber hawser can withstand a force of drag greater than 10 kN, elongate over 100 % of its length and retract back to original length. While doing this the system is putting constant tension and providing stability to the moored application.

The Seaflex is the preferred technology alternative for the following reasons:

- The moorings are self-regulating according to variations in water level. It slowly elongates and retracts in a smooth, even movement.
- SEAFLEX is the most modern and technologically advanced mooring system on the market today,
- Provides secure moorings even under the worst weather conditions.
- The size of each mooring is calculated based on the active forces with the help of our own software, JFlex, a program that is freely available to partners. Factors crucial to these calculations are variations in water-level, wind; waves, current, depth and the total air resistance caused by boats and are used in the size calculations.
- Since the SEAFLEX mooring system is under constant tension, it does not sway and touch the seabed at all. SEAFLEX stays off the sea floor at all times, which is why it is the only accepted mooring system in certain areas

with protected corals, marine flora, or historic artefacts.

- SEAFLEX does not release other pollutants into marine ecosystems, which also helps limit any impact on the surroundings. This makes SEAFLEX particularly well-suited for use with mooring pontoons and buoys in sensitive areas, such as those near coral reefs, areas of marine flora and historic sites.
- SEAFLEX units have low installation cost, fast and easy inspections and low maintenance needs.

ALTERNATIVE 2: TIMBER PILES

An alternative to anchor jetties is using piles made of concrete or wood. The piles are fixed in the ocean floor by boring a hole and fitting it in one place.

Figure 12: An example of a jetty installed on piles

Piles are not a feasible option due to the role the jetty has to play as a breakwater and docking bay. Piles jetties will not adapt to water levels to protect the docked vessels and when installing in deep water, piles can be very costly, or not even an option due to depth.

With static piles there will always be vertical movements. The nonexistent downward force allows the dock to smash up against the piles during bad weather, leading to damage on the piles, pile guides, docks, and boats. The only movement stopped by the piles is the horizontal movement which gets stopped rather abruptly when the dock hits the pile guide, causing wear and tear over time.

Sometimes the bottom conditions make it unfeasible to use piles, there might be a hard rock bottom requiring you to drill pile sockets or too soft soils requiring the piles to be battered down far.

ALTERNATIVE 3: CHAINS

Chains, which anchor the current breakwater, can be used to anchor the jetty by attaching the end to a concrete block or other heavy item like the engine blocks currently used (Figure 13).

Figure 13: Typical example of fixing a jetty with chains

Chains are not the preferred and feasible option for the following reasons:

Chain is difficult to inspect in full and is only as strong as its weakest link. Areas have been known to replace their chain yearly out of fear that the next storm might cause it to snap.

Applications moored with chain also move a lot during low tide when large portions of the chain are resting on the sea floor. This destroys bottom vegetation and creates dead spots.

It is well known that some of the traditional mooring methods can damage the underwater flora and fauna. One example are chain-moored boats that are allowed to drift and the chain scours the seabed, which can create what is known as dead spots, killing all vegetation around it.

TECHNOLOGY ALTERNATIVES OUTCOME

Alternative 1: Seaflex was found to be the preferred technology alternative.

3. NO-GO ALTERNATIVE

NO-GO OPTION

Implementing the No-Go option will mean the breakwater structure and all anchoring material will stay as it is presently.

Figure 14: Current breakwater at Simon's Town Marina

The breakwater structure consists of a 250m long rubber pipe with a 1m diameter and is anchored to the sea bottom with old engine blocks and chains and is falling apart due to age.

If the structure is kept as it is, parts that break off will pollute the ocean and the engine blocks and chains will erode and damage the ocean floor if it is not attached to the pipe. The eroding effect of the ocean on the anchor material will release harmful toxins which can affect fauna and flora on the ocean floor.

Vessels docked at the Marina will be damaged by the waves created by the North East and North West winds and the club will lose memberships and local and international visitors. These visitors play a big role in the socio-economic benefit of the club to Simon's Town and its residence.

No local contractors and their labour will receive additional contracts from the Marina. Activities, services and business will lose clientele who dock their vessels at the Marina and no international currency will be brought in by the Marina visitors.

E. IMPACT SUMMARY

DESIGN AND CONSTRUCTION	OPERATIONAL
GEOGRAPHICAL AND GEOPHYSICAL:	**GEOGRAPHICAL AND GEOPHYSICAL:**
Removal of breakwater The damaged breakwater structure will be removed and the engine blocks and chains will be removed, scrapped and recycled. Non metal items will be reused where possible Jetty expansion and breakwater structure replacement: The current floating breakwater structure will be replaced by expanding the jetty in a U-shape, the new expanded structure will act as a breakwater structure and docking bay for vessels. By installing the jetty with concrete blocks and Seaflex, no drag will be created on the ocean floor with the rise and fall of tides. Therefore the new structure will have a positive impact on the ocean floor habitat.	Protection of vessels from waves created by North Western and North Eastern The installed jetty/breakwater structure will protect the docked vessels from strong winds and waves created by the winds
BIOLOGICAL:	**BIOLOGICAL:**
Installation of breakwater structure and jetty expansion and damage to ocean floor The installation of the breakwater structure/jetty can	Breakwater structure and jetty expansion The breakwater structure/jetty and related anchoring mechanisms can further positively impact the ocean floor. The expanded structures will be anchored by concrete blocks and Seaflex. Seaflex is under constant strain and will not cause drag on the ocean floor. The fixed concrete blocks will enable fauna and flora to establish a habitat on the structure.
	SOCIO ECONOMIC:
	Economic advantages contributed by with the Marina

positively impact the ocean floor. Seaflex is under constant strain and will not cause drag on the ocean floor. The fixed concrete blocks will enable fauna and flora to establish a habitat on the structure, therefore resulting in a positive impact. **SOCIO ECONOMIC:** Additional job opportunities will be created during construction. The contract will be given to a local company. Only a temporary positive impact. **NOISE:** Temporary construction noise that can be mitigated through only allowing work during normal working hours. **VISUAL:** Construction activities Visual view during construction but it is only short term. **CULTURAL:** None	includes: Use of B&B accommodation, as they are tired of living on a boat, Car hire, Restaurants, Visits to game parks and reserves, Visits to wine farms, Visits to squatters camps, increasing understanding of our problems, Purchase of curios, Purchase of clothing and luxury items, Bringing foreign currency into the country. By expanding the marina, more docking bays will be available for visitors, which will lead to an increase in the above mentioned economic contributions to the local economy. Long term positive impact of job security for existing workers. **NOISE:** None **VISUAL:** Replacement of current breakwater structure with jetty expansion acting as a new breakwater structure. The current damaged breakwater structure will be replaced by expanding the current jetty structure to the position to where the breakwater structure was originally. The jetty should be in line with the surrounding area and should be visually similar to current jetty structures. **CULTURAL:** None

F. CONCLUSION

The installation and expansion of the breakwater structure that will double as docking bays for visiting vessels will be the least environmentally damaging system by installing it with the concrete blocks and Seaflex. Other anchoring mechanisms will not last as long and will damage the ocean floor.

After completion the activity will have many socio-economic contributions to the local and national economy.

Will provide temporary job opportunities for local workers during construction and will indirectly contribute to job security and financial income.

CONTENTS

Table of Figures

National Environmental Management Act, 1998 (Act No. 107 of 1998) and the 2014 Environmental Impact Assessment Regulations. December 2014

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by DEA&DP in terms of the EIA Regulations, 2010 and must be completed for all Basic Assessment applications.

2. This report must be used in all instances for Basic Assessment applications for an environmental authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended, and the Environmental Impact Assessment Regulations, 2012, and/or a waste management licence in terms of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEM: WA), and/or an atmospheric emission licence in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEM: AQA).

3. This report is current as of December 2012. It is the responsibility of the Applicant / EAP to ascertain whether subsequent versions of the report have been published or produced by the competent authority.

4. The required information must be typed within the spaces provided in the report. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. It is in the form of a table that will expand as each space is filled with typing.

5. Incomplete reports will be rejected. A rejected report may be amended and resubmitted.

6. The use of "not applicable" in the report must be done with circumspection. Where it is used in respect of material information that is required by the Department for assessing the application, this may result in the rejection of the report as provided for in the regulations.

7. **While the different sections of the report only provide space for provision of information related to one alternative, if more than one feasible and reasonable alternative is considered, the relevant section must be copied and completed <u>for each alternative</u>**.

8. Unless protected by law all information contained in, and attached to this report, will become public information on receipt by the competent authority. If information is not submitted with this report due to such information being protected by law, the applicant and/or EAP must declare such non-disclosure and provide the reasons for the belief that the information is protected.

9. This report must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. No faxed or e-mailed reports will be accepted. **Please note that for waste management licence applications, this report must be submitted <u>for the attention</u> of the Department's Waste Management Directorate (tell: 021-483-2756 and fax: 021-483-4425) at the same postal address as the Cape Town Office Region A.**

10. Unless indicated otherwise, two electronic copies (CD/DVD) and three hard copies of this report must be submitted to the Department.

<u>DEPARTMENTAL DETAILS</u>

CAPE TOWN OFFICE REGION A (Cape Winelands, City of Cape Town: Tygerberg and Oostenberg Administrations)	~~CAPE TOWN OFFICE REGION B (West Coast, Overberg, City of Cape Town: Helderberg, South Peninsula, Cape Town and Blaauwberg Administrations~~	~~GEORGE OFFICE (Eden and Central Karoo)~~
Department of Environmental Affairs and Development Planning **Attention: Directorate: Integrated Environmental Management (Region A2)** **Private Bag X 9086** **Cape Town,** **8000** **Registry Office** **1st Floor Utilitas Building** **1 Dorp Street,** **Cape Town** **Queries should be directed to the Directorate: Integrated Environmental Management (Region A2) at:** **Tel: (021) 483-4793 Fax: (021) 483-3633**	~~Department of Environmental Affairs and Development Planning~~ ~~Attention: Directorate: Integrated Environmental Management (Region B)~~ ~~Private Bag X 9086~~ ~~Cape Town,~~ ~~8000~~ ~~Registry Office~~ ~~1st Floor Utilitas Building~~ ~~1 Dorp Street,~~ ~~Cape Town~~ ~~Queries should be directed to the Directorate: Integrated Environmental Management (Region B) at:~~ ~~Tel: (021) 483-4094 Fax: (021) 483-4372~~	~~Department of Environmental Affairs and Development Planning~~ ~~Attention: Directorate: Integrated Environmental Management (Region A1)~~ ~~Private Bag X 6509~~ ~~George,~~ ~~6530~~ ~~Registry Office~~ ~~4th Floor, York Park Building~~ ~~93 York Street~~ ~~George~~ ~~Queries should be directed to the Directorate: Integrated Environmental Management (Region A1) at:~~ ~~Tel: (044) 805 8600 Fax: (044) 874-2423~~

View the Department's website at http://www.capegateway.gov.za/eadp **for the latest version of this document.**

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	DEA&DP Reference NOI: 16/3/3/6/7/1/A6/79/2004/16
File reference number (Waste):	N/A
File reference number (Other):	N/A

PROJECT TITLE

Simon's Town Marina Expansion

DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Environmental Assessment Practitioner (EAP):	Pieter Badenhorst Professional Services CC		
Contact person:	Helene Botha		
Postal address:	PO Box 1058		
	Wellington	Postal code:	7654
Telephone:	(021) 8737228	Cell:	076 800 4959
E-mail:	heleneb@iafrica.com	Fax:	0866721916
EAP Qualifications	Pieter Badenhorst - 41 years experience (16 @ CSIR) in environmental management; report writing; project management; facilitation		
	Helene Botha – environmental consultant at PBPS with a B.Sc and B.Sc Honours in Zoology from UFS. Currently busy with her Masters in Environmental Management at NWU.		
EAP registrations/Associations	Pieter -IAIAsa, Pr Eng, SAICE		

Details of the EAP's expertise to carry out Basic Assessment procedures

The requirements for a Basic Assessment Report states that the details of the EAP and relevant experience must be provided:

Pieter Badenhorst

The consultant has more than 42 years experience in project management and report writing. He has worked at the CSIR in environmental and estuarine management for 16 years. During that time he was part of the team that developed coastal management guidelines; the first process for EIA's and undertook numerous environmental studies for DEAT in collaboration with a team of ecologists. The following years he has worked mainly in environmental control and environmental impact assessments and has completed EIAs for many projects. He has also undertaken an EIA peer review on a major development for DEAT and is a member of IAIAsa.

The consultant has undertaken many meetings/workshops/open days to identify issues or similar for projects at the CSIR; Blue Flag for DEAT as well as other DEAT projects. The Blue Flag and other projects required interaction with large groups of stakeholders

Helene Botha

The consultant has a BSc and BSc honours in Zoology from the University of the Free State and has been working at Pieter Badenhorst Professional Services for the past 8 months. She is currently busy with her Masters in Environmental Management at the North West University.

Section A: Activity Information

1. Project Description

(a) Is the project a new development?	**YES**	~~NO~~

(b) Provide a detailed description of the development project and associated infrastructure.

1. Background

The False Bay Yacht Club was founded in 1958 and is situated in the naval town Simon's Town (Figure 1). The Marina is situated next to the Navy Base.

False Bay Yacht Club's marina is one of only two marinas in the Western Cape, South Africa to have been awarded 'Blue Flag' status. Blue Flag status indicates that the marina is clean, safe and secure, and adheres to international safety and tourism standards.

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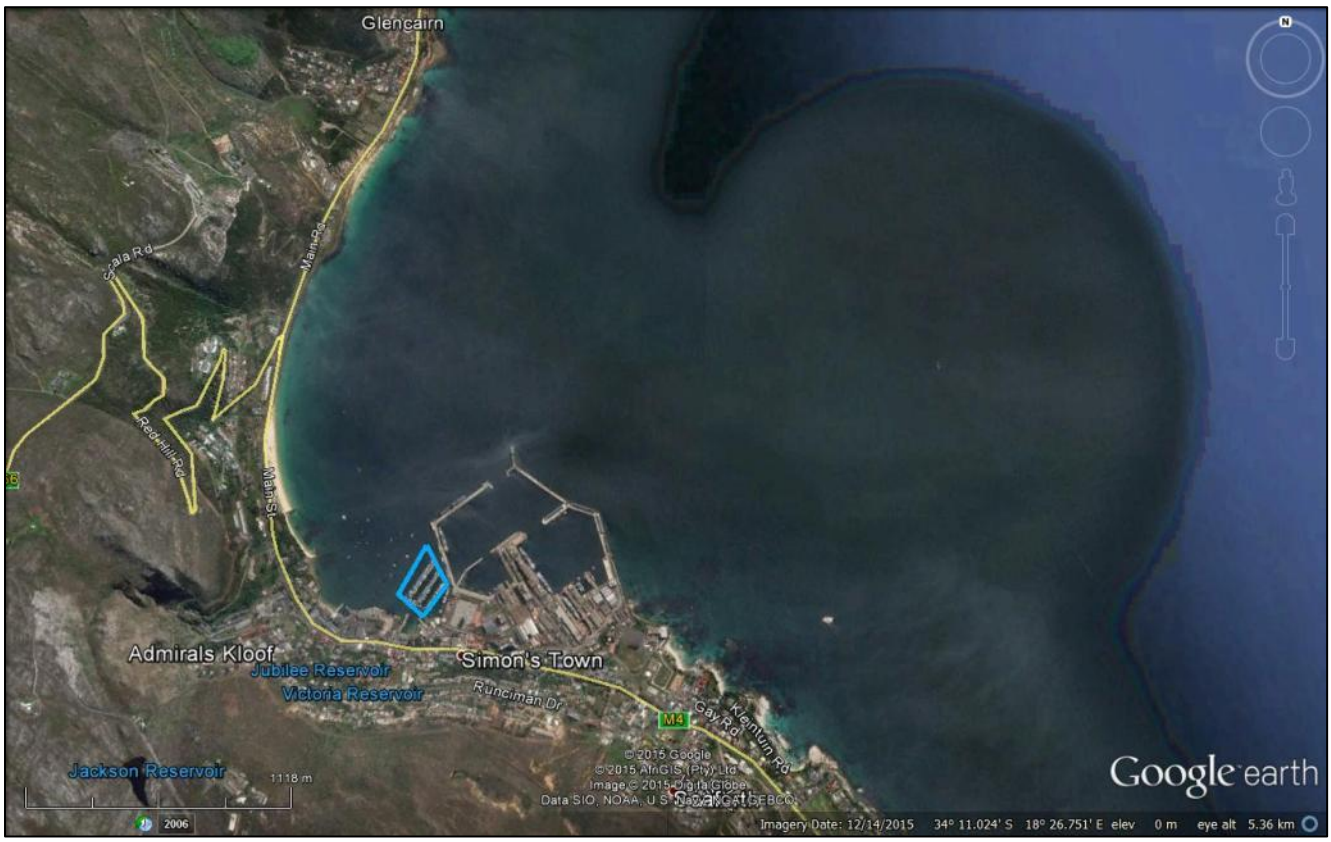

Figure 1: Locality of Simon's Town Marina

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Figure 2: The Marina as it is currently, with the breakwater to protect yachts.

Figure 3: Breakwater structure currently present at the Marina

STMC has appointed Pieter Badenhorst Professional Services as independent environmental consultant to undertake the environmental impact assessment as the replacement of the structure triggers a Basic Assessment Process.

2. Project Description

The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a floating breakwater structure and will provide additional moorings for visiting vessels (Figure 5).

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 4).

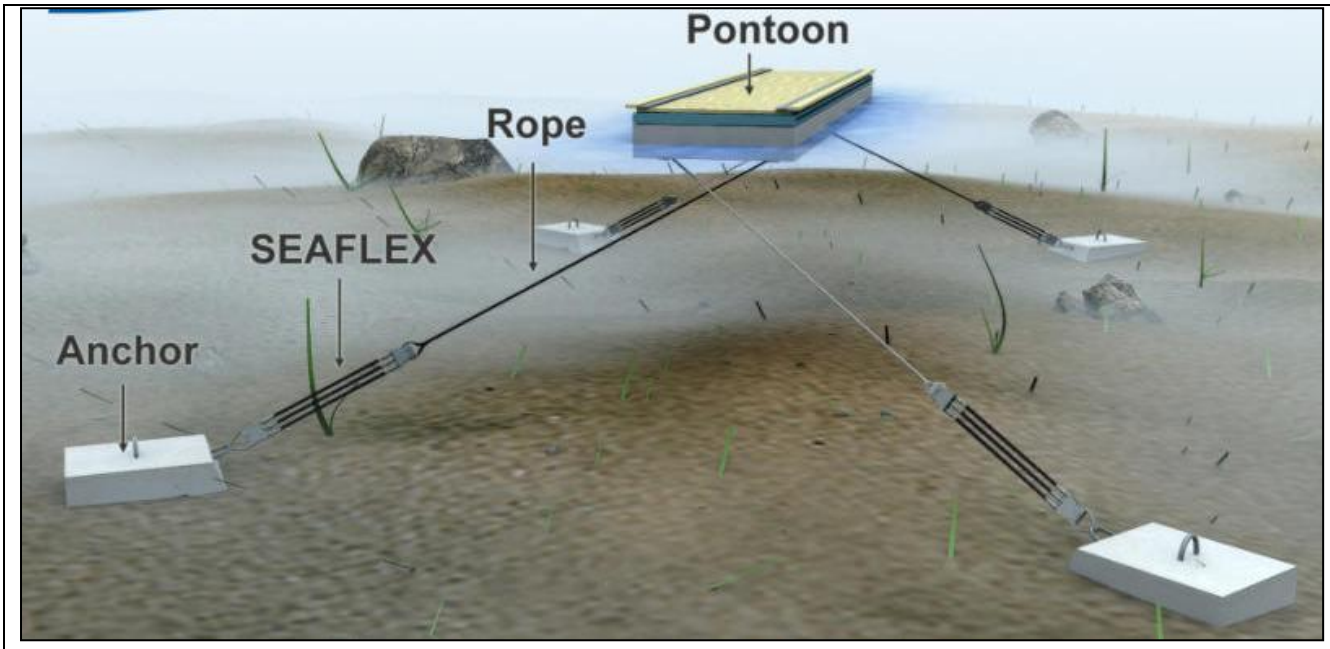


Figure 4: Schematic example of how the breakwater jetty will be anchored by the Seaflex

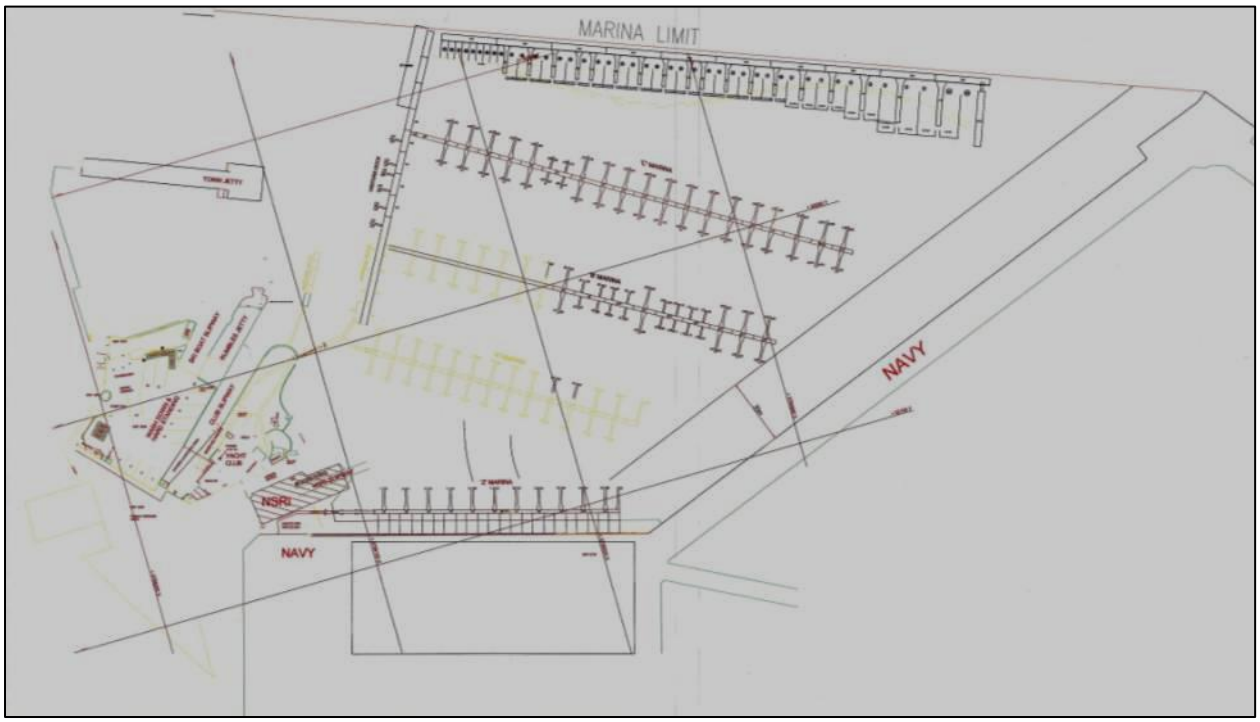


Figure 5: Proposed Layout plan for expansion.

(c) List all the activities assessed during the Basic Assessment process:

GN No. R. 983 Activity No(s):	Describe the relevant Basic Assessment Activity (ies) in writing as per Listing Notice 1 (GN No. R. 544)	Describe the portion of the development as per the project description that relates to the applicable listed activity.
12	**The development of—** (i) canals exceeding 100 square metres in size; (ii) channels exceeding 100 square metres in size; (iii) bridges exceeding 100 square metres in size; (iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size; (v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size; (vi) bulk storm water outlet structures exceeding 100 square metres in size; (vii) marinas exceeding 100 square metres in size; **(viii) jetties exceeding 100 square metres in size;** (ix) slipways exceeding 100 square metres in size; (x) buildings exceeding 100 square metres in size; (xi) boardwalks exceeding 100 square metres in size; or (xii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; **(b) in front of a development setback; or** (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; or (ee) where such development occurs within existing roads or road reserves.	The replacement of the current floating breakwater structure in the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2.
15	**The development of structures in the coastal public property where the development footprint is bigger than 50 square metres**, excluding— (i) the development of structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (ii) the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (iii) the development of temporary structures within the beach zone where such structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared; or (iv) activities listed in activity 14 in Listing Notice 2 of 2014, in which case that activity applies.	The replacement of the current floating breakwater structure at the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2. The area is coastal public property.
17	**Development—** **(i) in the sea;** (ii) in an estuary; (iii) within the littoral active zone; (iv) in front of a development setback; or (v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater; **in respect of—** **(a) fixed or floating jetties and slipways;** (b) tidal pools; (c) embankments; (d) rock revetments or stabilising structures including stabilising walls; (e) buildings of 50 square metres or more; or	The replacement of the current floating breakwater structure at the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2. The area is coastal public property.

	(f) infrastructure with a development footprint of 50 square metres or more — but excluding— (aa) the development of infrastructure and structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) the development of temporary infrastructure or structures where such structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared; or (dd) where such development occurs within an urban area.	
48	**The expansion of—** (i) canals where the canal is expanded by 100 square metres or more in size ; (ii) channels where the channel is expanded by 100 square metres or more in size ; (iii) bridges where the bridge is expanded by 100 square metres or more in size; (iv) dams, where the dam, including infrastructure and water surface area, is expanded by 100 square metres or more in size; (v) weirs, where the weir, including infrastructure and water surface area, is expanded by 100 square metres or more in size; (vi) bulk storm water outlet structures where the bulk storm water outlet structure is expanded by 100 square metres or more in size; or **(vii) marinas where the marina is expanded by 100 square metres or more in size;** **where such expansion or expansion and related operation occurs—** (a) within a watercourse; (b) **in front of a development setback; or** (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding— (aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such expansion occurs within an urban area; or (ee) where such expansion occurs within existing roads or road reserves.	The replacement of the current floating breakwater structure in the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2.
49	**The expansion of –** (i) **jetties by more than100 square metres;** (ii) slipways by more than 100 square metres; (iii) buildings by more than 100 square metres; (iv) boardwalks by more than 100 square metres; or (v) **infrastructure or structures where the physical footprint is expanded by 100 square metres or more;** where such expansion or expansion and related operation occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding— (aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or	The replacement of the current floating breakwater structure in the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2.

	activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such expansion occurs within an urban area; or (ee) where such expansion occurs within existing roads or road reserves.		
54	**The expansion of facilities—** **(i) in the sea;** (ii) in an estuary; (iii) within the littoral active zone; (iv) in front of a development setback; or (v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater; **in respect of—** **(a) fixed or floating jetties and slipways;** (b) tidal pools; (c) embankments; (d) rock revetments or stabilising structures including stabilising walls; (e) buildings where the building is expanded by 50 square metres or more; or (f) infrastructure where the development footprint is expanded by 50 square metres or more, but excluding— (aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; or (bb) where such expansion occurs within an urban area.		The replacement of the current floating breakwater structure in the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2.
55	**Expansion—** **(i) in the sea;** (ii) in an estuary; (iii) within the littoral active zone; (iv) in front of a development setback; or **(v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater; in respect of —** (a) facilities associated with the arrival and departure of vessels and the handling of cargo; (b) piers; (c) inter- and sub-tidal structures for entrapment of sand; **(d) breakwater structures;** **(e) coastal marinas;** (f) coastal harbours or ports; (g) tunnels; or (h) underwater channels; but excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.		The replacement of the current floating breakwater structure in the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2.
GN No. R. 985 Activity No(s):	**Describe the relevant Basic Assessment Activity (ies) in writing as per Listing Notice 3 (GN No. R. 546)**		**Describe the portion of the development as per the project description that relates to the applicable listed activity.**
23	**The expansion of—** (i) canals where the canal is expanded by 10 square metres or more in size; (ii) channels where the	(a) **In Western Cape:** i. **Outside urban areas, in:** (aa) **A protected area identified in terms of NEMPAA, excluding conservancies;** (bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by	The replacement of the current floating breakwater structure in the Simon's Town Marina by expanding the jetty which will act as a floating breakwater structure and additional docking bays for vessels. The expanded section will have a length of 330m and a width of 3m resulting in an expansion of 990m^2.

	channel is expanded by 10 square metres or more in size; (iii) bridges where the bridge is expanded by 10 square metres or more in size; (iv) dams where the dam is expanded by 10 square metres or more in size; (v) weirs where the weir is expanded by 10 square metres or more in size; (vi) bulk storm water outlet structures where the structure is expanded by 10 square metres or more in size; (vii) **marinas where the marina is expanded by 10 square metres or more in size;** **(viii) jetties where the jetty is expanded by 10 square**	the competent authority; (ee) Sites or areas listed in terms of an International Convention; (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (gg) Core areas in biosphere reserves; or (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.	

	metres or more in size; (ix) slipways where the slipway is expanded by 10 square metres or more in size; (x) buildings where the building is expanded by 10 square metres or more in size; (xi) boardwalks where the boardwalk is expanded by 10 square metres or more in size; or (xii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more; **where such development occurs—** (a) within a watercourse; (b) **in front of a development setback adopted in the prescribed manner;** or (c) if no development		

	setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.		

If the application is also for activities as per Listing Notice 2 and permission was granted to subject the application to Basic Assessment, also indicate the applicable Listing Notice 2 activities:

GN No. R. 984 Activity No(s):	**If permission was granted in terms of Regulation 20, describe the relevant Scoping and EIA Activity (ies) in writing as per Listing Notice 2 (GN No. R. 545)**	**Describe the portion of the development as per the project description that relates to the applicable listed activity.**
	Not applicable	

Waste management activities in terms of the NEM: WA (Government Gazette No. 32368):

GN No. 718 - Category A Activity No(s):	Describe the relevant Category A waste management activity in writing.
	Not applicable

Please note: If any waste management activities are applicable, the **Listed Waste Management Activities Additional Information Annexure** must be completed and attached to this Basic Assessment Report as **Appendix I.**

If the application is also for waste management activities as per Category B and permission was granted to subject the application to Basic Assessment, also indicate the applicable Category B activities:

Gn no. 718 – category b activity no(s):	Describe the relevant category b waste management activity in writing.
	Not applicable

Atmospheric emission activities in terms of the NEM: AQA (Government Gazette No. 33064):

Gn no. 248- activity no(s):	Describe the relevant atmospheric emission activity in writing.
	Not applicable

(d) Please Provide Details Of All Components Of The Proposed Project And Attach Diagrams (E.G. Architectural Drawings Or Perspectives, Engineering Drawings, Process Flow Charts Etc.).

Buildings	~~YES~~	**NO**
Provide brief description:		
Not applicable		
Infrastructure (e.g. Roads, power and water supply/ storage)	YES	**NO**
Provide brief description:		
Not applicable		
Processing activities (e.g. Manufacturing, storage, distribution)	~~YES~~	**NO**
Provide brief description:		

Not applicable		
Storage facilities for raw materials and products (e.g. Volume and substances to be stored)		
Provide brief description	YES	NO
Not applicable		
Storage and treatment facilities for solid waste and effluent generated by the project	~~YES~~	**NO**
Provide brief description		
Not applicable		

Other activities (e.g. Water abstraction activities, crop planting activities)	**YES**	NO
Provide brief description		

The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a floating breakwater structure and will provide additional moorings for visiting yachts. The layout design can be seen in Figure 7 and an A3 version in Appendix B1: Preferred Alternative, page 63.

The current broken floating breakwater structure will be removed including the engine block, chains and other structures used to anchor it. This will be discarded in an appropriate manner by the contractor.

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 6). The blocks will not be able to move around by sea currents like the current anchoring systems and the Seaflex is designed to not damage the ocean floor with the rise and fall of oceans currents. This will result in less damage to the ocean floor.

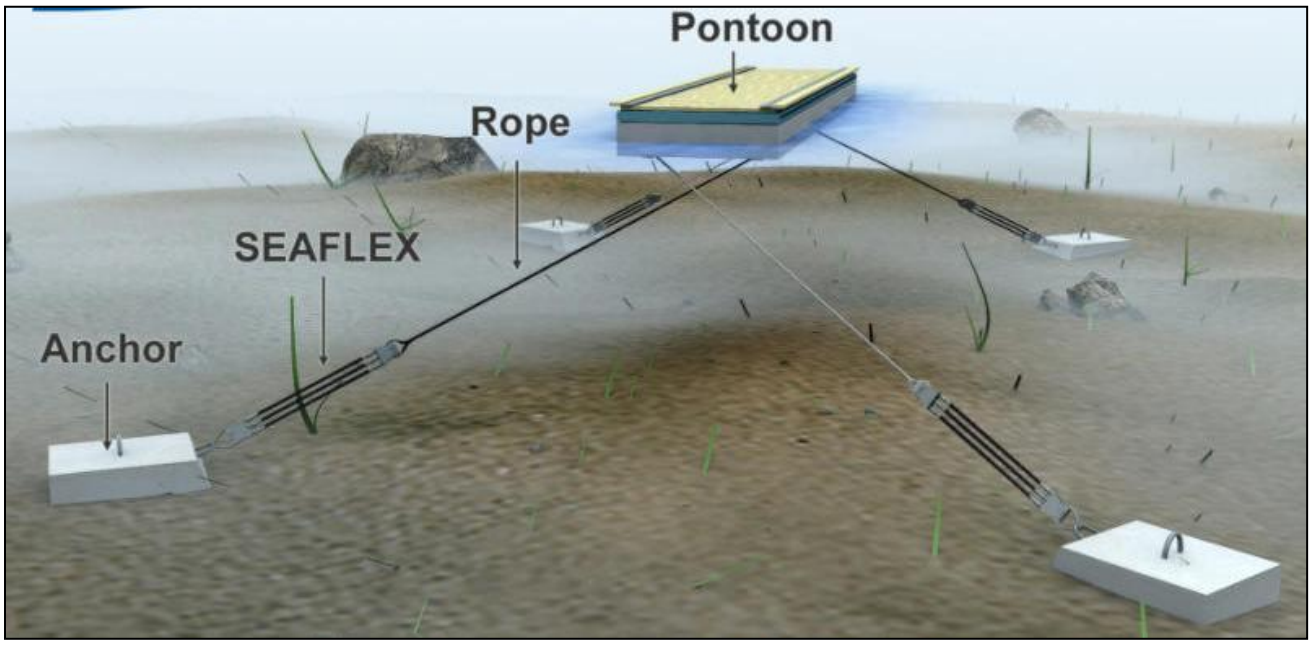


Figure 6: Schematic example of how the breakwater jetty will be anchored by the Seaflex

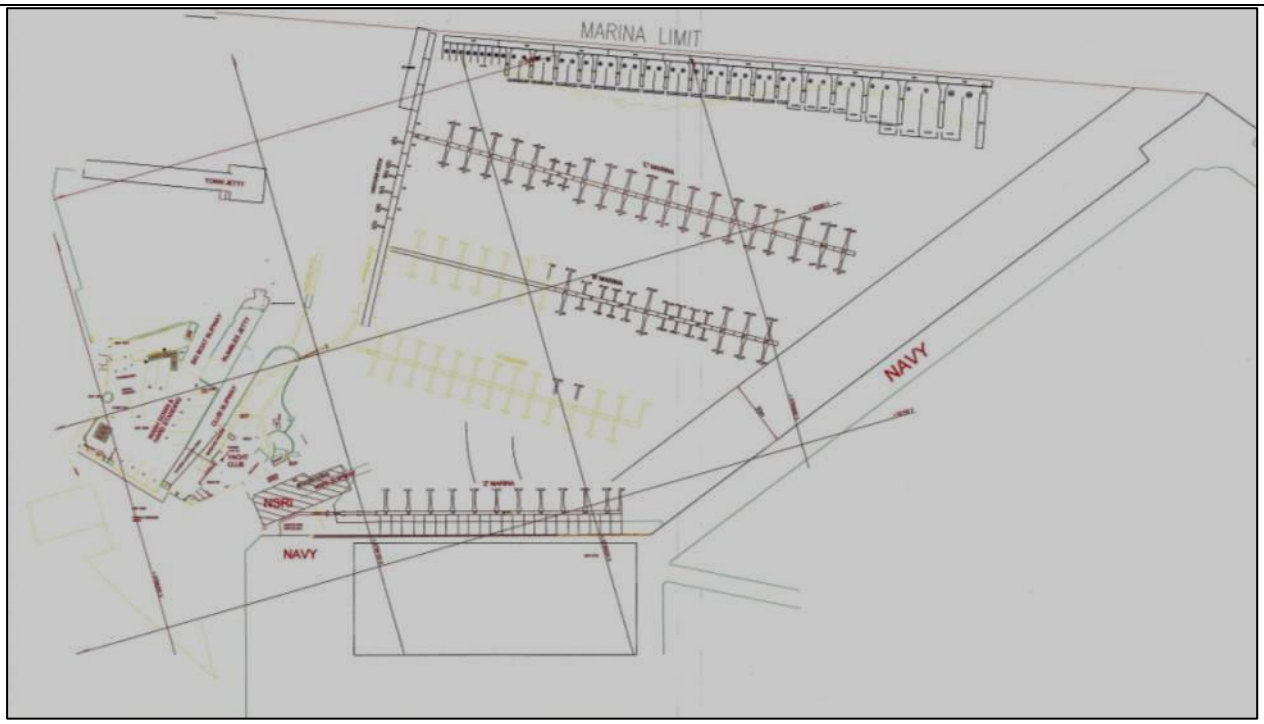


Figure 7: Proposed Layout plan for expansion.

2. Physical Size of the Activity

	Size of the property:
(a) Indicate the size of the property (cadastral unit) on which the activity is to be undertaken.	The proposed project will take place in the sea at the Simon's Town Marina.

	Size of the facility:
(b) Indicate the size of the facility (development area) on which the activity is to be undertaken.	The expansion of the current jetty will be 40m where it will meet the floating breakwater structure that will be approximately 290m long and 3m wide = 990m^2

	Size of the activity:
(c) Indicate the physical size (footprint) of the activity together with its associated infrastructure:	See (b)
(d) Indicate the physical size (footprint) of the activity:	See (b)
(e) Indicate the physical size (footprint) of the associated infrastructure:	See (b)

And, for linear activities:

	Length of the activity:
(f) Indicate the length of the activity:	330m

3. Site Access

(a) Is there an existing access road?	**YES**	~~NO~~
(b) If no, what is the distance over which a new access road will be built?	m	

(c) Describe the type of access road planned:

Not applicable

Please Note: indicate the position of the proposed access road on the site plan.

4. Description Of The Property On Which The Activity Is To Be Undertaken And The Location Of The Activity On The Property

Provide a description of the property on which the activity is to be undertaken and the location of the activity on the property.

The Simon's Town Marina or False Bay Yacht Club is situated in the Simon's Town Harbour in the cold Atlantic ocean and Benguela Current, adjacent to the S.A. Navy Dockyards. Simon's Town forms part of the False Bay Cape Peninsula. The area also falls in the Table Bay Mountain Reserve MPA.

The suburb of the bigger Cape Town region has many historical sites and a great part of the Peninsula is protected.

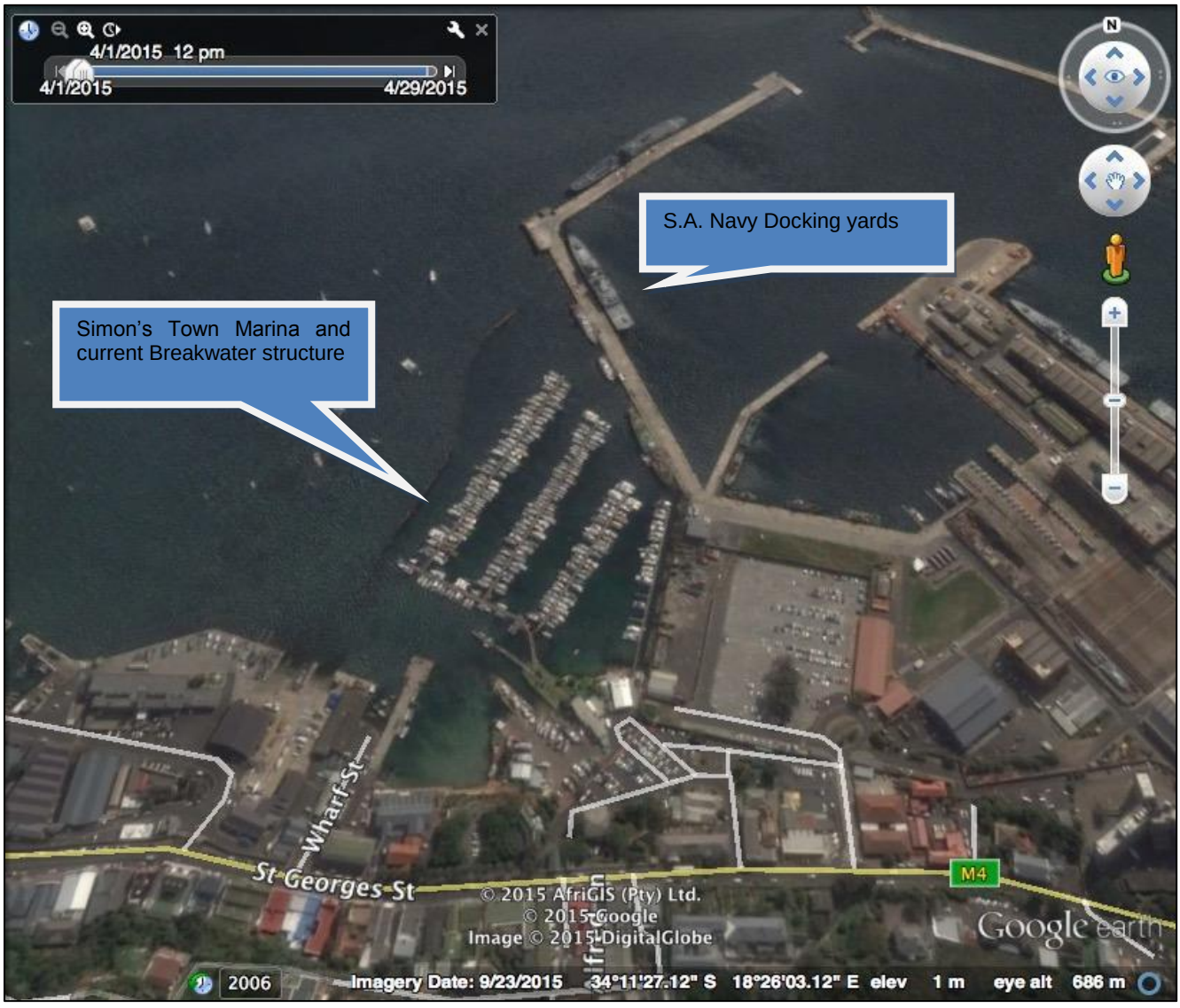


Figure 8: Locality of the Simon's Town Marina

The False Bay Yacht Club was founded in 1958 and is one of only two marinas in the Western Cape, South Africa to have been awarded 'Blue Flag' status. Blue Flag status indicates that the marina is clean, safe and secure, and adheres to

international safety and tourism standards.

The club welcomes many National and International visitors and can accommodate vessels up to 22M (approximately 20tons) on either swing moorings or walk-on marinas.

The Simon's Town Marina Company and applicant (STMC) was established in 2004 by the marina owners to look after the floating walk-on marinas. Their operation includes the management of the marinas, the slip and hard facilities.

Visitors from all over dock at Simon's Town to visit the various activities, sites and activities the area has to offer.

The applicant proposes to replace the outdated breakwater structure with a buoyant jetty structure which will act as a breakwater structure and will provide additional moorings for visiting yachts. The layout design can be seen in Appendix B1: Preferred Alternative, page 63.

The current broken breakwater structure will be removed including the engine blocks, chains and other structures used to anchor it. This will be discarded in an appropriate manner by the contractor at a licensed facility.

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 4). The blocks will not be moved around by sea currents like the current anchoring systems The Seaflex is designed to accommodate the rise and fall of oceans currents, thus will result in less damage to the ocean floor.

Please provide a location map (see below) as **Appendix A (page 62)** to this report which shows the location of the property and the location of the activity on the property; as well as a site map (see below) as **Appendix B (page 63)** to this report; and if applicable all alternative properties and locations.

Locality map:	The scale of the locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; • the prevailing wind direction (during November to April and during May to October); and • GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

Site Plan:	Detailed site plan(s) must be prepared for each alternative site or alternative activity. The site plan must contain or conform to the following: • The detailed site plan must be at a scale preferably at a scale of 1:500 or at an appropriate scale. The scale must be indicated on the plan. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be indicated on the site plan. • The position of each element of the application as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the development must be indicated on the site plan. • Servitudes indicating the purpose of the servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): • Rivers. • Flood lines (*i.*e. 1:10, 1:50, year and 32 meter set back line from the banks of a river/stream). • Ridges. • Cultural and historical features. • Areas with indigenous vegetation (even if it is degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, then a contour map of the site must be submitted.

(c) For a linear activity, please also provide a description of the route.

The proposed project will initially link to the current jetty structure and run for approximately 40 m (Figure 9. A). The

structure will then swing north where the new floating breakwater structure of 250 m will be installed and will double as docking bays for visitors to the Marina (Figure 9, B). An additional section of 40m, swinging North East, will be installed to protect the yachts in the Marina and this will also be a breakwater structure and jetty double (Figure 9, C).

Figure 9: Proposed layout of jetty extension

~~Indicate the position of the activity using the latitude and longitude of the centre point of the site. The co-ordinates must be in degrees, minutes and seconds. The minutes should be given to at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.~~	~~Latitude (S):~~			~~Longitude (E):~~		
	°	’	"	°	’	"

(d) Or:

For linear activities:	Latitude (S):			Longitude (E):		
Starting point of the activity	34°	11‘	28.55“	18°	25‘	57.46“
Staring point of Breakwater	34°	11‘	27.98“	18°	25‘	56.72“
End point of Breakwater	34°	11‘	20.41”	18°	26‘	00.15”
End point of the activity	34°	9‘	20.86“	18°	26‘	01.22“

Please Note: For linear activities that are longer than 500m, please provide and addendum with co-ordinates taken every 100 meters along the route.

5. Site Photographs

Colour photographs of the site and its surroundings (taken of the site and from the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached as **Appendix C (page 65)** to this report. It should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.

Section B: Description of Receiving Environment

Site/Area Description

For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete copies of this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area which is covered by each copy No. on the Site Plan.

1. Gradient of the Site

Indicate the general gradient of the sites (highlight the appropriate box).

Flat	~~Flatter than 1:10~~	~~1:10 – 1:4~~	~~Steeper than 1:4~~

2. Location in Landscape

Indicate the landform(s) that best describes the site (highlight the appropriate box (es).

~~Ridgeline~~	~~Plateau~~	~~Side slope of hill/mountain~~	~~Closed valley~~	~~Open valley~~	~~Plain~~	~~Undulating plain/low hills~~	~~Dune~~	**Sea-front**

(b) Please provide a description of the location in the landscape.

The Simon's Town Marina or False Bay Yacht Club is situated in the Simon's Town Harbour in the cold Atlantic ocean and Benguela Current, adjacent to the S.A. Navy Dockyards. Simon's Town forms part of the False Bay Cape Peninsula. The area also falls in the Table Bay Mountain Reserve MPA.

The suburb of the bigger Cape Town region has many historical sites and a great part of the Peninsula is protected as part of the Table Mountain National Park.

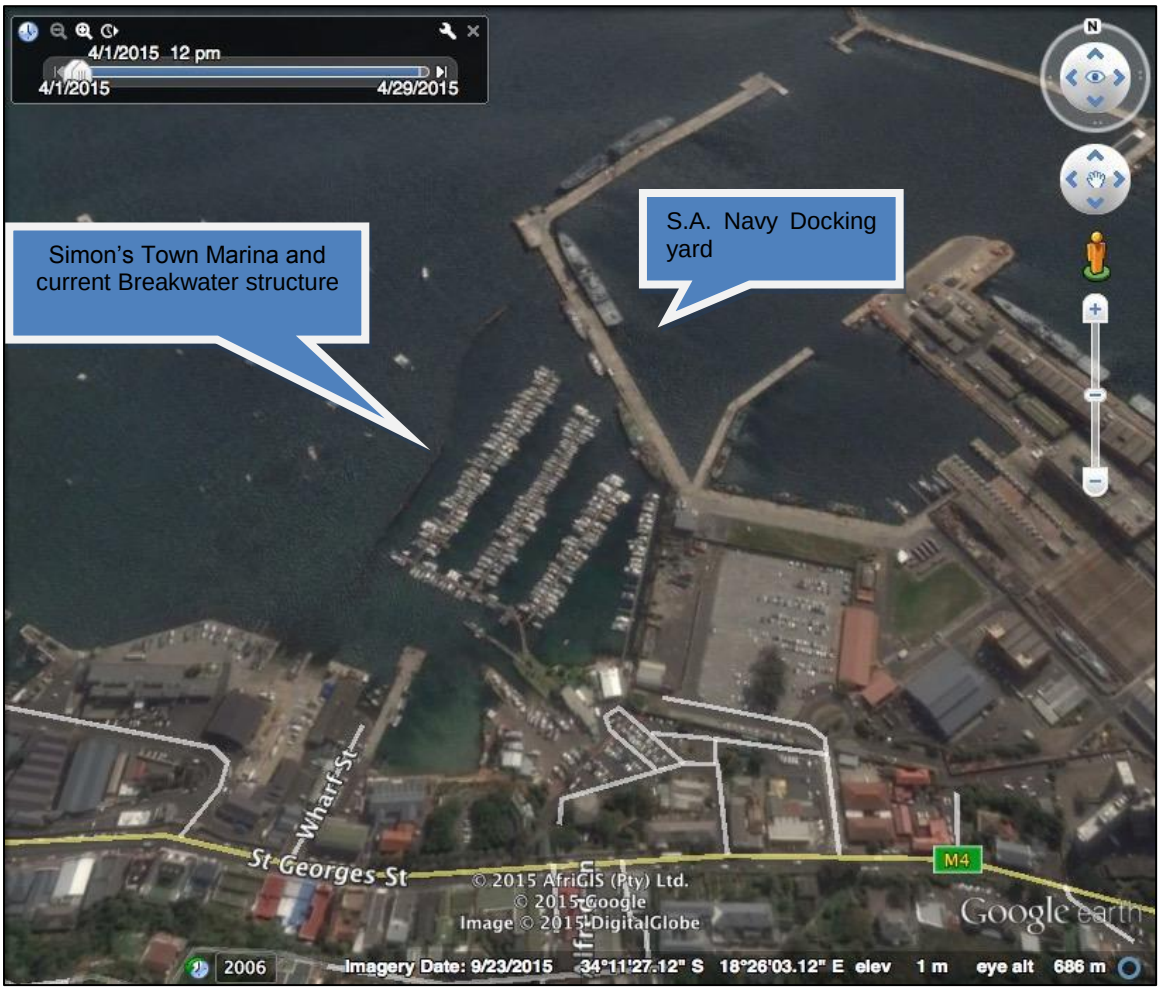


Figure 10: Locality of the Simon's Town Marina

The False Bay Yacht Club was founded in 1958 and is one of only two marinas in the Western Cape, South Africa to have

been awarded 'Blue Flag' status. Blue Flag status indicates that the marina is clean, safe and secure, and adheres to international safety and tourism standards.

The club welcomes many National and International visitors and can accommodate vessels up to 22M (approximately 20tons) on either swing moorings or walk-on marinas.

The Simon's Town Marina Company and applicant (STMC) was established in 2004 by the marina owners to look after the floating walk-on marinas. Their operation includes the management of the marinas, the slip and hard facilities.

Visitors from all over dock at Simon's Town to visit the various activities, sites and activities the area provides.

3. Groundwater, Soil and Geological Stability of the Site

(a) Is the site(s) located on or near any of the following (highlight the appropriate boxes)?

Shallow water table (less than 1.5m deep)	~~YES~~	**NO**	~~UNSURE~~
Seasonally wet soils (often close to water bodies)	~~YES~~	**NO**	~~UNSURE~~
Unstable rocky slopes or steep slopes with loose soil	~~YES~~	**NO**	~~UNSURE~~
Dispersive soils (soils that dissolve in water)	~~YES~~	**NO**	~~UNSURE~~
Soils with high clay content	~~YES~~	**NO**	~~UNSURE~~
Any other unstable soil or geological feature	~~YES~~	**NO**	~~UNSURE~~
An area sensitive to erosion	~~YES~~	**NO**	~~UNSURE~~
An area adjacent to or above an aquifer.	~~YES~~	**NO**	~~UNSURE~~
An area within 100m of the source of surface water	~~YES~~	**NO**	~~UNSURE~~

(b) If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department. (Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

Please indicate the type of geological formation underlying the site.

Granite	~~Shale~~	~~Sandstone~~	~~Quartzite~~	~~Dolomite~~	~~Dolorite~~	**Other**

Please provide a description.

The proposed site is located within the Atlantic ocean, in the Simon's Town Marina at Simon's Town. Soils surrounding Simon's Town have been described as granite, or rock with limit soil present.

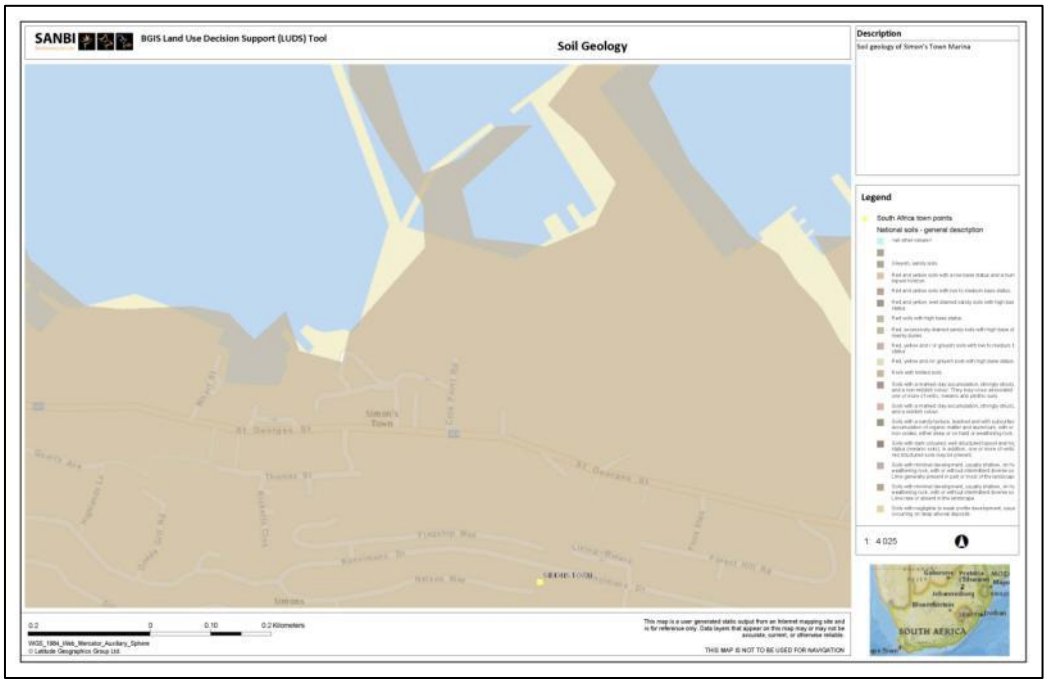


Figure 11: Soil classification of Simon's Town

4. Surface Water

Indicate the surface water present on and or adjacent to the site and alternative sites (highlight the appropriate boxes)?

Perennial River	YES	**NO**	UNSURE
Non-Perennial River	YES	**NO**	UNSURE
Permanent Wetland	YES	**NO**	UNSURE
Seasonal Wetland	YES	**NO**	UNSURE
Artificial Wetland	YES	**NO**	UNSURE
Estuarine / Lagoonal wetland	YES	**NO**	UNSURE

Please provide a description.

The site is situated within the Atlantic ocean, at Simon's Town Marina, Simon's Town, adjacent to the S.A. Navy Docking yards.

5. Biodiversity

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (CD) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as **Appendix D (page 71)** to this report.

Highlight the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category).

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
~~Critical Biodiversity Area (CBA)~~	~~Ecological Support Area (ESA)~~	**Other Natural Area (ONA)**	~~No Natural Area Remaining (NNR)~~	Not Applicable

Highlight and describe the habitat condition on site.

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes etc).
Natural	%	
Near Natural(includes areas with low to moderate level of alien invasive plants)	%	
Degraded(includes areas heavily invaded by alien plants)	100%	
Transformed(includes cultivation, dams, urban, plantation, roads, etc)	100%	The area is highly transformed with the S.A. Navy Dock yard to the North-East of the site and other building surrounding the harbour and Marina.

(c) Complete the table to indicate:
(i) The type of vegetation, including its ecosystem status, present on the site; and
(ii) Whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems		
Ecosystem threat status as per the	Critical	Wetland (including rivers,	Estuary	Coastline: The

National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Endangered Vulnerable – Least Threatened	depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)					site is situated in the Simon's Town Marina, net to the S.A. Navy Dock yard	
		~~YES~~	**NO**	~~UNSURE~~	~~YES~~	**NO**	**YES**	~~NO~~

The site is situated within the Simon's Town Marina, adjacent to the S.A. Navy Dock Yard. The area is also next to the Table Mountain Mountain National MPA which has been proclaimed to prohibit fishing and harvesting of marine life.

6. Land Use of the Site

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies.

~~Untransformed area~~	~~Low density residential~~	~~Medium density residential~~	~~High density residential~~	~~Informal residential~~
~~Retail~~	~~Commercial & warehousing~~	~~Light industrial~~	~~Medium industrial~~	~~Heavy industrial~~
~~Power station~~	~~Office/consulting room~~	~~Military or police base/station/compound~~	~~Casino/entertainment complex~~	**Tourism & Hospitality facility**
~~Open cast mine~~	~~Underground mine~~	~~Spoil heap or slimes dam~~	~~Quarry, sand or borrow pit~~	~~Dam or reservoir~~
~~Hospital/medical centre~~	~~School~~	~~Tertiary education facility~~	~~Church~~	~~Old age home~~
~~Sewage treatment plant~~	~~Train station or shunting yard~~	~~Railway line~~	~~Major road (4 lanes or more)~~	~~Airport~~
Harbour	~~Sport facilities~~	~~Golf course~~	~~Polo fields~~	~~Filling station~~
~~Landfill or waste treatment site~~	~~Plantation~~	~~Agriculture~~	~~River, stream or wetland~~	~~Nature conservation area~~
~~Mountain, koppie or ridge~~	~~Museum~~	~~Historical building~~	~~Graveyard~~	~~Archaeological site~~
Other land uses (describe):	The site is situated in the Atlantic Ocean, in the Simon's Town Marina			

Please provide a description.

The site is situated in the Simon's Town Marina and will be an extension of the marina self. The Marina provides docking bays for local and international visitors who wish to stay on their yacht or explore the surroundings of Simon's Town.

7. Land Use Character of Surrounding Area

Highlight the current land uses and/or prominent features that occur within +/- 500m radius of the site and neighbouring properties if these are located beyond 500m of the site.

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies.

~~Untransformed area~~	~~Low density residential~~	~~Medium density residential~~	~~High density residential~~	~~Informal residential~~
Retail	**Commercial & warehousing**	**Light industrial**	~~Medium industrial~~	~~Heavy industrial~~
~~Power station~~	~~Office/consulting room~~	**Military or police base/station/compound**	~~Casino/entertainment complex~~	**Tourism & Hospitality facility**

~~Open cast mine~~	~~Underground mine~~	~~Spoil heap or slimes dam~~	~~Quarry, sand or borrow pit~~	~~Dam or reservoir~~
~~Hospital/medical centre~~	~~School~~	~~Tertiary education facility~~	~~Church~~	~~Old age home~~
~~Sewage treatment plant~~	~~Train station or shunting yard~~	~~Railway line~~	~~Major road (4 lanes or more)~~	~~Airport~~
Harbour	~~Sport facilities~~	~~Golf course~~	~~Polo fields~~	~~Filling station~~
~~Landfill or waste treatment site~~	~~Plantation~~	~~Agriculture~~	~~River, stream or wetland~~	~~Nature conservation area~~
~~Mountain, koppie or ridge~~	~~Museum~~	~~Historical building~~	~~Graveyard~~	~~Archaeological site~~
Other land uses (describe):	Beach, coastal road			

Please provide a description, including the distance and direction to the nearest residential area and industrial area.

The Marina is situated at the Simon's Town Harbour. North East of the site, the S.A. Navy Dockyards can be found. The Marina provides docking facilities for local and international visitors to the Marina and surrounding areas.

Figure 12: Locality of Simon's Town Marina

8. Socio-Economic Aspects

Describe the existing social and economic characteristics of the community in order to provide baseline information.

Simon's Town forma part of the bigger Cape Town metropolitan area and falls under the City of Cape Town Municipality.

According to the Socio-Economic Profile (2014)1 the City of Cape town has a population size of 3 882 662 with a population growth of 2.3% per year.

The area has a gross domestic product of R194 647 billion where the top contributing sectors are finance, insurance, real estate ad business services (33.7%), wholesale and retail trade, catering and accommodation (19.3%), general government (11.7%) and manufacturing (11.5%).

The municipality has an unemployment rate of 23.9% and a literacy rate of 90.5%

Simon's town harbour is the main base of the S.A. Navy and the town also form part of the Cape Metrorail.

[1]https://www.westerncape.gov.za/assets/departments/treasury/Documents/Socio-economic-profiles/2014/dc00_city_of_cape_town_seplg_2014_f.pdf

9. Historical and Cultural Aspects

(a) Please be advised that if section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), is applicable to your proposed development, then you are requested to furnish this Department with written comment from Heritage Western Cape as part of your public participation process. Section 38 of the Act states as follows: "*38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-*

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
(i) exceeding 5 000 m2 in extent; or
(ii) involving three or more existing erven or subdivisions thereof; or
(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,

must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development."

(b) The impact on any national estate referred to in section 3(2), excluding the national estate contemplated in section 3(2) (i) (VI) and (vii), of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), must also be investigated, assessed and evaluated. Section 3(2) states as follows: "*3(2) Without limiting the generality of subsection (1), the national estate may include—*

(a) places, buildings, structures and equipment of cultural significance;
(b) places to which oral traditions are attached or which are associated with living heritage;
(c) historical settlements and townscapes;
(d) landscapes and natural features of cultural significance;
(e) geological sites of scientific or cultural importance;
(f) Archaeological and paleontological sites;
(g) graves and burial grounds, including—
(i) ancestral graves;
(ii) royal graves and graves of traditional leaders;
(iii) graves of victims of conflict;
(iv) graves of individuals designated by the Minister by notice in the Gazette;
(v) historical graves and cemeteries; and
(vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
(h) sites of significance relating to the history of slavery in South Africa;
(i) movable objects, including—
(i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
(ii) objects to which oral traditions are attached or which are associated with living heritage;
(iii) ethnographic art and objects;
(iv) military objects;
(v) objects of decorative or fine art;
(vi) objects of scientific or technological interest; and
(vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)."

Is section 38 of the National Heritage Resources Act, 1999, applicable to the development?		**YES**	~~NO~~
		~~UNCERTAIN~~	
If YES, explain:	The breakwater/jetty to be expanded and constructed will have a total length of 330m and will therefore trigger section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), (a).		
	A NID will be submitted to HWC where they will comment on whether a HIA will be needed. See Appendix E2: NID to HWC, page 74.		
Will the development impact on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999?		~~YES~~	NO
		~~UNCERTAIN~~	
If YES, explain:			

Will any building or structure older than 60 years be affected in any way?	~~YES~~	NO	~~UNCERTAIN~~
If YES, explain:			

Please Note: If uncertain, the Department may request that specialist input be provided.

10. Applicable Legislation, Policies and/or Guidelines

Please list all legislation, policies and/or guidelines that have been considered in the preparation of this Basic Assessment Report.

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorisation/comment / relevant consideration (e.g. rezoning or consent use, building plan approval)	DATE (if already obtained):
National Environmental Management Act, 1998 (Act No. 107 of 1998) and the 2014 Environmental Impact Assessment Regulations	DEA&DP	Environmental authorisation	Pending
National Environmental Management Act, 1998 (Act No. 107 of 1998) and the 2014 Environmental Impact Assessment Regulations	DEA; Oceans & Coasts	Comment	Pending
National Heritage Resources Act, 1999 (Act No. 25 of 1999), Section 38	Heritage Western Cape	NID has been submitted	Pending

POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
Guidelines on PPP	DEA&DP
Guidelines on Alternatives	DEA&DP
Guidelines on Need and Desirability	DEA&DP

Please describe how the legislation, policies and/or guidelines were taken into account in the preparation of this Basic Assessment Report.

LEGISLATION / POLICY / GUIDELINE	DESCRIBE HOW THE LEGISLATION / POLICY / GUIDELINE WERE TAKEN INTO ACCOUNT (e.g. describe the extent to which it was adhered to, or deviated from, etc).
NEMA	The activity was designed to have minimal impact on the environment and to maximize potential positive impacts.
Heritage Resources Act	The activity was designed to have a minimal impact on the national heritage resources.

Please note: Copies of any permit(s) or licences received from any other organ of state must be attached this report as **Appendix E (page 73)**.

Section C: Public Participation

The public participation process must fulfil the requirements outlined in NEMA, the EIA Regulations, and if applicable the NEM: WA and/or the NEM: AQA. This Department's *Guideline on Public Participation* (August 2010) and *Guideline on Exemption Applications* (August 2010), both of which are available on the Department's website (**http://www.capegateway.gov.za/eadp**), must also be taken into account.
See Appendix F (page 80)

Please highlight the appropriate box to indicate whether the specific requirement was undertaken or whether there was a deviation that was agreed to by the Department.

1. Were all potential interested and affected parties notified of the application by –			
(a) fixing a notice board at a place conspicuous to the public at the boundary or on the fence of -			
(i) the site where the activity to which the application relates is to be undertaken; and	**YES**	~~DEVIATED~~	
(ii) any alternative site mentioned in the application;	**YES**	~~DEVIATED~~	
(b) giving written notice to –			
(i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;	**YES**	~~N/A~~	
(ii) the occupiers of the site where the activity is to be undertaken and to any alternative site where the activity is to be undertaken;	**YES**	~~DEVIATED~~	
(iii) owners and occupiers of land adjacent to the site where the activity is to be undertaken and to any alternative site where the activity is to be undertaken;	**YES**	~~DEVIATED~~	
(iv) the municipal councillor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community in the area;	**YES**	~~DEVIATED~~	
(v) the municipality which has jurisdiction in the area;	**YES**	~~DEVIATED~~	
(vi) any organ of state having jurisdiction in respect of any aspect of the activity; and	**YES**	~~DEVIATED~~	
(vii) any other party as required by the competent authority;	**YES**	~~DEVIATED~~	
I placing an advertisement in -			
(i) one* local newspaper; and	**YES**	~~DEVIATED~~	
(ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	~~YES~~	~~DEVIATED~~	**N/A**
(d) placing an advertisement in at least one* provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken.	~~YES~~	~~DEVIATED~~	**N/A**

* **Please note:** In terms of the NEM: WA and NEM: AQA a notice must be placed in at least two newspapers circulating in the area in which the activity applied for is to be carried out.

2. Provide a list of all the state departments that were consulted:
Department of Environmental Affairs: Coastal Management Unit
City of Cape Town
Cape Nature
HWC
Department of Environmental Affairs (Oceans and Coasts)
Department of Agriculture and Fisheries
Department of Defence

3. Please provide an overall summary of the Public Participation Process that was followed. (The detailed outcomes of this process must be included in a comments and response report to be attached to the final Basic Assessment Report (see note below) as Appendix F).
Public participation included the following: **REGISTRATION AND ADVERTISEMENT** An Advertisement was placed in the False Bay Echo on Thursday 16 March 2016, notifying I&AP's of the proposed development and of the opportunity to register for the public participation process and notification to provide comments on the dBAR. The dBAR is part of the pre-application public participation process and will be distributed for 30 day PPP before the submission of the Application. This advertisement served as a notice for registration as an Interested and Affected Parties and provides comments on the

dBAR as part of the unofficial public participation process. The registration/comment period was from the Tuesday 22 March 2016 until Monday 25 April 2016.

NOTICE BOARD (APPENDIX F3: SITE NOTICE AND LOCALITY, PAGE84)

A Notice Board was placed at the False Bay Yacht Club entrance on the Tuesday 22 March 2016 (see Appendix F3).

INFORMATION AND REPORTING FOR THE FORMAL PROCESS (APPENDIX F4: PROOF OF NOTIFICATIONS, PAGE 86)

A notice that included the Executive Summary was made available and distributed by registered post to all registered I&APs and neighbours for the 30 day commenting period, from 22 March 2016 until 25 April 2016. The notice also informed all I&AP's of the availability of the draft Basic Assessment Report which could be obtained from the EAP. Comments received will be placed in the Final Basic Assessment Report. The actual comments received on the Executive Summary and Draft Basic Assessment Report, as part of the public participation is shown in section. Digital copies were made available to those who requested it.

Hard copies or digital copies of the report were sent to DEA&DP: Coastal Development Unit, Heritage Western Cape, Department of Environmental Affairs (Oceans and Coasts), Cape Nature, Department of Agriculture, Forestry and Fisheries, Department of Defence and the City of Cape Town Municipal Manager and Ward Councillor.

I&AP DATABASE (APPENDIX F1: I&AP LIST, PAGE 80)

The I&AP database in Appendix F1 was compiled from registered and listed I&APs. The database will be updated to include new I&AP's that have submitted comments on the Draft Basic Assessment Report

COMMENTS AND RESPONSES (APPENDIX F5: COMMENTS RECEIVED, PAGE 92)

The actual comments received on the draft report will be included in Appendix F5. The comments and response sheet is included in Appendix F6.

Please note:
Should any of the responses be "No" and no deviation or exemption from that requirement was requested and agreed to /granted by the Department, the Basic Assessment Report will be rejected.
A list of all the potential interested and affected parties, including the organs of State, notified and a list of all the register of interested and affected parties must be submitted with the final Basic Assessment Report. The list of registered interested and affected parties must be opened, maintained and made available to any person requesting access to the register in writing.
The draft Basic Assessment Report must be submitted to the Department before it is made available to interested and affected parties, including the relevant organs of State and State departments which have jurisdiction with regard to any aspect of the activity, for a 40-day commenting period. With regard to State departments, the 40-day period commences the day after the date on which the Department as the competent/licensing authority requests such State department in writing to submit comment. The applicant/EAP is therefore required to inform this Department in writing when the draft Basic Assessment Report will be made available to the relevant State departments for comment. Upon receipt of the Draft Basic Assessment Report and this confirmation, this Department will in accordance with Section 24O (2) and (3) of the NEMA request the relevant State departments to comment on the draft report within 40 days.
All comments of interested and affected parties on the draft Basic Assessment Report must be recorded, responded to and included in the Comments and Responses Report included as Appendix F to the final Basic Assessment Report. If necessary, any amendments in response to comments received must be effected in the Basic Assessment Report itself.
The Comments and Responses Report must also include a description of the public participation process followed.
The final Basic Assessment Report must be made available to registered interested and affected parties for comment before submitting it to the Department for consideration. Unless otherwise indicated by the Department, a final Basic Assessment Report must be made available to the registered interested and affected parties for comment for a minimum of 21-days. Comments on the final Basic Assessment Report does not have to be responded to, but the comments must be attached to the final Basic Assessment Report.
The minutes of any meetings held by the EAP with interested and affected parties and other role players which record the views of the participants must also be submitted as part of the public participation information to be attached to the final Basic Assessment Report as **Appendix F.**
Proof of all the notices given as indicated, as well as of notice to the interested and affected parties of the availability of the draft Basic Assessment Report and final Basic Assessment Report must be submitted as part of the public participation information to be attached to the final Basic Assessment Report as **Appendix F (page 86)**.

Section D: Need and Desirability

Please Note: Before completing this section, first consult this Department's *Guideline on Need and Desirability* (August 2010) available on the Department's website (**http://www.capegateway.gov.za/eadp**).

NO PLANNING APPLICATION OR AUTHORISATION IS REQUIRED FOR THE PROPOSED PROJECT

1. Is the activity permitted in terms of the property's existing land use rights?	**YES**	~~NO~~	Please explain
The activity is permitted. Consent will be granted by the rightful owners.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	**YES**	NO	Please explain
The activity will be inline with POLICY E3: REVITALISE AND STRENGTHEN URBAN SPACE-ECONOMIES AS THE ENGINE OF GROWTH nr. 5 which state Existing economic assets (e.g. CBDs, township centres, modal interchanges, vacant and under-utilised strategically located public land parcels, fishing harbours, public squares and markets, etc) to be targeted to lever the regeneration and revitalisation of urban economies. By expansion of the current marina, it will pave the way for local and international visitors to visit Simon's Town and surrounding areas. This can bring in internationally investors and will help accelerate economic growth in the area. POLICY S1: PROTECT, MANAGE AND ENHANCE SENSE OF PLACE, CULTURAL AND SCENIC LANDSCAPES nr. 4 states: Use heritage resources, such as the adaptive use of historic buildings, to enhance the character of an area, stimulate urban regeneration, encourage investment and create tourism opportunities, while ensuring that interventions in these heritage contexts are consistent with local building and landscape typologies, scale, massing, form and architectural idiom. The expansion of the Marina will be in line with the aesthetics of the Marina and will enhance urban regeneration by allowing more visitors to be able to access the Marina and the historical Simon's Town.			
(b) Urban edge / Edge of Built environment for the area	**YES**	~~NO~~	Please explain
The activity will be on the Edge of Built, outside of the Urban Edge environmental and will be in line with it, for the Marina is already existing			
(c) Integrated Development Plan and Spatial Development Framework of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	~~YES~~	**NO**	Please explain
The proposed development will not compromise the integrity of the Municipal SDF or IDP as it is situated within the City of Cape Town.			
(d) Approved Structure Plan of the Municipality	~~YES~~	**NO**	Please explain
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	~~YES~~	**NO**	Please explain
Not Applicable			
(f) Any other Plans (e.g. Guide Plan)	~~YES~~	**NO**	Please explain

3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	~~YES~~	**NO**	Please explain
The activity is not identified as a priority in the IDP.			
4. Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur here at this point in time?	**YES**	~~NO~~	Please explain
The development is needed to protect the Marina from damage from strong winds and wave actions. If not implemented, many boats will be damaged and local and international visitors will be lost, taking with them their financial inputs to the area.			
5. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	**YES**	~~NO~~	Please explain
The activity is necessary in a local context. Visitors to the Marina dock their yachts at the Marina and bring with them foreign currency. They contribute to the local community by utilising resources, activities and services provided by Simon's Town and Cape Town.			

6. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix E.)	**YES**	~~NO~~	Please explain
No services needed			
7. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix E.)	~~YES~~	**NO**	Please explain
The development is not provided for in the infrastructure planning of the municipality and it will not have an effect on the planning.			
8. Is this project part of a national programme to address an issue of national concern or importance?	~~YES~~	**NO**	Please explain
Not applicable			

9. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	**YES**	~~NO~~	Please explain
The Marina already exists. The jetty expansion will double as a breakwater structure to protect the yachts docked at the Marina and will also provide additional docking bays.			
10. How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	Please explain		
The activities will not impact on sensitive natural areas for no vegetation is present on site. The site is also not situated in any CBA or MPA.			
11. How will the development impact on people's health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc)?	Please explain		
The proposed rehabilitation will be in line with the visual character of the site. The activity will also not affect the sense of place. The activity will not add to noise and odour levels in the area.			
12. Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?	~~YES~~	**NO**	Please explain
The activity will be funded by private investors.			
13. What will the cumulative impacts (positive and negative) of the proposed land use associated with the activity applied for, be?	Please explain		
The removal of the current engine blocks and chains will result in less harmful, eroding substances in the water. The un-adaptability of the chains, to the rise and fall of ocean levels due to tides, results in the damage to the ocean floor and living organisms on the ocean floor. By installing fixed concrete blocks and the Seaflex, less harm will be done to the ocean floor and the concrete blocks will provide an area for organisms to establish a habitat. The structures will not erode as chains and engine blocks do.			
14. Is the development the best practicable environmental option for this land/site?	**YES**	~~NO~~	Please explain
The option is more environmentally friendly than the current breakwater structures installed.			
15. What will the benefits be to society in general and to the local communities?			Please explain
As far as economic advantages we bring with our marina, which will be enhanced with the expansion, we include the following: o Use of B&B accommodation, as they are tired of living on a boat o Car hire o Restaurants o Visits to game parks and reserves o Visits to wine farms o Visits to informal settlements, increasing understanding of our problems o Purchase of curios o Provide work for local maintenance contractors and their labour o Purchase of clothing and luxury items			

o Bringing foreign currency into the country
16. Any other need and desirability considerations related to the proposed activity? | Please explain
None

(17) Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account:

Section 23 of NEMA	Implementation for this proposed development
(a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;	The needs of people, the economy of the area and the environment were considered in developing the preferred option.
(b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximizing benefits, and promoting compliance with the principles of environmental management set out in section 2;	The selected development area was chosen due to the low impact on the environment. The type of development also ensured low impacts on the environment whereas the socio-economic conditions were maximised directly.
(c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;	The selected development option ensured minimal impacts on the natural environment.
(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;	The public were kept informed through distribution of information as required by the regulations.
(e) ensure the consideration of environmental attributes in management and decision making which may have a significant effect on the environment; and	Attributes such as socio economy and the least harmful option to the environment were identified which aided the identification of the proposed development.
(f) identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.	Environmental management principles were used to identify the type of project which in this case will contribute to the economy of the region while at the same time have minimal negative impacts on the natural environment. In other words, the proposed development is in line with the opportunities and constraints of the land, the surrounding area and the region's economy.

(18) Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account:

In achieving sustainable development the focus therefore may not be restricted to environmental or nature conservation factors only. It should include economic and social realities and also consider social factors such as those that determine income, quality of life, social networks, and other means aimed at maintaining and improving the well-being of people. Economic factors deal with the affordability of processes, their potential to generate an income over an extended period (into future generations) and to maintain its ability to support both the environmental and social needs of an area.

In short, if people are impoverished, there will be no environment to protect; if a project is not attractive economically, it will not be launched.

One way of testing whether a project meets with the demands of sustainability in development is to establish whether or not a project increases environmental, social, and economic values. Sustainable development mainly has as its aim the maintenance of environmental capital. This is achieved if the project that will be established in the developmental process is likely to provide at least the same value as is likely to be destroyed by its development.

Looking at the three tiers of NEMA principles, this development should be socially, environmentally, and economically viable.

They are summarised for this project as follows:

SOCIALLY:

The development will meet the local and regions needs through securing job opportunities as the additional docking bays for local and international visitors will lead to the use of the activities, products and services provided by the locals of Simon's Town and the bigger Cape Town metropolitan area. Construction will also provide job opportunities for local contractors and their labour.

ECONOMICALLY:

The development will have a positive impact by improving the economy of local workers through providing job opportunities

during construction. The proposed development will secure the employment of current local employees of Simon's Town and the businesses, services and activities it has to offer. International visitors may see investment opportunities in the area and bring with them their international currencies which will help further economic growth for the area and the country.

ENVIRONMENTALLY:

- The development will have a small negative impact on any natural vegetation on the ocean but this is outweighed by the current damaging and eroding structures that keep the broken breakwater a float and anchored. It will, however, have many positive impacts that include:
- Will provide temporary job opportunities for local workers during construction.
- Contributing to local economy by local and international visitors docking at the Marina to visit the Peninsula.
- Creating a habitat for living organisms to attach to
- Removing the damaging and eroding chains and engine blocks
- Providing shelter for boats from the changing winds and waves in the Peninsula.

Section E: Alternatives

Please Note: Before completing this section, first consult this Department's *Guideline on Alternatives* (August 2010) available on the Department's website (**http://www.capegateway.gov.za/eadp**).

"Alternatives", in relation to a proposed activity, means different means of meeting the general purposes and requirements of the activity, which may include alternatives to –
(a) the property on which, or location where, it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

The NEMA prescribes that the procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment must, *inter alia*, with respect to every application for environmental authorisation –

- ensure that the general objectives of integrated environmental management laid down in NEMA and the National Environmental Management Principles set out in NEMA are taken into account; and
- include an investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity.

The general objective of integrated environmental management is, inter alia, to "identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management" set out in NEMA.

1. In the sections below, please provide a description of any indentified and considered alternatives and alternatives that were found to be feasible and reasonable.
   Please note: Detailed written proof the investigation of alternatives must be provided and motivation if no reasonable or feasible alternatives exist.

(a) Property and location/site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

No site alternatives are considered for the following reasons:

- The floating breakwater structure is situated at a fixed position and the jetty will be installed at this location to prevent further damage to the ocean floor.
- The proposed jetty expansion will fall within the harbour footprint where development is allowed.

(b) Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

ALTERNATIVE A: EXPANSION OF CURRENT JETTY TO ACT AS A BREAKWATER AND DOCKING BAYS

The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a breakwater structure and will provide additional moorings for visiting yachts. The layout design can be seen in Appendix B1: Preferred Alternative, page 63.

The current broken breakwater structure will be removed including the engine block, chains and other structures used to anchor it. This will be discarded in an appropriate manner by the contractor.

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 13). The blocks will not be moved around by sea currents like the current anchoring systems and the Seaflex is designed to accommodate the rise and fall of oceans currents,thus will result in less damage to the ocean floor.

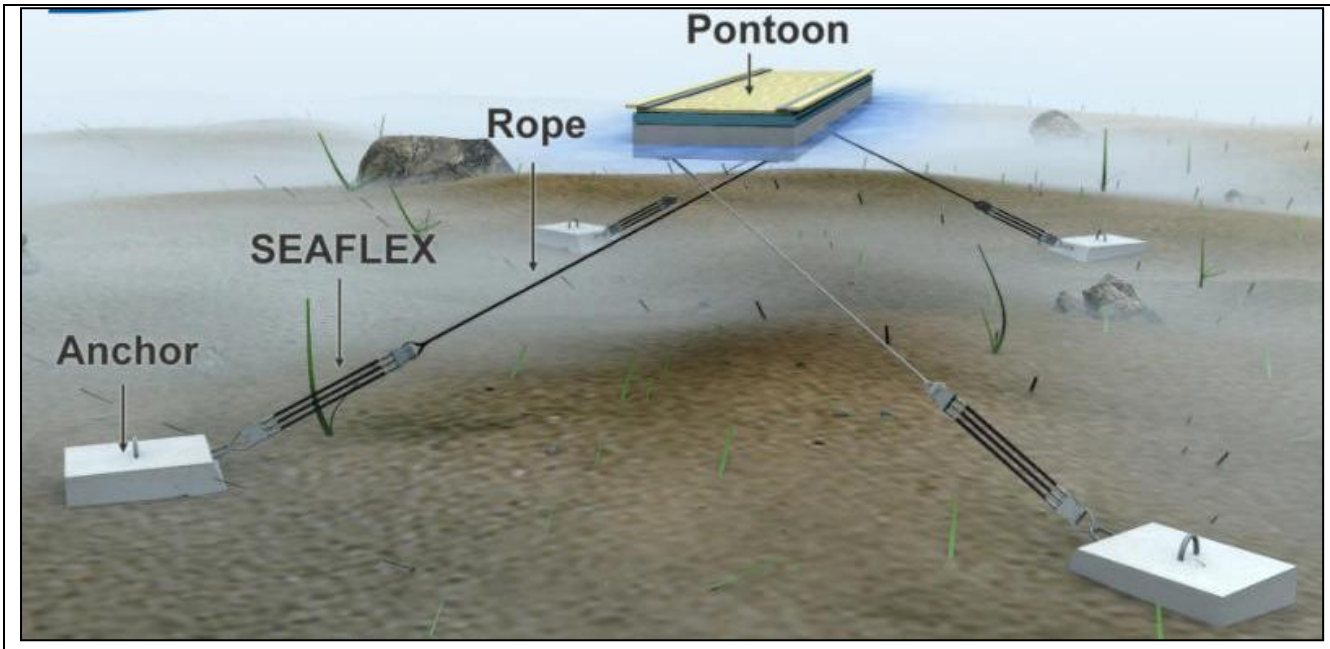


Figure 13: Schematic example of how the breakwater jetty will be anchored by the Seaflex

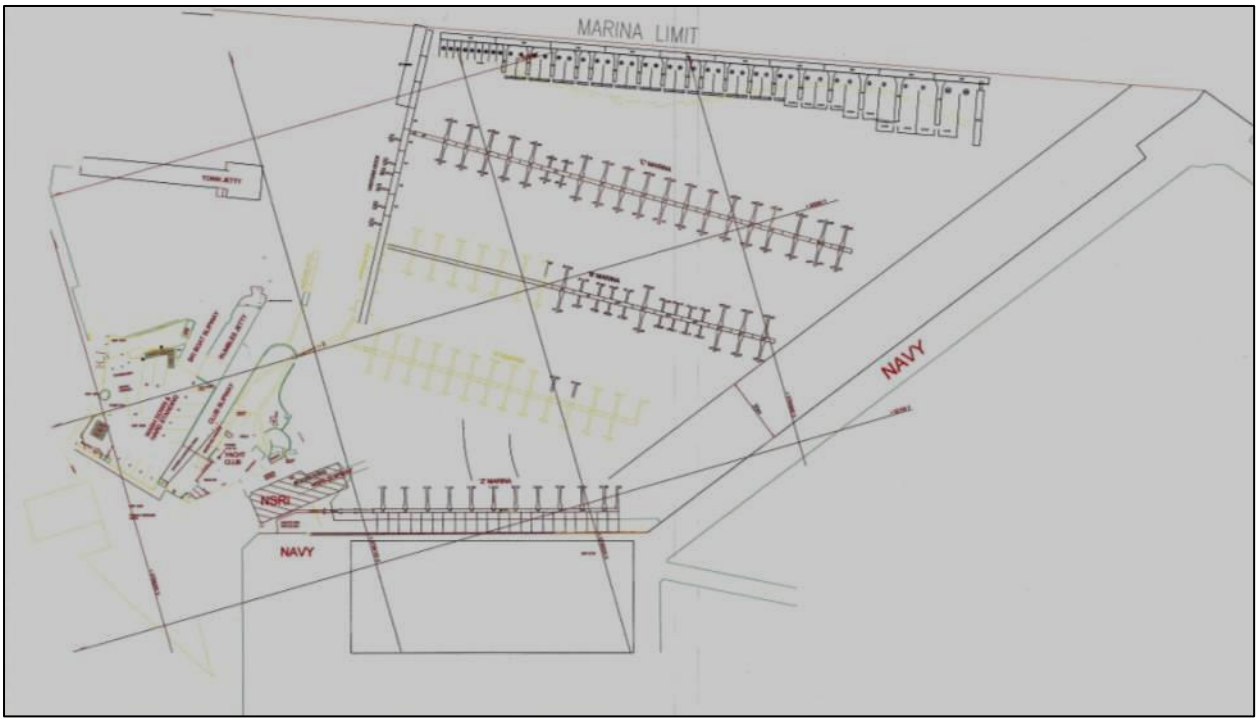


Figure 14: Proposed Layout plan for expansion.

The proposed project will initially link to the current jetty structure and run for approximately 40 m (Figure 15, A). The structure will then swing north where the floating breakwater structure of 250 m will be installed and will double as docking bays for visitors to the Marina (Figure 15, B). An additional section of 40m, swinging North East, will be installed to protect the yachts in the Marina and this will also be a floating breakwater structure and jetty double(Figure 15, C).

Figure 15: Proposed layout of jetty extension

This is the preferred alternative for the following reasons:

- The structure will replace the outdated breakwater structure with a modern structure which will not change the character of the site.
- The proposed expansion will protect docked vessels from waves created by strong winds.
- The old eroding and damaging materials anchoring the current breakwater structure will be removed resulting in less environmental damage to the ocean floor.
- The Sealflex will have less damaging effects on the ocean floor due to no dragging with changing tide levels.
- The concrete blocks will not move and can therefore be used by sea life to establish a habitat.
- The Seaflex structure has a guarantee of 30 years and include regular monitoring and upkeep.
- Docking bays can be sold/rented to yacht owners to cover costs of construction.
- Additional docking bays for vessels will result in socio-economic benefits from local and international visitors as described in Section D (15).

ALTERNATIVE B: REPLACEMENT OF THE OLD BREAKWATER WITH A NEW BREAKWATER

Alternative B will entail replacing the current breakwater structure with a new breakwater structure of the same type of design (Figure 16). Old materials will be removed and replaced by newer technology other than the Seaflex.

A rubber pipe will be made buoyant and will be installed by means of anchoring the pipe with concrete blocks and chains or equivalent means.

This alternative is not the preferred alternative for the following reasons:

- The lifespan of the rubber pipe is not guaranteed and will need to be replaced if broken or damaged.
- Chains or equivalent means of anchoring the structure has high damaging effect on the ocean floor and if eroded can release harmful toxins into the ocean.
- This alternative doesn't provide a means of funding the project and will result is large financial loss to the STMC and the members. Because the lifespan is not guaranteed, the financial loss will be reoccurring if the structure breaks.
- The alternative will not have any socio-economic benefits like additional docking bays for local and international visitors which utilises the services, activities and businesses in the Peninsula and Simon's Town.

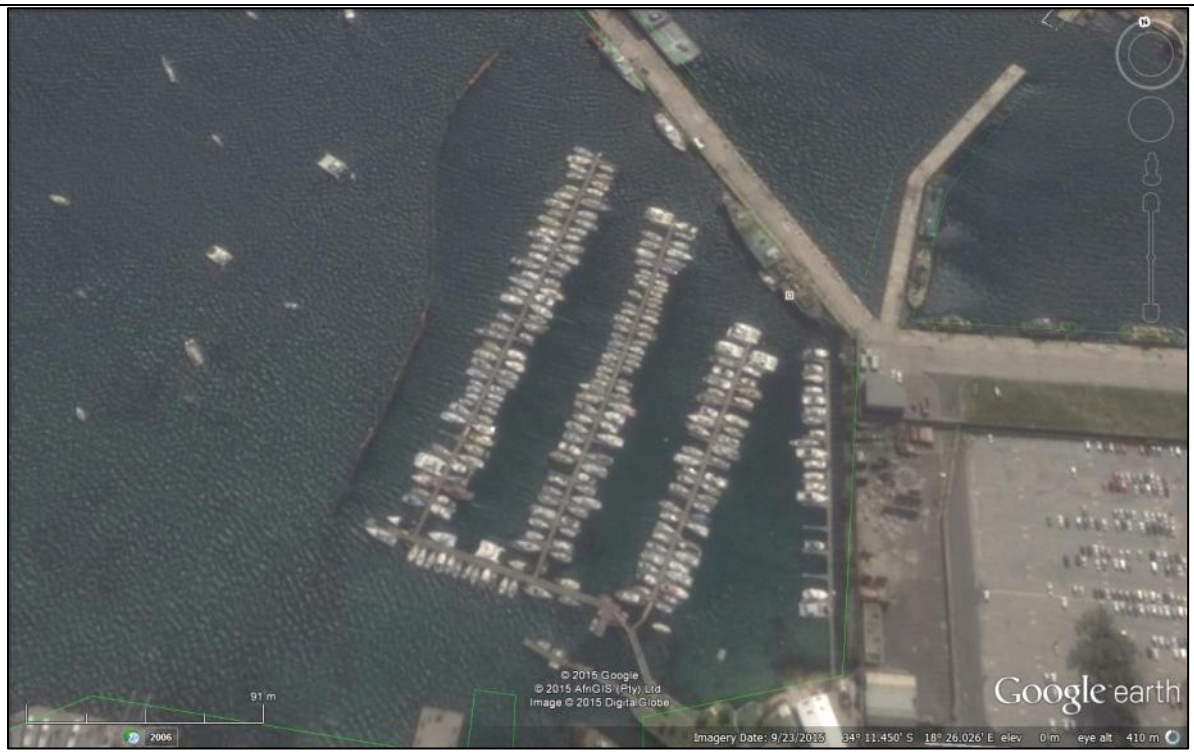


Figure 16: Current breakwater installed at Simon's Town Marina

ALTERNATIVE C: LEAVING THE CURRENT BREAKWATER STRUCTURE AS IT IS

This will mean the current breakwater structure will be left in the same deteriorating state as it is currently. The breakwater will keep falling apart and will pollute the ocean with parts breaking off. The anchoring materials and chains will stay where it is and will erode and damage the ocean floor with the rise and fall of tides.

Vessels will be damaged by wave actions from strong winds and this will result in memberships being withdrawn and local and international visitors not visiting Simon's Town and the Cape Town metropolitan. Socio economic benefits will be lost to the local community.

(c) Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

See (b)

(d) Technology alternatives (e.g. to reduce resource demand and resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts or detailed motivation if no reasonable or feasible alternatives exist:

ALTERNATIVE 1: SEAFLEX

SEAFLEX is the most modern and technologically advanced mooring system on the market today, providing secure moorings even under the worst weather conditions. The main part of a SEAFLEX is a reinforced homogeneous rubber hawser; attached together with a high quality stainless steel plate (Figure 17).

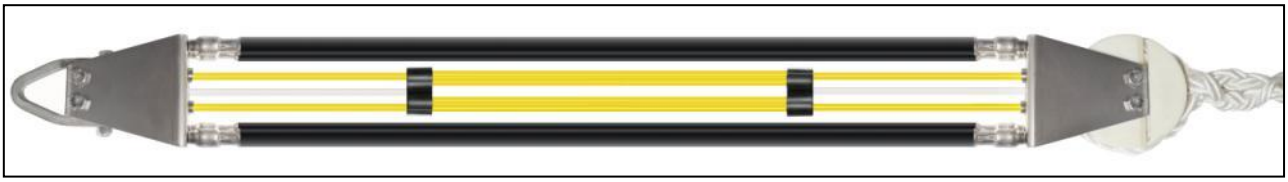


Figure 17: The main part of a Seaflex

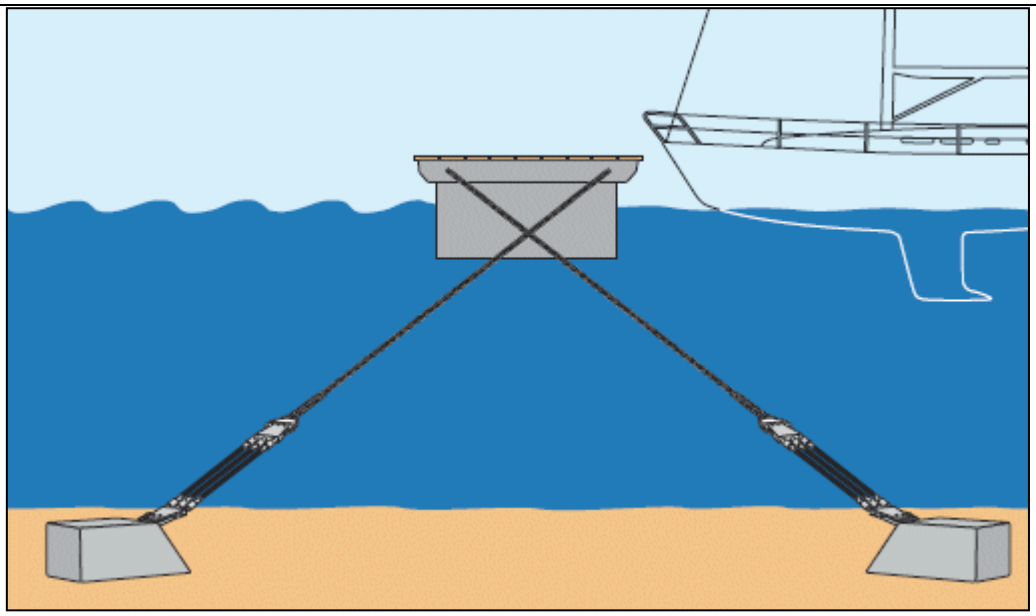


Figure 18: Typical installation of a Seaflex system

One single SEAFLEX rubber hawser can withstand a force of drag greater than 10 kN, elongate over 100 % of its length and retract back to original length. While doing this the system is putting constant tension and providing stability to the moored application.

The Seaflex is the preferred technology alternative for the following reasons:

- The moorings are self-regulating according to variations in water level. It slowly elongates and retracts in a smooth, even movement.
- SEAFLEX is the most modern and technologically advanced mooring system on the market today,
- Provides secure moorings even under the worst weather conditions.
- The size of each mooring is calculated based on the active forces with the help of our own software, JFlex, a program that is freely available to partners. Factors crucial to these calculations are variations in water-level, wind; waves, current, depth and the total air resistance caused by boats and are used in the size calculations.
- Since the SEAFLEX mooring system is under constant tension, it does not sway and touch the seabed at all. SEAFLEX stays off the sea floor at all times, which is why it is the only accepted mooring system in certain areas with protected corals, marine flora, or historic artefacts.
- SEAFLEX does not release other pollutants into marine ecosystems, which also helps limit any impact on the surroundings. This makes SEAFLEX particularly well-suited for use with mooring pontoons and buoys in sensitive areas, such as those near coral reefs, areas of marine flora and historic sites.
- SEAFLEX units have low installation cost, fast and easy inspections and low maintenance needs.

ALTERNATIVE 2: TIMBER PILES

An alternative to anchor jetties is using piles made of concrete or wood. The piles are fixed in the ocean floor by boring a hole and fitting it in one place.

Figure 19: An example of a jetty installed on piles

Piles are not a feasible option due to the role the jetty has to play as a breakwater and docking bay. Piles jetties will not adapt to water levels to protect the docked vessels and when installing in deep water, piles can be very costly, or not even an option due to depth.

With static piles there will always be vertical movements. The nonexistent downward force allows the dock to smash up against the piles during bad weather, leading to damage on the piles, pile guides, docks, and boats. The only movement stopped by the piles is the horizontal movement which gets stopped rather abruptly when the dock hits the pile guide, causing wear and tear over time.

Sometimes the bottom conditions make it unfeasible to use piles, there might be a hard rock bottom requiring you to drill pile sockets or too soft soils requiring the piles to be battered down far.

ALTERNATIVE 3: CHAINS

Chains, which anchor the current breakwater, can be used to anchor the jetty by attaching the end to a concrete block or other heavy item like the engine blocks currently used (Figure 20).

Figure 20: Typical example of fixing a jetty with chains

Chains are not the preferred and feasible option for the following reasons:

- Chain is difficult to inspect in full and is only as strong as its weakest link. Areas have been known to replace their

chain yearly out of fear that the next storm might cause it to snap.

- Applications moored with chain also move a lot during low tide when large portions of the chain are resting on the sea floor. This destroys bottom vegetation and creates dead spots.
- It is well known that some of the traditional mooring methods can damage the underwater flora and fauna. One example are chain-moored boats that are allowed to drift and the chain scours the seabed, which can create what is known as dead spots, killing all vegetation around it.

(e) Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

No operational alternatives except as discussed under design options above.

(f) The option of not implementing the activity (the No-Go Option):

NO-GO OPTION

Implementing the No-Go option will mean the breakwater structure and all anchoring material will stay as it is presently.

Figure 21: Current breakwater at Simon's Town Marina

The breakwater structure consists of a 250m long rubber pipe with a 1m diameter and is anchored to the sea bottom with old engine blocks and chains and is falling apart due to age.

If the structure is kept as it is, parts that break off will pollute the ocean and the engine blocks and chains will erode and damage the ocean floor if it is not attached to the pipe. The eroding effect of the ocean on the anchor material will release harmful toxins which can affect fauna and flora on the ocean floor.

Vessels docked at the Marina will be damaged by the waves created by the North East and North West winds and the club will lose memberships and local and international visitors. These visitors play a big role in the socio-economic benefit of the club to Simon's Town and its residence.

No local contractors and their labour will receive additional contracts from the Marina. Activities, services and business will lose clientele who dock their vessels at the Marina and no international currency will be brought in by the Marina visitors.

(g) Other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

No other alternatives

(h) Please provide a summary of the alternatives investigated and the outcomes of such investigation:

Please note: If no feasible and reasonable alternatives exist, the description and proof of the investigation of alternatives, together with motivation of why no feasible or reasonable alternatives exist, must be provided.

ACTIVITY ALTERNATIVES

ALTERNATIVE A: EXPANSION OF CURRENT JETTY TO ACT AS A BREAKWATER AND DOCKING BAYS

The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a breakwater structure and will provide additional moorings for visiting yachts. The layout design can be seen in Appendix B1: Preferred Alternative, page 63.

The current broken breakwater structure will be removed including the engine block, chains and other structures used to anchor it. This will be discarded in an appropriate manner by the contractor.

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 13). The blocks will not be moved around by sea currents like the current anchoring systems and the Seaflex is designed to accommodate the rise and fall of oceans currents,thus will result in less damage to the ocean floor.

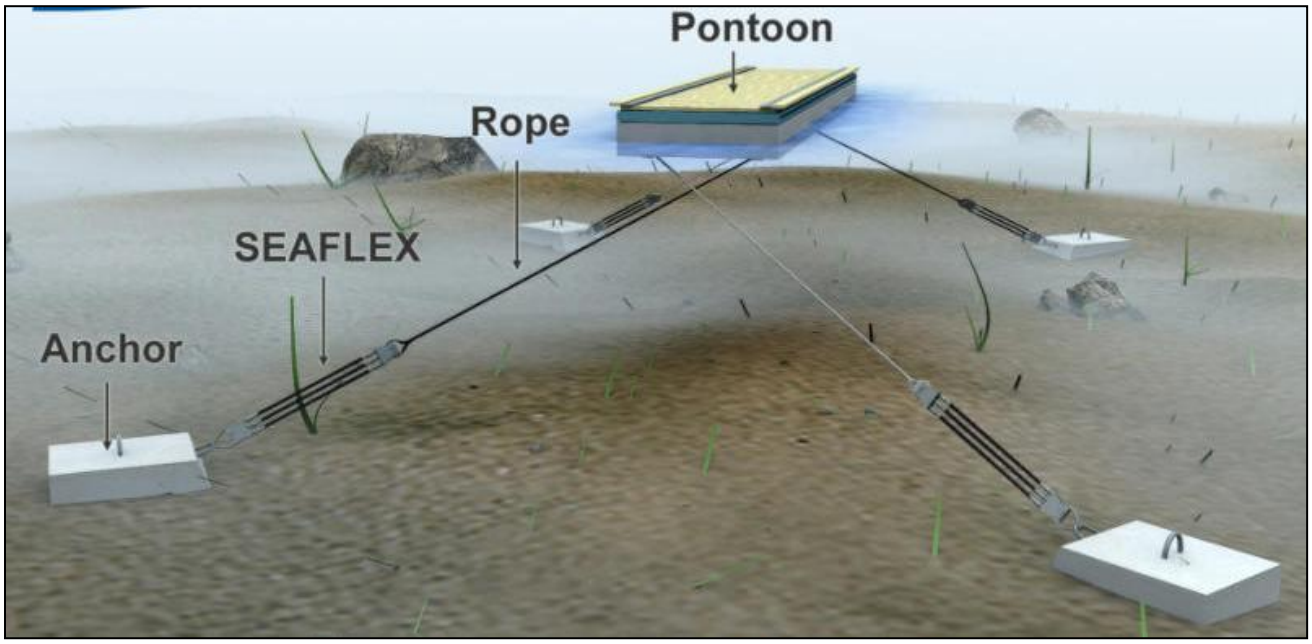


Figure 22: Schematic example of how the breakwater jetty will be anchored by the Seaflex

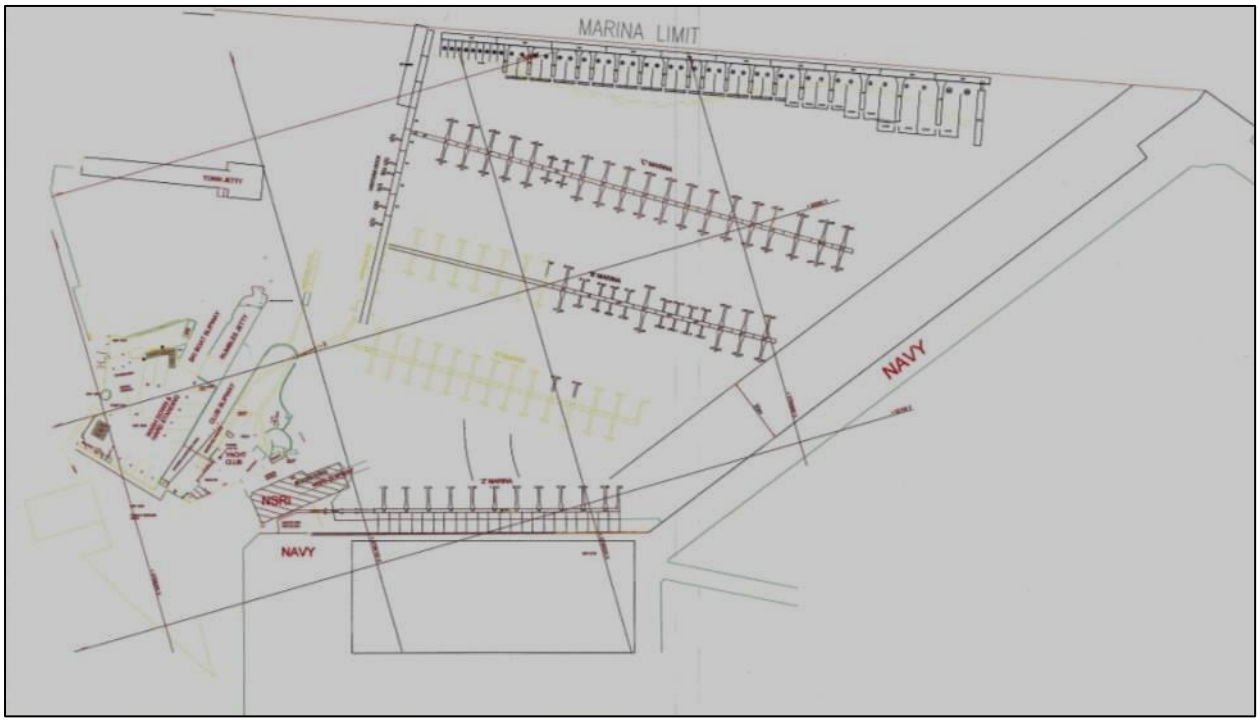


Figure 23: Proposed Layout plan for expansion.

The proposed project will initially link to the current jetty structure and run for approximately 40 m (Figure 15, A). The structure will then swing north where the floating breakwater structure of 250 m will be installed and will double as docking bays for visitors to the Marina (Figure 15, B). An additional section of 40m, swinging North East, will be installed to protect the yachts in the Marina and this will also be a floating breakwater structure and jetty double(Figure 15, C).

Figure 24: Proposed layout of jetty extension

This is the preferred alternative for the following reasons:

- The structure will replace the outdated breakwater structure with a modern structure which will not change the character of the site.
- The proposed expansion will protect docked vessels from waves created by strong winds.
- The old eroding and damaging materials anchoring the current breakwater structure will be removed resulting in less environmental damage to the ocean floor.
- The Sealflex will have less damaging effects on the ocean floor due to no dragging with changing tide levels.
- The concrete blocks will not move and can therefore be used by sea life to establish a habitat.
- The Seaflex structure has a guarantee of 30 years and include regular monitoring and upkeep.
- Docking bays can be sold/rented to yacht owners to cover costs of construction.
- Additional docking bays for vessels will result in socio-economic benefits from local and international visitors as described in Section D (15).

ALTERNATIVE B: REPLACEMENT OF THE OLD BREAKWATER WITH A NEW BREAKWATER

Alternative B will entail replacing the current breakwater structure with a new breakwater structure of the same type of design (Figure 16). Old materials will be removed and replaced by newer technology other than the Seaflex.

A rubber pipe will be made buoyant and will be installed by means of anchoring the pipe with concrete blocks and chains or equivalent means.

This alternative is not the preferred alternative for the following reasons:

- The lifespan of the rubber pipe is not guaranteed and will need to be replaced if broken or damaged.
- Chains or equivalent means of anchoring the structure has high damaging effect on the ocean floor and if eroded can release harmful toxins into the ocean.
- This alternative doesn't provide a means of funding the project and will result is large financial loss to the STMC and the members. Because the lifespan is not guaranteed, the financial loss will be reoccurring if the structure

breaks.

- The alternative will not have any socio-economic benefits like additional docking bays for local and international visitors which utilises the services, activities and businesses in the Peninsula and Simon's Town.

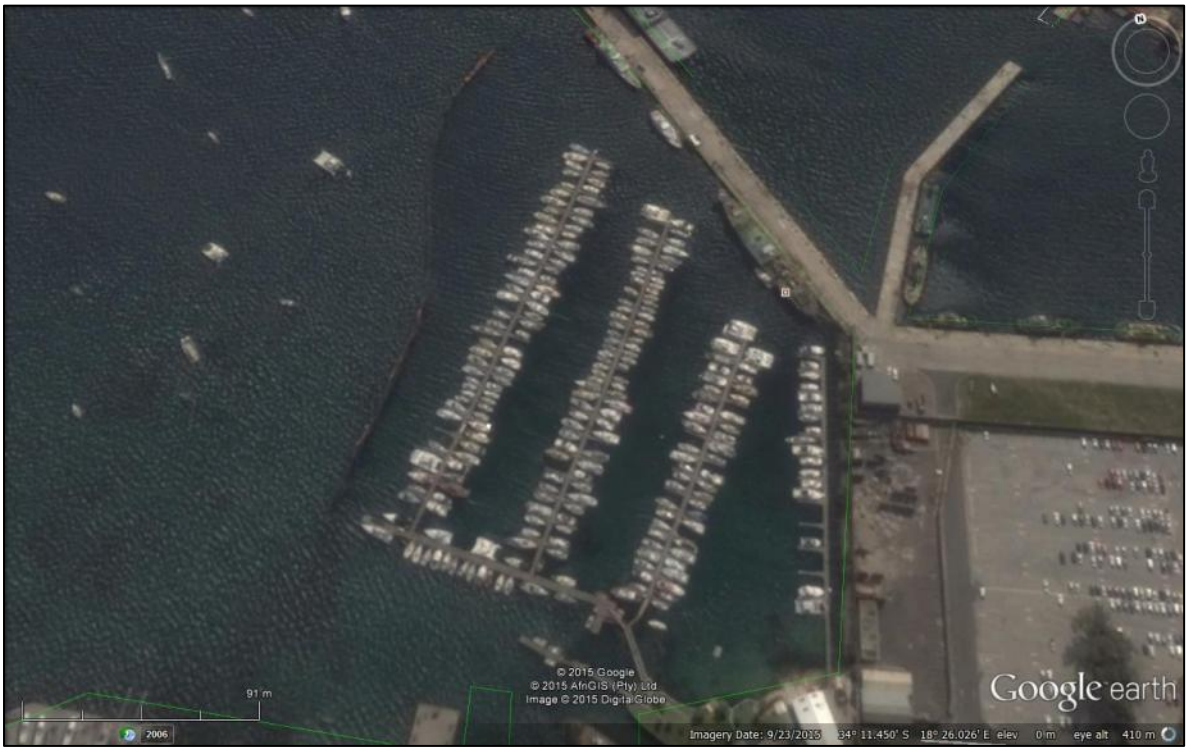


Figure 25: Current breakwater installed at Simon's Town Marina

ALTERNATIVE C: LEAVING THE CURRENT BREAKWATER STRUCTURE AS IT IS

This will mean the current breakwater structure will be left in the same deteriorating state as it is currently. The breakwater will keep falling apart and will pollute the ocean with parts breaking off. The anchoring materials and chains will stay where it is and will erode and damage the ocean floor with the rise and fall of tides.

Vessels will be damaged by wave actions from strong winds and this will result in memberships being withdrawn and local and international visitors not visiting Simon's Town and the Cape Town metropolitan. Socio economic benefits will be lost to the local community.

ACTIVITY ALTERNATIVES OUTCOME

Alternative A: Expansion of current jetty to act as a breakwater and docking bays was found to be the feasible and reasonable alterative for the project

TECHNOLOGY ALTERNATIVES

ALTERNATIVE 1: SEAFLEX

SEAFLEX is the most modern and technologically advanced mooring system on the market today, providing secure moorings even under the worst weather conditions. The main part of a SEAFLEX is a reinforced homogeneous rubber hawser; attached together with a high quality stainless steel plate (Figure 17).

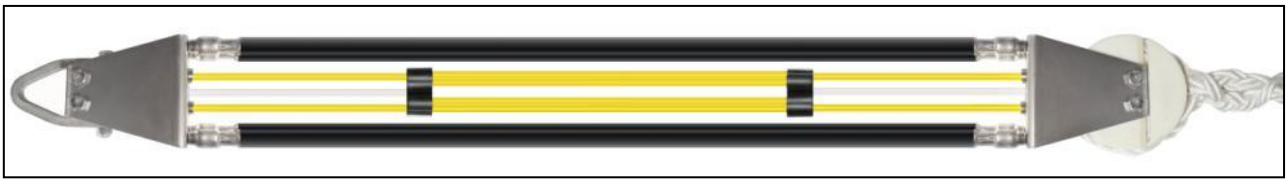


Figure 26: The main part of a Seaflex

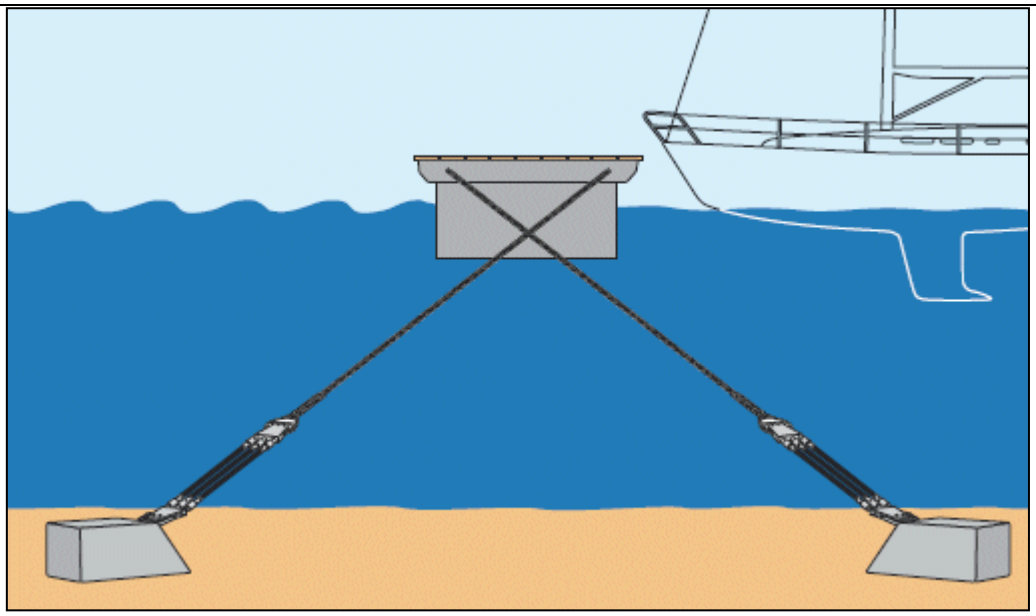


Figure 27: Typical installation of a Seaflex system

One single SEAFLEX rubber hawser can withstand a force of drag greater than 10 kN, elongate over 100 % of its length and retract back to original length. While doing this the system is putting constant tension and providing stability to the moored application.

The Seaflex is the preferred technology alternative for the following reasons:

- The moorings are self-regulating according to variations in water level. It slowly elongates and retracts in a smooth, even movement.
- SEAFLEX is the most modern and technologically advanced mooring system on the market today,
- Provides secure moorings even under the worst weather conditions.
- The size of each mooring is calculated based on the active forces with the help of our own software, JFlex, a program that is freely available to partners. Factors crucial to these calculations are variations in water-level, wind; waves, current, depth and the total air resistance caused by boats and are used in the size calculations.
- Since the SEAFLEX mooring system is under constant tension, it does not sway and touch the seabed at all. SEAFLEX stays off the sea floor at all times, which is why it is the only accepted mooring system in certain areas with protected corals, marine flora, or historic artefacts.
- SEAFLEX does not release other pollutants into marine ecosystems, which also helps limit any impact on the surroundings. This makes SEAFLEX particularly well-suited for use with mooring pontoons and buoys in sensitive areas, such as those near coral reefs, areas of marine flora and historic sites.
- SEAFLEX units have low installation cost, fast and easy inspections and low maintenance needs.

ALTERNATIVE 2: TIMBER PILES

An alternative to anchor jetties is using piles made of concrete or wood. The piles are fixed in the ocean floor by boring a hole and fitting it in one place.

Figure 28: An example of a jetty installed on piles

Piles are not a feasible option due to the role the jetty has to play as a breakwater and docking bay. Piles jetties will not adapt to water levels to protect the docked vessels and when installing in deep water, piles can be very costly, or not even an option due to depth.

With static piles there will always be vertical movements. The nonexistent downward force allows the dock to smash up against the piles during bad weather, leading to damage on the piles, pile guides, docks, and boats. The only movement stopped by the piles is the horizontal movement which gets stopped rather abruptly when the dock hits the pile guide, causing wear and tear over time.

Sometimes the bottom conditions make it unfeasible to use piles, there might be a hard rock bottom requiring you to drill pile sockets or too soft soils requiring the piles to be battered down far.

ALTERNATIVE 3: CHAINS

Chains, which anchor the current breakwater, can be used to anchor the jetty by attaching the end to a concrete block or other heavy item like the engine blocks currently used (Figure 20).

Figure 29: Typical example of fixing a jetty with chains

Chains are not the preferred and feasible option for the following reasons:

- Chain is difficult to inspect in full and is only as strong as its weakest link. Areas have been known to replace their

chain yearly out of fear that the next storm might cause it to snap.

- Applications moored with chain also move a lot during low tide when large portions of the chain are resting on the sea floor. This destroys bottom vegetation and creates dead spots.
- It is well known that some of the traditional mooring methods can damage the underwater flora and fauna. One example are chain-moored boats that are allowed to drift and the chain scours the seabed, which can create what is known as dead spots, killing all vegetation around it.

TECHNOLOGY ALTERNATIVES OUTCOME

Alternative 1: Seaflex was found to be the preferred technology alternative.

NO-GO ALTERNATIVE

NO-GO OPTION

Implementing the No-Go option will mean the breakwater structure and all anchoring material will stay as it is presently.

Figure 30: Current breakwater at Simon's Town Marina

The breakwater structure consists of a 250m long rubber pipe with a 1m diameter and is anchored to the sea bottom with old engine blocks and chains and is falling apart due to age.

If the structure is kept as it is, parts that break off will pollute the ocean and the engine blocks and chains will erode and damage the ocean floor if it is not attached to the pipe. The eroding effect of the ocean on the anchor material will release harmful toxins which can affect fauna and flora on the ocean floor.

Vessels docked at the Marina will be damaged by the waves created by the North East and North West winds and the club will lose memberships and local and international visitors. These visitors play a big role in the socio-economic benefit of the club to Simon's Town and its residence.

No local contractors and their labour will receive additional contracts from the Marina. Activities, services and business will lose clientele who dock their vessels at the Marina and no international currency will be brought in by the Marina visitors.

Section F: Impact Assessment, Management, Mitigation and Monitoring Measures

Please note: The information in this section must be duplicated for all the feasible and reasonable alternatives (where relevant).

PLEASE DESCRIBE THE MANNER IN WHICH THE DEVELOPMENT WILL IMPACT ON THE FOLLOWING ASPECTS:

(a) Geographical and physical aspects:

Currently the existing breakwater structure is falling apart and will not be able to act out its purpose. Implementing the preferred alternative will remove the broken pipe and damaging anchors materials before they wash away and pollute other coast regions. The jetty will act as a docking bay for vessels, and will be in line with the physical and visual aspect of the area, and it will act as a breakwater to protect vessels from strong waves created by the North West and North East winds. Removing the anchoring material will reduce the damaging effect the drag of the chains and engine blocks have on the ocean floor. The fixed concrete block will not move on the ocean bottom and will be less eroding and damaging to the floor and habitat.

(b) Biological aspects:

Will the development have an impact on critical biodiversity areas (CBAs) or ecological support areas (CSAs)?	~~YES~~	**NO**
If yes, please describe:		
Will the development have an impact on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)?	**YES**	~~NO~~
If yes, please describe:		
The activity will take place in the Simon's Town Marina near the Simon's Town Harbour. Concrete blocks will replace the current engine blocks and chains that keep the current breakwater structure fixed at a specific location??. The current materials drag on the ocean floor and cause damage to the surrounding ocean habitat. The replacement blocks will not move with the tides and will create an area where fauna and flora can establish a habitat. The Seaflex is under constant tension and will not drag on the ocean floor with lower tides as chains tend to do.		
Will the development have an impact on any populations of threatened plant or animal species, and/or on any habitat that may contain a unique signature of plant or animal species?	~~YES~~	**NO**
If yes, please describe:		
Please describe the manner in which any other biological aspects will be impacted:		
The current engine blocks and chains will be removed. The concrete blocks will be fixed and the Seaflex will not drag on the ocean floor, which will not damage the ocean floor. The concrete blocks will also provide an area for fauna and flora to establish a habitat. The Seaflex does not release any harmful substances.		

(c) Socio-Economic aspects:

What is the expected capital value of the activity on completion?	R 20 000 000	
What is the expected yearly income or contribution to the economy that will be generated by or as a result of the activity?	R 860 000	
Will the activity contribute to service infrastructure?	~~YES~~	**NO**
How many new employment opportunities will be created in the construction phase of the activity?	6	
What is the expected value of the employment opportunities during the construction phase?	R 168 000	
What percentage of this will accrue to previously disadvantaged individuals?	100%	
How will this be ensured and monitored (please explain):		
Not applicable		

How many permanent new employment opportunities will be created during the operational phase of the activity?	None
What is the expected current value of the employment opportunities during the first 10 years?	Nil
What percentage of this will accrue to previously disadvantaged individuals?	Nil

How will this be ensured and monitored (please explain):
Not applicable
Any other information related to the manner in which the socio-economic aspects will be impacted:
The purpose of the project is to provide increased capacity to the marina to cater for a larger number of moorings. This is required for the increased number of visitors that require this type of facility. The main benefit of the project is therefore the positive impact on the local and regional economy.

(d) Cultural and historic aspects:

No cultural or historical aspects on the site.

1. WASTE AND EMISSIONS

Waste (including effluent) management

Will the activity produce waste (including rubble) during the construction phase?	**YES**	~~NO~~
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	Old rubber pipe, old engine blocks and chains	
All items will be removed from the ocean floor. Chain and other metal material will be scrapped and recycled. Non metal items will be reused or discarded of in an appropriate manner by the contractor at a licensed facility.		

Will the activity produce waste during its operational phase?	~~YES~~	**NO**
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	M^3	

Where and how will the waste be treated / disposed of (describe)?		
All items will be removed from the ocean floor. Chain and other metal material will be scrapped and recycled. Non metal items will be reused or discarded of in an appropriate manner by the contractor at a licensed facility.		
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type per phase of the development?		
Has the municipality or relevant authority confirmed that sufficient capacity exist for treating / disposing of the waste to be generated by this activity (ies)? If yes, provide written confirmation from Municipality or relevant authority.	~~YES~~	**NO**
Will the activity produce waste that will be treated and/or disposed of at another facility other than into a municipal waste stream?	~~YES~~	**NO**
If yes, has this facility confirmed that sufficient capacity exist for treating / disposing of the waste to be generated by this activity (ies)? Provide written confirmation from the facility and provide the following particulars of the facility:	~~YES~~	~~NO~~
Does the facility have an operating license? (If yes, please attach a copy of the license.) **Not Applicable**	~~YES~~	~~NO~~
Facility name:		
Contact person:		
Postal address:		
	Postal code:	
Telephone:	Cell:	
E-mail:	Fax:	

Describe the measures that will be taken to reduce, reuse or recycle waste:
All metal items removed will be scrapped and will be recycled. Non metal items will be reused where possible and if not, will be discarded in an appropriate manner.

Emissions into the atmosphere

Will the activity produce emissions that will be disposed of into the atmosphere?	~~YES~~	**NO**
If yes, does it require approval in terms of relevant legislation?	~~YES~~	~~NO~~
Describe the emissions in terms of type and concentration and how it will be treated/mitigated:		
Emissions will consist of small amounts of construction emission gasses and will only last until the end of construction.		

2. WATER USE

Please indicate the source(s) of water for the activity by ticking the appropriate box (es)

Municipal	Water board	Groundwater	River, Stream, Dam or Lake	Other	**The activity will not use water**

If water is to be extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	0 m^3

Please provide proof of assurance of water supply (eg. Letter of confirmation from municipality / water user associations, yield of borehole)		
Does the activity require a water use permit / license from DWAF?	~~YES~~	**NO**
If yes, please submit the necessary application to Department of Water Affairs and attach proof thereof to this application.		
Describe the measures that will be taken to reduce water demand, and measures to reuse or recycle water:		
Not applicable		

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

Not applicable

If power supply is not available, where will power be sourced from?
Not applicable

4. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:
Not applicable

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

None

5. DESCRIPTION AND ASSESSMENT OF THE SIGNIFICANCE OF IMPACTS PRIOR TO AND AFTER MITIGATION

Please note: While sections are provided for impacts on certain aspects of the environment and certain impacts, the sections should also be copied and completed for all other impacts.

(a) Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

Potential impacts on geographical and physical aspects:	Removal of Breakwater structure
Nature of impact:	The broken breakwater structure will be removed and discarded of in an appropriate manner
Extent and duration of impact:	Temporary
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Engine blocks and chains which is used to anchor the breakwater structure that causes drag damage to the ocean floor and erosion, can release harmful substances into the ocean. Docked vessels in the Marina will be battered by waves from strong winds
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Remove engine blocks and chains and discard in an appropriate manner. Metal items will be scrapped and recycled. Install a new breakwater structure.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Positive

Potential impacts on geographical and physical aspects:	Jetty expansion and breakwater structure replacement.
Nature of impact:	The current breakwater structure will be replaced by expanding the jetty in a U-shape, the new expanded structure will act as a breakwater structure and docking bay for vessels.
Extent and duration of impact:	Permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Materials used to anchor the jetty can cause drag damage on the ocean floor and can impact on the ocean habitat.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	By installing the jetty with concrete blocks and Seaflex, there will be no drag on the ocean floor with the rise and fall of tides.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Positive

Potential impact on biological aspects:	Installation of breakwater structure and jetty expansion
Nature of impact:	The installation of the breakwater/jetty can impact the ocean floor
Extent and duration of impact:	Medium term
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low negative
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Install the breakwater/jetty with fixed concrete blocks and Seaflex.
Cumulative impact post mitigation:	Seaflex is under constant strain and will not cause drag on the ocean floor. The fixed concrete blocks will enable fauna and flora to establish a habitat on the structure.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low positive

Potential impacts on socio-economic aspects:	Socio-economic benefits of the breakwater/jetty expansion
Nature of impact:	Job creation
Extent and duration of impact:	Short term
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	The impact is positive
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative
Degree to which the impact can be mitigated:	High
Proposed mitigation:	None
Cumulative impact post mitigation:	Additional job opportunities during construction for construction company
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Positive

Potential impacts on cultural-historical aspects:	None
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation	

(Low, Medium, Medium-High, High, or Very-High)	

Potential noise impacts:	Noise impacts due to construction
Nature of impact:	Construction noise in a light industrial area
Extent and duration of impact:	Only during the construction period
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium Negative
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Working hours will be restricted to daily normal working hours. All noise and sounds generated by plant or machinery must adhere to SABS 0103 specifications for the maximum permissible noise levels for residential areas. All plant and machinery are to be fitted with adequate silencers. No sound amplification equipment such as sirens, loud hailers or hooters may be used on site, after normal working hours, except in emergencies. If work is to be undertaken outside of normal work hours, permission must be obtained from the Land owner. Prior to commencing any such activity the Contractor is also to advise the potentially affected neighbouring residents. Dates, times and the nature of the work to be undertaken are to be provided. Notification could include letter-drops. The acceptable noise level according to SABS 10103 Code of Practice is 45dBA in rural district during the day and 35dBA at night. The applicant must comply/adhere to these requirements.
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Negative

Potential visual impacts:	Construction activities
Nature of impact:	During construction there will be a period during which construction activities will be visual, but this will only be for a short period.
Extent and duration of impact:	Local and temporary
Probability of occurrence:	High
Degree to which the impact can be reversed:	Will be reversed when construction stops
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Lighting during construction will be kept to a minimal. Construction should only take place during set out times as described in the EMPr
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Negative

(b) **Impacts that may result from the operational phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.**

(c)

Potential impacts on the geographical and physical aspects:	Protection of vessels from waves created by North Western and North Eastern
Nature of impact:	The installed jetty/breakwater structure will protect the docked vessels from strong winds and waves created by the winds
Extent and duration of impact:	Site, permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	The action is the mitigation
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Potential impact on biological aspects:	Breakwater structure and jetty expansion
Nature of impact:	the breakwater structure/jetty and related anchoring mechanisms can impact the ocean floor
Extent and duration of impact:	Long term
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low negative
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Install the breakwater/jetty with fixed concrete blocks and Seaflex.
Cumulative impact post mitigation:	Seaflex is under constant strain and will not cause drag on the ocean floor. The fixed concrete blocks will enable fauna and flora to establish a habitat on the structure.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low positive

Potential impacts on socio-economic aspects:	Socio-economic benefits of the breakwater/jetty expansion
Nature of impact:	Economic advantages contributed by with the Marina Use of B&B accommodation, as they are tired of living on a boat, Car hire, Restaurants, Visits to game parks and reserves, Visits to wine farms, Visits to squatters camps, increasing understanding of our problems, Purchase of curios, Purchase of clothing and luxury items, Bringing foreign currency into the country
Extent and duration of impact:	Long term
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	The impact is positive

Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	All the aboe mentioned helps with economic growth in the Cape Town Metropolitan area and the county's economy.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low positive
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Expansion of the current marina by installing jetty expansion structure.
Cumulative impact post mitigation:	By expanding the marina, more docking bays will be available for visitors, which will lead to an increase in the above mentioned economic contributions to the local economy.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Positive

Potential impacts on the cultural-historical aspects:	None
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential noise impacts:	None
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential visual impacts:	Replacement of current breakwater with jetty expansion acting as breakwater

Nature of impact:	The current broken breakwater will be replaced by expanding the current jetty structure to the position to where the breakwater was
Extent and duration of impact:	Local and permanent
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	The jetty should be in line with the surrounding area and should be visually similar to current jetty structures.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low Negative

(a) Impacts that may result from the decommissioning and closure phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase.

Potential impacts on the geographical and physical aspects:	Not applicable
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential impact biological aspects:	Not applicable
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential impacts on the socio-economic aspects:	Not applicable
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation	

(Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential impacts on the cultural-historical aspects:	Not applicable
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential noise impacts:	Not applicable
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

Potential visual impacts:	Not applicable
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

(d) Any other impacts:

Potential impact:	
Nature of impact:	
Extent and duration of impact:	
Probability of occurrence:	
Degree to which the impact can be reversed:	
Degree to which the impact may cause irreplaceable loss of resources:	
Cumulative impact prior to mitigation:	

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	

11. Specialist Inputs/Studies and Recommendations

Please note: Specialist inputs/studies must be attached to this report as **Appendix G**. Also take into account the Department's Guidelines on the Involvement of Specialists in EIA Processes available on the Department's website (http://www.capegateway.gov.za/eadp).

Specialist inputs/studies and recommendations:

Not applicable

12. Impact Summary

Please provide a summary of all the above impacts.

DESIGN AND CONSTRUCTION	OPERATIONAL
GEOGRAPHICAL AND GEOPHYSICAL: Removal of breakwater The damaged breakwater structure will be removed and the engine blocks and chains will be removed, scrapped and recycled. Non metal items will be reused where possible Jetty expansion and breakwater structure replacement: The current floating breakwater structure will be replaced by expanding the jetty in a U-shape, the new expanded structure will act as a breakwater structure and docking bay for vessels. By installing the jetty with concrete blocks and Seaflex, no drag will be created on the ocean floor with the rise and fall of tides. Therefore the new structure will have a positive impact on the ocean floor habitat. **BIOLOGICAL:** Installation of breakwater structure and jetty expansion and damage to ocean floor The installation of the breakwater structure/jetty can positively impact the ocean floor. Seaflex is under constant strain and will not cause drag on the ocean floor. The fixed concrete blocks will enable fauna and flora to establish a habitat on the structure, therefore resulting in a positive impact. **SOCIO ECONOMIC:** Additional job opportunities will be created during construction. The contract will be given to a local company. Only a temporary positive impact. **NOISE:** Temporary construction noise that can be mitigated through only allowing work during normal working hours.	**GEOGRAPHICAL AND GEOPHYSICAL:** Protection of vessels from waves created by North Western and North Eastern The installed jetty/breakwater structure will protect the docked vessels from strong winds and waves created by the winds **BIOLOGICAL:** Breakwater structure and jetty expansion The breakwater structure/jetty and related anchoring mechanisms can further positively impact the ocean floor. The expanded structures will be anchored by concrete blocks and Seaflex. Seaflex is under constant strain and will not cause drag on the ocean floor. The fixed concrete blocks will enable fauna and flora to establish a habitat on the structure. **SOCIO ECONOMIC:** Economic advantages contributed by with the Marina includes: Use of B&B accommodation, as they are tired of living on a boat, Car hire, Restaurants, Visits to game parks and reserves, Visits to wine farms, Visits to squatters camps, increasing understanding of our problems, Purchase of curios, Purchase of clothing and luxury items, Bringing foreign currency into the country. By expanding the marina, more docking bays will be available for visitors, which will lead to an increase in the above mentioned economic contributions to the local economy. Long term positive impact of job security for existing workers. **NOISE:** None **VISUAL:**

VISUAL: Construction activities Visual view during construction but it is only short term. **CULTURAL:** None	Replacement of current breakwater structure with jetty expansion acting as a new breakwater structure. The current damaged breakwater structure will be replaced by expanding the current jetty structure to the position to where the breakwater structure was originally. The jetty should be in line with the surrounding area and should be visually similar to current jetty structures. **CULTURAL:** None

6. OTHER MANAGEMENT, MITIGATION AND MONITORING MEASURES

(a) Over and above the mitigation measures described in Section 6 above, please indicate any additional management, mitigation and monitoring measures.

All mitigations in the EMP should be adhered to.

(b) Describe the ability of the applicant to implement the management, mitigation and monitoring measures.

The probability for the applicant to implement all measures is excellent.

Please note: A draft ENVIRONMENTAL MANAGEMENT PROGRAMME must be attached this report as **Appendix H (page 96).**

Section G: Assessment Methodologies and Criteria, Gaps in Knowledge, Underlying Assumptions and Uncertainties

(a) Please describe adequacy of the assessment methods used.

The assessment methods used for the proposed development were adequate as all possible impacts were assessed in detail.

The project was necessitated through the need to provide protection to docked vessels from the wave action of strong winds. The current breakwater structure has reached the end of its lifespan and needs to be replaced. Due to financial costs of replacing the structure, the new breakwater structure will be used as docking bays for visiting vessels to help cover the costs of construction.

The assessment methods therefore focused on finding the best practical option to protect docked vessels but also to be as environmentally friendly as possible. By installing the breakwater structure/jetty with fixed concrete blocks and Seaflex, there will be a reduction in the impact on the ocean floor and the structure will be strong and stable enough to protect vessels and accommodate new docked vessels.

the design is done by calculating the amount of Seaflex needed by taking into account factors including lowest water level, water level variation, maximum wind velocity, wave height and the current and therefore the design will be the best possible alternative. The other design options were found to be not feasible due to the damage it will have on the ocean floor.

(b) Please describe the assessment criteria used.

The criteria for the description and assessment of environmental impacts were drawn from the National Environmental Management Act, 1998 (Act No.107 of 1998).

The level of detail was somewhat fine-tuned by assigning specific values to each impact. In order to establish a coherent framework within which all impacts could be objectively assessed it is necessary to establish a rating system, which is consistent throughout all criteria. For such purposes each aspect was assigned a value, ranging from 1-5, depending on its definition.

H-2.1 POTENTIAL IMPACT

This is an appraisal of the type of effect the proposed activity would have on the affected environmental component. Its description should include what is being affected and how it is being affected.

H-2.2 EXTENT

The physical and spatial scale of the impact is classified as:

- **Local**

The impacted area extends only as far as the activity, e.g. a footprint.

- **Site**

The impact could affect the whole, or a measurable portion of the site.

- **Regional**

The impact could affect the area including the neighbouring erven, the transport routes and the adjoining towns.

H-2.3 DURATION

The lifetime of the impact, which is measured in relation to the lifetime of the proposed base?

- **Short term**

The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than any of the phases.

- Medium term

The impact will last up to the end of the phases, where after it will be entirely negated.

- **Long term**

The impact will continue or last for the entire operational lifetime of the Development, but will be mitigated by direct human action or by natural processes thereafter.

- **Permanent**

This is the only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

H-2.4 INTENSITY

The intensity of the impact is considered here by examining whether the impact is destructive or benign, whether it destroys the impacted environment, alters its functioning, or slightly alters the environment itself. These are rated as:

- **Low**

The impact alters the affected environment in such a way that the natural processes or functions are not affected.

- **Medium**

The affected environment is altered, but functions and processes continue, albeit in a modified way.

- **High**

Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

This will be a relative evaluation within the context of all the activities and the other impacts within the framework of the project.

H-2.5 PROBABILITY

This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time. The classes are rated as follows:

- **Improbable**

The possibility of the impact occurring is none, due either to the circumstances, design or experience.

- **Possible**

The possibility of the impact occurring is very low, due either to the circumstances, design or experience.

- **Likely**

There is a possibility that the impact will occur to the extent that provisions must therefore be made.

- **Highly Likely**

It is most likely that the impacts will occur at some stage of the Development. Plans must be drawn up before carrying out the activity.

- **Definite**

The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on.

H-2.6 DETERMINATION OF SIGNIFICANCE – WITHOUT MITIGATION

Significance is determined through a synthesis of impact characteristics, and is an indication of the importance of the impact in terms of both physical extent and time scale. The significance of the impact “without mitigation” is the prime determinant of the nature and degree of mitigation required. Where the impact is positive, significance is noted as “positive”. Significance is rated on the following scale:

- **No significance**

The impact is not substantial and does not require any mitigation action.

- **Low**

The impact is of little importance, but may require limited mitigation.

- **Medium**

The impact is of importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.

- **High**

The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

H-2.7 DETERMINATION OF SIGNIFICANCE – WITH MITIGATION

Significance is determined through a synthesis of impact characteristics. It is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. In this case the prediction refers to the foreseeable significance of the impact after the successful implementation of the suggested mitigation measures. Significance with mitigation is rated on the following scale:

- **No significance**

The impact will be mitigated to the point where it is regarded to be insubstantial.

- **Low**

The impact will be mitigated to the point where it is of limited importance.

- **Low to medium**

The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels.

- **Medium**

Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw.

- **Medium to high**

The impact is of great importance. Through implementing the correct mitigation measures the negative impacts will be reduced to acceptable levels.

- **High**

The impact is of great importance. Mitigation of the impact is not possible on a cost-effective basis. The impact continues to be of great importance, and, taken within the overall context of the project, is considered to be a fatal flaw in the project proposal. This could render the entire development option or entire project proposal unacceptable.

(c) Please describe the gaps in knowledge.

None

(d) Please describe the underlying assumptions.

None

(e) Please describe the uncertainties.

None

Section H: Recommendation of the EAP

In my view (EAP), the information contained in this application form and the documentation attached hereto is sufficient to make a decision in respect of the activity applied for.	**YES**	~~NO~~

If "NO", list the aspects that should be further assessed through additional specialist input/assessment or whether this application must be subjected to a Scoping & EIR process before a decision can be made:		
If "YES", please indicate below whether in your opinion the activity should or should not be authorised:		
Activity should be authorised:	**YES**	NO
Please provide reasons for your opinion		
The installation and expansion of the breakwater structure that will double as docking bays for visiting vessels will be the least environmentally damaging system by installing it with the concrete blocks and Seaflex. Other anchoring mechanisms will not last as long and will damage the ocean floor. After completion the activity will have many socio-economic contributions to the local and national economy. Will provide temporary job opportunities for local workers during construction and will indirectly contribute to job security and financial income.		
If you are of the opinion that the activity should be authorised, then please provide any conditions, including mitigation measures that should in your view be considered for inclusion in an authorisation.		
All measures set out in the EMPr should be included in the authorization.		
DURATION AND VALIDITY: Environmental authorisations are usually granted for a period of three years from the date of issue. Should a longer period be required, the applicant/EAP is requested to provide a detailed motivation on what the period of validity should be.		
Five years is adequate.		

Section I: Appendices

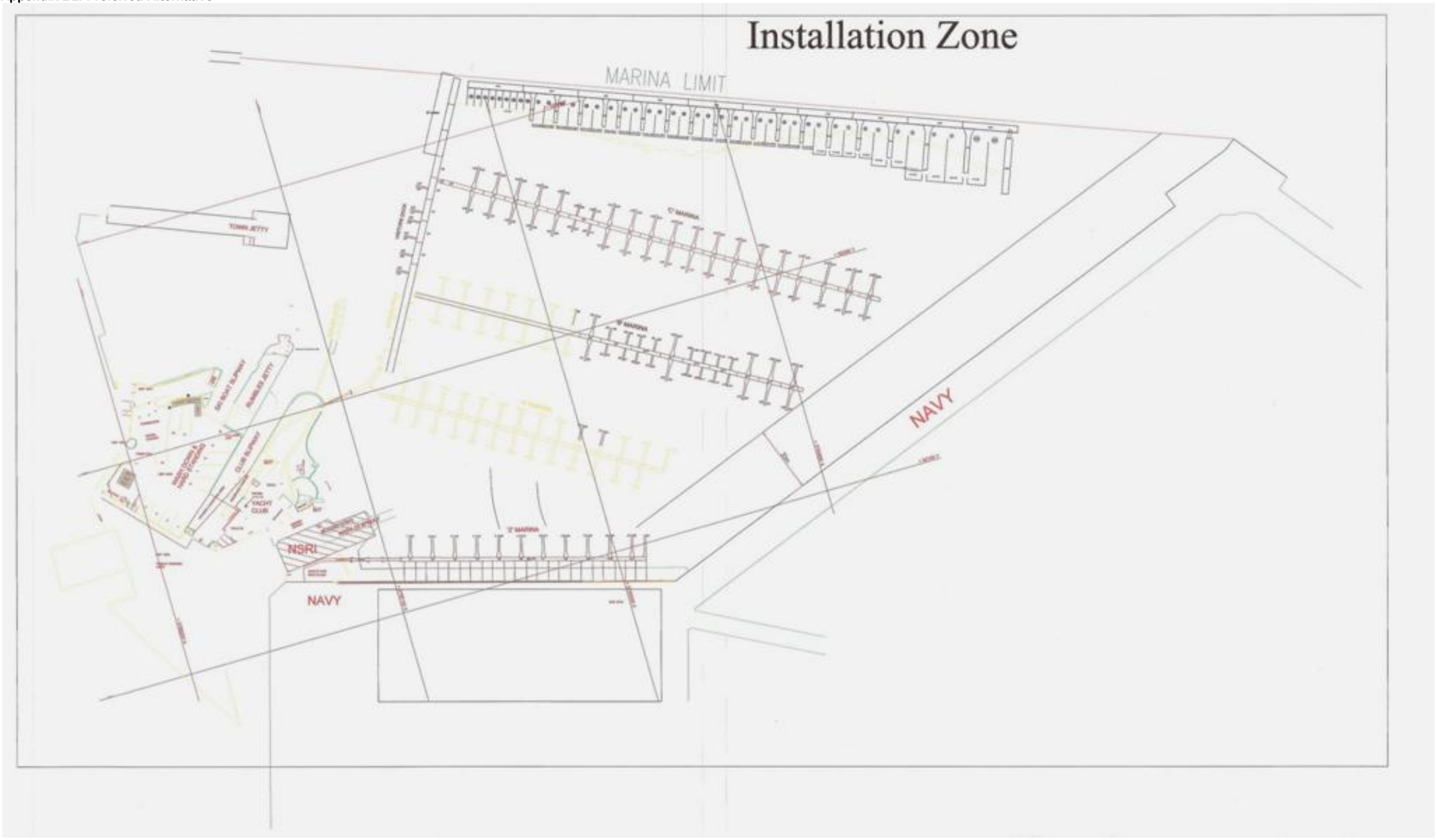
The following appendices must be attached to this report:

Appendix		Tick the box if Appendix is attached
Appendix A:	Locality map	X
Appendix B:	Site plan(s)	X
Appendix C:	Photographs	X
Appendix D:	Biodiversity overlay map	X
Appendix E:	Permit(s) / license(s) from any other organ of state including service letters from the municipality	X
Appendix F:	Public participation information: including a copy of the register of interested and affected parties, the comments and responses report, proof of notices, advertisements and any other public participation information as required in Section C above.	X
Appendix G:	Specialist Report(s)	Not applicable
Appendix H :	Environmental Management Programme	X
Appendix I:	Additional information related to listed waste management activities (if applicable)	Not applicable
Appendix J:	Any Other (if applicable)	X

Appendix A: Locality Map

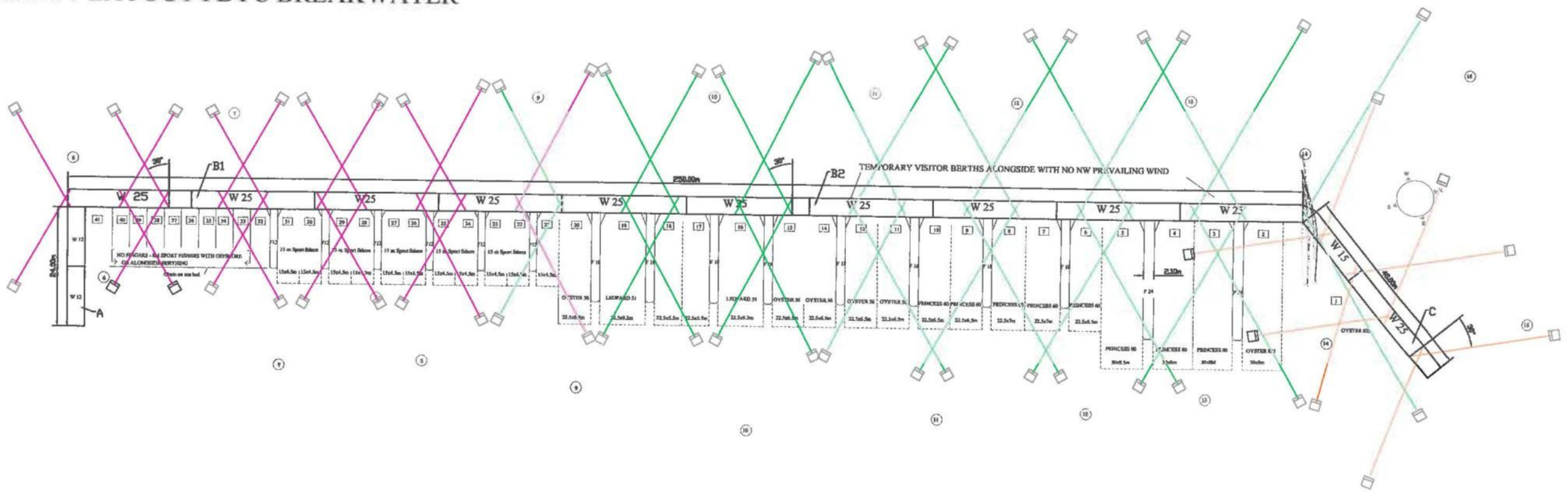
Appendix B: Site Plans

Appendix B1: Preferred Alternative



Appendix B2: Draft Jetty Design

DRAFT LAYOUT FBYC BREAKWATER



Note:
- 8020TSTHBP, 10020TSTHBP Seaflex installations scope - 3,2:1.
- 10030TSTHBP Seaflex installations scope - 2:1.

Type of Seaflex:
- 10030 TSTHBP
- 8020 TSTHBP
- 10020 TSTHBP

[1] - Berth No 1

(15) - Depth -- 15m C.D.

SEAFLEX		
PART	NO. OF SEAFLEX	TYPE OF SEAFLEX
B1 Breakwater	20	8020 TSTHBP
B2 Breakwater	28	10020 TSTHBP
C Breakwater	8	10030 TSTHBP

Dimension Parameters

[Lowest Water Level]	*6-15m*
[Water Level Variation]	*2m*
[Max Wind Velocity]	*25m/s*
[Wave Height]	*1,5m*
[Current]	*0,3m*

NOTE:

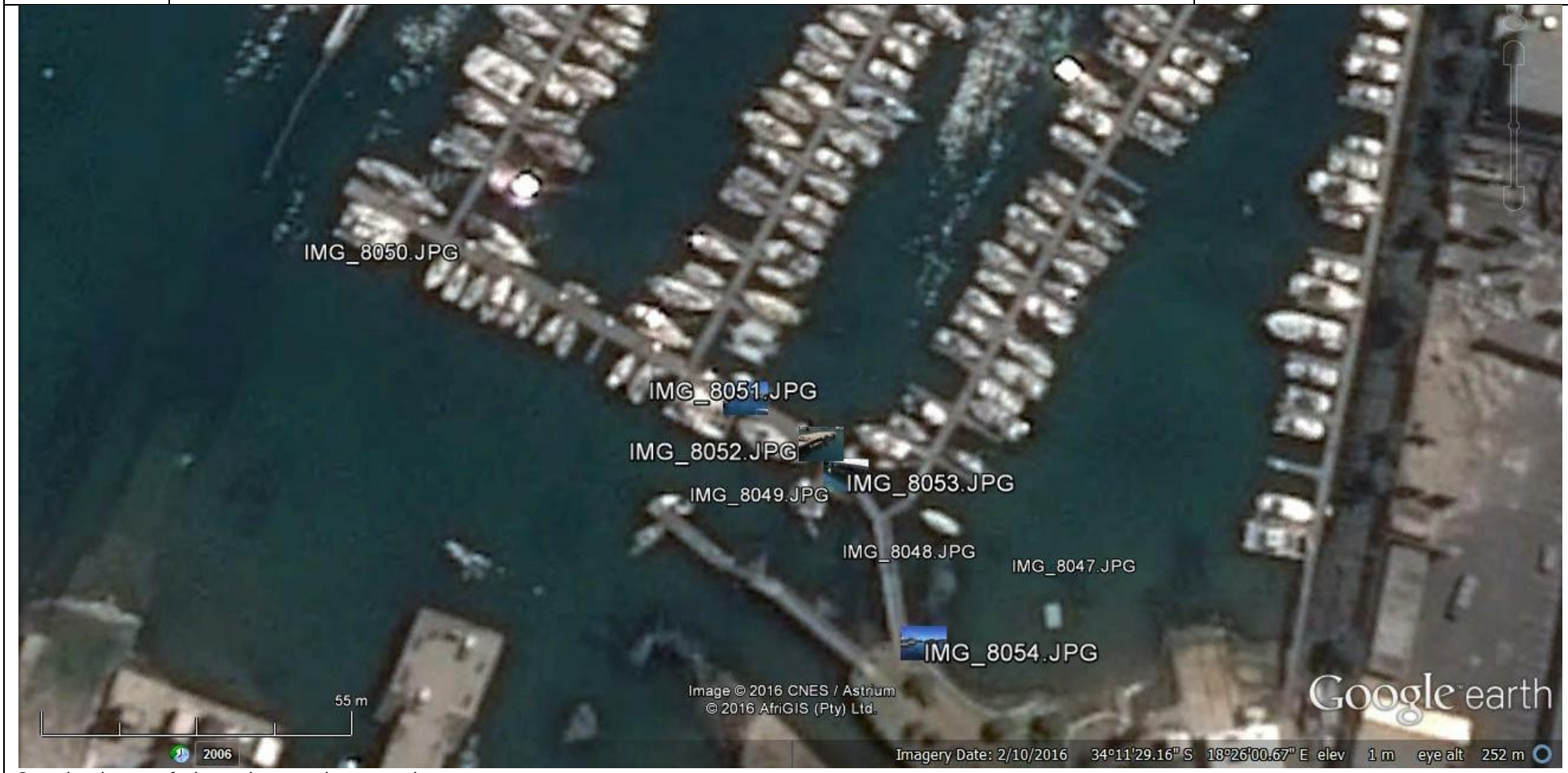
1. *Indicative placement of anchors, actual placement to be determined at time of installation*
2. *All dimensions in millimeters/meters unless noted otherwise*
3. *Do not scale, use figured dimension only*

REV	DESCRIPTION	SIGN	DATE
Project name: FBYC		Seaflex Project number 4691	
Drawing by: THY Date: 20150622 Scale: x	Client: Jarr Marine		

Seaflex

Tel: + 46 90 16 06 50
PHONE: + 46 90 16 06 51
FAX: + 46 90 16 06 51
E-mail: info@seaflex.net

Appendix C: Photographs

Image number	Image	Image Description
		

Overview image of where photographs were taken

Image number	Image	Image Description
IMG_8047		Edge of Jetty to be expanded indicating the breakwater structure that will be removed and replaced.

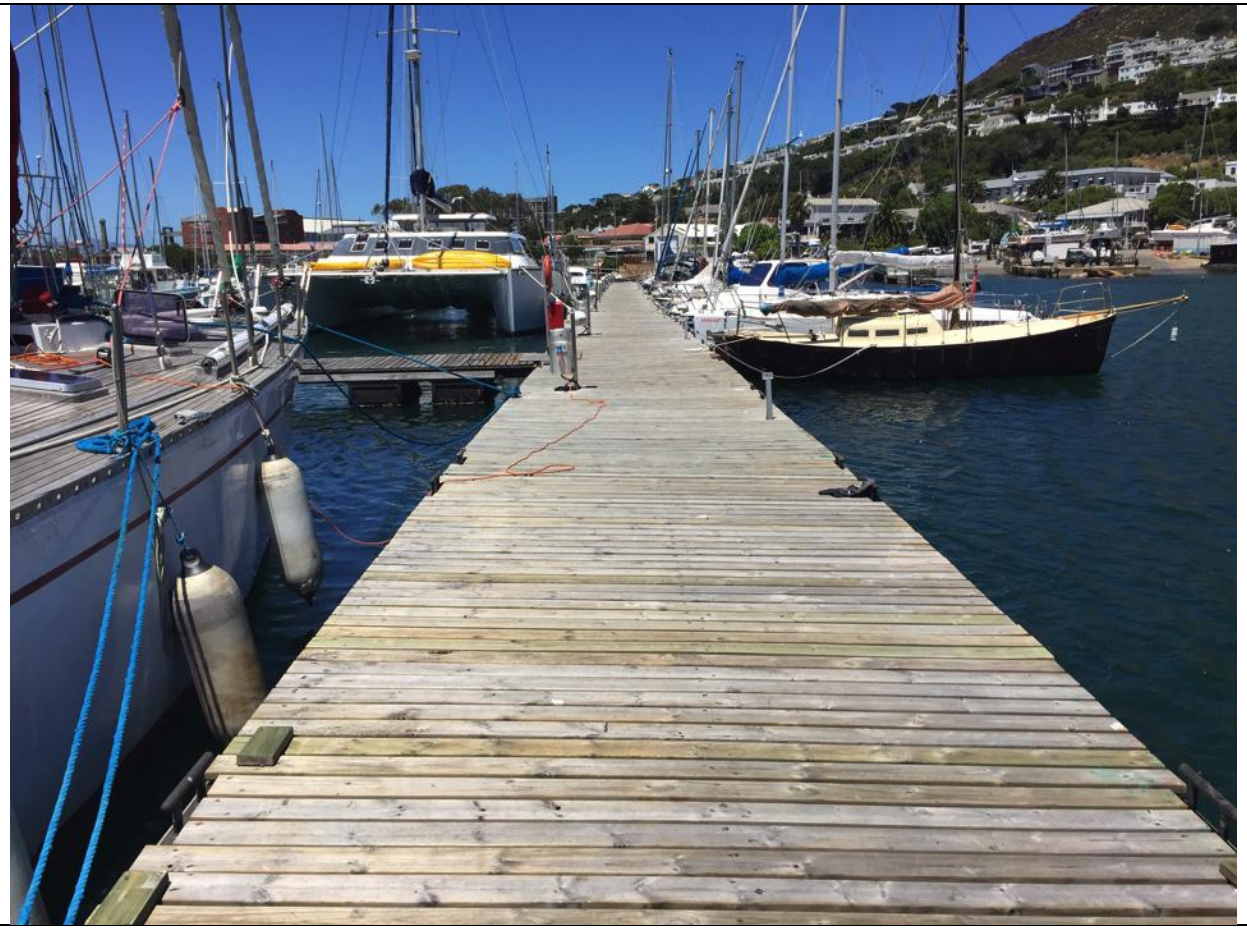
Image number	Image	Image Description
IMG_8048		An on site example of how the expanded jetty will look like with docking bays for vessels.

Image number	Image	Image Description
IMG_8049		Breakwater structure to be replaced.

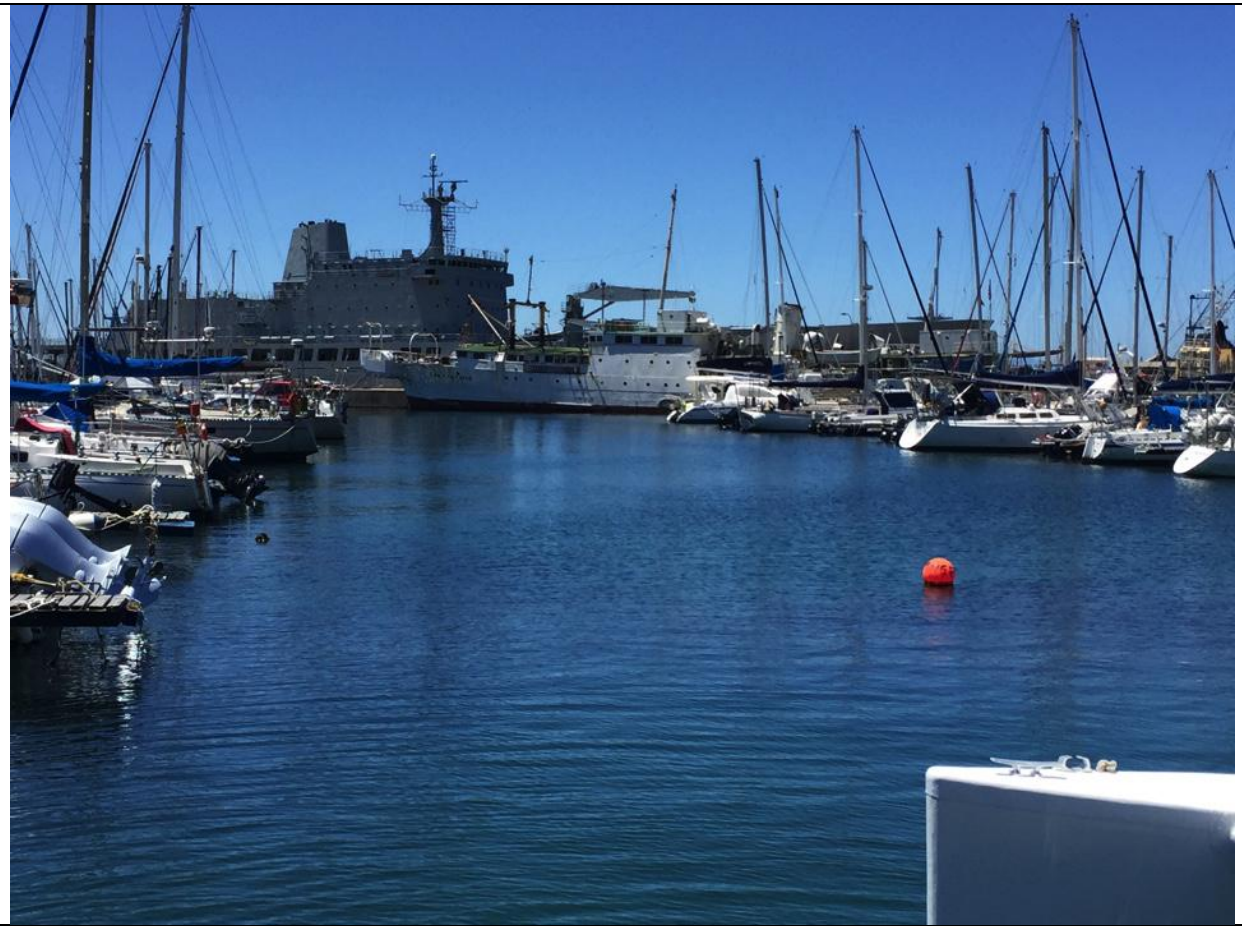
Image number	Image	Image Description
IMG_8051		Overview of where the S.A. Navy docking yard is situated

Image number	Image	Image Description
IMG_8053		An onsite example of what the new jetty will look like and how it will be made buoyant by steel pipes.

Appendix D: Biodiversity Overlays

Appendix D1: Soil

Appendix D2: MPA

APPENDIX E: Permits and Licences

Appendix E1: Municipal confirmation of services

No confirmation of services necessary

Appendix E2: NID to HWC

HWC 002/02/ED (4 Jul 14)

iLifa leMveli leNtshona Koloni
Erfenis Wes-Kaap
Heritage Western Cape

NOTIFICATION OF INTENT TO DEVELOP

Completion of this form is required by Heritage Western Cape for the initiation of all impact assessment processes under Section 38(1) & (8) of the National Heritage Resources Act (NHRA).

Whilst it is not a requirement, it may expedite processes and in particular avoid calls for additional information if certain of the information required in this form is provided by a heritage specialist/s with the necessary qualifications, skills and experience.

A. APPLICABILITY OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA)

HWC Case Number:	DEADP Reference Number: 16/3/3/6/7/1/A6/79/2004/16
NOTE 1:	An HWC case number must be obtained and application fee paid in advance of submission of this form.
NOTE 2:	A DEADP (W Cape Dept. Environment Affairs & Development Planning) reference number must be included in all NHRA Section 38(8) processes where DEADP is the decision making authority under NEMA. The effect of this requirement is that the NEMA process must be initiated with DEADP prior to the NHRA process with HWC.
If a DEADP reference number is not entered above please check one of the following boxes:	
☒	This application is made in terms of Section 38(8) of the NHRA and an application under NEMA has been made to the following authority: Western Cape Government Department of Environmental Affairs and Department Planning
☐	This development will not require a NEMA application.
NOTE 3:	Making an incorrect statement or providing incorrect information in this part of the form may result in all or part of the application having to be reconsidered by HWC in the future, or submission of a new application.

B. BASIC DETAILS

PROPERTY DETAILS:

Name of property: Simon's Town Marina, False Bay Yacht Club, Simon's Town	
Street address or location (eg: off R44): False Bay Yacht Club, Simon's Town Marina, adjacent to S.A. Navy docking yard, of King George Way, Simon's Town	
Erf or farm number/s: N.A.	Coordinates: 34.192297S 18.434349 E (A logical centre point. Format based on WGS84.)
Town or District: Simon's Town	Responsible Municipality: City of Cape Town
Extent of property: N.A.	Current use: Marina
Predominant land use/s of surrounding properties: Docking yards, harbour	

REGISTERED OWNER OF PROPERTY:

Name Republic of South Africa, custodian is National Department of Public Works
Address Private Bag X9027, Cape Town, 8000

Telephone 021 402 2157	Cell	E-mail Ossie.Lamb@dpw.gov.za
By the submission of this form and all material submitted in support of this notification (ie: 'the material'), all applicant parties acknowledge that they are aware that the material and/or parts thereof will be put to the following uses and consent to such use being made: filing as a public record; presentations to committees, etc; inclusion in databases; inclusion on and downloading from websites; distribution to committee members and other stakeholders and any other use required in terms of powers, functions, duties and responsibilities allocated to Heritage Western Cape under the terms of the National Heritage Resources Act. Should restrictions on such use apply or if it is not possible to copy or lift information from any part of the digital version of the material, the material will be returned unprocessed.		
I confirm that I enclose with this form four hardcopies of all material submitted together with a CD ROM containing digital versions of all of the same.		

Signature of owner or authorised agent
(Agents must attach copy of power of attorney to this form.)

Date / / 20

DEVELOPMENT DETAILS:

Please indicate below which of the following Sections of the National Heritage Resources Act, or other legislation has triggered the need for notification of intent to develop.

☒ S38(1)(a) Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.	S38(1)(c) Any development or activity that will change the character of a site -
☐ S38(1)(b) Construction of a bridge or similar structure exceeding 50m in length.	☒ (i) exceeding 5 000m^2 in extent;
☐ S38(1)(d) Rezoning of a site exceeding 10 000m^2 in extent.	☐ (ii) involving three or more existing erven or subdivisions thereof;
☒ Other triggers, eg: in terms of other legislation, (ie: National Environment Management Act, etc.) Please set out details: NEMA	☐ (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years. If you have checked any of the three boxes above, describe how the proposed development will change the character of the site:

If an impact assessment process has also been / will be initiated in terms of other legislation please provide the following information:

Authority / government department (ie: consenting authority) to which information has been /will be submitted for final decision: Department of Environmental Affairs & Development Planning

Present phase at which the process with that authority stands: A Basic Assessment process will be followed.

Provide a full description of the nature and extent of the proposed development or activity including its potential impacts (eg: changes in land use, envisaged timeframes, provision of additional bulk services, excavations, landscaping, total floor area, height of development, etc. etc.): Project Description
The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a breakwater structure and will provide additional parking bays for visiting yachts.
The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex.
The expanded area will have a length of 330m and a width of 3m resulting in an expanded area of 990 square meters.

C. HERITAGE RESOURCES AND IMPACTS THEREUPON

Section 3 of the National Heritage Resources Act sets out the following categories of heritage resource as forming part of the national estate. Please indicate the known presence of any of these by checking the box alongside and then providing a description of each occurrence, including nature, location, size, type

Failure to provide sufficient detail or to anticipate the likely presence of heritage resources on the site may lead to a request for more detailed specialist information.

(The assistance of relevant heritage professionals is particularly relevant in completing this section.)

Provide a short history of the site and its environs (Include sources where available): The False Bay Yacht Club was founded in 1958 and is situated in the naval town Simon's Town (Figure 1). The Marina is situated next to the Navy Base.

False Bay Yacht Club's marina is one of only two marinas in the Western Cape, South Africa to have been awarded 'Blue Flag' status. Blue Flag status indicates that the marina is clean, safe and secure, and adheres to international safety and tourism standards.

The club welcomes many National and International visitors and can accommodate vessels up to 22M (approximately 20tons) on either swing moorings or walk-on marinas.

The Simon's Town Marina Company and applicant (STMC) was established in 2004 by the marina owners to look after the floating walk-on marinas. Their operation includes the management of the marinas, the slip and hard facilities.

Please indicate which heritage resources exist on the site and in its environs, describe them and indicate the nature of any impact upon them:

☐	**Places, buildings, structures and equipment of cultural significance** Description of resource: Description of impact on heritage resource: n/a
☐	**Places to which oral traditions are attached or which are associated with living heritage** Description of resource: Description of impact on heritage resource: n/a
☐	**Historical settlements and townscapes** Description of resource: Description of impact on heritage resource: n/a
☐	**Landscapes and natural features of cultural significance** Description of resource: Description of impact on heritage resource: n/a

☐	**Geological resources of scientific or cultural importance** Description of resource: Description of impact on heritage resource: n/a
☐	**Archaeological resources** (Including archaeological sites and material, rock art, battlefields & wrecks)**:** Description of resource: Description of impact on heritage resource: n/a
☐	**Palaeontological resources** (ie: fossils)**:** Description of resource: Description of impact on heritage resource: n/a
☐	**Graves and burial grounds** (eg: ancestral graves, graves of victims of conflict, historical graves & cemeteries)**:** Description of Resource: Description of Impact on Heritage Resource: n/a
☐	**Other human remains:** Description of resource: Description of impact on heritage resource: n/a
☐	**Sites of significance relating to the history of slavery in South Africa:** Description of resource: Description of impact on heritage resource: n/a
☐	**Other heritage resources:** Description of resource: Description of impact on heritage resource: n/a

Describe elements in the environs of the site that could be deemed to be heritage resources: N.A.

Description of impacts on heritage resources in the environs of the site:

Summary of anticipated impacts on heritage resources: No impacts are anticipated.

ILLUSTRATIVE MATERIAL (This form will not be processed unless the following are included):

Attach to this form a minimum A4 sized locality plan showing the boundaries of the area affected by the proposed development, its environs, property boundaries and a scale. The plan must be of a scale and size that is appropriate to creating a clear understanding of the development.

Attach also other relevant graphic material such as maps, site plans, satellite photographs and photographs of the site and the heritage resources on it and in its environs. These are essential to the processing of this notification.

Please provide all graphic material on paper of appropriate size and on CD ROM in JPEG format. It is essential that graphic material be annotated via titles on the photographs, map names and numbers, names of files and/or provision of a numbered list describing what is visible in each image.

D. RECOMMENDATION

In your opinion do you believe that a heritage impact assessment is required? ☐ Yes ☒ No

Recommendation made by: Name Pieter Badenhorst Capacity Independent Environmental Assessment Practicioner
PLEASE NOTE: No Heritage Impact Assessment should be submitted with this form or conducted until Heritage Western Cape has expressed its opinion on the need for such and the nature thereof.

E. INFORMATION TO BE PROVIDED AND STUDIES TO BE CONDUCTED AS PART OF THE HERITAGE IMPACT ASSESSMENT (HIA)

If it is recommended that an HIA is required please complete this section of the form.

DETAILS OF HERITAGE PRACTITIONERS AND SPECIALISTS INTENDING TO CONDUCT THE HIA:

1.	Name of individual: Name of Practice: Area of specialisation: Qualifications: Experience: Standing in heritage resource management: E-mail Address: Telephone: Cell:
2.	Name of individual: Name of Practice: Area of specialisation: Qualifications: Experience: Standing in heritage resource management: E-mail Address: Telephone: Cell:
3.	Name of individual: Name of Practice: Area of specialisation: Qualifications: Experience: Standing in heritage resource management: E-mail Address: Telephone: Cell:
4.	Name of individual: Name of Practice: Area of specialisation: Qualifications: Experience: Standing in heritage resource management: E-mail Address: Telephone: Cell:

5.	Name of individual: Name of Practice: Area of specialisation: Qualifications: Experience: Standing in heritage resource management: E-mail Address: Telephone: Cell:
If this submission is made in terms of Section 38(8) of the National Heritage Resources Act indicate below the particulars of the principle environmental consultant on the project.	
Name of individual: Pieter Badenhorst Name of Practice: Pieter Badenhorst Professional Services Area of specialisation: EIA and public participation E-mail Address: pbps@iafrica.com Telephone: 021 873 7228 Cell: 082 7763422 Postal Address: P. O. Box 1058, Wellington,	

DETAILS OF STUDIES TO BE CONDUCTED IN THE INTENDED HIA

In addition to the requirements set out in Section 38(3) of the NHRA, indicate envisaged studies:	
☐	Heritage resource-related guidelines and policies.
☐	Local authority planning and other laws and policies.
☐	Details of parties, communities, etc. to be consulted.
☐	Specialist studies, eg: archaeology, palaeontology, architecture, townscape, visual impact, etc. Provide details:
☐	Other. Provide details:
PLEASE NOTE: Any further studies which Heritage Western Cape may resolve should be submitted must be in the form of a single, consolidated report with a single set of recommendations. Specialist studies must be incorporated in full, either as chapters of the report, or as annexures thereto.	

Appendix F: Public Participation Process

Appendix F1: I&AP List

	Surname	Initials	Representing	Tel	Fax	Email	P.O. Box	Town	Code	Reg
Authorities										
1			Department of Environmental Affairs and Development Planning: Coastal Management Unit	0214832785			Private Bag X9086	Cape Town	8000	
2	Duffel-Canham	A	Cape Nature (Land Use Advice Unit)	021 866 8017	021 866 1523	Landuse@Capenature.Co.Za	P/Bag X5014	Stellenbosch	7599	L
3			Heritage Western Cape		021 483 9842		Private Bag X9067	Cape Town	8000	L
4	Chief Director: ICM		Department of Environment Affairs (DEA) Branch: Oceans and Coast (OC)	021 462 1777	021 465 2664		P.O. Box 52126	Victoria and Alfred Waterfront Cape Town	8002	L
5			Department of Agriculture, Forestry and Fisheries				Private Bag X9087	Cape Town	8000	
6			Department of Defence	(021) 787 6075	(021) 787 6038		P.O. BOX 47	Cape Town	8000	
7	Andy Greenwood		City of Cape Town: Southern E&HM Region	021 444 2604	021 444 3802		Private Bag X5	Plumstead	7801	
Other										
8	Liell-Cock	S	Ward Councillor	0825517230		Simon.Liell-Cock@Capetown.Gov.Za	Sub-Council Office – Fish Hoek Civic Centre, Central Circle Off Recreation Road, Fish Hoek	Fish Hoek		E
9	Purchase	Fa	Chairman Of Sub Council 19	0836290827		Felicityanne.Purchase@Capetown.Gov.Za				E
10	Pelt-Ray	A	Community Police Forum	0723473117			Post Box 675,	Simons Town Cape Town	7995	L
11		Admiral	S.A Navy			g.jamieson@sanavy.co.za				E

	Surname	Initials	Representing	Tel	Fax	Email	P.O. Box	Town	Code	Reg
		Jamieson								
12	Bromley	Cilla	GEESE	0217826400	0217825016	Bromleycilla@gmail.com	71 Glen Road	Glencairn	7975	E
13	Heywood	Eileen	Simon's Town Civic Association	0217823296		S Town Civic Association [Stcamail@Gmail.Com] ehey212@gmail.com	46 Glen Road	Glencairn	7975	E
14			Simon's Town Amenities Development Company (STADCO)	0217864731		STADCO@telkomsa.net	P.O. Box 47	Simon's Town	7995	E
15	Brundrit	Prof. G	Chairman Simon's Town Amenities Development Company (STADCO)	0217862308			P.O. Box 260	Simon's Town	7995	E
16	Silk	Margaret	Paddlers Kayak Shop	0217862626		sales@paddlers.co.za				E
17	Hurwitz	Dave	Simon's Town Boat Company	0822577760 0217862136		info@boatcompany.co.za dhurwitz@iafrica.com				E
18	Dilly	Harry	Former Mayor Of Simon's Town And Manager Of Boat Trips	0217863148		hdilley@iafrica.com	P.O. Box 6	Simon's Town	7995	E
19			False Bay Yacht Club	0217861703	0217863925	info@fbyc.co.za	P.O. Box 45	Simon's Town	7995	
20	Arenhold	G	Simon's Town Marina Company	0217863853	0217864535		P.O. Box 45	Simon's Town	7995	

Appendix F2: Advertisement
Appendix F2.1: Advertisement Text

PUBLIC PARTICIPATION PROCESS

PRE- APPLICATION PUBLIC PARTICIPATION

Proposed Simon's Town Marina Expansion

DEA&DP NOI Reference nr: 16/3/3/6/7/1/A6/79/2004/16Notice is hereby given of a public participation process in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, Amended November 2014.

The applicant proposes to replace the outdated floating breakwater structure at the Simon's Town Marina with a buoyant jetty structure which will act as a floating breakwater structure and will provide additional docking bays for visiting vessels. The current broken floating breakwater structure and anchoring material will be removed. The new structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex. The approximate expanded are will be 990m^2.

The notification and registration period for I&AP's as well as commenting period will be from Tuesday 22 March until Monday 25 April 2016. More information of the development is available in the Basic Assessment Report which is available for comment from www.pbpscon.co.za or the EAP from 18 January 2016 until 17 February 2016.

As per the listed activities below the proposed development initiated a Basic Assessment Process.

The following National Environmental Management Act (NEMA) listed activities are triggered: Listing Notice 1: R983 Activity 12,15, 17, 48, 49, 54, 55; Listing Notice 3: R985 Activity 23

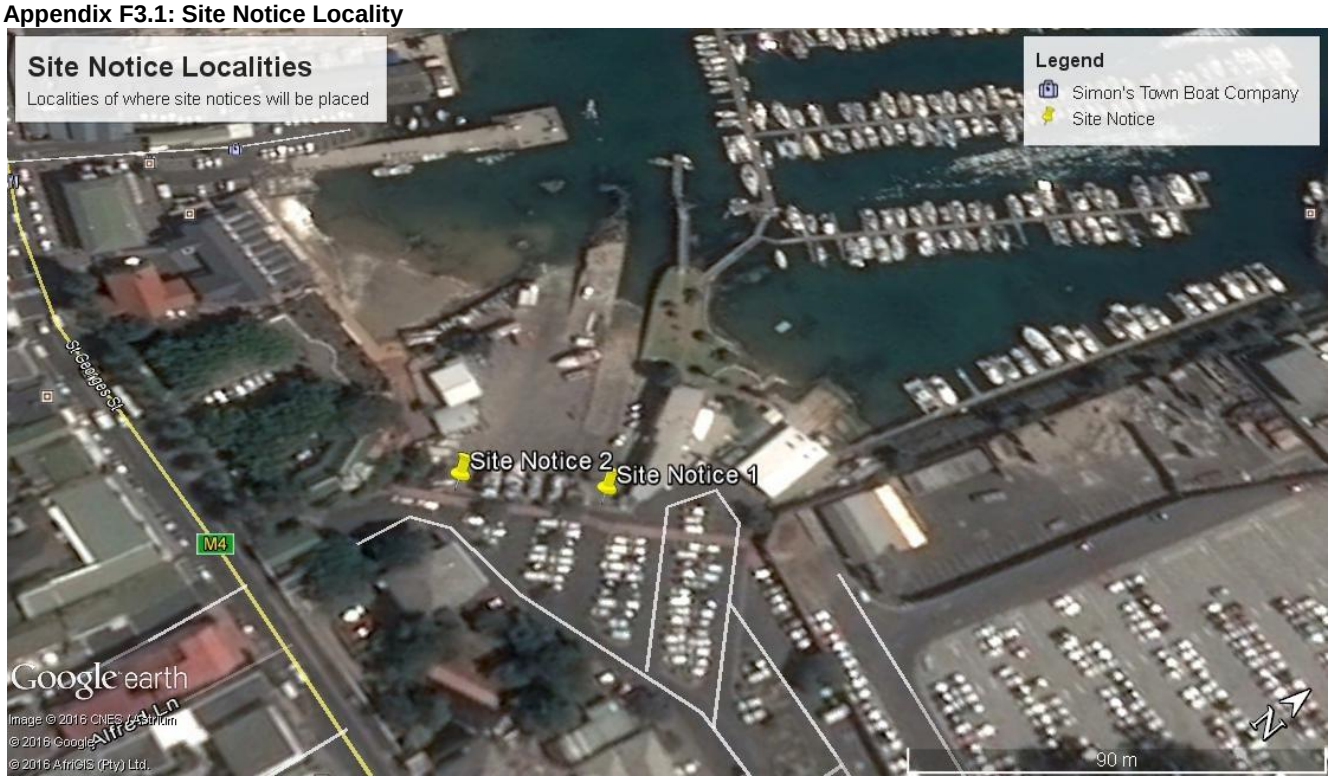
Details of EAP

Helene Botha Pieter Badenhorst Professional Services; P O Box 1058, Wellington, 7654 Cell: 076 800 4959; Fax: 0866721916; E-mail: heleneb@iafrica.com Website: www.pbpscon.co.za	**This notification is for the Pre-application Public Participation process. In order to ensure that you are identified as an interested and/or affected party (I&AP) please submit your name, contact information and interest in the matter as well as any comment to the EAP before 17:00 on 25 April 2016.**

Appendix F2.2: Proof of Advertisement
Will be included in final report

Appendix F3: Site Notice and Locality

Appendix F3.1: Site Notice Locality



Appendix F3.2: Text and proof of site notice

PUBLIC PARTICIPATION PROCESS

PRE- APPLICATION PUBLIC PARTICIPATION

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Helene Botha Pieter Badenhorst Professional Services; P O Box 1058, Wellington, 7654 Cell: 076 800 4959; Fax: 0866721916; E-mail: heleneb@iafrica.com Website: www.pbpscon.co.za	**This notification is for the Pre-application Public Participation process. In order to ensure that you are identified as an interested and/or affected party (I&AP) please submit your name, contact information and interest in the matter as well as any comment to the EAP before 17:00 on 25 April 2016.**

Appendix F4: Proof of Notifications

Appendix F4.1 Proof of letters sent

Appendix 4.1.1. Proof of letters sent for dBAR

Will be included in final report

4.1.2 Proof of letters sent for fBAR

Will be included in final report

Appendix F4.3: Notification letters sent
4.3.1: Notification letter sent to I&AP for dBAR
Will be included in final report

Appendix F4.3.2: Notification letter sent to Authorities for DBAR
All Authorities
Will be included in final report

Appendix F4.3.3: Notification letter sent to I&AP's with FBAR
Will be included in final report

Appendix F4.3.4: Notification letter sent to Authorities for FBAR

Will be included in final report

Appendix F5: Comments Received

Appendix F5.1: Comments received on dBAR

Will be included in final report

Appendix F5.2: Comments received on fBAR
Will be included in final report

Appendix F6: Comments and Response Table

COMMENTS RECEIVED ON DBAR				
Date	Comments from	Comments received	Response from	Response received
COMMENTS RECEIVED ON FBAR				

Appendix G: Specialist Reports

Not applicable

Appendix H: Environmental Management Plan

Construction & Operational Management Plan

For

PROPOSED SIMON'S TOWN MARINA EXPANSION

DEA&DP NOI Reference nr: 16/3/3/6/7/1/A6/79/2004/16

COMPILED BY: Helene Botha, Elanie Kühn and Pieter Badenhorst

Pieter Badenhorst Professional Services

DATE: March 2016

CONTENTS

List of abbreviations

EA	Environmental Authorisation
DEA&DP	Department of Environmental Affairs and Development Planning
ECO	Environmental Control Officer
ELWU	Existing Lawful Water use haal uit
EMPr	Environmental Management Programme
RE/Engineer	Resident Engineer overseeing the construction activity

Definitions

For the purposes of this Specification the following definitions shall apply (please note some definitions may not apply to this EMPr):

Alien species - Plants and animals which do not arrive naturally in an area - they are brought in by humans. Alien plants often force indigenous species out of the area. Rooikrans is a good example of alien species in the Cape.

Alternative - A possible course of action, in place of another, that would meet the same purpose and need defined by the development proposal. Alternatives considered in the EIA process can include location and/or routing alternatives, layout alternatives, process and/or design alternatives, scheduling alternatives or input alternatives.

Aspect – Element of an organisation's activities, products or services that can interact with the environment.

Auditing - A systematic, documented, periodic and objective evaluation of how well the environmental management programme is performing with the aim of helping to safeguard the environment by: facilitating management control which would include meeting regulatory requirements. Results of the audit help the organisation to improve its environmental policies and management systems.

Biodiversity - The rich variety of plants and animals that live in their own environment. Fynbos is a good example of rich biodiversity in the Cape.

Built environment - Physical surroundings created by human activity, e.g. buildings, houses, roads, bridges and harbours.

Conservation - Protecting, using and saving resources wisely, especially the biodiversity found in an area.

Construction site, working area or Site - means any area within the boundaries of the property(ies) where construction is taking place.

Contamination - Polluting or making something impure.

Corrective (or remedial) action - Response required to address an environmental problem that is in conflict with the requirements of the EMPr. The need for corrective action may be determined through monitoring, audits or management review.

Degradation - The lowering of the quality of the environment through human activities, e.g. river degradation, soil degradation.

Ecology - The scientific study of the relationship between living things (animals, plants and humans) and their environment.

Ecosystem - The relationship and interaction between plants, animals and the non-living environment.

Environment - Our surroundings, including living and non-living elements, e.g. land, soil, plants, animals, air, water and humans. The environment also refers to our social and economic surroundings, and our effect on our surroundings.

Environmental Impact Assessment (EIA) - An Environmental Impact Assessment (EIA) refers to the process of identifying, predicting and assessing the potential positive and negative social, economic and biophysical impacts of a proposed development. The EIA includes an evaluation of alternatives; recommendations for appropriate management actions for minimising or avoiding negative impacts and for enhancing positive impacts; as well as proposed monitoring measures.

Environmental Management System (EMS) - Environmental Management Systems (EMS) provide guidance on how to manage the environmental impacts of activities, products and services. They detail the organisational structure, responsibilities, practices, procedures, processes and resources for environmental management. The ISO14001 EMS standard has been developed by the International Standards Organisation.

Environmental policy - Statement of intent and principles in relation to overall environmental performance, providing a framework for the setting of objectives and targets.

Fynbos - Low-growing and evergreen vegetation found only in the south Western Cape. Fynbos is known for its rich biodiversity.

Habitat - The physical environment that is home to plants and animals in an area, and where they live, feed and reproduce.

Hazardous waste – Waste, even in small amounts, that can cause damage to plants, animals, their habitat and the well-being of human beings, e.g. waste from factories, detergents, pesticides, hydrocarbons, etc.

Impact - A description of the potential effect or consequence of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.

Indigenous species - Plants and animals that are naturally found in an area.

Infrastructure - The network of facilities and services that are needed for economic activities, e.g. roads, electricity, water, sewerage.

Integrated - Mixing or combining all useful information and factors into a joint or unified whole.

See Integrated Environmental Management.

Integrated Environmental Management (IEM) - A way of managing the environment by including environmental factors in all stages of development. This includes thinking about physical, social, cultural and economic factors and consulting with all the people affected by the proposed developments. Also called "IEM".

Land use - The use of land for human activities, e.g. residential, commercial, industrial use.

Mitigation - Measures designed to avoid, reduce or remedy adverse impacts

Natural environment - Our physical surroundings, including plants and animals, when they are unspoiled by human activities.

No-Go area- means any area where no access is allowed.

Over-utilisation - Over-using resources - this affects their future use and the environment.

Policy - A set of aims, guidelines and procedures to help you make decisions and manage an organisation or structure. Policies are based on people's values and goals. See Integrated Metropolitan Environmental Policy.

Process - Development usually happens through a process - a number of planned steps or stages.

Proponent – Developer. Entity which applies for environmental approval and is ultimately accountable for compliance to conditions stipulated in the Environmental authorisation (EA) and requirements of the EMPr.

Recycling - Collecting, cleaning and re-using materials.

Refuse- refers to all solid waste, including construction debris (cement bags, wrapping materials), waste and surplus food, food packaging, organic waste etc.

Resources - Parts of our natural environment that we use and protect, e.g. land, forests, water, wildlife, and minerals.

Scoping Report - A report presenting the findings of the scoping phase of the EIA. This report is primarily aimed at reaching closure on the issues and alternatives to be addressed in the EIA (in the case of a full EIA process).

Stakeholders - A subgroup of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. The term includes the proponent, authorities and all interested and affected parties.

Storm water management – Strategies implemented to control the surface flow of storm water such that erosion, sedimentation and pollution of surface and ground water resources in the immediate and surrounding environments are mitigated. This is specifically important during the construction and decommissioning phases of a project.

Sustainable development - Development that is planned to meet the needs of present and future generations, e.g. the need for basic environmental, social and economic services. Sustainable development includes using and maintaining resources responsibly.

Sustainability - Being able to meet the needs of present and future resources.

Waste Management – Classifying, recycling, treatment and disposal of waste generated during construction and decommissioning activities.

Wetlands - An area of land with water mostly at or near the surface, resulting in a waterlogged habitat containing characteristic vegetation species and soil types e.g. vlei's, swamps.

Zoning - The control of land use by only allowing specific type development in fixed areas or zones.

1) Introduction & Background

The False Bay Yacht Club was founded in 1958 and is situated in the naval town Simon's Town (Figure 1). The Marina is situated next to the Navy Base.

False Bay Yacht Club's marina is one of only two marinas in the Western Cape, South Africa to have been awarded 'Blue Flag' status. Blue Flag status indicates that the marina is clean, safe and secure, and adheres to international safety and tourism standards.

The club welcomes many National and International visitors and can accommodate vessels up to approximately 20tons on either swing moorings or walk-on marinas.

The Simon's Town Marina Company and applicant (STMC) was established in 2004 by the marina owners to look after the floating walk-on marinas. Their operation includes the management of the marinas, the slip and hard facilities.

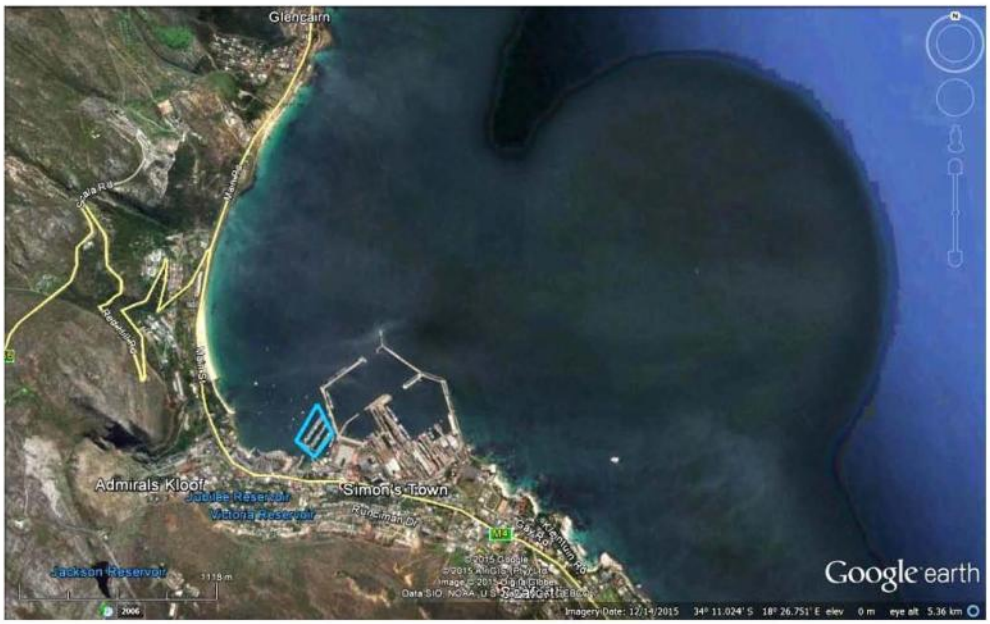

Figure 1: Locality of Simon's Town Marina

The boats in the Marina are exposed to the North-West and North-East winds. To protect the boats in the Marina, a rubber pipe was acquired, made buoyant and anchored to the sea bottom, with chains, to create a breakwater structure (Figure 3). The pipe was anchored with engine blocks and other structures heavy enough to keep the pipe anchored. The 250m pipe has reached the end of its lifespan and is currently breaking apart.

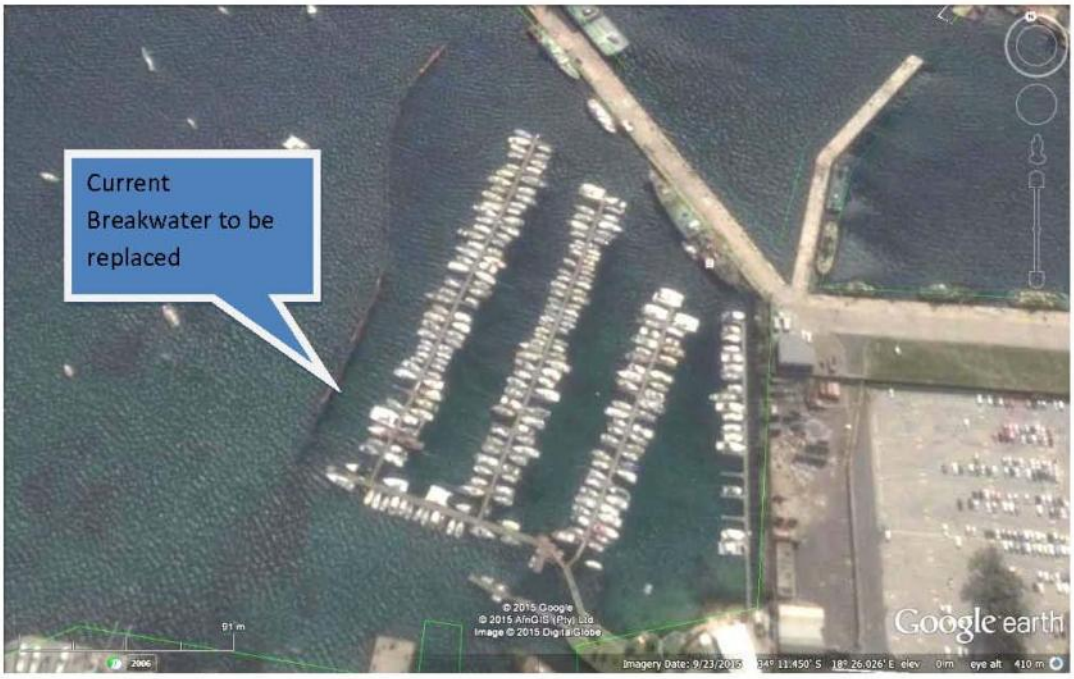

Figure 2: The Marina as it is currently, with the breakwater to protect yachts.

Figure 3: Breakwater structure currently present at the Marina

STMC has appointed Pieter Badenhorst Professional Services as independent environmental consultant to undertake the environmental impact assessment as the replacement of the structure triggers a Basic Assessment Process.

This document is a requirement for environmental authorization which will be included in Appendix A when available. On approval by DEA&DP the developer must ensure that

its conditions are implemented by making the document available to the contractor and also ensure that an ECO is appointed and systems are in place to evaluate compliance. The contractor(s) is expected to familiarise himself with the contents of this document and to implement its conditions.

Overall the EMPr will aim to:

- Control the construction activities in such a way that negative impacts on the physical environment, sensitive areas and surrounding areas are prevented or minimised.
- Ensure that mitigation and rehabilitation measures are implemented where required.

Please note that this document does not replace any other regulations, laws and bylaws that the contractor must adhere to. It specifically does not replace the regulations of the Occupational Health and Safety act of 1993 (Act No. 85 of 1993).

Funding for the implementation of the Construction EMPr is the financial responsibility of the developer. Note that the architectural/design guideline for the beach wall and revetment must be accepted by the municipality prior to the commencement of construction activities.

The project locality and environmental issues are shown in section 2 with the construction EMPr in section 3 and the operational EMPr in section 4.

2) Project description and environmental issues

2.1 Project Description

The applicant proposes to replace the outdated structure with a buoyant jetty structure which will act as a breakwater structure and will provide additional moorings for visiting yachts (Figure 5).

The structure will be made buoyant with two 800mm steel pipes and will be anchored to the sea bottom by means of concrete blocks and a more environmental friendly mechanism named Seaflex (Figure 4).

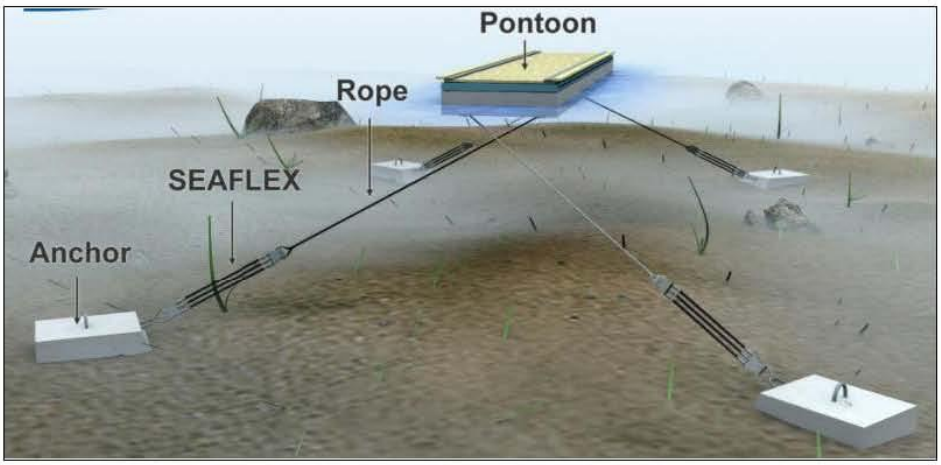

Figure 4: Schematic example of how the breakwater jetty will be anchored by the Seaflex

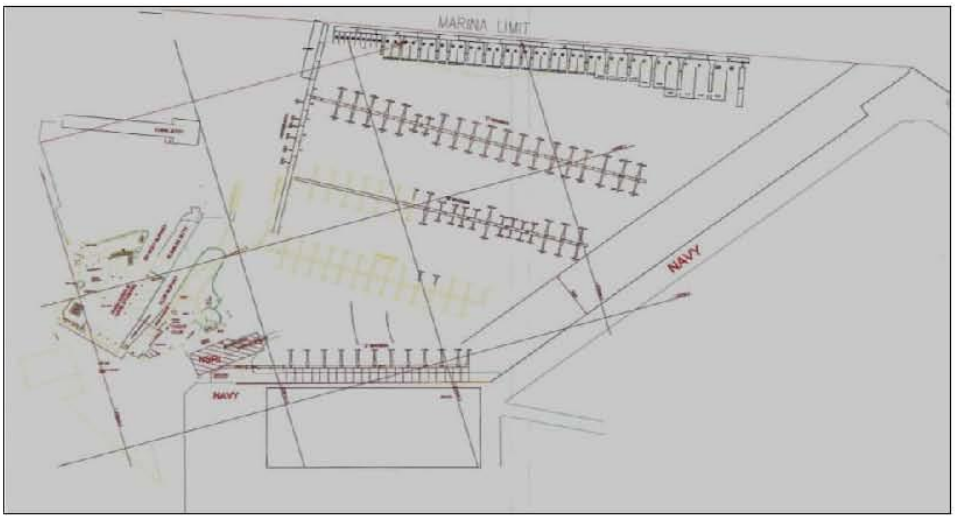

Figure 5: Proposed Layout plan for expansion.

3) Management Programme – Construction

Please note that all contractors on the site must be made aware of this EMPr and they must at all times adhere to the procedures specified.

3.1 Contractual obligations

1) The Contractor shall acknowledge receipt of copies of the EMPr and confirm in writing that he has familiarised himself with the contents thereof;
2) The Contractor shall comply with all environmental obligations imposed by the ECO.
3) The Contractor shall co-operate fully with the ECO and use his best endeavours to ensure that the objectives of the EMPr are fulfilled in the course of the Contractor's execution of the works or the relevant part thereof.
4) The Contractor shall erect an information board containing background information for the construction activity and listing the relevant contact details for complaint.
5) The Contractor must ensure that all workers are given environmental awareness training on the requirements of the EMPr. This must form part of the Contractor's contract agreement. The ECO must be informed in writing of implementation.
6) Working hours will be from 7:00pm to 18:00pm Monday to Saturday. No work will be allowed on Sundays or public holidays.
7) Deliveries will only be allowed between 8:00am and 5pm.
8) Preference must be given to local labour.
9) Workers (except security guards) may not be housed on site.

3.2 Penalties

Penalties will be instituted for non-compliance. The penalty is over and above the cost of rectifying the problem and/or damage. Penalties will vary on a sliding scale from R1 000 to R 20 000 for non-serious to serious issues as determined by the/ECO. Repeat offenses will have a higher penalty.

These penalties must be paid into a separate account to be administered by the EA Holder. The ECO will decide how the penalties, if any, are to be spent on measures improving the environment.

3.3 Methodology statement

A methodology statement must be compiled by the contractor(s) before any construction or activity may commence. The statement must include a site establishment plan indicating all relevant areas. The ECO must approve the methodology statement.

The activity indicated in the following list will as a minimum require a statement. The contractor must identify any other statements that will be required as part of the project implementation.

- Environmental Awareness and Training
- Contractor's camp
- Demarcation and protection of sensitive environments
- Noise control
- Turbidity control
- Waste Management
- Toilets
- Fuel and chemical management
- Litter and oil traps
- Contaminated water

3.4 Environmental awareness training

1) All the Contractors Employees and Sub-Contractors Employees and any suppliers Employees that spend more than 1 day a week or four days in a month on site, must attend an Environmental Awareness Training course presented by the Contractor the first of which shall be held within one week of the Commencement Date. Subsequent courses shall be held as and when required.
2) The ECO will provide the Contractor with the course content for the environmental awareness-training course, and the Contractor shall communicate this information to his Employees on the site, to any new Employees coming onto site, to his subcontractors and to his suppliers.
3) The Contractor shall supply the ECO with a monthly report indicating the number of Employees that will be present on site during the following month and any changes in this number that may occur during the month.
4) The Contractor shall submit a Method Statement detailing the logistics of the environmental awareness-training course.

3.5 Contractor's camp

1) The Contractor's camp, offices, and storage facilities shall not be located within an environmentally sensitive area. The camp's position must be approved by the ECO.
2) The contractor must ensure that all temporary structures, equipment, materials, and facilities used or created on-site during the construction phase are removed and appropriately disposed of.

3.6 Demarcation and protection

1) Proper access control must be implemented to ensure that only authorised people obtain access to the site. No-Go areas must be clearly demarcated prior to commencing of demolition and/or installation operations.

2) The contractor must ensure that demarcations are maintained for the duration of the project.
3) Public access to the harbour must not be impaired except for the demarcated area where construction is taking place.

3.7 Noise control

1) Working hours will be restricted to daily normal working hours.
2) All noise and sounds generated by plant or machinery must adhere to SABS 0103 specifications for the maximum permissible noise levels for residential areas.
3) All plant and machinery are to be fitted with adequate silencers.
4) No sound amplification equipment such as sirens, loud hailers or hooters may be used on site, after normal working hours, except in emergencies.
5) If work is to be undertaken outside of normal work hours, permission must be obtained from The City of Cape Town.

3.8 Fire management

1) No open fires or naked flames for heating or cooking shall be allowed on Site. Stoves and other electrical equipment shall only be permitted in the Contractor's camp and never be left unattended.
2) The Contractor shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on Site. No fires may be lit except at places approved by the ECO.
3) The Contractor shall ensure that the basic fire-fighting equipment is to the satisfaction of the Municipal Fire Chief (where applicable).
4) The Contractor shall supply all living quarters, site offices, kitchen areas, workshop areas, materials, stores and any other areas identified by the ECO with tested and approved fire fighting equipment.
5) Fire and "hot work" shall be restricted to a site approved by the ECO.
6) A braai facility may be considered at the discretion of the ECO. The area shall be away from flammable stores. All events shall be under management supervision and a fire extinguisher shall be immediately available. "Low smoke" fuels shall be used. Smoke free zoning regulations shall be considered.
7) Cooking shall be restricted to bottled gas facilities under strict control and supervision. The sensitivity of the surrounding land uses and occurrence of natural indigenous vegetation must be considered when assessing the risk of fires.
8) The Contractor shall take precautions when working with welding or grinding equipment near potential sources of combustion. Such precautions include having a suitable, tested and approved fire extinguisher immediately at hand and the use of welding curtains.
9) The Contractor shall identify the authorities responsible for fighting fires in the area and shall liaise with them regarding procedures should a fire start. The Contractor shall ensure that his staff are aware of the fire danger at all times and

are aware of the procedure to be followed in the event of a fire. The Contractor shall also ensure that all the necessary telephone numbers etc. are posted at conspicuous and relevant locations in the event of an emergency. The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it.

10) Should a contractor be found responsible for the outbreak of a fire, he shall be liable for any associated costs.

3.9 Water management

1) The Contractor shall provide water for drinking and construction purposes. Water from the local system must be used carefully and sparingly with the view of not wasting water.
2) Taps are to be attached to secure supports and leaking taps and hosepipes are to be repaired immediately.

3.10 Turbidity control

1) The generation of silt/turbidity during placement of the anchors must be prevented or minimised. The methodology to be used must be approved by the ECO.

3.11 Waste management

1) A waste minimisation approach must be followed. This requires recycling wherever possible. All waste therefore to be suitably contained and removed regularly from site in accordance with the municipal waste management procedures.
2) The old floating barrier with chains and anchors must be removed to an approved municipal waste site.
3) The Contractor shall ensure that all refuse is deposited in refuse bins, which he shall supply and arrange to be emptied on a weekly basis. Refuse bins shall be of such a design that the refuse cannot be blown out and that animals or birds are not attracted to the waste and spread it around. Refuse bins shall be water tight, wind-proof and scavenger-proof and shall be appropriately placed throughout the site.
4) Refuse shall be disposed of at an approved waste site (site and method to be agreed with Local Authority). Refuse shall not be burnt or buried on or near the Site.
5) The Contractor shall provide labourers to clean up the Contractor's camp and Site on a weekly basis.
6) The Contractor shall also clean the Contractor's camp and Site of all structures, equipment, residual litter and building materials at the end of the contract.

3.12 Toilets

1) The Contractor shall be responsible for providing all sanitary arrangements for construction and supervisory staff on the site. A minimum of one chemical toilet shall be provided per 15 persons. Toilets provided by the Contractor must be easily accessible and within a practical distance from the workers. Toilets shall be located within areas of low environmental importance. The toilets shall be of a neat construction and shall be provided with doors and locks and shall be secured to prevent them blowing over. Toilets shall be placed outside areas susceptible to flooding.
2) The Contractor shall keep the toilets in a clean, neat and hygienic condition. The Contractor shall supply toilet paper at all toilets.
3) The Contractor shall be responsible for the cleaning, maintenance, servicing and emptying of the toilets on a regular basis (by chemical contractor). No waste to be dumped in the bush or stream. The Contractor shall ensure that the toilets are emptied before the builders' or other holidays and the waste be stored and disposed of at an appropriate place off site. The Contractor shall ensure that no spillage occurs when chemical toilets are cleaned and emptied. The Contractor shall supply a contingency plan for spills from toilets.
4) Performing ablutions in any other area is strictly prohibited.
5) The location for construction camps and toilets must be approved by the ECO.

3.13 Fuel and chemical management

1) Fuel may be stored on site providing the following is strictly adhered to:
2) All necessary approvals with respect to fuel storage and dispensing shall be obtained from the appropriate authorities.
3) The Municipal Fire Chief (or as applicable) must be informed and consulted i.t.o Fire Regulations.
4) The Contractor shall ensure that all liquid fuels and oils are stored in tanks with lids, which are kept firmly shut and under lock and key at all times.
5) The Contractor shall stand any equipment that may leak, and does not have to be transported regularly, on watertight drip trays to catch any pollutants. The drip trays shall be of a size that the equipment can be placed inside it. Drip trays shall be cleaned regularly and shall not be allowed to overflow.
6) All hazardous material (e.g., oils. Petrol or diesel) used on site must be disposed of at an approved hazardous waste facility or with the services of a licensed waste transportation company. All certificates of disposal and weigh bridge slips need to be signed by all relevant officials and kept as records on the premises.
7) The contractor will be responsible for the cleaning up of any spill and associated costs.
8) Areas for storage of fuels and other flammable materials shall comply with standard fire safety regulations and may require the approval of the Municipal Fire Chief (in urban areas).

9) Temporary above ground storage tanks may be permitted at the discretion of the Municipal Fire Chief based on the merit of the situation, provided that the following requirements are complied with:

   a. Written application together with a plan and authority from the Municipality shall be forwarded to the Municipal Fire Chief (in urban areas) at least fourteen (14) days prior to the installation being erected on site. Written permission shall be obtained from the chief fire officer for the erection of the installation.

   b. The drawn plan shall be acceptable to the Municipal Fire Chief (in urban areas) and to contain the following information:

      (i) the scale

      (ii) the name and address of the premises,

      (iii) the number and the quantity of the tanks,

      (iv) the position of the tanks in relation to the boundary, other flammable or combustible materials, etc,

      (v) the size and construction materials used for the bund

      (vi) the product to be kept in the tank, and

      (vii) any other information relevant to the situation.

Location

- The fuel storage area shall be located at one of the following locations: {provide a list of acceptable locations for the fuel storage area}.
- The ECO shall be advised of the area that the Contractor intends using for the storage of fuel.
- The location of the fuel storage area will determined by the Municipal Fire Chief (in urban areas).
- The tank shall be erected at least 3,5 meters from buildings, boundaries and any other combustible or flammable materials.

Signs/good practice/safety precautions

- Symbolic safety signs depicting “No Smoking”, “No Naked Lights” and “Danger” conforming to the requirement of SABS 1186 are to be prominently displayed in and around the fuel storage area. The volume capacity of the tank shall be displayed.
- No smoking shall be allowed in the vicinity of the stores.
- The capacity of the tank shall be clearly displayed and the product contained within the tank clearly identified using the emergency information system detailed in SABS 0232 part 1.
- There shall be adequate fire-fighting equipment at the fuel storage and dispensing area or areas.
- Fuel shall be kept under lock and key at all times.

Tanks

- The storage tank shall be removed on completion of the works.
- The storage tank shall be on the premises only for as long as the contract last.
- All such tanks to be designed and constructed in accordance with a recognised code.
- The rated capacity of tanks shall provide sufficient capacity to permit expansion of the product contained therein by the rise in temperature during storage.

Bunds/storage areas

- Tanks shall be situated in a bunded area the volume of which shall be at least 150% of the volume of the largest tank. The floor of bund shall be smooth and impermeable constructed of concrete or plastic sheeting with impermeable joints with a layer of sand over to prevent perishing. The bund walls shall be of concrete or formed of well-packed earth with the impermeable lining extending to the crest. The floor of the bund shall be sloped towards an oil trap or sump to enable any spilled fuel and/or fuel-soaked water to be removed.
- A bacterial hydrocarbon digestion agent that is effective in water approved by the ECO shall be installed in the sump.
- The tanks and bunded areas shall be covered by a roofed structure to prevent the bunded area from filling with rainwater. This structure shall be constructed in such a way, and to the approval of the Engineer, to ensure that it is wind resistant.
- Any water that collects in the bund shall not be allowed to stand and shall be removed within one day and taken off Site to a disposal site approved by the ECO, and the bacterial hydrocarbon digestion agent shall be replenished.

Empty containers

- Only empty and externally clean tanks may be stored on the bare ground. All empty and externally dirty tanks shall be sealed and stored on an area where the ground has been protected.

Filling/dispensing methods

- Any electrical or petrol-driven pump shall be equipped and positioned so as not to cause any danger of ignition of the product.
- If fuel is dispensed from 200 litre drums, the proper dispensing equipment shall be used. The drum shall not be tipped in order to dispense fuel. The dispensing mechanism of the fuel storage tank shall be stored in a waterproof container when not in use.
- Adequate precautions shall be provided to prevent spillage during the filling of any tank and during the dispensing of the contents.

Method statements

- A method statement is required for the filling of and dispensing from storage tanks.

3.14 Contaminated water

General

1. The Contractor shall prevent discharge of any pollutants, such as cements, concrete, lime, chemicals and fuels into the ocean.
2. Water from kitchens, showers, laboratories, sinks etc. shall be discharged into a conservancy tank for removal from the site.
3. Runoff from fuel depots/workshops/truck washing areas and concrete swills shall be directed into a conservancy tank and disposed off at a site approved by the ECO and Local Authority.
4. Contaminated water must not be released into the environment without authorisation from the relevant authority.

Washing areas

1. A Method Statement shall be required for all wash areas where hydrocarbon and hazardous materials, and pollutants are expected to be used. This includes, but is not limited to, vehicle washing, workshop wash bays, paint wash and cleaning.
2. Wash areas for domestic use shall ensure that the ECO sanctions the disposal of contaminated "grey" water.

3.15 Contingency planning

In the event of a spill or leak of product into the ground and/or water courses (e.g. that of hazardous substances used for the construction phase), such incidents must be reported (within 14 days) to all the relevant authorities including the Directorate: Pollution Management in accordance with Section 30(10) of the National Environmental Management Act No. 107 of 1998 (NEMA) and Section 20 (3) of the National Water Act No.36 of 1998 (NWA), that pertains to the control of emergency incidents and the remediation of the affected area. All necessary documentation must be completed and submitted within the prescribed timeframes. An incident log must be maintained by the Resident Engineer.

Containment, clean-up, and remediation must commence immediately.

3.16 Environmental Control Officer

An Environmental Control Officer (ECO) will implement environmental control of the development. The ECO duties will be as follows:

- Ensure implementation and monitoring of the EMPr.

- Make changes to the EMPr as required.
- Visit the site at least twice a week during start-up and weekly thereafter
- Maintain a photographic record of the work and environmental issues.

3.17 Documentation control

The ECO will maintain a file containing the following:

1) Copy of the EMPr
2) Methodology statement(s) by the contractor(s)
3) Site establishment plan
4) Letter from contractor(s) indicating that he has familiarised himself with the contents of the EMPr.
5) Letter from contractor(s) on environmental awareness training
6) The applicant should maintain a copy of the following documents on-site:
    - Operational Plan;
    - Emergency response and remedial action plan;
    - Environmental Management Plan (EMPr) and other documents related to the operation on file.
7) Tracking table (see Appendix B)

1) Management Programme – Operational

No management planning necessary for operational phase as the project entails only a construction phase.

Appendix A: Environmental authorisation

Appendix B: Tracking Table

Requirement	Received		Date	Comment
	Yes	No		
Methodology statement				
Site establishment plan				
Letter re contents of EMPr				
Letter re awareness training				

Appendix C: Complaint Register

Date	Time	Nature of Complaint	Details of complaint

Appendix I: Additional Information Related To Listed Waste Management Activities

Not Applicable

Appendix J: Other