agriculture
& environmental affairs

Department:
Agriculture
& Environmental Affairs
PROVINCE OF KWAZULU-NATAL

	(For official use only)
EIA File Reference Number:	DC/
NEAS Reference Number:	KZN/EIA/
Waste Management Licence Number: (if applicable)	
Date Received:	

BASIC ASSESSMENT REPORT

Submitted in terms of the Environmental Impact Assessment Regulations, 2010 promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998)

This template may be used for the following applications:

- **Environmental Authorization** subject to basic assessment for an activity that is listed in Listing Notices 1or 3, 2010 (Government Notices No. R 544 or No. R 546 dated 18 June 2010); or
- **Waste Management Licence** for an activity that is listed in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) for which a basic assessment process as stipulated in the EIA Regulations must be conducted as part of the application (refer to the schedule of waste management activities in Category A of Government Notice No. 718 dated 03 July 2009).

Kindly note that:

1. This **basic assessment report** meets the requirements of the EIA Regulations, 2010 and is meant to streamline applications. This report is the format prescribed by the KZN Department of Agriculture & Environmental Affairs. Please make sure that this is the latest version.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with text.
3. Where required, place a cross in the box you select.
4. An incomplete report will be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it will result in the rejection of the application as provided for in the regulations.
6. No faxed or e-mailed reports will be accepted.
7. The report must be compiled by an independent environmental assessment practitioner ("EAP").
8. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

9. The KZN Department of Agriculture & Environmental Affairs may require that for specified types of activities in defined situations only parts of this report need to be completed.
10. The EAP must submit this basic assessment report for comment to all relevant State departments that administer a law relating to a matter affecting the environment. This provision is in accordance with Section 24 O (2) of the National Environmental Management Act 1998 (Act 107 of 1998) and such comments must be submitted within 40 days of such a request.
11. **Please note that this report must be handed in or posted to the District Office of the KZN Department of Agriculture & Environmental Affairs to which the application has been allocated (please refer to the details provided in the letter of acknowledgement for this application).**

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	
File reference number (Waste Management Licence):	

SECTION A: DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER AND SPECIALISTS

1. NAME AND CONTACT DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Name and contact details of the EAP who prepared this report:

Business name of EAP:	Strategic Environmental Focus (Pty) Ltd		
Physical address:	Office 11 Doncaster Park Sevenfold Building 10 Derby Place Derby Downs Office Park Westville 3629		
Postal address:	P.O. Box 227, Pavilion, 3611		
Postal code:	3611	**Cell:**	N/A
Telephone:	(031) 266 1277	**Fax:**	(031) 266 6880
E-mail:	mark@sefsa.co.za		

2. NAMES AND EXPERTISE OF REPRESENTATIVES OF THE EAP

Names and details of the expertise of each representative of the EAP involved in the preparation of this report:

Name of representative of the EAP	**Education qualifications**	**Professional affiliations**	**Experience at environmental assessments (yrs)**
Mark Ryan	MSocSci (Geography & Environmental Management)	Member of IAIA	7 years
Natasha Lalie	MSc. Environment and Society	Member of IAIA	11 years

3. NAMES AND EXPERTISE OF SPECIALISTS

Names and details of the expertise of each specialist that has contributed to this report:

Name of specialist	Education qualifications	Field of expertise	Section/ s contributed to in this basic assessment report	Title of specialist report/ s as attached in Appendix D
Mr. Bénet of Drennan, Maud & Partners	M.Sc.	Geotechnical Specialist	Specialist Assessments	Proposed Development of Port Edward Leisure Resort situated over the Remainder of Erf 1023 & Portion 7 of Erf 1023 Port Edward Township
Mr. DA Wepenar of BKS Engineers	Pr. Eng.	Traffic Engineer	Specialist Assessments	Traffic Impact Study for Proposed Port Edward Leisure Resort.
Mr. James Croswell	Hatch Goba	Civil Engineer	Specialist Assessments	Scheme Report for Civil and Electrical Services in the proposed Port Edward Leisure Report (Remainder of Erf 1023 & Portion 7 of Erf 1023).
Mr. Guy Nicolson	Guy Nicolson Consulting cc	Wetland Specialist	Specialist Assessment	Wetland Delineation on remainder of Erf 1023 and Portion 7 of 1023, Port Edward Township.
Ms. Tandi Breetzke	SSI Engineers and Environmental Consultants	Coastal Risk Specialist	Specialist Assessment	Coastal Risk Assessment for the Proposed Port Edward Holiday Resort.
Ms Mamo Seliane	S.E.F	Heritage Specialist	Specialist Assessment	Heritage Assessment for the proposed Port Edward Holiday resort
Mrs Debbie Whelan	Archaic Heritage	Built Heritage Specialist	Specialist Assessment	Built Heritage Assessment for the proposed Port Edward Holiday Resort.

SECTION B: ACTIVITY INFORMATION

1. PROJECT TITLE

Describe the project title as provided on the application form for environmental authorization:

Proposed Mixed Use Development situated over the Remainder of Erf 1023 and Portion 7 of Erf 1023, Port Edward Township and the proposed construction of a promenade along the Admiralty Reserve in Port Edward within the Hibiscus Coast Municipality.

2. PROJECT DESCRIPTION

Provide a detailed description of the project:

1 Background

Strategic Environmental Focus (SEF) Pty Ltd has been appointed by Imvula Property Development (Pty) Ltd to undertake an environmental assessment process for the proposed redevelopment of the South African Police Service (SAPS) Resort in Port Edward. SEF has taken over the project as the Environmental Assessment Practitioners (EAPs) from Udidi Project Development Company Pty (Ltd).

The Amended Draft Basic Assessment Report (BAR) was available for public review and comment from 21 August 2013 to 10 October 2013 and addressed the comments raised by the Competent Authority (CA), KwaZulu-Natal Department of Agriculture and Environmental Affairs (KZN DAEA) in their letter dated 23 November 2011, wherein the Final BAR was rejected (refer to the letter in Appendix G). Refer to SEF's letter to KZN DAEA in response to the concerns raised in the KZN DAEA Rejection Letter in Appendix G. A meeting was held with SEF, KZN DAEA, Port Edward Holiday Resort (PEHR) and Gibb on 25 April 2012, to clarify pertinent issues raised in the rejection letter and to understand the way forward on the project (see minutes of meeting with KZN DAEA in Appendix G).

Following public review of the Amended Draft BAR, the Final BAR incorporates the comments raised by the Interested and Affected Parties (I&APs) and is available for public review and comment from 28 January 2014 to 27 February 2014. The Final BAR has been submitted to the KZN DAEA and registered I&APs simultaneously for review and comment.

The Port Edward Holiday Resort was previously known as the Port Edward Police Resort which was established approximately 60 years ago and was funded by Police Force donations - for police members, by police members. It included the Waterfront Restaurant which is now known as the Beach Bobbies Restaurant.

The proposed development site, which is located in Owen Ellis Drive, Port Edward on the Remainder of Erf 1023 Port Edward Township and Portion 7 of Erf 1023 Port Edward Township will comprise of the following land uses (refer to Figure 2 for proposed layout): The residential development proposal is based around the parameters of a coverage of 30% and a maximum height of three storeys. This will provide a maximum bulk and footprint which will be developed according to market trends and requirements, specifically with regards to unit size and configuration.

At this point in time it is difficult to confirm the actual number of units envisioned however it is safe to say that expectation of between 700 and 800 residential units (general and intermediate residential) could be accommodated which would include the retirement village that would be developed as single storey structures with a coverage of 50%.

By taking into account these factors, the number of development opportunities available to the applicant will be scaled, based on the economic demand when construction is proposed. However, it is likely that approximately 700 – 800 residential units (including a retirement village; eco tourism zone, general commercial, private conservation, public open space, public roads and walkways, hotel with uses ancillary thereto being restaurants, child care and conference facilities etc.; shops and restaurant. A promenade is proposed along the admiralty reserve and occurs outside of the cadastral boundary of the abovementioned proposed development.

2 SAPS Board of Directors

This site for the proposed mixed-use development is owned by a social fund for the SAPS and the development of the site will entail the retention of 120 units (equal to the existing number of units) for the continued use of the Police. The development will be undertaken between Imvula and PEHRS, with Imvula being the financier and PEHRS being the land owner. The Port Edward Holiday Resort (PEHR) (Association incorporated in terms of Section 21) owns the property and Imvula Commercial Holdings (Pty) Ltd is the developer for this project. The site for the proposed mixed-use development comprises of two properties, the ownership and size are listed below:

	Property Description	Ownership	Size
1	Remainder of Erf 1023 Port Edward Registration Division ET	Port Edward Rusoord	13,0395ha ha
2	Portion 7 of Erf 1023 Port Edward Registration Division ET	Port Edward Rusoord	2,3212 ha

The development will be done between Imvula and PEHRS, with Imvula being the financier and PEHRS being the land owner. The end objective is to improve the facilities of the resort via the joint venture, and to ensure the sustainability of the facility moving forward. To do this, it is necessary to develop the site in such as way that it generates income to build the necessary infrastructure by the sale of erven to the general public

3 Proposed development

The proposed development will be comprised of a variety of components constituting a Mixed Use Development.

The residential units cater for a diverse range of accommodation options ranging from holiday rentals to permanent residences and retirement facilities. In addition, different housing typologies at varying densities will be available to investors to the development. The lower density, higher value properties have been positioned in the land pockets closer to the beachfront, with medium density residential uses proposed between the beachfront and the western boundary of the site.

The maximum number of residential units is difficult to pinpoint at this stage because the relevant town planning restrictions (coverage of 30% and height restriction of 3 storeys) will be applied to the residential space available for development. As such, given the size of the site available to the applicant for development purposes, dependant on economic demand at the time of proceeding with submission of the final town planning application, approximately 700 – 800 residential units may be achieved on site inclusive of the retirement village which will be developed at a coverage of 50% and single storey structures.

The retirement village is proposed on the north -western portion of the site, as it is a little more isolated from the vibrant mixed use area around the hotel and retail sites, yet close enough to assist in the daily functioning of the facility. The residential village is proposed as follows: max. height of 1 storey; a coverage of 50%; the size of site is ±1,691ha; the size of the units will be 80m²; and a maximum of 175 units.

The proposal further includes:

- A hotel with 200 rooms and includes conference facilities and catering which will be uses ancillary to the hotel (max. height of 4 storeys. The podium of the hotel, which includes the restaurant conference facilities etc will exhibit a maximum coverage of 50%. The top structure, which includes the residential rooms will exhibit a maximum density of 35%. It must be noted that the ultimate density of the hotel may be scaled down dependant on the market or goal of the operator).
- General Commercial (i.e. retail, shops) with: a max. height of 2 storeys; a coverage of 60%; the size of site is ±0,435ha; and the Gross Leasable Area (GLA) is 0,261.
- A promenade is proposed on the eastern extremity of the site, outside of the cadastral boundary of the site, on land that is on the seaward side of this boundary. Portions of this land may be leased to local authorities. The site for the proposed promenade occurs with the admiralty reserve and is owned by the Department of Public Works (DPW). DPW's consent will be required to enable the development of the promenade. DWP has been notified of the proposal to construct a promenade.

4 Service Provision (refer to Appendix D)

In general, the design approach for all services, roads and stormwater drainage in the Resort is a distillation of discussions which took place with all professionals involved in the development and representatives of the Client. In all instances however local requirements and/or knowledge took precedence over the "Guidelines".

4.1 Roads and Stormwater

It should be noted that all roads in the development will be public and no access will be restricted to the parking facilities, beach or promenade. However, the following design criteria have been adopted for the roads and are submitted for information purposes. Roads widths were decided in line with Red Book Guidelines. Drainage run-off will be directed into swales on the sides of the road. The swales will then discharge into attenuation ponds throughout the site. All roads will be surfaced with either a 20 - 30 mm medium premix or in selected areas segmented paving will be used to differentiate uses or to highlight intersections or pedestrian crossings. The stormwater attenuation ponds will be located out of the 20m buffer of the wetlands.

Stormwater will flow off the roads into side channels; and will be discharged regularly along the length of all roads directly into open spaces and attenuation ponds. It is proposed that the roads be constructed with a cross fall into the slope and therefore, a side channel will be constructed at the edge of the road to collect and convey stormwater to convenient crossing points. Stormwater will be attenuated in shallow landscaped hollows in the open areas of the development. These systems will prevent the concentration of flow, will only be located outside of the conservation areas and allow water to flow slowly across the site over time, discharging into either the river to the west or sea to the east.

4.2 Bulk Water Supply

Reticulation is proposed in uPVC piping with individual connections in HDPE. The potable water supply will be obtained from the existing municipality network. The current capacity of the existing network would have to be upgraded, with a 160 diameter pipe along Bristol Road down to Dean Road, in order to meet the proposed development demands. The design criteria used is as outlined in the "Guidelines for Provision of Engineering Services in Residential Townships" and Municipal Standards.

4.3 Sewer Reticulation

The design for the sewer reticulation in the township was carried out and points of possible conflict between other pipes were checked. There is no sewer available for a direct connection, therefore a pumping main will be necessary. The internal sewer will consist of a gravity system discharging into the pump station which will have standby generation. There is an existing municipal stilling chamber in the north-eastern corner of the site to where the rising main connection will be made. The sewer will have

to gravitate to the low point where it will be pumped to a central pump station at the corner of Border and Cardiff Road. The central pump station will then have to pump Ramsay Avenue pump station which links to the Red Desert sewerage treatment plant.

4.4 Electrical Reticulation

An electrical connection will be provided by Eskom at 11kV (approximately 5000kva). A formal application will be submitted to Eskom, for approval once the township is proclaimed. The internal reticulation will comprise of an 11kV underground cable ring, each stand will be connected to the ring by means of a mini-sub station. The internal electrical connection of each stand will be done by the stand owners. Street lights will be provided along all streets, supplied by the mini-sub station.

4.5 Energy Saving Methods

Energy saving methods to be employed include the following:

a) Solar heating for all water.
b) Provision of gas for cooking.
c) Use of low energy light sources (such as compact neon tubes).
d) The use of battery storage at each dwelling to be charged either at off-peak times from the grid system or from photovoltaic panels.

4.6 Solid Waste Removal

Each residential cluster within the proposed development will be self sufficient in this regard, and will have refuse collected by the Municipality on a weekly basis.

3. ACTIVITY DESCRIPTION

Describe each listed activity in Listing Notice 1 (GNR 544, 18 June2010), Listing Notice 3 (GNR 546, 18June 2010) or Category A of GN 718, 3 July 2009 (Waste Management Activities) which is being applied for as per the project description:

Indicate the number and date of the relevant notice:	**Activity No (s) (in terms of the relevant or notice):**	**Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:**	**Indicate Section of BAR where the activity is assessed.**
GNR 544 dated 18 June 2010	11	The construction of: i. canals; ii. channels; iii. bridges; iv. dams; v. weirs; vi. bulk storm water outlet structures; vii. marinas; viii. jetties exceeding 50 square metres in size; ix. slipways exceeding 50 square metres in size; **x. buildings exceeding 50 square metres in size; or** **xi. infrastructure or structures covering 50 square metres or more** where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.	Section E. Point 2.1., 2.2 and 2.3.

[1] Please note that this description should not be a repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description, i.e. describe the components of the desired development

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		As part of the proposed development, there will be construction of buildings 32m from the edge of wetlands on the site for the proposed mixed use development and the proposed promenade. There will be removal of the existing infrastructure and buildings in the wetland and the 20m buffer.	
GNR 544 dated 18 June 2010	14	**The construction of structures in the coastal public property where the development footprint is bigger than 50 square meters,** excluding i. the construction of structures within existing ports or harbours that will not increase the development footprint or throughput capacity of the port or harbour; ii. the construction of a port or harbour, in which case activity 24 of Notice 545 of 2010 applies; i. the construction of temporary structures within the beach zone where such structures will be demolished or disassembled after a period not exceeding 6 weeks. **Proposed construction of the promenade occurs with the admiralty reserve. 'Admiralty reserve' is defined in the Integrated Coastal Management (ICM) as 'any strip of land adjoining the inland side of the Water Mark which when this Act took effect, was state land reserved or designated on an official plan, deed of**	Section E. Point 2.1., 2.2 and 2.3. A Coastal Risk Assessment (see Appendix D was undertaken for the proposed promenade, in terms of risk to coastal erosion, maintenance of dune vegetation and design of the promenade).

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		grant, title deed or other document evidencing title or land-use rights as "Admiralty Reserve", "government reserve", "beach reserve", "coastal forest reserve" or other similar reserve.' (Celliers *et al*., 2009: 88)	
GNR 544 dated 18 June 2010	16	Construction or earth moving activities in the sea, an estuary, or within the littoral active zone **or a distance of 100 meters inland of the high-water mark of the sea** or an estuary, whichever is the greater, in respect of: i. fixed or floating jetties and slipways; (Ii) tidal pools; ii. embankments; iii. rock revetments or stabilising structures including stabilising walls; iv. buildings of 50 square meters or more; or **v. infrastructure covering 50 square meters or more** but excluding a. if such construction or earth moving activities will occur behind a development setback line; or b. where such construction or earth moving activities will occur within existing ports or harbours and the construction or earth moving activities will not increase the development footprint or throughput capacity of the port or harbour;	Section E. Point 2.1., 2.2 and 2.3. Erven 1, 2, 3, 6, 11 and 12 occur out of the 10mamsl contour in the revised Site Development Plan. A Coastal Risk Assessment has been undertaken for the proposed promenade (refer to Appendix D).

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		c. where such construction or earth moving activities is undertaken for purposes of maintenance of the facilities mentioned in (i)-(vi) above; or where such construction or earth moving activities is related to the construction of a port or harbour, in which case activity 24 of Notice 545 of 2010 applies. **A promenade comprising of an elevated polywood (recycled mixed plastic) boardwalk (width of between 2m to 3m and length of 412m) for recreational purposes is proposed to be constructed on the admiralty reserve, as part of the proposed development.**	
GNR 544 dated 18 June 2010	17	The planting of vegetation or **placing of any material on dunes and exposed sand surfaces**, within the littoral active zone for the purpose of preventing the free movement of sand, erosion or accretion, excluding where the planting of vegetation or placement of material relates to restoration and maintenance of indigenous coastal vegetation or where such planting of vegetation or placing of material will occur behind a development setback line. **A promenade comprising of an elevated polywood (recycled mixed plastic) boardwalk (width of between 2m to 3m and length of 412m) for recreational purposes is proposed to be constructed on the admiralty reserve, as part of the proposed**	Section E. Point 2.1., 2.2 and 2.3. A Coastal Risk Assessment has been undertaken for the proposed promenade (refer to Appendix D).

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		development.	
GNR 544 dated 18 June 2010	18	The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from i. **a watercourse**; ii. the sea; iii. the seashore; **iv. the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater** but excluding where such infilling, depositing, dredging, excavation, removal or moving a. is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or occurs behind the development setback line. **As part of the proposed development, there will be construction of buildings 32m from the edge of wetlands on the site for the proposed mixed use development and the proposed promenade. There will be removal of the existing infrastructure and buildings in the wetland and the 20m buffer.** **A promenade comprising of an elevated polywood**	Section E. Point 2.1., 2.2 and 2.3. The 20m buffer from the wetland has been approved by the EKZNW (refer to the letter by EKZNW dated 8 March 2011 in Appendix G). A buffer of 20m from the 1: 100 year floodline has been accommodated such that no hard structures will be placed in this buffer area and therefore, minimizes the risk of flooding. A Coastal Risk Assessment has been undertaken for the proposed promenade (refer to Appendix D).

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		(recycled mixed plastic) boardwalk (width of between 2m to 3m and length of 412m) for recreational purposes is proposed to be constructed on the admiralty reserve, as part of the proposed development.	
GNR 544 dated 18 June 2010	23	**The transformation of undeveloped, vacant or derelict land to** i. residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or **ii. residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares;** except where such transformation takes place a. for linear activities; or b. for purposes of agriculture or afforestation, in which case Activity 16 of Notice No 545 applies. **The proposed mixed use development will have a development footprint of approximately 15.95ha. consisting of intermediate and general residential, retirement village, eco tourism zone, general commercial, private conservation and private open space and public roads.**	Section E. Point 2.1., 2.2 and 2.3. The buffer zones around sensitive elements of the site has been accommodated in the Site Layout Plan in accordance with EKZNW recommendations.

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
GNR 544 dated 18 June 2010	24	The transformation of land bigger than 1000 square meters in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule such land was zoned open space, conservation or had an equivalent zoning. **The site for the proposed promenade occurs in the Umtamvuna Sensitive Coastal Area.** **The site for the proposed mixed-use development is currently zoned "Deferred Eco -tourism" in terms of the Umtamvuna Town Planning Scheme.**	Section E. Point 2.1., 2.2 and 2.3. A Coastal Risk Assessment has been undertaken for the proposed promenade (refer to Appendix D).
GNR 546 dated 18 June 2010	4	The construction of a road wider than 4 meters with a reserve less than 13.5 meters. **i. In KZN, outside urban areas:** **(cc) Sensitive areas as identified in an environmental management framework a contemplated in chapter 5 off the Act and as adopted by the competent authority;** **(hh) Areas seawards of the development setback line or within 1 kilometer from the high-water mark of the sea if no such development setback line is determined** **The main public beach road will be closed and an access road through the proposed development will be constructed for the public to access the beach amenities.**	Section E. Point 2.1., 2.2 and 2.3.
GNR 546 dated 18 June 2010	6	The construction of resorts, lodges or other tourism	Section E. Point 2.1., 2.2 and 2.3.

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		accommodation facilities that sleep 15 people or more. ii. In KZN, outside urban areas: **(cc) Sensitive areas as identified in an environmental management framework a contemplated in chapter 5 off the Act and as adopted by the competent authority;** **(ii) Areas seawards of the development setback line or within 1 kilometer from the high-water mark of the sea if no such development setback line is determined** (jj) **Areas on the watercourse side of the development setback line or within 100m from the edge of a watercourse where no such setback line has been determined**. **The site for the proposed mixed-use development is currently zoned "Deferred Eco -tourism" in terms of the Umtamvuna Town Planning Scheme. The proposed development will entail the construction of a hotel.**	
GNR 546 dated 18 June 2010	12	The clearance of an area of 300 square meters or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation (a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment, 2004;	Section E. Point 2.1., 2.2 and 2.3.

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		(b) Within critical biodiversity areas identified in bioregional plans; (c) Within the littoral zone or 100 meters inland from the high-water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas.	
GNR 546 dated 18 June 2010	16	The construction of: 1. buildings with a footprint exceeding 10 square meters in size; or 2. infrastructure covering 10 square meters or more. where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. **In KwaZulu-Natal,** i. Outside urban areas, in: (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ii) Areas seawards of the development setback line or within 1 kilometer from the high-water mark of the sea if no such development setback line is determined. **The proposed mixed-use development occurs within the Umtamvuna Sensitive Coastal Area within 1km**	

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		from the high-water mark of the sea.	
GNR 546 dated 18 June 2010	18	The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded. **In KwaZulu-Natal,** i. Outside urban areas, in: (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. The proposed mixed-use development (includes expansion of the Port Edward Holiday Resort) and occurs within the Umtamvuna Sensitive Coastal Area within 1km from the high-water mark of the sea.	
GNR 546 dated 18 June 2010		The expansion of: a. Buildings where the buildings will be expanded by 10 square meters or more in size; or b. Infrastructure where the infrastructure will be expanded by 10 square meters or more. Where such construction occurs within a watercourse, measured from the edge of watercourse excluding where such construction will occur behind the development setback line.	Section E. Point 2.1., 2.2 and 2.3.

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:	Indicate Section of BAR where the activity is assessed.
		In **KwaZulu-Natal,** ii. Outside urban areas, in: iii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. **The proposed mixed-use development (includes expansion of the Port Edward Holiday Resort) and infrastructure for stormwater, water and sewerage occurs within the Umtamvuna Sensitive Coastal Area within 1km from the high-water mark of the sea.**	

4. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose 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;

The proposed site is located approximately 150km south of Durban along the Port Edward coastline (refer to Appendix A) in the Hibiscus Coast Local Municipality (KZ215) and Ugu District Municipality (DC21). The properties earmarked for the proposed mixed-use development are described as the Remainder of Erf 1023 and Portion 7 of Erf 1023, Port Edward Township. These properties are owned by the PEHR and Mr. Rynier Bartlomias Brandt, in his capacity as Director of the Company, has provided consent for this application to be made (refer to Appendix G). The proposed development is for the redevelopment of an existing site and therefore alternative sites were not considered for this application.

The proposed development entails the construction of a proposed promenade along the Admiralty Reserve (which is the eastern extremity of the site for the proposed mixed-use development and occurs outside of the cadastral boundary on land that is on the seaward side of the site boundary) is considered to be a major tourist attraction to the Port Edward area and is perceived to enhance recreational development to the area. Portions of this land may be leased to local authorities. A Coastal Risk Assessment was undertaken to determine the most suitable position for the proposed promenade. The Coastal Specialists recommended that a boardwalk would cause least impact on the receiving environment while maximising the social and economic opportunities provided by the natural resource base. The proposed location of the promenade (boardwalk) takes natural processes into consideration and is deemed as sufficiently in-land of the littoral active zone, so as not to impact on natural sediment movement patterns. The Coastal Risk Assessment is included in Appendix D.

(b) the type of activity to be undertaken;

Existing Facilities

There are various areas designated for camping, caravanning and recreation at the existing Port Edward Holiday Resort. The northern, southern and western portions of the site are bounded by dense bush and trees.

The Port Edward main beach is close to the holiday resort and is a preferred launch site for deep sea fishing boats. Included in the existing infrastructure of the development are: two tennis courts, a beach volleyball court, two ring tennis courts and a large swimming pool; the Beach Bobbies Restaurant. The restaurant is situated at the foot of Tragedy Hill at the entry to Port Edward's main beach.

Vegetation

The site is almost completely transformed. According to the Ezemvelo KZN Wildlife landcover map (2005) the vast majority of the proposed site is classified as Urban with a few patches of sugarcane, forest and dense bush in the northern and western extremities of the site.

The veld type, according to Mucina and Rutherford (2006), is Pondoland-Ugu Sandstone Coastal Sourveld which has a conservation status of 'vulnerable' and 'poorly protected'. This veld type falls within the Indian Ocean Coastal Belt biome.

Surrounding land uses
The proposed mixed-use development is compatible with the surrounding landuses. The current zoning of the site which is Deferred Eco-Tourism in terms of the Umtamvuna Town Planning Scheme, June 2006. The surrounding zonings are detailed below:

The land to the east of the site, being adjacent to the beach front, is zoned as a Government Reserve;

The land to the south of the site comprises the following zonings: Tourist Centre, Residential Only 3, Residential Medium Impact 2 and Public Buildings and Institutions: Local Authority;
The property to the west of the site is zoned Special Case Area 1; and

The site is located in an area where tourist activity is the predominant land use activity and the proposed promenade will enhance the area in terms of the recreational aspect that it will provide for tourist attraction.

There is an increase in the need for holiday facilities within South Africa and the proposed development provides an opportunity to address this need. A variety of residential accommodation options will be provided such as hotel, timeshare, residential units and a retirement village.

The proposed development presents an opportunity to be redevelop the site to its full potential being to create an integrated development to accommodate both residents of and visitors to Port Edward.

(c) the design or layout of the activity;

Refer to the Site Layout Plan in Appendix A.

Proposed Mixed-Use Development
The Site Layout Plan makes provision for the following, in consultation with the Ezemvelo KZN Wildlife (EKZNW) (Refer to the correspondence from EKZNW dated 8 March 2011, included in Appendix G):

There will be a 30m buffer from the Pondoland Scarp Forest of Tragedy Hill in the northern, north eastern and north western portion of the site, which is demarcated by Erven 13 on the Site Layout Plan.

The existing structures that occur within the wetland and the 20m buffer on the site, will be removed and the wetland will be rehabilitated. A buffer of 20m will be implemented around the wetland on site to ensure the ecological functioning and hydrological integrity of the wetland.

The existing internal road, Owen Ellis Drive, which currently occurs within the 20m wetland buffer of the south-eastern wetland boundary, will remain in its current position due to road safety requirements. With regards to the widening of the extension of Owen Ellis Drive, the widening of the road to comply with road standards was facilitated to the east of the existing road to not affect the wetland to the west of the road. Refer to EKZNW's letter dated 8 March 2011 (in Appendix G) regarding the road alignment.

The revised layout ensures that the proposed internal road on the northern boundary of the wetland occurs out of the 20m wetland buffer.

The revised layout has accommodated a buffer of 50m from the 5 m contour of the Sandlundlu Estuary in the north western portion of the site.

A private conservation area (Erf 13 and 14) has been incorporated into the Site Layout Plan. No buildings and hard infrastructure such as water, sewerage and stormwater services will be allowed in this area. Appropriate signage will be in place to make people aware of the conservation value of this area.

Private open space areas are proposed on Erf 15 to 19. No buildings and hard infrastructure such as water, sewerage and stormwater services will be allowed in this area. Appropriate signage will be in place to make people aware of the conservation value of this area.

A buffer of 20m from the 1: 100 year floodline (on the western boundary of the site) has been accommodated as per EKZNW recommendations.

As per the recommendations of KZN DAEA, the layout has been revised to ensure that Erven 1, 2, 3, 6, 11 and 12 do not encroach below the 10 m.a.m.s.l. This area is designated as a conservation servitude on the Site Layout Plan and no development will take place within this area.

The layout plan has been amended to ensure that Erven 8 and 9 do not occur within the 20m of the 1 in 100 year floodline on the western boundary of the property. This area is demarcated as a conservation area in the Site Layout Plan.

Parking and other Amenities
The parking provision for each respective residential erf will be self sustaining and will be provided in terms of the prescribed Town Planning Scheme. The existing public parking (2871m^2) will be retained along the sea shore together with additional parking along the public road reserve being created as part of the development.

Proposed Promenade
As per the recommendation by the Ugu District Office of the KZN DAEA, a Coastal Risk Assessment was conducted for the proposed promenade along the eastern extremity of the site boundary within the Admiralty Reserve.

The purpose of this Coastal Risk Assessment is to ensure that existing natural ecological integrity within the site is maintained, and that the proposed promenade/boardwalk will not interfere with natural dune movement. The potential impacts associated with the proposed promenade/boardwalk were assessed and taking the risk to the impacts of dynamic coastal processes into consideration, mitigation measures are proposed. The assessment also suggests rehabilitation measures for the study area following conclusion of construction activities.

With regards to future risk affected by the development of the proposed promenade/boardwalk, the anticipated increased footfall may lead to further habitat disturbance and fragmentation. While the dominant vegetation forms are largely resilient to extreme conditions typical of the coastal zone, their primary role is dune stabilisation. Unchecked human interference may ultimately reduce the recovery and enhancement of the vegetation to more established, mature species assemblages, unless appropriate mitigation measures are implemented.

This proposed development provides an opportunity for rehabilitation of the dune environment as a spin-off/offset of any authorisation granted, with the foresight of raising the environmental awareness of visitors to the area. In terms of design, a raised boardwalk will allow for the development and expansion of the dune environment beneath and around the structure, without hindering ecological processes, such as movement of fauna and flora, as well as physical processes, for example wind-shifted sands and percolation of rainwater.

Design of the Proposed Boardwalk
Given the size of the proposed development and the anticipated number of users, the use of an elevated treated timber or polywood (recycled mixed plastic) boardwalk in non-obtrusive colours is recommended. The polywood non-slip alternative is deemed the more suitable as it is rot proof, weather resistant and relatively vandal proof and therefore highly suitable for the marine environment. It is recommended that the boardwalk be elevated to a height of approximately 1m to allow for natural faunal movement, connectivity of natural features and protection of sensitive areas. Consideration should be taken of the needs of disabled persons and the possibility of constructing ramps instead of stairs should be considered. It is recommended that existing informal accesses be consolidated into four formal access points, which should extend down from the raised boardwalk to the shoreline, with viewing decks adjacent to these access points.

The width of boardwalks should generally extend from a 1.5m minimum width to cater for two-way pedestrian traffic; 1.8m to 2.4m for a typical nature area; and 3m to 3.7m for high use areas. It is therefore recommended that the width of this boardwalk should be between 2m but not exceed 3m to ensure minimal impact but still allow for comfortable movement of people during peak seasons. It is suggested that proposed viewing decks or platforms extend seawards from the main boardwalk and their size must relate to expected usage.

Proposed design specifics recommended are:
Both sides of the boardwalk should be fenced with handrails and such handrails should be between 900mm and 1.1m high. The maximum opening between banisters should be 10 cm;

The edges of planks should be smooth and bevelled and they should be at least 40mm thick with sufficient gaps between and attached with 10mm diameter galvanised steel bolts or copper;

Support poles should be 100mm in diameter and sunk at a depth of 1m, preferably in a concrete foundation, and should be no more than 2m apart and supported by 100mm x 50mm diagonal braces;

Steps should be constructed taking cognisance of the ratio of the height of step to its width – ratio selected should remain the same. Ideally the height of two steps plus width of the surface between them should be 64cm;

The boardwalk gradient cannot exceed 5%;

The beach end of the pathway must not be subject to wave attack or changing beach level. A short independent sacrificial end must be included in the design;

The length of the boardwalk is recommended as per Figure 8 of the Coastal Risk Assessment (see Appendix D), extending from the southernmost portion of the cadastral boundary to the formalised carpark, comprising a length of approximately 400m; and

It is recommended that the width of the boardwalk should be between 2m but not exceed 3m to allow for comfortable movement of people during peak seasons.

(d) the technology to be used in the activity;

There are no technology alternatives in terms of sewerage, water and electricity provision for the proposed development.

(e) the operational aspects of the activity; and

Alternative 1: Retain the Public Beach Road
Advantage
The visitors to the beach will continue to utilise the existing beach road.

Disadvantage
The PEHR will continue to pay rates and taxes for a public road which occurs on PEHR land.

Alternative 2: Remove the public beach road

Advantage
The beach road is situated on the resort site and is an unregistered servitude that has minimised the development of the resort for many years. This has been a contentious issue and there are extensive re-development opportunities for the resort. There has been a rates issue of contention for many years.

The resort has been in existence for many years with extensive parts of the site requiring renovation or replacement. Due to the size and scale of the current development, the opportunity exists to develop over the property, specifically over the extent and location of the existing road, which occurs on the resort site. The re-development of the site is viewed as an opportunity to create growth and jobs in the area as well as creating tourism opportunity on the South Coast which is not currently available on this size and scale.

Access to the beach by the public, will continue to occur (free of charge) but will be inside of the proposed Port Edward Holiday Resort.

Additional kerbed parking facilities will be provided within the road reserve of the public beach road within the PEHR.

Disadvantage
In the absence of mitigation measures and should human encroachment into the wetland and the 20m wetland buffer (set aside as private conservation) take place, this will impact negatively on the ecological functioning of the wetland system.

(f) the option of not implementing the activity.

This option assumes that a conservative approach would ensure that the environment is not impacted upon any more than is currently the case. It is important to state that this assessment is informed by the current condition of the area. Should the KZN DAEA decline the application, the 'No-development' option will be followed and the status quo of the site will remain. The status quo will include the continuation of existing structures being located the wetland areas.

Describe alternatives that are considered in this report. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Sections B 5 – 15 below should be completed for each alternative.

5. ACTIVITY POSITION

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, minutes and seconds. List alternative sites were applicable.

Proposed Mixed-Use Development

Alternative:	**Latitude (S):**			**Longitude (E):**		
Alternative S1[2] (preferred or only site alternative)	**31°**	**02'**	**49.45"**	**30°**	**13'**	**38.2"**
Alternative S2 (if any)		'	"	°	'	"
Alternative S3 (if any)	°	'	"	°	'	"

[2] "Alternative S.." refer to site alternatives.

In the case of linear activities:
Proposed Promenade

Alternative:	**Latitude (S):**			**Longitude (E):**		
Alternative S1 (preferred or only route alternative)						
• Starting point of the activity	**31o**	**2'**	**49.953"**	**30o**	**13'**	**45.53"**
• Middle point of the activity	**31o**	**2'**	**55.96"**	**30o**	**13'**	**47.36"**
• End point of the activity	**31o**	**3'**	**1.15"**	**30o**	**13'**	**45.21"**
Alternative S2 (if any)			"			"
• Starting point of the activity	o	'	"	o	'	"
• Middle point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"
Alternative S3 (if any)			"			"
• Starting point of the activity	o	'	"	o	'	"
• Middle point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 500m along the route for each alternative alignment.

6. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Proposed Mixed-Use Development

Alternative:	**Size of the activity:**
Alternative A1[3] (preferred activity alternative)	**159 500m^2 (15.95ha)**
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or, for linear activities:

Proposed Promenade

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	**412m**
Alternative A2 (if any)	m
Alternative A3 (if any)	m

[3] "Alternative A.." refer to activity, process, technology or other alternatives.

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	20m from 100m floodline (north western portion of the site) 30m forest buffer (north western portion of the site) 50m from 5m contour of the Sandlandu Estuary (north western portion of the site) 10mamsl contour along the eastern boundary of the site
	20m from the wetland on the south western portion of the site.
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

7. SITE ACCESS

Does ready access to the site exist?	**YES X**	NO
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

The existing access on the corner of Border and Owen Ellis Drive will be utilised.

Based on correspondence from the project team, it can be confirmed that the existing road along the beach is not a public road but a portion of the resort has been utilised by the Hibiscus Coast Municipality for an extended period. This has inhibited the resort from fully utilising the entire property. As part of the redevelopment and approval process for the proposed development plan, access to the beach will be relocated through the existing resort (with a 16m road reserve width). All roads indicated internally to erven and to the beach will be zoned as public roads.

All roads will be surfaced with either a 30 mm medium premix or in selected areas segmented paving will be used to differentiate uses or to highlight intersections or pedestrian crossings. The proposed public access road through the proposed development is illustrated on PLAN No. J30085 / L1b as Erven 20.

Based on the reconfiguration of the resort, the proposed promenade will be constructed along the alignment of the beach reserve.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

8. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this report.

Refer to PLAN No. J30085 / L1b in Appendix A.

The site or route plans must indicate the following:

8.1. the scale of the plan which must be at least a scale of 1:500;

8.2. the property boundaries and numbers/ erf/ farm numbers of all adjoining properties of the site;

Refer to Plan 8769/2 and Plan 8769/3

8.3. the current land use as well as the land use zoning of each of the properties adjoining the site or sites;

Refer to Plan 8769/2 and Plan 8769/3

8.4. the exact position of each element of the application as well as any other structures on the site;

Refer to Plan 1491/FLOOD/10/1001 in Appendix A.

8.5. the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;

Refer to Plan 1491/FLOOD/10/1001 in Appendix A.

8.6. walls and fencing including details of the height and construction material;

The development will be appropriately fenced to ensure the safety and security of the development is maintained. However, the type of fence to be utilised cannot be determined in this planning stage of the development application.

8.7. servitudes indicating the purpose of the servitude;

Refer to PLAN No. J30085 / L1b in Appendix A.

The following conservation servitudes are depicted on the above plan with respect to the following:

20m from 100m floodline (north western portion of the site) 30m forest buffer (north western portion of the site) 50m from 5m contour of the Sandlandu Estuary (north western portion of the site) 10mamsl contour along the eastern boundary of the site 20m from the wetland on the south western portion of the site.

8.8. sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):

- rivers, streams, drainage lines or wetlands;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation including protected plant species (even if it is degraded or infested with alien species);

Please refer to the land cover map in Appendix A.

8.9. for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and

Refer to PLAN No. J30085 / L1b in Appendix A.

8.10. the positions from where photographs of the site were taken.

9. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report**.** It must be supplemented with additional photographs of relevant features on the site, if applicable.

Refer to Appendix B for the Photoplate of the site for development.

10. FACILITY ILLUSTRATION

A detailed illustration of the facility must be provided at a scale of 1:200 and attached to this report as Appendix C. The illustrations must be to scale and must represent a realistic image of the planned activity/ies.

Refer to Appendix C.

11. ACTIVITY MOTIVATION

11.1. Socio-economic value of the activity

What is the expected capital value of the activity on completion?	No estimates of the final cost of the infrastructure have been undertaken at this point in the planning process.	
What is the expected yearly income that will be generated by or as a result of the activity?	The income which is referred to here is trading income in respect of the public side of the development. This information has not been calculated by the applicant. Engineering services, the provision of bulk water, reticulation of sewerage and electricity will obtained from the relevant service provider in terms of a Service level Agreement.	
Will the activity contribute to service infrastructure?	**YES** **X**	NO
Is the activity a public amenity?	**YES** **X** The proposed promenade and access road through the development will be a public amenity.	NO

How many new employment opportunities will be created in the development phase of the activity?	There are to be between six and eight man years of employment per million Rand of expenditure on the services.
What is the expected value of the employment opportunities during the development phase?	Cost of a man year of employment (assuming the majority of workers are unskilled) could be estimated at between R 50,000 and R60,000.
What percentage of this will accrue to previously disadvantaged individuals?	100%
How many permanent new employment opportunities will be created during the operational phase of the activity?	A number of full-time job opportunities exist, but this is unlikely to exceed about 10.
What is the expected current value of the employment opportunities during the first 10 years?	R6million
What percentage of this will accrue to previously disadvantaged individuals?	90 %

11.2. Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The motivation for the development from a need and desirability perspective was compiled by APS Plan Africa incorporated (January 2010), has been included below:

Need:

- The proposed consolidation and subdivision of the site and the subsequent rezoning of the various erven will enable the creation of an integrated and sustainable development which will promote Port Edward as a tourist destination.
- Land fronting onto the ocean is a scarce resource and it is therefore essential to develop this resource to its optimal potential: in so doing a sustainable development will be created.
- Discussions with Estate Agents working in the Port Edward area indicated the existing police resort is a highly sought after holiday destination and is often fully booked during peak season. There is a need for the site to be re-developed as well as a demand for additional residential accommodation, both permanent and tourist orientated in the area, particularly with additional facilities such as a hotel, retirement village and specific retail provision which will in turn boost tourism within Port Edward. This proposed re-development of the site will enhance and promote the development as a tourist destination for both international and local tourists.
- The site is a high value property which currently comprises of low density residential uses. This use is not ideal as the land should be utilised to its full potential being that of a high quality development.
- There is an increase in the need for holiday facilities within South Africa and the proposed

development provides an opportunity to address this need. A variety of residential accommodation options will be provided such as hotel, timeshare, residential units and a retirement village.

- Port Edward is the last town along the KwaZulu Natal South Coast before entering the undeveloped wild coast / Eastern Cape thereby making it a destination where people travelling may require accommodation.
- Discussions with the Local Authority indicated that they would like to expand and upgrade the Margate Airport as well as development options predominantly tourist related along the South Coast. It is therefore evident that there is a need to uplift the South Coast and this can be achieved by promoting catalytic developments such as proposed which will serve as a benchmark for future upgrade and development projects.
- The proposed consolidation and subdivision of the site and the subsequent rezoning of the various erven will enable the development of an integrated and sustainable development which will promote Port Edward as a tourist destination.

Desirability:

- Discussions with Council Officials helped obtain a better understanding of the needs of the Port Edward community. It was indicated that there is a need for a development of this nature. The existing facility is a successful holiday and leisure resort, but is in dire need of upgrade or re-development to optimise the opportunities created by its locality being right along the beach front. Additional land use components such as a hotel and retirement village are proposed as a need for these facilities within the area have been identified. The proposed development will enhance Port Edward and its surrounds due to the provision of necessary facilities and additional new residential components, notwithstanding the necessary service upgrades that will be required as part of the development.
- The proposed re-development of the site is being undertaken with financial assistance from an external investor. Should the re-development of this site not occur the financial assistance will not be available and the site will continue to deteriorate over time and therefore, the existing development will be unsustainable in the future.
- The proposed development will be integrated as it will contain various residential typologies catering for a different purposes as well as income brackets.
- The re-development of the site will require upgrading and expansion to the existing Council Services which will be with the assistance of the developer by means of contributions or by the physical upgrade of facilities.
- The site is extensive and in an ideal location for this type of re -development of existing marginalised facilities. In so doing the development of a new fresh identity has been created comprising of a variety of housing and holiday accommodation alternatives.
- The KwaZulu Natal South Coast is known to be more affordable than the KwaZulu Natal North Coast making it a favourable holiday destination. The proposed re -development of the site will serve as a catalyst for development in Port Edward and will further assist in changing the perception of the development from a typical coastal holiday resort to that of a tourist node. The South and North Coastlines both have their own character. The South Coast, is more developed with a string of small beachside communities with various types of accommodation options such as a hotel, bed and breakfast and other types of accommodation. The South Coast is extremely popular amongst local tourists. The proposed development will provide a variety of accommodation options which will accommodate a wide range of income brackets.
- The relative inaccessibility of the lower South Coast has prevented it from being developed to its full potential. The proposed linkage of Port Edward with Port Elizabeth will unlock the development potential of the lower South Coast as it will become far more accessible from the western tourism hubs.
- The South Coast is known for the sardine run which takes place during the winter months and other attractions which include golf, whales, dolphins, the Oribi Gorge, hibiscus flowers, golden beaches and the Umtamvuna Nature Reserve. From the above, it is evident that the South Coast has the potential to attract more visitors to the area and the proposed development will offer an additional

attraction to the area.
- A diverse selection of accommodation options are available along the South Coast, ranging from upmarket hotels to camping facilities. The development therefore provides for a range of affordability options making it accessible to the varying income levels.

Alignment with the Municipal Planning
Hibiscus Coast Municipality (HCM) Integrated Development Plan (IDP) & Spatial Development Framework (SDF)

- Relevant principles from the Hibiscus Coast IDP and SDF which have bearing on the proposed development from a coastal and/or environmental management perspective have been included as part of the legislative and policy review component of the proposed development. These have been summarised as follows:
- Promotion of a balance between meeting the increasing demands associated with human activity and the maintenance of environmental integrity, particularly in coastal areas;
- Unchecked development is seen as having irreversible consequences for biodiversity and the natural environment of the HCM;
- Lack of financial and human capital are seen as key challenges to promoting environmental integrity; and
- Current environmental programmes such as alien weed eradication and environmental education require ongoing support.

The proposed development is in line with the IDP as it will create a well managed, tourist friendly sustainable development. Substantial market research has been undertaken to ensure that the land uses proposed for the development are in fact needed, which will ensure the sustainability of the development. The proposed development optimizes the opportunities and strengths identified within the area and its surrounds. An opportunity created by the development will be to attract investment within Port Edward which will have spin -off effects and assist in creating a sustainable development within an environment that is strategically located in terms of its potential for economic growth and development.

Spatial Development Framework : Review 2009/2010
The Wild Coast Spatial Development Initiative envisages that Port Elizabeth and Port Edward will in the future be linked thus opening new opportunities and markets within and from the Eastern Cape. The R61 currently runs from the Marburg Interchange to complete the North -South Primary Transport Route to Port Edward, once the Wild Coast Spatial Development Initiative is completed this primary corridor will link up with Port Elizabeth.
Other Primary Corridors within close proximity to the site are rail and air (Margate airport) traffic, both of which play a major role in the promotion of tourism within the area as it is easily accessed.
The SDF identifies Port Edward as follows:

- As an urban area / dense settlement in terms of the existing land use plan;
- The site is situated in an area earmarked for Primary / Commercial and Tourism / Recreational;
- An opportunity point has been identified where the R61 meets Port Edward;
- The site falls within the urban edge between Leisure Bay in the north and Banners Rest in the south.
- The properties to the east of the R61 have been identified for Secondary Commercial land uses.
- Further to the north and south of the site, the land has been earmarked for Tertiary tourism (low key).
- The land to the west of the R61 is earmarked for urban densification.
- The proposed development is in line with the SDF as the proposed development is orientated towards tourism, however a high percentage of permanent residents is expected which will assist in ensuring sustainable development.

As per the findings of the Coastal Risk Assessment, while the proposed boardwalk is located in a sensitive environment, if the guidelines and recommendations as suggested by the Coastal Specialist are adhered to in terms of construction, it is not in conflict with the identified integrated coastal management specific principles. The proposed mitigation measures will contribute to reducing potential negative impacts and will promote sustainable development and facilitate coastal access.

The Hibiscus Coast SDF identifies the climax dune forest adjacent to the proposed development as an area of conservation significance, an issue which should be taken into account when implementing the recommendations of the proposed development. In consultation with EKZNW, the developer has accommodated a buffer of 30m from the Pondoland Scarp Forest (Tragedy Hill) to ensure that the proposed development does not encroach into this area.

The SDF identifies the Wild Coast Spatial Development Initiative which is to link Port Elizabeth and Port Edward. This link will provide new opportunities and markets within and from the Eastern Cape. From the above, it is evident that the site has the potential to be developed due to its ideal locality and its easy accessibility (R61, Margate Airport and by rail). Furthermore, in terms of the SDF, Port Edward is earmarked for beach related tourism. The proposed development will enhance Port Edward and will enable it to become a tourist destination.

Indicate any benefits that the activity will have for society in general:

The existing resort has been in existence for many years and in its current state, does not meet the needs of contemporary holiday makers and the site, with its prime location in relation to the main beach, has potential for redevelopment and attraction to such holiday makers. The current owners do not have the resources to redevelop the site. The benefits the society in general will receive from this proposal include an improved development on this prime location which will provide a variety of housing and amenities for retail and recreational landuses.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The community in general will have access to improved beachfront facilities and an increase in rates income to the Municipality. Furthermore short term employment opportunities during construction and long term opportunities for the maintenance and management of the site (proposed mixed use development site and the proposed promenade site) will be created over the lifespan of the development.

12. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are relevant to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	**Administering authority:**	**Date:**
Town Planning Ordinance Section 47*bis*B (Application for Rezoning)	Hibiscus Coast Municipality	1949
National Environmental Management Act (No. 107 of 1998)	DEA	1998
Environmental Impact Assessment Regulations under NEMA	DEA	2006
Environmental Impact Assessment Regulations under NEMA	KZN DAEA	2010
Conservation of Agricultural Resources Act (No. 43 of 1983)	Department of Agriculture	1983
National Water Act (No. 36 of 1998)	DWA	1998
Water Services Act (No. 108 of 1997)	DWA	1997
The National Heritage Resources Act (No. 25 of 1999)	South African Heritage	1999

	Resource Agency	
Atmospheric Pollution Prevention Act (No. 25 of 1999)	Department of Health	1999
Occupational Health and Safety Act (No. 45 of 1965)	Department of Health	1965
Health Act (No. 63 of 1997)	Department of Health	1997
Promotion of Access to Information Act (No. 2 of 2000)	National & Provincial	2000
National Environmental Management: Integrated Coastal Management Act No. 24 of 2008	National & Provincial	2008
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Department of Environmental Affairs	2004
Environmental Impact Assessment Regulations, 2010, Government Notice No. 543, 544, 546	Department of Environmental Affairs	18 June 2010

13. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

13.1. Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES X**	NO
If yes, what estimated quantity will be produced per month?	**30m^3**	

How will the construction solid waste be disposed of? (describe)

All solid waste generated during construction will be temporarily stored on site in suitable containers such as bins, 55 gallon drums or skips (volume dependent) and then transported via truck to the registered Hibiscus Coast Municipal landfill site.

Where will the construction solid waste be disposed of? (provide details of landfill site)

The registered Hibiscus Coast Municipal landfill site.

Will the activity produce solid waste during its operational phase?	**YES X**	NO
If yes, what estimated quantity will be produced per month?	**500m^3**	

How will the solid waste be disposed of? (provide details of landfill site)

Waste generated by the development will be collected by the Hibiscus Coast Local Municipality and disposed of at a suitable registered landfill site. .

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine the further requirements of the application.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?	YES	**NO X**

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	**NO X**

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

13.2. Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	**NO X**
If yes, what estimated quantity will be produced per month?		m^3
Will the activity produce any effluent that will be treated and/or disposed of on site?	Yes	**NO X**

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	**NO X**

If yes, provide the particulars of the facility:

Facility name:	N/A		
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

The pressure on potable water must be reduced to minimise wastage. During the detailed design of the development, post authorisation by DAEA, investigations into rainwater harvesting for non-domestic purposes such as garden irrigation, car washing etc should be undertaken by the engineer. This could include recycling of grey water into toilets/ sanitation systems (where practical and feasible). The grey water should be reticulated in its own piping network as separation is not possible at a later stage. The release of grey water into the environment, especially for irrigation should be carefully controlled to prevent contamination of the environment, such as wetlands and watercourses.

The use of grey water can drastically reduce the amount of white water required by the project and the following is recommended:

- Water from hand basins, showers and washing machines should be captured and redirected to flush toilets.
- If grey water from basins, showers, washing machines or kitchens is to be used for irrigation, all detergents used must be 100% biodegradable to prevent negative impacts on the environment.
- Rainwater can be captured by fitting tanks to roof gutters and the water can be used for either irrigation or flushing of toilets.
- Grey water (excluding rainwater) should be used immediately to prevent contamination by algae or bacteria.

13.3. Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	**NO X**
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

N/A

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

If no, describe the emissions in terms of type and concentration:

The restaurant will produce some emissions, but this facility is already in existence and thus will merely maintain the current level and concentrations of atmospheric emissions. These emissions are considered to have a negligible impact on the environment and have not been considered for assessment.

13.4. Generation of noise

Will the activity generate noise?	**YES X**	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	**NO X**

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

There will be noise generated as a result of construction activity, but this will be of a short-term duration. During the operational phases, noise may be generated as a result of the proposed activities on the development site, however, the proposed layout is designed in such a way that all sites are sea facing and therefore, the potential noise impact will be mitigated as the noise would be projected seaward.

14. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal X	water board	groundwater	river, stream, dam or lake	other	the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	**N/A**	
Does the activity require a water use permit from the Department of Water Affairs?	YES	**NO X**

If YES, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this report.

15. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

Several energy saving interventions will be included in the final design. These include: a) Solar heating for all water. b) Provision of gas for cooking. c) Use of low energy light sources (such as compact neon tubes). d) The use of battery storage at each dwelling to be charged either at off-peak times from the grid system or from photovoltaic panels.

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

As above.

SECTION C: SITE/ AREA/ PROPERTY DESCRIPTION

Important notes:

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

Section C Copy No. (e.g. A): [ ]

- Subsections 1 - 6 below must be completed for each alternative.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:
Proposed Mixed Use Development Site

Flat	1:50 – 1:20	**1:20 – 1:15 X**	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S1:
Proposed Promenade

Flat	**1:50 – 1:20 X**	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S2 (if any): N/A

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S3 (if any): N/A

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site **(Please cross the appropriate box)**.
Alternative S1 (preferred site):
Proposed Mixed Use Development Site

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

Alternative S1 (preferred site):
Proposed Promenade

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

Alternative S2 (if any): N/A

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

Alternative S3 (if any): N/A

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

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Has a specialist been consulted for the completion of this section?	**YES X**	NO

If YES, please complete the following:

Name of the specialist:	**M. J-F Benet**		
Qualification(s) of the specialist:	**M.Sc.**		
Postal address:	**PO Box 20464 – Mayville**		
Postal code:	**4058**		
Telephone:	**031 201 8992**	Cell:	**083 326 4460**
E-mail:	**michel@dmpconsultin.co.za**	Fax:	**031 201 7920**

Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?	YES	**NO X**
If YES, specify and explain: N/A		
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?	YES	**NO X**
If YES, specify and explain:		
Are any further specialist studies recommended by the specialist?	YES	**NO X**
If YES, specify:		
If YES, is such a report(s) attached in Appendix D?	**YES X**	NO

Signature of specialist: _____ Date: _____

Is the site(s) located on any of the following (cross the appropriate boxes)?

	Alternative S1:		Alternative S2 (if any): N/A		Alternative S3 (if any): N/A	
Shallow water table (less than 1.5m deep)	**YES X**	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	**NO X**	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	**YES X**	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	**YES X**	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	**NO X**	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	**NO X**	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	**NO x**	YES	NO	YES	NO
An area sensitive to erosion	**YES X**	NO	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

A Geotechnical Assessment was undertaken by Drennan Maud and Partners (refer to Appendix D). The study area is underlain by the Natal Group sandstone bedrock, the residual soils derived from the clayey sands of the Berea Red Formation and recent aeolian sediments. The development is considered feasible, provided that the recommendations as set out in the Geotechnical Assessment are strictly adhered to, these amounting to more than sound engineering practice.

4. GROUNDCOVER

Proposed Mixed-Use Development

Has a specialist been consulted for the completion of this section?	YES	**NO X**

If YES, please complete the following:

Name of the specialist:			
Qualification(s) of the specialist:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?	YES	**NO X**
If YES, specify and explain:		
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?	YES	**NO X**
If YES, specify and explain:		
Are any further specialist studies recommended by the specialist?	YES	NO

If YES, specify:	**N/A**		
If YES, is such a report(s) attached in Appendix D?		YES	NO

Signature of specialist: _____ Date:

The site is almost completely transformed as much of the site has the existing Port Edward Holiday Resort buildings and infrastructure. Along the boundaries of the site there is some natural vegetation, in particular the northern boundary that borders Tragedy Hill which contains a natural and undisturbed dune forest.

The location of all environmental features of conservation value have been illustrated on the site development plan.

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	**Gardens X**
Sport field	Cultivated land	**Paved surface X**	**Building or other structure X**	Bare soil

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

Proposed Promenade

Has a specialist been consulted for the completion of this section?	**YES X**	NO

If YES, please complete the following:

Name of the specialist:	Ms. Tandi Breetzke		
Qualification(s) of the specialist:	BA (Hons) Geography		
Postal address:	PO Box 55, Pinetown, 3600		
Postal code:	3600		
Telephone:	031 719 5500	Cell:	N/A
E-mail:	tandib@ssi.co.za	Fax:	031 719 5505

Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?	**YES X**	NO
If YES, specify and explain:	The site also contains elements of national importance, namely Mimusops caffra (Coastal Red Milkwood) which is listed as a protected tree species under the National Forest Act (Act 84 of 1998). Should removal of this plant species be required for the proposed construction of the boardwalk, a permit must be obtained from the KZN Department of Agriculture, Forestry and Fisheries (DAFF) prior to removal.	
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?	YES	**NO X**
If YES, specify and explain:	N/A	
Are any further specialist studies recommended by the specialist?	YES	**NO X**
If YES, specify:	**N/A**	
If YES, is such a report(s) attached in Appendix D? **Refer to the Coastal Risk Assessment in Appendix D.**	**YES X**	NO

Signature of specialist: _____ Date: _____

Within the admiralty zone, prior to construction of the promenade commencing, all large individual or protected indigenous trees located within the development footprint must be identified by the ECO, demarcated with danger tape and conserved. Permits are required from Ezemvelo KZN Wildlife and the Department of Water Affairs to fell, prune or damage any indigenous tree protected by the KZN Nature Conservation Ordinance and National Forestry Act. The coastal specialist identified a *Mimusops caffra* (Coastal Red Milkwood), a Nationally Protected Tree occurring at 31° 2'55.14"S and 30°13'47.28"E.

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	**Natural veld with heavy alien infestation[E] X**	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	**Bare soil X**

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Cross the land uses and/or prominent features that currently occur within a 500m radius of the site and give a description of how this influences the application or may be impacted upon by the application:

Land use character			**Description**
Natural area	**YES X**	NO	Tragedy Hill (Pondoland Scarp Forest) borders on the northern, north eastern and north western portion of the site. The Site Development Plan has accommodated a buffer of **30m** to ensure that ecological processes are not impacted by the proposed development.
Low density residential	**YES X**	NO	Residential areas occur west and south of the site boundary. This is compatible with the proposed residential land uses for the development site.
Medium density residential	**YES X**	NO	Residential areas occur west and south of the site boundary. This is compatible with the proposed residential land uses for the development site.
High density residential	**YES X**	NO	Residential areas occur west and south of the site boundary. This is compatible with the proposed residential land uses for the development site.

Informal residential	YES	**NO X**	
Retail commercial & warehousing	YES	**NO X**	
Light industrial	YES	**NO X**	
Medium industrial	YES	**NO X**	
Heavy industrial	YES	**NO X**	
Power station	YES	**NO X**	
Office/consulting room	YES	**NO X**	
Military or police base/station/compound	**YES X**	NO	The Port Edward Police Station occurs on Boundary Lane approximately 400m from the Port Edward Police Resort.
Spoil heap or slimes dam	YES	**NO X**	
Quarry, sand or borrow pit	YES	**NO X**	
Dam or reservoir	YES	**NO X**	
Hospital/medical centre	YES	**NO X**	
School/ creche	YES	**NO X**	
Tertiary education facility	YES	**NO X**	
Church	**YES X**	NO	A church occurs in the residential area west of the site.
Old age home	YES	**NO X**	
Sewage treatment plant	YES	**NO X**	
Train station or shunting yard	YES	**NO X**	
Railway line	YES	**NO X**	
Major road (4 lanes or more)	YES	**NO X**	
Airport	YES	**NO X**	
Harbour	YES	**NO X**	
Sport facilities	**YES X**	NO	
Golf course	YES	**NO X**	
Polo fields	YES	**NO X**	
Filling station	YES	**NO**	

		X	
Landfill or waste treatment site	YES	**NO X**	
Plantation	YES	**NO X**	
Agriculture	YES	**NO X**	
River, stream or wetland	**YES X**	NO	The Sandlandu Estuary occurs 150m north of the site boundary.
Nature conservation area	YES	**NO X**	
Mountain, hill or ridge	YES	**NO X**	
Museum	YES	**NO X**	
Historical building	YES	**NO X**	
Protected Area	YES	**NO X**	
Graveyard	YES	**NO X**	
Archaeological site	YES	**NO X**	
Other land uses (describe)	**YES X**	NO	**The Indian Ocean is to the east of the site.**

6. CULTURAL/ HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or within 20m of the site?	**YES X**	NO

If YES, contact a specialist recommended by AMAFA to conduct a heritage impact assessment. The heritage impact assessment must be attached as an appendix to this report.

Briefly explain the recommendations of the specialist:	The Port Edward Holiday Resort was established more than 60 years ago. A combined Phase 1 Heritage Impact Assessment and Built heritage Assessment was undertaken for the site. Please refer to Appendix D fort this study. Upon receipt of the Environmental Authorisation (EA) the relevant permits for the destruction of the existing structures will be provided to Amafa by an appointed Built-Heritage Specialist.

Will any building or structure older than 60 years be affected in any way?	**YES X**	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	**YES X**	NO

If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.

It is important to note that the structures found to be older than 60 years were not found to hold significant value from a heritage perspective. Therefore, post authorisation by DAEA, a built-heritage specialist will be appointed to compile and submit the necessary applications/permits to AMAFA for the destruction of the buildings older than 60 years.

SECTION D: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) 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 or is to be undertaken; and
  (ii) any alternative site mentioned in the application;

Two site notices were placed on site on the18 November 2009. One was placed at the entrance to the existing Port Edward Holiday Resort as this is the most visible position for passers by to see the notice. The second notice was placed along the sea facing boundary of the site which runs along the public road leading to the main beach. Refer to the site notice text and proof of placement in Appendix E.

(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;
  (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

The site for the proposed mixed use development is owned by the Port Edward Rusoord (Resort) and proof of written notice is provided in Appendix E. The owner of the site for the proposed promenade is the National Department of Public Works and Mr. Nkosi of the National Department of Public Works was notified of the proposed development. Refer to Appendix E for proof of notification.

  (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  (v) the local and district municipality which has jurisdiction in the area;

(vi) any organ of state having jurisdiction in respect of any aspect of the activity (as identified in the application form for the environmental authorization of this project); and
(vii) any other party as required by the competent authority;

The Database of Contacted Interested and Affected Parties are provided in Appendix E.

(c) placing an advertisement in—
(i) one local newspaper; or
(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;
(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 district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
(i) illiteracy;
(ii) disability; or
(iii) any other disadvantage.

Upon commencement of the environmental assessment process a register of interested and affected parties (I&AP) was compiled and maintained throughout the process (refer to Appendix E). Between the 18-20th November 2009 a Background Information Document (BID) and a letter introducing the proposed development was sent via registered post, hand delivery and email to landowners and occupiers adjacent to and within 100m of the proposed development site and other key stakeholders initially identified. This included the Ward Councillor, Port Edward/Banners Rest Rate Payers Association, District and Local Municipalities.

Refer to Appendix E for the notice and BID delivered.
It is anticipated that the potential impacts of this proposed development will not extend beyond the boundaries of the District Municipality and as such an advertisement was placed in the South Coast Herald, a newspaper that is delivered along the south coast. The advertisement, in accordance with the KZN DAEA EIA application notice, was placed in this newspaper on the 27th November 2009.

Refer to Appendix E for the contents of the advertisement and proof of placement.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:
(a) indicate the details of the application which is subjected to public participation; and
(b) state—
(i) that an application for environmental authorization has been submitted to the KZN Department of Agriculture & Environmental Affairs in terms of the EIA Regulations, 2010;(ii)
(iii) a brief project description that includes the nature and location of the activity to which the application relates;

(iv) where further information on the application can be obtained; and
(iv) the manner in which and the person to whom representations in respect of the application may be made.

Refer to Appendix E for the contents of the Site Notices and proof of placement, respectively.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

It is anticipated that the potential impacts of this proposed development will not extend beyond the boundaries of the District Municipality and as such there was no need to advertise in a Provincial or National Gazette.

4. DETERMINATION OF APPROPRIATE PROCESS

The EAP must ensure that the public participation process is according to that prescribed in regulation 54 of the EIA Regulations, 2010, but may deviate from the requirements of subregulation 54(2) in the manner agreed by the KZN Department of Agriculture & Environmental Affairs as appropriate for this application. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate.

Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

The most appropriate form of public participation for this process was deemed to be a public meeting at a location close to the proposed site. A public meeting was held on Wednesday 9th December 2009 at the Port Edward Library in Dover Road (refer to the public meeting presentation and minutes of the public meeting in Appendix E).

Two weeks prior to the meeting, notices and BIDs were sent to all identified I&AP. During this process additional I&AP contacted Udidi and were registered. Furthermore site notices were placed on site to notify passers by of the proposed development and the public meeting.

Upon completion of the Draft Basic Assessment Report (DBAR) a copy was available to the public for viewing for a period of at least 28 days. A copy of this report was available at the local Municipal offices (i.e. Hibiscus Coast in Leonora Drive) and the Library. Refer to the notification letter that was sent to I&APs in Appendix E.

The Final Basic Assessment Report (incorporated comments during announcement of the project and public review of the Draft BAR) was available for public review and comment from 21 June 2011 to 29 July 2011. Refer to the notification letter attached in Appendix E.

Since the Final BAR was rejected by the KZN DAEA, the amended Draft Basic Assessment Report was compiled and submitted to I&APs for comment over a 40 day period (i.e. from 21 August 2013 to 1 October 2013. Refer to the notification letter in Appendix E. Following public review of the Amended Draft BAR, the Final BAR incorporated the comments from public review of the Amended Draft BAR and was available for public review and comment from 28 January 2014 to 27 February 2014. The I&APs are urged to submit their comments on the Final BAR to the Assessing Officer at the KZN DAEA, Ms. Wendy Hadebe directly, while copying SEF in all correspondences. The comments must reach KZN DAEA and SEF on or before 27 February 2014.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before this application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations (regulation 57 in the EIA Regulations, 2010) and be attached as Appendix E to this report.

Comments and Reponses Report is attached at Appendix E.

6. PARTICIPATION BY DISTRICT, LOCAL AND TRADITIONAL AUTHORITIES

District, local and traditional authorities (where applicable) are all key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of this application and provided with an opportunity to comment.

Has any comment been received from the district municipality?	YES	**NO X**

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

Comment will be sought from the Ugu District Municipality during review of the Final BAR.

Has any comment been received from the local municipality?	**YES X**	NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

In a letter dated 30 September 2013, the Hibiscus Coast Municipality (HCM) thanked SEF for being given the opportunity to comment on the Draft Basic Assessment Report for the proposed project. The HCM's Environmental Management Section indicated that they have no objections to the proposed development (refer to the correspondence from HCM in Appendix E).

Has any comment been received from a traditional authority?	YES	**NO X**

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

The site does not occur within the jurisdiction of any traditional authority.

7. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?	YES X	NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

A complete set of correspondence from I&AP is attached at **Appendix E**.

Comments have been received from the following stakeholders:

- Department of Water Affairs
- Wildlife and Environment Society South Africa (WESSA)
- Ezemvelo KZN Wildlife (EKZNW)
- Landowners and residents around the proposed development site

The comments received addressed the following concerns/issues:

- The heights of the buildings
- Density and sustainability of the proposed development
- Ecologically Sensitive Areas Related Issues/Comments
- A buffer zone will be require around the base of Tragedy Hill bordering the site and any other environmentally sensitive areas and water resources
- Biodiversity and ecosystem services
- The buffers or setback lines required by the Integrated Coastal Management Act
- Management of solid waste generated during the construction phase and the post construction phase
- Management of any hazardous waste material generated pre-and post construction
- Cumulative water capacity demand
- Sewage capacity of the Municipality
- Stormwater management
- Free access to the site
- Insufficient parking at the beach access point, especially during holiday seasons
- The cumulative impact of all the developments within the area
- Road network
- Type of clientele.
- Potential increase in noise
- Need and Desirability
- Energy saving method of utilizing gas needs to be carefully considered
- Port Edward infrastructure
- Privacy and property value

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Issues raised prior to circulation of DBAR:

Building Design Related Issues/Comments

1. The issue of the height of the building was raised and it was noted that residents would be against any buildings higher than 2 storeys.
2. The residents desire a lower density but good quality, sustainable development.
3. A greater benefit could be derived from 'green' architecture which makes use of natural light and air movement meaningful water saving measures should also be adopted.

Ecologically Sensitive Areas Related Issues/Comments

1. A buffer zone will be required around the base of Tragedy Hill bordering the site. Sand dunes are transient and should sand be cut off near to the dune it could negatively impact the dune as it would be undermined.
2. Identification of any environmental sensitive areas and water resources such as wetlands, rivers, groundwater etc. as well as possible pollution impacts and mitigation measures such as water resources needs to be undertaken.
3. While the proposed site has largely been previously transformed, the proposed development has the potential to result in significant detrimental impacts upon important biodiversity and ecosystem services provided by adjacent sensitive habitats (with particular reference to the dune vegetation of Tragedy Hill, the Sandlundlu Estuary and wetlands associated with the Estuary, and the Admiralty Reserve and marine environments). To this end, it will be necessary to ensure that these important habitats are appropriately delineated and afforded an ecological buffer zone and protection from development related impacts.
4. The buffers or setback lines required by the Integrated Coastal Management Act must be adopted.
5. A vegetated dune barrier must be re-established in line with Policies and Guidelines adopted to deal with coastal erosion.
6. This will have negative impact on our dwindling wildlife and the fauna and flora. They will be destroying some beautiful old trees in this area. This has always been a secluded corner and haven for wildlife.

Planning Related Issues/Comments

1. In terms of the zoning, what planning controls are applicable?
2. Certain areas are resting on Msikaba Formation sandstones which means that those areas are part of the Pondoland Centre of Endemism. As a result, exceptional care needs to be regarding the vegetation and it survey.

Service Provision Related Issues/Comments

1. Management of solid waste generated during the construction phase and the post construction phase needs to be addressed in the BAR.
2. Management of any hazardous waste material generated pre-and post construction needs to be addressed in the BAR.
3. The cumulative water capacity demand needs to be considered as this is a problem in the Municipality.
4. The sewage capacity of the Municipality is not capable of accommodating the increased demand.
5. Alternative types of sewage treatment and disposal options must be identified, investigated and evaluated. The Best Practical Environmental Option (BPEO) must then be determined.
6. In our opinion, waste hierarchy must be adopted internally for a development of this scale in order to prevent all waste entering the municipal waste stream. The Hibiscus Coast landfill has reached capacity.

Stormwater Related Issues/Comments

1. Stormwater management plan/system needs to be considered in the BAR.
2. Stormwater run-off needs to be treated prior to discharge to either drainage lines or the beach.
3. Stormwater run-off needs to be treated prior to discharge to either drainage lines or the beach.

Access and Traffic Related Issues/Comments

1. The residents need to be assured that free access will be available to all residents.
2. There is insufficient parking for all residents at the beach access point and, especially during holiday seasons, parking will be a major issue.
3. The proposed access road will need to accommodate boats as the access to the beach is a registered launch site.
4. The cumulative impact of all the developments within the area need to be considered in the provision of parking, particularly for the holiday seasons.
5. The roads cannot cope with the current traffic, let alone for an increase of 2600 extra people being catered for on the beach front. We the rate payers of port Edward will end up carry the bill for these developments in the long run. As it stands, the municipality cannot cope.

Clientele Related Issues/Comments

The new development will cater for a different type of clientele. For some holiday makers generations of their families having been visiting the Port Edward Resort. How will the development affect this group of people.

Noise Related Issues/ Comments

The noise factor. As the area is in front of our properties and it is a valley, we hear all the noise from the police camp. This is now going to be magnified.

Need and Desirability Related Issues/Comments

1. There are a number of developments along the coast which are in the process of failing as they are becoming less economically viable.
2. There is enough development around this area. There's Ekuba Estate and The Estuary and Arbor Glades. We don't need anymore. People visit Port Edward (the little village) due to its small size and its surrounding nature in the area, not to visit a concrete Jungle. The rural nature of the area is changing and large density developments are impacting negatively on this. The cumulative impact of the surrounding developments in changing the rural nature of the area needs to be addressed particularly due to the high density of the proposed development.

General Related Issues/Comments

1. Spill contingency plans and an Environmental Management Plan (EMPr) need to be addressed in the BAR.
2. The proposed energy saving method of utilizing gas needs to be carefully considered as gas accidents can occur due to negligence. Furthermore the use of gas releases green house gases.
3. Does Port Edward have sufficient infrastructure, for examples restaurants, to accommodate such a large increase in numbers of people?
4. WESSA will require:
    - More detailed plans before it can provide more input into the project.
    - To view the environmental management plan for the construction and operation of the development
    - Information on the owners and the developers including the entity
5. We vehemently object to the Port Edward Holiday Resort redevelopment of the remainder of Erf 1023 and portion 7 of Erf 1023, Port Edward Township on the grounds listed above.
6. This is going to destroy our privacy and reduce the value of our properties dramatically.
7. This development is not about trying to upgrade Port Edward. Its all about making money as pointed out in the meeting last night. We do not want this development to go ahead. Port Edward is the last bit of wilderness left on the south coast.

8. Information regarding the 1:50 and 1:100 year floodlines is required. This must be clearly demarcated on a map.
9. In addition to the studies suggested in the BID, EKZNW requires additional detail on the proposed launch site and the proposed "public promenade located outside the boundary of the proposed site" (page 2 of the BID).

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached as Appendix E to this report):

Issues raised prior to circulation of DBAR:

Building Design Related Issues/Comments

1. It was then established that the height of the hotel would be the only building greater than 2 storeys however the dune is behind it and therefore will have minimal visual impact. The height of structures varies between 2-4 storeys depending on the location or the housing typology. The site has an exaggerated slope in many areas and the eventual design will accommodate the surrounding environment.
2. Noted.
3. Noted.

Ecologically Sensitive Areas Related Issues/Comments

1. An ecological buffer will be provided around the base of the dune.
2. A wetland delineation has been undertaken and included in Appendix D attached to the BAR.
3. The recommendations have been considered and noted. The following buffers have been incorporated into the Site Development Plan, viz, 30m forest buffer around the Pondoland Scarp Forest in the northern portion of the site, 50m buffer from the 5m contour of the Sandlundlu Estuary, 20m buffer from the 1: 100 year floodline along the western boundary of the site, 20m buffer around the south western wetland. The proposed promenade will be constructed such that there will be minimal disturbance to the coastal dune forest and soil movement, as it will be a raised structure made of polywood.
4. All development is above the 10m contour and therefore a setback line delineation was not undertaken.
5. This is not relevant to the proposed development as the strip of beach bordering the site consists of rocks.
6. The areas to be developed are areas that have already been developed. The wetland has been delineated and the ecologically sensitive areas will be zoned to prevent disturbance of these areas.
7. It will increase crime in this area due to the volume of people being increased.

Planning Related Issues/Comments

1. A rezoning application will be lodged whereby all planning controls will be included.
2. Noted. A geotechnical assessment has been undertaken to determine the suitability of the proposed development.

Service Provision Related Issues/Comments

1. Noted. This has been included in the BAR.
2. This has been noted and is included in the Draft EMPr appended to the BAR.
3. The Ugu District has been in contact with the services engineer and the issues raised will be dealt with accordingly.
4. The Ugu District has been in contact with the services engineer and the issues raised will be dealt with accordingly. The proposal is to upgrade the existing Red Desert Waste Water Treatment Plant to cater for the increased demand as a result of the proposed development.
5. Alternatives were considered however the proposed is the BPEO.
6. Communication with the Ugu District Municipality has been held to discuss service provision.

Stormwater Related Issues/Comments

1. This has been noted and included in the BAR and Draft EMPr.
2. This has been noted and included in the BAR and Draft EMPr.
3. Noted. Stormwater Management has been addressed in the Scheme Report (refer to Appendix D. Drainage run-off will be directed into swales on the sides of the road. Stormwater will flow off the road into side channels; this will discharge regularly along the length of all roads directly into open spaces and attenuation ponds. Stormwater attenuation ponds will not occur within the 20m of the wetland on the south western portion of the site. Stormwater attenuation will be allowed for and will be by means of shallow (landscaped) hollows in the open spaces, discharging into either the river to the west or sea to the east.

Access Related Issues/Comments

In terms of the control of parking within the resort there will be strict measures taken. A traffic impact assessment has been undertaken. Refer to Appendix D. The existing public parking area will be retained along the sea shore together with the provision of additional parking along the proposed public road reserve being created as part of the development.

Clientele Related Issues/Comments

The purpose of the proposed development is to improve the amenity of the area. Over the years the SAPS attendance to the resort has dwindled and it is anticipated that the upgrade of the site will encourage the SAPS members to return.

Noise Related Issues/ Comments

During the operational phases, noise may be generated as a result of the proposed activities on the development site, however, the proposed layout is designed in such a way that all sites are sea facing and therefore, the potential noise impact will be mitigated as the noise would be projected seaward.

Need and Desirability Related Issues/Comments

1. The need and desirability for the development does take into consideration the other developments in the area, however at present the economic climate is not conducive to the residential market. This will however change and the need will once again arise for development.
2. The site is not rural, and remains an erf in the township of Port Edward. It is the intention of the developer to improve the facility within the existing environment by the creation of a tourism destination to enhance the Port Edward Village which is situated on the sea end of the access road thereby minimizing the actual impact on the village.

General Related Issues/Comments

1. This has been noted and is included in the Draft EMPr appended to the BAR.
2. This has been noted and is included in the Draft EMPr appended to the BAR.
3. This has been noted and is included in the Draft EMPr appended to the BAR.
4. This has been noted and is included in the Draft EMPr appended to the BAR.
5. Noted. The proposed development will have the necessary security systems installed.
6. A market assessment was undertaken and it was established that this type of development is needed in the area.
7. Noted.
8. The floodlines have been illustrated in Appendix A in DRAWING NO: 1491/FLOOD/10/1001 and in PLAN No. J30085 / L1b in Appendix A. A 20m buffer from the 1: 100 year floodline on the western portion of the site has been incorporated into the SDP, such there will be no hard infrastructure in this area.
9. Noted. This is included in the BAR. A Coastal Risk Assessment (Appendix D) has been undertaken for the proposed promenade occuring with the Admiralty Reserve. The existing access road to the site will be closed and replaced with a public road that traverses behind the first line of development which will provide formal access to the exiting launch site and parking facilities which will remain as

is.
Issues raised on the Draft BAR Refer to the Comments and Response Report In Appendix E: **Issues raised on the Final BAR** Refer to the Comments and Response Report In Appendix E:
Issues raised on the Amended Draft BAR Refer to the Comments and Responses Report in Appendix E.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

2.1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the planning and design phase:

Alternative S1 (preferred alternative)

Direct impacts:

Lack of Capacity of Service Infrastructure

The Ugu Municipality is currently experiencing difficulty in rendering services such as water provision. The provision of water to the proposed development may be hindered by the lack of municipal infrastructure. The provision of water for such a development is a key to sustainable development.

The proposed development will result in an increase in waste water which needs to be collected and dealt with using the Best Practicable Environmental Option (BPEO).

The Ugu Municipality is currently experiencing difficulty in rendering services such as waste water disposal. The provision of waste water disposal mechanisms for the proposed development may be hindered by the lack of municipal infrastructure. The provision of waste water disposal for such a development is a key to sustainable development.

Impact on wetlands

If access to the wetland is not controlled permanent damage to the water system (and to the water quality) through erosion, siltation, soil compaction, pollution and damage to vegetation may occur. The developer's initiative to remove the existing structures that occur within the wetland and the 20m wetland buffer will have a high positive impact in terms of ecological functioning of the wetland.

Impact on soil

Erosion of topsoil and subsoil due to uncontrolled storm water runoff during construction and operation activities will occur if adequate control measures are not implemented. Storm water runoff may become increasingly silted, and possibly more 'grey'. A balance must be struck between developing areas for housing and maintaining green areas, which will attenuate and absorb runoff, and reduce soil erosion. If topsoil is eroded from the site it will increase the sediment load in water system (wetland and streams) downstream of the site, and damage the sensitive ecology of these systems.

Impact on the Pondoland Scarp Forest

The Site Development Plan has incorporated a buffer of 30m from the forest edge in the northern, north

eastern and north western portion of the site to ensure that the forest patch that is of high conservation importance (in terms of providing a habitat for endemic and threatened flora and fauna) is protected from the impacts of the proposed development. The existing buildings in this area will be demolished and the area rehabilitated and set aside as private conservation areas and maintained as such.

A hotel is proposed within the Ecotourism zone (Erven 11) on the Site Layout Plan and will occur out of the 30m buffer of the forest edge. This will ensure that the forest is not impacted by shading impacts caused as a result of the proposed hotel.

Impact on the adjacent watercourse
A 20m buffer from the 1: 100 year floodline of the watercourse adjacent west of the site boundary has been incorporated into the Site Development Plan. This is to ensure that the risk to flooding on the proposed development is minimised.

Impact on the Sandlundlu Estuary
As per the recommendations by the EKZNW, the proposed buffer for the estuary (50m on the 5m contour) has been accommodated on the Site Layout Plan. This area has been set aside as a no-go area to ensure that services infrastructure and proposed buildings do not encroach in this area.

Impact of construction of the promenade along the Admiralty Reserve
With regards to future risk affected by the development of the proposed promenade/boardwalk, the anticipated increased footfall may lead to further habitat disturbance and fragmentation. While the dominant vegetation forms are largely resilient to extreme conditions typical of the coastal zone, their primary role is dune stabilisation. Unchecked human interference may ultimately reduce the recovery and enhancement of the vegetation to more established, mature species assemblages, unless appropriate mitigation measures are implemented. The design of the proposed boardwalk is important in consideration of dune environment beneath and around the structure, without hindering ecological processes, such as movement of fauna and flora, as well as physical processes, for example wind-shifted sands and percolation of rainwater.

Impact on discharge of stormwater runoff into the sea
The site development plan has accommodated areas below the 10 m.a.m.s.l. contour as no-go areas and has subsequently been set aside as a 'conservation servitude'. There will be no hard infrastructure places in this servitude.

Loss of heritage resources
During the planning stages of the development, it is important to account for any possible features of heritage significance that may be negatively impacted by the re-development of the site. Archaeological features or buildings/structures older than sixty (60) years may be impacted negatively by development. Please refer to Appendix D for the combined heritage and built heritage impact assessment report.

Indirect impacts:
Visual Impact
The site is along the coast and therefore the buildings that are too high may impede the view of the neighbours. The higher density of the proposed development may cause the sustainability of the project to be compromised.

Ecological Impacts
The Tragedy Hill dune, containing indigenous dune vegetation and rich in biodiversity, borders the site to the north. Dunes are transient and should sand be cut off near to the dune it could negatively undermine the dune.

Impact on tourists to the beach
The proposed development includes the realignment of the vehicular road access to the main Port Edward beach through the development. A public pedestrian promenade will be provided along the eastern periphery for public purposes. The existing access road accommodates boats and has parking along the road for vehicles. The new access route needs to provide the same or better access road and the public should not be prevented from utilizing the public beach.

Cumulative impacts:
Increased pressure on existing resources:
In light of other developments in the area such and the proposed mixed-use development at the Port Edward Holiday Resort, there could be pressure placed on existing resources by way of the following:

- Increase in demand for services such as water and electricity.
- In the absence of sensitive planning, the unnecessary clearance of vegetation and improper stormwater management the proposed developments could lead to an increase in the hardening of the surface area inside the catchment area, erosion impacts, surface water pollution and impact on the hydrology of the surrounding river systems.
- Impact on capacity of existing land fill sites in a localised area.
- Increased localised traffic due to movement of construction vehicles.

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:
The wetland will continue to function in its current condition. No buffer around the wetland will be delineated and therefore future potential damage to the wetland will not occur.

The existing water demand on the Municipal system will be retained and no additional burden will be placed on the system.

The existing waste water demand on the Municipal system will be retained and no additional burden will be placed on the system.

No additional stormwater will incur and therefore no additional impacts will occur.

Indirect impacts:
No maintenance of the public beach road will occur and the existing road network would remain in its current condition. The developer will continue to pay rates and taxes for the existing public beach road.

No development would occur and therefore no buffer between the sensitive environments would be imposed.

The status quo of the SAPS Resort would remain should the development not proceed. Several of the buildings on site are run down and in need of renovation. This visual intrusion will not be mitigated and will remain as is.

Cumulative impacts:
No cumulative impacts are envisaged.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Wetland
The delineated wetland with its associated buffer (20m) will need to be factored into the proposed

rezoning plan. The buffer strip must remain undeveloped, and be treated as a private conservation area or open space.
The existing structures that occur within the wetland and the 20m wetland buffer must be removed and the wetland must be rehabilitated. No services infrastructure, such as water and sewer pipelines, stormwater attenuation ponds and hard infrastructure may be constructed in the conservation area. The area must be cleared of alien invasive plant species.

The wetland and the 20m buffer have been designated as Private Open Space in the proposed layout plan. However, the existing internal road through the development goes through the 20m wetland buffer on the south-eastern wetland boundary. Due to road safety requirements, the existing road alignment will remain in its current position. With regards to the widening of the extension of Owen Ellis Drive, the widening of the road to comply with road standards was facilitated to the east of the existing road to not affect the wetland to the west of the road. Refer to EKZNW's letter dated 8 March 2011 (in Appendix G) regarding the road alignment.

Soil erosion
During the planning and design the following should be incorporated to mitigate erosion and be included in the EMPr:

- Consideration should be given to the idea of retaining as many 'soft' surfaces (grassed) as possible. This will facilitate the percolation of water, reduce siltation and grey water runoff, and reduce reflected heat and light which would emanate from bare areas and pedestrian and road surfaces.
- Residents should be made aware of the many benefits of planting new indigenous trees and shrubs.
- 'Grass Blocks' could be used for paving (pedestrian walkways), in order to establish a firmer surface. The surface will then not get muddy, but will allow for plant growth and water percolation through the blocks, reducing runoff. This will confer similar advantages in heat reduction and aesthetic appeal as a grassed surface would, but will retain its integrity under heavy rain.
- The design recurrence interval for the sizing of side drainage, kerb inlets where used, and for internal pipe work is 5 years.
- Stormwater will flow off the road into side channels; this will discharged regularly along the length of all roads directly into open spaces and attenuation ponds. The attenuation ponds must not be located within the 20m buffer of the wetlands.
- It is proposed that the roads be constructed with a crossfall into the slope and therefore a side channel will be constructed at the edge of the road to collect and convey stormwater to convenient crossing points. A system of inlet, pipe culvert and headwall will be constructed at approximately 50m apart or wherever necessary. The outlets will be protected with grouted stone pitching to obviate erosion.
- Stormwater attenuation will be allowed for and will be by means of shallow (landscaped) hollows in the open spaces, discharging into either the river to the west or sea to the east.

Stormwater from all roof and paved areas must be piped or collected in surface drains to discharge into the Stormwater system provided for in the area. After construction the site must be graded to facilitate free surface drainage and prevent ponding against the structure.

Impact on discharge of stormwater runoff into the sea
The site development plan has accommodated areas below the 10 m.a.m.s.l. contour as no-go areas and has subsequently been set aside as a 'conservation servitude'. There must be physical demarcation of the area prior to construction and no hard infrastructure will be allowed to be constructed within this servitude. This area must be bunded and a stormwater management plan implemented to ensure that stormwater runoff during the construction phase does not enter the ocean.

Ecologically sensitive environments
The majority of the site bordering Tragedy Hill has been transformed as a result of the existing development on site. The Site Layout Plan has made provision for a 30m buffer from the forest edge and all existing structures in this area will be removed and the area will be rehabilitated. This buffer has

been agreed with EKZNW. Refer to correspondence with EKZNW dated 8 March 2011 in Appendix G.

The buffer of 50m from the 5m contour of the Sandlandu Estuary will ensure that the estuary is afforded maximum protection against construction-related impacts such as contaminated stormwater runoff entering the estuary.

Impact on the adjacent watercourse
A 20m buffer from the 1: 100 year floodline of the watercourse adjacent west of the site boundary has been incorporated into the Site Development Plan. This is to ensure that the risk to flooding on the proposed development is minimised. This area must be physically demarcated by a hydrologist prior to construction and construction activity must not encroach into this area. Stockpiles and toilets must not be placed in this area.

Height
The height of the structures varies between 2-4 storeys depending on the location or the housing typology. The site has an exaggerated slope in many areas and the eventual design will accommodate the surrounding environments. The 30m buffer from Tragedy Hill will ensure that there is minimal shading caused by the proposed buildings.

Water supply
The potable water supply will be obtained from the existing municipality network. The current capacity of the existing network would have to be upgraded, with a 160 diameter pipe along Bristol Road down to Dean Road, in order to meet the proposed development demands. Furthermore, it has been indicated by the Municipality, but not confirmed, that there is sufficient water available for the demands of the proposed development.

The design criteria used is as outlined in the "Guidelines for Provision of Engineering Services in Residential Townships" and Municipal Standards.

Sewer
There is no sewer available for a direct connection therefore a pumping main will be necessary. The sewer will have to gravitate to low point where it will be pumped to a central pump station at corner Border Road and Cardiff Road. The central pump station (at corner Border Road and Cardiff Road) will then pump to the Ramsay Avenue station pump which links to the Red Desert Sewer Treatment Plant.

The internal sewer will be designed in accordance with the “Red Book” and will consist of a gravity system discharging into the pump station which will have standby generation. There is an existing municipal stilling chamber in the north-eastern corner of the site to where the rising main connection will be made.

Internal roads
The road must be designed according to the Engineers specifications. In general the design approach for the roads and stormwater drainage in the township will follow the standards of the relevant Local Authorities, namely, Ugu District Council as well as the “Guidelines for the Provision of Engineering Services in Residential Townships” or Red Book issued by the former Department of Community Development. In all instances however local requirements and/or knowledge took precedence over the “Guidelines”. It is intended that all services will be taken over by Ugu.

Horizontal Alignment was determined by the cadastral information but minimum radii are set at 20 metres.

Generally the roads will not be kerbed, except the main access road through the development for access to the beach front, with the drainage run-off being directed into swales on the sides of the road. The stormwater will then discharge into attenuation ponds throughout the site.

Vertical Alignment - as per the "Guidelines" with the minimum 'k" values set at 4 on crests and 6 on sags.

Generally a straight crossfall of 3.0 % will be employed. In particular cases, where dictated by drainage or alignment considerations, a cambered road (2.5 %) will be designed.

All roads will be surfaced with either a 30 mm medium premix or in selected areas segmented paving will be used to differentiate uses or to highlight intersections or pedestrian crossings.

Construction of the Proposed Promenade

An elevated boardwalk constructed of polywood in natural unobtrusive colours (recycled mixed plastic) is recommended rather than a concrete promenade. The polywood non-slip alternative is deemed the more suitable as it is rot proof, weather resistant and relatively vandal proof and therefore highly suitable for the marine environment.

The location of the proposed promenade takes natural processes into consideration and is deemed as sufficiently in-land of the littoral active zone so as not to impact on natural sediment movement patterns. It is crucial to note that the construction of such a boardwalk must be undertaken in acknowledgement of the inundation risk inherent to the site, with significant damage to this infrastructure from future storms / tidal surges, being a strong possibility. In a sense, the boardwalk – a relatively low cost investment - must be considered expendable.

The height of the boardwalk must be elevated (raised) to approximately 1m to allow for natural faunal movement, connectivity of natural feature and protection of sensitive areas.

Consideration should be taken of the needs of disabled persons and the possibility of constructing ramps instead of stairs should be considered. It is recommended that existing informal accesses be consolidated into four formal access points, which should extend down from the raised boardwalk to the shoreline, with viewing decks adjacent to these access points.

It is recommended that the width of this boardwalk should be between 2m, but not exceed 3m to ensure minimal impact, but still allow for comfortable movement of people during peak seasons. It is suggested that proposed viewing decks or platforms extend seawards from the main boardwalk and their size must relate to expected usage.

Indigenous vegetation removal must be minimised. The remaining natural vegetation should be incorporated into the proposed development design. Appropriate erosion control measures, detailed in the EMPr (Appendix F) must be implemented when removing alien invasive vegetation. All efforts must be made to maintain the integrity of the continuous vegetated dune.

In Area 2 (as identified by the Coastal Risk Specialist), a vegetation buffer must be instated to ensure that the boardwalk provides protection for the sensitive dune habitat.

There must be strict adherence to locating the promenade behind the identified hazard zone (proposed coastal setback). There must be strict maintenance of natural defences on site (i.e. the remaining vegetated dune cordon). There should be public private partnership / stewardship programme with Hibiscus Coast Municipality in order to maintain and protect the vegetated dune cordon. The current agreement is that the developer will construct the promenade and the responsibility of future maintenance of this feature will be the accepted by the Hibiscus Coast Municipality.

Proposed design specifics that are recommended are as follows:

- Both sides of the boardwalk should be fenced with handrails and such handrails should be between 900mm and 1.1m high. The maximum opening between banisters should be 10 cm;

- The edges of planks should be smooth and bevelled and they should be at least 40mm thick with sufficient gaps between and attached with 10mm diameter galvanised steel bolts or copper;
- Support poles should be 100mm in diameter and sunk at a depth of 1m, preferably in a concrete foundation, and should be no more than 2m apart and supported by 100mm x 50mm diagonal braces;
- Steps should be constructed taking cognisance of the ratio of the height of step to its width – ratio selected should remain the same. Ideally the height of two steps plus width of the surface between them should be 64cm.
- The boardwalk gradient cannot exceed 5 %;
- The beach end of the pathway must not be subject to wave attack or changing beach level. A short independent sacrificial end must be included in the design; and
- The length of the boardwalk is recommended as per Figure 8 of the Coastal Risk Assessment, extending from the southernmost portion of the cadastral boundary to the formalised carpark, comprising a length of approximately 400m.

Features of heritage value

Ms Mamo Seliane (SEF) and Mrs D Whelan (Archaic Heritage) conducted the heritage site visit on Friday 31st May 2013. The results of this assessment have been included in Appendix D, but the recommendations and mitigations measures have been included below:

- No features of heritage value were identified on site.
- Should any artefacts be uncovered during the construction phase then construction must be placed on hold and Amafa must be contacted immediately to provide guidance of whether a heritage specialist is required to investigate the discovery further.

From a built heritage perspective, Mrs D. Whelan of Archaic heritage identified structures older than sixty years, but with the majority presenting low architectural, technical, historical and social significance from local, regional, national and international perspectives. This specialist has presented the following recommendations to be considered by the applicant:

- **Labour quarters:** These structures can be demolished;
- **Dwellings and associated rondawels:** The specialist has recommended that these be retained to retain some of the history and feel of the development. These structures are shown to represent low significance from a heritage perspective and demolition permits can be sought should the developer choose not to incorporate them into the new development.
- **Holiday Units:** The specialist confirmed that these structures contain low heritage significance and can be demolished. The specialist has recommended that one unit be retained to retain some of the history and feel of the development, but this decision site with the applicant.
- **Sheds:** This specialist confirmed that these structures can be demolished.
- **Small Hall:** The specialist has recommended that this structure be retained to maintain some of the history and feel of the development. The decision to incorporate this structure sits with the applicant.
- **Solitary rondawel:** This structure is considered to contribute to the memory of the site and the specialist recommends that it be retained. This decision sits with the applicant.
- **Restaurant:** The built heritage specialist confirms that this structure can be demolished should the applicant require this action to take place.

It must be noted that the specialist has only recommended that some of the structures be retained; these are not specific requirements that have to be met given the fact that the heritage value of all structures is considered to be low. Therefore, should the applicant choose to demolish all the structures older than sixty years then permits will need to be obtained in due course from Amafa AkwaZulu-Natali.

b. Process, technology, layout or other alternatives

List the impacts associated with any process, technology, layout or other alternatives that are likely to occur during the planning and design phase (please list impacts associated with each alternative separately):

There are no process, technology, layout or other alternatives. This section is therefore not applicable.

Alternative A1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:	**Alternative A2:**
N/A	

2.2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the construction phase:

Alternative S1 (preferred site)

Direct impacts:

Impact on wetland

If access to the wetland is not controlled, especially during construction, permanent damage to the water system (and to the water quality) through erosion, siltation, soil compaction, pollution and damage to vegetation may result.

Hydrocarbons (oil, petrol and diesel) and other chemicals/ liquids will be required during the construction phase. Spills and/or leakages could occur from construction vehicles and/or equipment. These spills could contaminate the surface and ground water should they occur simultaneously with a heavy rainfall event.

Alien plant invasion

Weeds thrive on disturbed soil, and will present an eradication problem at a later stage should these plants set seed, especially near wet areas.

Disturbance of soils, caused by construction activities, may result in Invasive Alien Plant (IAP) growth. These IAP do not provide sufficient soil stabilisation.

Therefore should IAP not be adequately managed during construction they will continue to encroach into surrounding sensitive areas, such as the wetland and Tragedy Hill.

Stormwater runoff and erosion

Erosion of topsoil and subsoil due to uncontrolled storm water runoff during construction activities will

occur if adequate control measures are not implemented. Storm water runoff may become increasingly silted, and possibly more 'grey'.

If topsoil is eroded from the site it will increase the sediment load in water systems (streams) downstream of the site, and damage the sensitive ecology of these systems.

The clayey sands of the Berea Formation and the Aeolian dune sands are susceptible to erosion by wind and flowing water and must be vegetated as soon as possible after construction. It is therefore imperative that Stormwater runoff is strictly controlled during and after construction.

Impact on Soil and vegetation clearance
Erosion of topsoil and subsoil due to uncontrolled storm water runoff during construction activities will occur if adequate control measures are not implemented. Storm water runoff may become increasingly silted, and possibly more 'grey'. If topsoil is eroded from the site it will increase the sediment load in water systems (streams) downstream of the site, and damage the sensitive ecology of these systems. The clayey sands of the Berea Formation and the Aeolian dune sands are susceptible to erosion by wind and flowing water and must be vegetated as soon as possible after construction. It is therefore imperative that Stormwater runoff is strictly controlled during and after construction.

Vehicle access to the site may disturb residents, the vegetation and compact soils.

ımpact of soil erosion as a result of construction of the promenade
Rocky shores are acknowledged as being more resilient to the effects of dynamic coastal processes than sandy shores. The entire shoreline fronting the proposed development is considered rocky with the exception of the northernmost portion which abuts the sandy shore but has a portion of the vegetated dune in-between. Anecdotal evidence, as well as the photographs taken in 2007 (plates 7-10) following the storm surge event, suggests that the area in question is prone to inundation but not to coastal erosion, which is at odds with the desktop information of the Coastal Vulnerability Index (CVI). The CVI indicates that large portions of the proposed study site are considered in the category of High Risk, as well as indicating that there are sites of erosion present fronting the study area. As a result of this apparent conflict of the best available information at the time of reporting, a precautionary approach is advocated (SSI, Coastal Risk Assessment, August 2012).

Impact on dune vegetation as a result of the construction of the proposed promenade
In the absence of rehabilitation of the site post construction, the proposed construction activity could impact on the ecological connectivity of the area, habitat fragmentation and disturbance, ecological processes, such as movement of fauna and flora and dune stabilisation.

Impact on ecological carrying capacity as a result of construction of the proposed promenade
With regard to the impact of the proposed promenade/boardwalk on the natural environment and specifically on the ecological carrying capacity of the shoreline, it should be noted that this area is already intensively utilised. This situation, when considered together with the current absence of management/mitigation measures, has resulted in significant degradation of the natural assets on site. It is therefore of paramount importance that the proposed promenade/boardwalk be used as a mechanism to increase the resilience of the natural assets on site by formalising and instating access to the shoreline in such a way that sensitive areas are avoided (through elevation of the boardwalk above the dune, *inter alia*), and degraded areas are rehabilitated. If sustainable design is incorporated into the construction of the proposed structure, such activity could in fact increase the ecological carrying capacity of the natural assets on site as the short-term impacts arising from the construction phase are considered negligible when considered against the long-term benefits of rehabilitated dunes.

Indirect impacts:

Proliferation of alien invasive plant species

Weeds thrive on disturbed soil, and will present an eradication problem at a later stage should these plants set seed, especially near wet areas. Disturbance of soils, caused by construction activities, may result in Invasive Alien Plant (IAP) growth. These IAP do not provide sufficient soil stabilisation. Therefore should IAP not be adequately managed during construction they will continue to encroach into surrounding sensitive areas, such as the wetland and Tragedy Hill.

Impact on air quality

Air quality degradation because of dust and noise as a result of construction activities, may have a negative impact on residents in the vicinity of the development. This impact will be short term in duration, as it is associated with construction. Management methods to control dust during construction may be required.

Impact on noise

A general increase in noise from the construction site may disturb the residents.

Increased job opportunities

Job opportunities will be created for the local labour force for the duration of the construction phase.

Impact on safety and security

The increased numbers of people present in the area during the construction phase may result in an increased security hazard to the residents in this area.

Cumulative impacts:

Increased pressure on existing resources:

In the long-terms, there could be the proliferation of other developments in the area which will place pressure on existing resources by way of the following:

- In the absence of sensitive planning, the unnecessary clearance of vegetation and improper stormwater management, the proposed developments could lead to an increase in the hardening of the surface area inside the catchment area, erosion impacts, surface water pollution and impact on the hydrology of the Sandlundlu River system.
- Increased localised traffic due to construction vehicles.
- Impact on capacity of existing landfill site.
- Increased pressure on the existing municipal services e.g. water, sewerage and electricity.

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

In the absence of the proposed development, there will not be any impacts, as explained above.

Indirect impacts:

In the absence of the proposed development, there will not be any impacts, as explained above.

Cumulative impacts:

In the absence of the proposed development, there will not be any impacts, as explained above.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Safety and security

The construction areas should be fenced off if necessary in order to avoid harm to local residents.

Storage areas should be established and the site should be fenced at the commencement of the construction phase.

Access to the site during the duration of the construction phase must be monitored.

Further mitigation measures should be established with the co-operation of the local community and residents involved.

In terms of construction site safety the Occupational Health and Safety Act will be complied with.
The construction phase EMPr should be implemented (refer to Appendix F).

Impact on Indigenous Flora
Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas (particular attention must be paid to imported material).

Any new or existing alien invasive plants should be removed and replaced with appropriate indigenous plants prior to handing over the completed development. Nevertheless, residents should still be informed and educated as to the correct procedures for maintaining indigenous vegetation, the removal of alien invasive vegetation, and the prevention of its' spread. No construction activities are to take place near any of the identified buffer areas and vehicles must not be allowed to encroach on the buffer areas.

Impact on wetlands
Development should occur as far away from the wetland areas and buffers as is possible. The 20m wetland buffer and the wetland must be physically delineated by a wetland ecologist to ensure that the construction crew do not encroach into this area during construction of the public beach access road through the development site.

Rehabilitation of the wetland and its 20m buffer (for removal of existing structures in the wetland) must be done in accordance with the approved rehabilitation plan and monitored by the ECO and wetland ecologist. It is recommended that the requirement to compile and obtain approval for the wetland rehabilitation and management plan is included as a condition of authorisation by DAEA, should the competent authority issue a decision in favour of the proposed development.

Access to the wetlands on site by construction vehicles and construction staff must be prevented and no litter or spoil material should be disposed of in the wetland.

Any interference with the wetland functioning, including demolition of structures currently located within the wetland, must be carefully monitored and be in accordance with the specifications of the Department of Water Affairs (DWA). This includes deviations form the specified route or demarcated working area, which will impact negatively on local biodiversity.

A stormwater management plan for the construction phase of the development should be required. This must be a condition in the Environmental Authorisation (EA).

Construction sites must have appropriate sediment trapping structures in place to prevent soil, building material etc. entering the drainage lines / wetland systems.

Storage of any material, chemicals, fuel, etc. must not pose a risk to surrounding environment and this includes ground water. Temporary bunds must be also constructed around chemical or fuel storage areas to contain possible spillages.

The process of redeveloping any existing areas of development or other existing hardened areas should not impact negatively on the wetland or its buffer areas. Measures to ensure this occurs should include:

All construction activities, including the storage and cartage of waste, lay down of construction materials and mixing of cement, must occur outside of the established buffer zone.

The stormwater attenuation facilities must be designed to filter / trap any contaminates prior to water seeping into the ground, wetland or drainage lines.

Construction should preferably take place during the dry season.

All construction vehicles should be kept in good working condition.

All construction vehicles should be parked in demarcated areas when not in use and drip trays should be placed under vehicles to collect any spillages/ leaks.

If hydrocarbon spills occur these should be cleaned using SUNSORB (or similar product) and the contaminated soils removed from site and dispose of at an appropriate registered landfill site.

Impact on soil

During the construction phase the following should be incorporated to mitigate erosion and be included in the EMPr:

- Stormwater measures should be employed during construction to allow for the stormwater to be channelled directly to the existing outfalls without causing erosion.
- A Stormwater Management Plan should be prepared detailing the response to the increase in stormwater runoff and approval from the relevant Departments would be required and should be carried through to the operational phase of the development. The EAP recommends that the requirement to compile a stormwater management plan is included as a condition of authorization by DAEA.
- Soil stabilisation and re-vegetation of affected areas, as well as avoidance of all areas susceptible to erosion, should be undertaken.
- Vegetation should not be removed from any part of the development area until directly prior to the construction activities in that area (i.e. vegetation removal must be phased). Where possible, vegetation should not be removed at all but retained, and construction should proceed around the existing vegetation. Blanket site clearing of vegetation and unnecessary removal of ground cover should be avoided.
- Areas to be excavated should be kept as small as possible. These areas should also be clearly cordoned off with chevron tape in order to keep the disturbance within a limited area. Vegetation (especially ground cover, like grasses and forbs) should not be removed until absolutely necessary for construction.
- Soil erosion on site must be prevented at all times.
- Erosion prevention mechanisms should be employed prior to breaking ground in anticipation of potential erosion problems.
- Erosion control measures should be implemented in areas sensitive to erosion such as near water supply points, edges of slopes, etc. to ensure that there is reduced sediment load to any water courses. Measures must also be implemented prior to construction to minimise problems during the construction phase of the project. These measures could include the use of sand bags, hessian sheets, retention or replacement of vegetation.
- Drainage must be controlled to ensure that runoff from the Development will not culminate in off- site pollution or cause water damage to properties further down from the site. The storm water drainage system must not be contaminated by other waste sources and must therefore be separate from other waste water drainage systems.
- After construction, the site should be contoured to ensure free flow of run off and to prevent ponding of water.

After construction the site must be graded to facilitate free surface drainage and prevent ponding against the structure.

Employment of local labour
Local contractors, labour and supplies should be used during the construction phase of this development. This should be a condition of the contract entered into with the contractor/project manager. Only if necessary should the bigger 'national' companies oversee or manage the project, while local contractors supply all the building expertise, labour, materials and supplies where possible.

Impact on noise
Operating hours should be restricted to weekdays between 08h00-17h00 and on Saturdays between 08h00-13h00.

Machinery must be maintained in good working order.

Impact on air quality
Dust suppression techniques such as dampening of the construction area and access roads should be employed to reduce dust, where necessary.

Measures must be in place to minimize/ control dust.

Vehicles should be kept to a single path, and soils should be ripped up upon completion of all the construction phases. Construction vehicles must not be allowed to pass through the stream, but should access the site from the main eastern bypass only.

Prior notification of the residents should occur and care taken to minimise the disturbance as far as possible.

Impact on sensitive ecological areas
Ecologically sensitive areas (including the conservation and rehabilitation zones) must be temporarily fenced prior to the construction phase in order to avoid access of these areas by construction staff or vehicles, and to avoid damage to these areas.

Impacts of construction of the proposed promenade
In an effort to reduce the impacts of construction of the promenade, the following must take place:

Suitable erosion control measures shall be implemented in areas sensitive to erosion. These measures should include:
1. The suitable use of sand bags; soil saver or hessian sheets;
2. The prompt rehabilitation of exposed sand / embankment areas with indigenous vegetation to ensure that soil is protected from the elements; and the removal of vegetation, only as it becomes necessary for work to proceed;
3. The time that stripped areas are left open to exposure should be minimised wherever possible. Care should be taken to ensure that lead times are not excessive;
4. Wind screening and storm water control should be undertaken to prevent soil loss from the site;
5. Procedures that are in place to conserve topsoil during the construction phase of the project are to be applied to the set up phase i.e. topsoil is to be conserved while providing access to the site and setting up the camp; and
6. Minimise changes to natural topography, retain natural shape of dunes and other features

Stormwater control:
1. To prevent stormwater damage, the increase in stormwater run-off resulting from construction activities must be estimated and the drainage system assessed accordingly;
2. Storm water pipelines shall be consolidated where possible to reduce the number of discharge points within the study area;

3. Storm water must be disposed of without causing soil saturation, erosion, sloughing and without affecting dune integrity; and
4. Provision shall be made for storm water management measures that will ensure effective run-off control and prevent erosion at run-off points and ponding on the beach;

Pollution - Extreme caution must be taken with activities such as concrete mixing and generation of waste material. The principles of reducing, reusing and recycling must be adopted.

Vegetation:
1. All areas that have been disturbed by construction activities must be cleared of alien vegetation;
2. The remnant dune habitat must not be disturbed;

3. Dunes must be planted with endemic coastal vegetation intermixed with a range of pioneer species and maintained until the vegetation is well established;
4. Correct vegetation must be planted, replacing like with like and encouraging herbaceous or woody cover by allowing natural succession to take its course;
5. Basic re-vegetation techniques include:
   - Use seed material, small plants or cuttings - success greater with young plants;
   - Preparation of seed bed - relatively loose, damp substrate;
   - Preferably use hand planting;
   - Ensure follow up planting;
   - Apply high nitrogen fertilizer immediately and one month after planting;
   - Re-establish natural (indigenous) dune vegetation in same zonational sequences;
   - Plant vegetation in the correct season;
   - Recreate the natural situation as much as possible;
   - Maintain vegetation through alien vegetation removal and monitoring; and
   - Utilize local labour as far as possible.

The following rehabilitation must take place, following the construction of the proposed promenade:

The following principles and actions should be undertaken post construction of the boardwalk to minimize and mitigate impacts on the natural environment. These should be undertaken through the development of a coastal-specific environmental management plan to address the following:

Vegetation:
1. All areas that have been disturbed by construction activities must be cleared of alien vegetation;
2. Dunes must be planted with endemic coastal vegetation intermixed with a range of pioneer species and maintained until the vegetation is well established; and
3. Vegetation planted is to be watered and maintained.

Dune rehabilitation:
1. Rehabilitation of embankments must be monitored and poor vegetation establishment rectified - monitor the area for vegetation die-off and re-vegetate where necessary; and
2. Alien weed and invader plant infestation must be eradicated.

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the construction phase (please list impacts associated with each alternative separately):

There are no process, technology, layout or other alternatives. This section is therefore not applicable.

Alternative A1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:	**Alternative A2:**

2.3. IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the operational phase:

Alternative S1 (preferred alternative)

Direct impacts:

Impact on wetland

If access to the wetland and its 20m buffer is not controlled, especially during operation, permanent damage to the water system (and to the water quality) through erosion, siltation, soil compaction, pollution and damage to vegetation may result.

Impact on the adjacent watercourse

A 20m buffer from the 1: 100 year floodline of the watercourse adjacent west of the site boundary has been incorporated into the Site Development Plan. This is to ensure that the risk to flooding on the proposed development is minimised.

Impact on soil

Erosion of topsoil and subsoil due to uncontrolled storm water runoff during operation activities will occur if adequate control measures are not implemented. Storm water runoff may become increasingly silted, and possibly more 'grey'. A balance must be struck between developing areas for housing and maintaining green areas, which will attenuate and absorb runoff, and reduce soil erosion.

The Port Edward area currently experiences electrical shortages and there is potential for the proposed development to experience sustainability issues with regards to electricity.

Impacts on the Pondoland Scarp Forest

The presence of the proposed mixed-use development may impact negatively on the fauna that occur within the Pondoland Scarp Forest, in the absence of mitigation measures for appropriate lighting.

- The 30m forest buffer must be maintained and managed as a conservation area.

- Lighting for the proposed development must adhere to the 'dark approach' preferable for the entire development but at a minimum for Erven 9 and 11. Such lighting must include the following:
- Internal lights must be placed above the level of the horizontal of the lintels, and wherever possible, be placed on perimeter walls rather than internal walls, so as to shine inwards, rather than outwards.
- Spot lights, floodlights and decorative external lights are not to be permitted;
- External lighting must be minimised;
- Street lights and lighting of pathways must be designed to prevent light pollution and glare, and should minimise the upward spread of light (70 degrees to 90 degrees from the vertical) and direct the light to where it is needed.

Impact of promenade

In the absence of a proper maintenance programme, there could be pollution caused by public mismanagement of the area in terms of waste issues.

Safety of the public could be compromised due to the lack of maintenance.

The proposed promenade will have a positive impact in terms of providing access to the shoreline as well as incorporating opportunities for economic growth by providing space for informal traders to operate. These actions are in keeping with the principles of integrated costal management (ICM) and the ICM Act. However, the promenade and surrounds must be maintained and the area kept free of litter.

Increase in vehicular traffic and noise

The proposed development will result in a general increase in vehicular and pedestrian traffic to this area.

Indirect impacts:

Job opportunities will created for the local labour force for the duration of the operational phase.

Potential negative impact on property values

The proposed development has the potential to negatively impact the property values of the surrounding properties should this development not be successful.

Cumulative impacts:

Increased pressure on existing resources:

In light of other proposed developments in the area, there could be pressure placed on existing resources by way of the following:

- Increase in demand for services such as water and electricity.
- In the absence of sensitive planning, the unnecessary clearance of vegetation and improper stormwater management the proposed developments could lead to an increase in the hardening of the surface area inside the catchment area, erosion impacts, surface water pollution and impact on the hydrology of the surrounding river systems.
- There could be an impact on capacity of existing land fill sites in a localised area due to increased volumes of solid waste.
- Increased localised traffic due to introduction of more people in the area.

Increased tourism potential:

There will be increased tourism as a result of increased residential accommodation and access to public beach amenities such as the proposed promenade.

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Wetland degradation will continue to occur due to the existence of the buildings within the wetland.

Stormwater will continue to follow along the current paths. No additional stormwater will incur and therefore no additional impacts will occur.

Should the proposed development not continue there will not be an increase in vehicular traffic and noise.

Indirect impacts:

The existing property values of the surrounding properties will remain in their current state.

Cumulative impacts:

None

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Impact on the wetland

The wetland will be zoned as Private Conservation and access to the wetland should be controlled. Appropriate signage will be placed in these areas which will only be used as passive open space, such as nature trails. No hard infrastructure, no picnicking and no littering will be allowed in this area.

- Water and sewer pipelines must no occur within the 20m wetland buffer. Leaks on the sewerage and water pipes must be detected early and remedial action must be taken immediately to contain the spill to avoid contamination of the wetland.
- Stormwater attenuation/retention structures must not occur within the wetland and its 20m buffer.
- Outlets and erosion control and flow dissipaters must be placed outside the buffers to sensitive areas.

Impact on soil

During the operational phase the following should be incorporated to mitigate erosion:

- Soil stabilisation and re-vegetation of affected areas, as well as avoidance of all areas susceptible to erosion, should be undertaken.
- Erosion control measures should be implemented in areas sensitive to erosion such as near water supply points, edges of slopes, etc. to ensure that there is reduced sediment load to any water courses.
- Drainage must be controlled to ensure that runoff from the Development will not culminate in off- site pollution or cause water damage to properties further down from the site. The storm water drainage system must not be contaminated by other waste sources and must therefore be separate from other waste water drainage systems.

After construction, the site should be contoured to ensure free flow of run off and to prevent ponding of water.

Rehabilitation

A rehabilitation plan must be compiled and implemented following the construction phase of the proposed development for the wetlands and buffer, watercourse and estuarine buffer and forest and forest buffers. This plan must be compiled by the relevant specialists (wetland ecologists and terrestrial floral and faunal specialists) and needs to include timeframes for removal of infrastructure,

implementation of rehabiliation and monitoring/follow up on rehabilitation.

The forest buffer rehabilitation plan must include coastal dune edge vegetation, such as *Brachylaena discolor*, *Draceana sp*, *Rhus natalensis* and *Acokanthera sp*.

An alien plant clearing programme with regular monitoring must be implemented.

Local contractors, labour and supplies should be used during the operational phase of this development. This should be a condition of the contract entered into with the contractor/project manager.

Strict measures must be in place to ensure the maintenance of the wetlands and buffers, forest and forest buffer, watercourse and estuarine buffer as conservation areas. Appropriate signage must be in place to create awareness of the conservation importance of these areas.

Only if necessary should the bigger 'national' companies oversee or manage the project, while local contractors supply all the building expertise, labour, materials and supplies where possible.

Increase in vehicular traffic and noise
It is recommended that:
- With the development of the proposed Port Edward Leisure Resort, a traffic circle be constructed at the intersection of Ramsey Road with Owen Ellis Drive, with single lane approaches. Recommendations of TIA will be implemented unless UGU makes different requirements
- The intersection at the access to the development be controlled by means of a 1-way stop, with free flow into and out of the development.

It is suggested that the Port Edward Leisure Resort be approved from a traffic engineering point of view, subject to the recommendations as made above.

T**he following impacts on the Pondoland Scarp Forest must be implemented:**
- The 30m forest buffer must be maintained and managed as a conservation area.
- Lighting for the proposed development must adhere to the 'dark approach' preferable for the entire development but at a minimum for Erven 9 and 11. Such lighting must include the following:
- Internal lights must be placed above the level of the horizontal of the lintels, and wherever possible, be placed on perimeter walls rather than internal walls, so as to shine inwards, rather than outwards.
- Spot lights, floodlights and decorative external lights are not to be permitted;
- External lighting must be minimised;
- Street lights and lighting of pathways must be designed to prevent light pollution and glare, and should minimise the upward spread of light (70 degrees to 90 degrees from the vertical) and direct the light to where it is needed.

The following must be provided on the proposed boardwalk:
- Bins must be provided at frequent intervals along the length of the promenade to encourage the public not to litter; and
- Effective process is established to ensure that litter and domestic waste is removed from the waste containers / bins to an accepted standard on a daily basis.

A maintenance programme must be established and implemented for the continued maintenance of the boardwalk. The following principles and actions should be undertaken through the development of a coastal-specific operational environmental management plan. Principles and actions are:

- Replacement of damaged planks, fastenings/bolts, handrails, support poles; steps/ramps;
- Should the beach end of the boardwalk be subject to wave attack or changing beach level, the short independent sacrificial end must be replaced as and when necessary;

- Lighting, if installed, must be maintained; and
- Financial costs of ongoing maintenance must be negotiated and included into Municipal maintenance budgets.

Impact on property values

According to market research report, the whole area reflects a very positive residential market with a variety of house prices and housing structures.

The socio -economic and demographic profile indicates that the area can be divided into low income households (LSM 1 – 4) and upper, older, more established households (LSM 8 – 10). The LSM 8 – 10 category represents approximately 24% of the total market. This sector of the market will most probably be the target market for future residential development in Port Edward.

The residents of Port Edward consider Shelley Centre as the main shopping destination, however South Coast Mall, situated further towards Durban, provides an alternative shopping destination.

The multiple unit market, below R1 million is strong and active. The lower performance of Port Edward clearly indicates the lack of good stock.

The site offers excellent opportunities to develop and enhance Port Edward as a tourist destination.

The need for a small shopping centre is limited at present but should be considered at a later stage, once most of the residential units are occupied.

It is expected that the take up rate for new housing units will be between 45 and 75 units per annum. All this refers to private take -up rates and not part of the police sector of the market.

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the operational phase (please list impacts associated with each alternative separately):

There are no process, technology, layout or other alternatives. Therefore, this section is not applicable.

Alternative A1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:
No impacts if development is not allowed to proceed.

Indirect impacts:
No impacts if development is not allowed to proceed.

Cumulative impacts:
No impacts if development is not allowed to proceed.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1

N/A

2.4. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING OR CLOSURE PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the decommissioning or closure phase:

The proposed mixed use development and promenade will not be decommissioned in the future and this section is therefore not applicable.

Alternative S1 (preferred alternative)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Alternative S2

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	**Alternative S2**
N/A	

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the decommissioning or closure phase (please list impacts associated with each alternative separately):

There are no process, technology, layout or other alternatives. Therefore, this section is not applicable.

Alternative A1 (preferred alternative)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Alternative A2

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	**Alternative A2**
N/A	

2.5. PROPOSED MONITORING AND AUDITING

For each phase of the project and for each alternative, please indicate how identified impacts and mitigation will be monitored and/or audited.

Alternative S1 (preferred site)

The final design layout of the development must be approved by the Municipality prior to the start of any construction activities

An Environment Conservation Officer (ECO) should be appointed for the construction phase.

The Regular auditing of construction activities to include site inspections and completion of compliance reports should be undertaken at the start, during and after the completion of construction activities. Compliance reports must be submitted to KZN DAEA.

During construction the ECO must always be available to answer questions and record complaints from the public. A complaints register must be kept by the ECO. The complaints must be reported to the developer who must address all complaints and record, in the complaints register how each complaint has been addressed.

At the start of the operation phase a committee should be set up to include representation from residents of the residential component, the resort manger and the hotel manager. The committee should meet regularly to ensure all requirements of the authorization are being met. Furthermore the committee must appoint a person responsible who will be available to the public and who will maintain an operational complaints register. All complaints must be reported to the committee who must address all complaints and record, in the complaints register, how each complaint has been addressed.

Both the construction and operational complaints register must be available to the public, Municipality and KZN DAEA on request and should form part of the compliance reports.

Refer to Appendix G1 for additional measures.

Alternative A1 (preferred alternative)

See above

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative S1 (preferred site)

If access to the wetland is not controlled permanent damage to the water system (and to the water quality) through erosion, siltation, soil compaction, pollution and damage to vegetation may occur. The duration of the impact on the wetland would be permanent and the risk would be moderate however,

should the mitigation measures be implemented the significance would be low.

During the operational phase, the rehabilitation of the wetland and its 20m buffer will have a positive impact on the provision of various ecosystem services such as stream flow regulation, flood attenuation, groundwater recharge, nitrogen removal, phosphate removal, toxicant removal, particle assimilation and provision of natural resources. The duration of the impact on the wetland would be permanent and positive, should rehabilitation take place in accordance with the approved rehabilitation plan.

Erosion of topsoil and subsoil due to uncontrolled storm water runoff during construction and operation activities will occur if adequate control measures are not implemented. Storm water runoff may become increasingly silted, and possibly more 'grey'. A balance must be struck between developing areas for housing and maintaining green areas, which will attenuate and absorb runoff, and reduce soil erosion. If topsoil is eroded from the site it will increase the sediment load in water system (wetland and streams) downstream of the site, and damage the sensitive ecology of these systems. The risk of runoff and erosion during the construction and operation phases is moderate and should the EMPr be implemented the significance of these will be low.

The Tragedy Hill dune, containing indigenous dune vegetation and rich in biodiversity, borders the site to the north. Dunes are transient and should sand be cut off near to the dune it could negatively undermine the dune. The risk of permanently damaging such an indigenous resource is high and the duration would be permanent. The mitigation measures identified would reduce the risk and the significance of the proposed development would be low, provided the mitigation measures are adhered to.

With the implementation of the 50m buffer from the 5m contour of the Sandlandu Estuary, the impact on surface water contamination will be low and the duration of the impact would be permanent.

The site is along the coast and therefore the buildings that are too high may impede the view of the neighbours. The height of the structures varies between 2-4 storeys depending on the location or the housing typology. The site has an exaggerated slope in many areas and the eventual design will accommodate the surrounding environments. Furthermore, the height will be in accordance with the Town Planning Scheme. The risk would be unavoidable and the duration permanent however, the significance of the height impact will be low.

The higher density of the proposed development may cause the sustainability of the project to be compromised. A rezoning application is to be lodged and all zones proposed (i.e. Intermediate Residential, General Residential, Retirement Village, Eco Tourism, General Commercial, Private Conservation and Private Open Space) are in accordance with the Umtamvuna Town Planning Scheme. Therefore, the density will be in accordance with the TPS.

The Ugu Municipality is currently experiencing difficulty in rendering services such as water provision. The provision of water to the proposed development may be hindered by the lack of municipal infrastructure and the provision of this service is key to sustainable development. The potable water supply will be obtained from the existing municipality network. The current capacity of the existing network would have to be upgraded, with a 160 diameter pipe along Bristol Road down to Dean Road, in order to meet the proposed development demands. Furthermore, it has been indicated by the Municipality, but not confirmed, that there is sufficient water available for the demands of the proposed development. The risk would be unavoidable however, the significance would be low.

The Ugu Municipality is currently experiencing difficulty in rendering services such as waste water disposal. The provision of waste water disposal mechanisms for the proposed development may be hindered by the lack of municipal infrastructure and the provision of this service is key to sustainable development. The Best Practicable Environmental Option (BPEO) would be the use of a pumping main.

The risk is high however, the significance is low.

The proposed development includes closing the existing vehicular road access to the main Port Edward beach and redirecting the road through the development. The existing road will then become a pedestrian promenade. The existing access road accommodates boats and has parking along the verge for cars. The new access route needs to provide the same or better access road and the public should not be prevented from utilizing the public beach. Should the roads be designed in accordance with the Engineers guidelines the significance of this impact would be low.

The construction related potential impacts – such as: invasive alien plant invasion, wetland degradation, erosion, noise, dust, traffic, safety and security – have a high risk however, should the EMPr be strictly adhered to these impacts will be mitigated and have a low impact on the environment.

Employment opportunities will be available during both the construction and operational phases with the duration being temporary and permanent, respectively. The significance of such an impact would be significant.

The proposed development has the potential to negatively impact the property values of the surrounding properties should this development not be successful. The market research has shown that there is demand for such a development therefore the risk of the potential negative impact would be moderate yet the significance would be low.

If construction activities for the proposed promenade encroach on the remnant dune vegetation and the wetland (note these areas do not occur within the footprint of the proposed promenade) the impact will be negative, the duration of the impact will be permanent, the risk high and the impact will be irreversible. However, should the mitigation measures be implemented the significance would be low.

The CVI indicates that large portions of the site for the proposed promenade are considered in the High Risk, as well as indicating that there are sites of erosion present fronting the study area. Therefore, a precautionary approach with mitigation measures are suggested to ensure that erosion is minimised. With the implementation of mitigation measures, the impact will be low.

Alternative S2

N/A

Alternative A1 (preferred alternative)

See S1 above

Alternative A2

N/A

No-go alternative (compulsory)

The public beach road is situated on the resort site and is an unregistered servitude that has minimised the development of the resort for many years. This has been a contentious issue for the resort. Should the proposed development not be approved, the applicant will continue to pay rates and taxes for the public beach road.

The wetland will continue to function in its current condition. No buffer around the wetland will be delineated and therefore future potential damage to the wetland will not occur as a result of the proposed re-development of the site. There will be no immediate potential impacts on the wetland however; future potential negative impacts would need to be mitigated should they arise.

Stormwater will continue to follow along the current paths. No additional stormwater will incur and

therefore no additional impacts will occur.

The sensitive environment bordering the site would remain in its current state however no ecological buffer would be established between the existing development and the sensitive environments.

The status quo of the SAPS Resort would remain should the development not proceed. Several of the buildings on site are run down and in need of renovation. This visual intrusion will not be mitigated and will remain as is. The risk would be high and significant. An alternative source of funding would be needed to renovate the existing development.

The existing water and waste water demand on the Municipal system will be retained and no additional burden will be placed on the system.

No maintenance of the road will occur and the existing road network would remain in its current condition.

Job opportunities will not be created for the local labour force for the duration of the construction and operational phases.

Should the proposed development not continue there will not be an increase in vehicular traffic and noise.

SECTION F. RECOMMENDATION OF EAP

Is the information contained in this report and the documentation attached hereto in the view of the EAPr sufficient to make a decision in respect of this report?	**YES X**	NO
If "NO", please contact the KZN Department of Agriculture & Environmental Affairs regarding the further requirements for your report.		

If "YES", please attach the draft EMPr as Appendix F to this report and list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

Management and protection of the indigenous vegetation bordering the site and sensitive environments (such as the wetland on site) should be kept away from as far as possible. Discussions to finalise the layout have been held with EKZN Wildlife in this regard.

At a meeting with EKZNW, Gibb and facilitated by Udidi, it was resolved that the following buffer widths must be incorporated in the Site Layout Plan to ensure that ecological functioning and hydrological integrity is maintained:

- Twenty (20m) from the wetland on the south eastern portion of the site;
- Thirty (30m) from the edge of the coastal dune forest (Tragedy Hill) on the north, north eastern and north western portion of the site;
- Fifty(50m) on the 5m contour of the Sandlundlu Estuary on the north western portion of the site; and
- Twenty (20m) from the 1: 100 year floodline on the western boundary of the site.

The meeting was held in response to the comments received from Ezemvelo KZN Wildlife, and no minutes are available for SEF to append to the application.

As per the recommendation by the KZN DAEA, there will be no-development below the 10mamsl contour on the eastern boundary of the site.

The above areas have been incorporated as conservation servitudes for the proposed development. As part of the re-development of the site, the existing structures that occur within the areas listed above must be removed and a rehabilitation plan must be implemented for these areas.

Storm water measures should be employed during construction to allow for the storm water to be channelled into streams without causing erosion. Storm water management measures must be included in the design and be implemented during operation to ensure all storm water originating from the proposed development is not contaminated and is channelled into the municipal storm water system.

Should excessive dust be created due to high winds or construction activities the site should be dampened down with water.

Construction vehicles should be considerate of other road users and should not access the site at peak traffic periods.

The construction site should be demarcated, and all construction staff and equipment must not be allowed to encroach on other properties. Further the construction site should be fenced to prevent any accidental harm to the public.

Following construction the site should be cleared of all building litter / rubble and other foreign matter.

Construction activities must be limited to weekdays between 08h00 and 17h00 and Saturdays from 08h00 and 13h00.

Design of the development must take aesthetic impact into account and must fit with the character of the surrounding residential properties.

The final design layout of the development must be approved by the Municipality prior to the start of any construction activities.

While the proposed boardwalk is located in a sensitive and potentially hazardous environment, if the guidelines and recommendations are adhered to in terms of its construction, it is the opinion of this assessment that it is not in conflict with identified integrated coastal management specific principles. In conclusion, it is believed that mitigation measures proposed will contribute to reducing potential negative impacts and constraints identified and will ultimately promote a sustainable development and facilitate coastal access.

In order to minimise risk to coastal erosion, there must be strict adherence to locating the proposed boardwalk behind the identified hazard zone (proposed coastal setback). There must be strict maintenance of natural defences on site (i.e. the remaining vegetated dune cordon). Potential private/public partnership stewardship programme with Hibiscus Coast Municipality must be established in order to maintain and protect the vegetated dune cordon.

The remnant dune habitat must not be disturbed by construction activity for the proposed promenade, or during the operational phase. The sensitive area (wetland and the dune vegetation) must be visibly demarcated during the construction phase and the construction crew must be made aware that construction activities, dumping of builder's rubble and equipment storage must not take place in these areas. Appropriate signage must be erected to make the public aware of the ecological importance of the dune vegetation and the wetland. The removal of indigenous vegetation must be minimised. Should Protected trees such as the *Mimmusops caffra* be removed to make way for the construction of the

boardwalk, a permit must be sought from the Department of Agriculture, Forestry and Fisheries (DAFF). Efforts must be made to incorporate the remaining vegetation into the proposed development design of the promenade. Appropriate erosion control measures must be implemented when removing alien invasive vegetation. All efforts must be made to maintain the integrity of the continuous vegetated dune.

An Environment Conservation Officer (ECO) should be appointed for the construction phase.

The Regular auditing of construction activities to include site inspections and completion of compliance reports should be undertaken at the start, during and after the completion of construction activities. Compliance reports must be submitted to KZN DAEA.

During construction the ECO must always be available to answer questions and record complaints from the public. A complaints register must be kept by the ECO. The complaints must be reported to the developer who must address all complaints and record, in the complaints register how each complaint has been addressed.

At the start of the operation phase a committee should be set up to include representation from residents of the residential component, the restaurant manager/ owner (Should this proceed) and the hotel manager. The committee should meet regularly to ensure all requirements of the authorization are being met. Furthermore the committee must appoint a person responsible who will be available to the public and who will maintain an operational complaints register. All complaints must be reported to the committee who must address all complaints and record, in the complaints register, how each complaint has been addressed.

Both the construction and operational complaints register must be available to the public, Municipality and KZN DAEA on request and should form part of the compliance reports.

The provision of services (particularly water and sewerage) has not been confirmed in writing by the Ugu District Municipality and the Hibiscus Coast Municipality. It is suggested that services agreements be included as a condition in the EA.

SEF's letter of response (see Appendix G) to the KZN DAEA Rejection of the Final BAR dated 23 November 2011 must be considered in KZN DAEA's decision-making process.

The recommendations given by all specialists should be adhered to as these are intended to give guidance for the planning of the development (refer to the Appendix D).

SECTION G: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Draft Environmental Management Programme (EMPr)

Appendix G: Other information