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Department :
Economic Development, Tourism and
Environmental Affairs

PROVINCE OF KWAZULU-NATAL

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EIA File Reference Number:
NEAS Reference Number:
Waste Management Licence Number:
(if applicable)
Date Received:

DM/0013/2013
KZN/EIA/

FINAL BASIC ASSESSMENT REPORT

THE PROPOSED UPGRADING OF THE EXISTING LIFEGUARD FACILITY, UMHLANGA ROCKS, KWAZULU-NATAL.

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 1 or 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 Economic Development, Tourism & 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 Economic Development, Tourism & 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

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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 Economic Development, Tourism & 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):	DM/0013/2013
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:	Jeffares & Green (Pty) Ltd		
Physical address:	6 Pin Oak Avenue, Hilton		
Postal address:	PO Box 794, Hilton		
Postal code:	3245	Cell:	076 157 9602
Telephone:	033 343 6789	Fax:	033 343 6788
E-mail:	summersi@jgi.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)
Magnus van Rooyen	BSc Hons; MPhil (Env. Man.)	IAIASA	11 Years
Imke Summers	BSc (Honours)	IAIASA	4 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
N/A				

SECTION B: ACTIVITY INFORMATION

1. PROJECT TITLE

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

Upgrading and expansion of the existing Lifeguard Facility at Umhlanga Rocks, KwaZulu-Natal.

2. PROJECT DESCRIPTION

Provide a detailed description of the project:

The Umhlanga Main Beach has grown significantly in popularity and use over recent years. The increase in visitor numbers to the areas as well as additional and potential development pressure has resulted in the current facilities being inadequate. The Umhlanga Life Guard facility therefore requires a substantial upgrade to cater for the growing demand on lifesaving requirements at this beach.

Applicant:

The Applicant is the eThekweni Metropolitan Municipality, who are also the lifeguard facility owners. The land is owned by The Pearls, but falls within the Beach Amenity Reserve. The Umhlanga Rocks Surf Lifesaving Club lease the building from the eThekweni Metropolitan Municipality.

Structural upgrades:

The proposed structural upgrades will include the expansion of the existing Life Guard facility by 267m². A small part of the building (16m²) encroaches 2,75m closer to the high water mark but it is still located over 3m inland of the existing retaining wall and paved vehicular access platform. The reason for the 'encroachment' is to ensure a 180 degree view of the water from the control room. The ground floor extension is 250m² in extent, but is all below the level of the promenade, and has been designed to ensure that it does not impact negatively on the surrounding area. The ground floor extension in no way expands onto the beach front or past the existing Loffelstein block wall. The expansion of the structure is to include the following (as per the layout plans in Appendix C):

Upstairs:

- Scullery
- Kiosk
- Entrance lobby
- Administration office
- Male water closet (WC)
- Female WC
- Disable WC
- Dining lounge/function area
- Covered veranda
- Veranda extension
- Club outdoor area

Ground floor:

- New staircase
- Female change room
- Male change room
- Female WC
- Male WC

- Storage area (rescue boards, surf ski's, trailer, tractor, two rubber inflatable boats)
- Raised driveway

Dive charter:

- Storage area (compressed air and cylinder storage)
- Office
- Covered outdoor charter area

External amenities:

- Public outdoor showers
- Living wall gardens
- Rooftop gardens
- New pedestrian gate to restrict access

Demolition:

- Existing retaining walls demolished and realigned
- Existing internal stairs demolished and realigned
- Existing walls demolished and realigned
- Car park and driveway size reduced

Aesthetics:

Two living walls will be erected on the north and south facades (if this is deemed possible by the horticulturalist). On the upper floor (level with the promenade) 80m² of planted vegetation will be reinstated with indigenous vegetation, creating a green barrier between the promenade and the private club veranda. A landscape specialist will be appointed at the relevant time to create the green barrier and advise on what local vegetation is to be planted. The idea however is to use the local "dune" plants (*Carpobrotus* etc.) wherever possible.

Amenities:

The following amenities will be available to the general public at the lifesaving facility:

- Ablutions for male, female and disabled persons;
- A kiosk which will sell drinks and basic food stuffs;
- A dining area; and
- A veranda.

Construction activities:

Two of the concrete roofs and internal walls will be demolished. Although this activity is considered to provide certain levels of noise pollution, the surrounding community will be made aware of the construction process. Demolition activities will take place within designated working hours.

Access and parking:

The expansion activities will encroach on and result in two parking bays less (from 7-5 bays). However consultation with all stakeholders has unanimously confirmed that the need for additional storage space and change rooms for club members far outweighs the loss of the 2 existing parking bays the extension will occupy. As a result, five of the original seven parking's will remain unaffected. These parking bays are to remain open at all times, and are only to be used for disabled members of the general public or the facility, emergency vehicles and Senior Beach Maintenance staff. The beach access is to remain open at all times for emergency services access.

Stormwater management:

It is not anticipated that the proposed expansion will significantly affect stormwater management as this structure and consequent stormwater management system has

been in operation for several years. The increased footprint will be mitigated by the rooftop and living gardens and will balance the hardened area percentage. In addition rainwater storage tanks will be placed at the site: 8m³ rainwater storage tank to receive water from roof, 6m³ for collection of rainwater from the veranda (total 14,000 Litres). The tanks will be connected with a pump, to a tap to be used for the cleaning of equipment. The tanks will fitted with a sand trap with manhole covers for cleaning. A 200mm overflow pipe will be connected to the existing stormwater network.

Storm surge events:

When one looks at the current infrastructure on the site there are no other possible development options, aside from the expansion and upgrade of the current facility. The existing building falls within the area anticipated to be affected by future sea level rise. According to the Stormwater Management Plan & Coastal Development Assessment¹, one has to trade off risk of damage/loss of the structures verse functionality and cost. In this case as a recreation facility it falls into the medium term category. This recognizes the life span of this type of infrastructure and the need to refurbish regularly as a result of the severe corrosion as well as the need to take on some additional risk, but moderated as these are not significant investments, in order to meet the ICM Act requirements of the enjoyment of the coast by all. It is noted that the building and proposed expansion are supported on piles, which are founded on bedrock or equivalent frictional strength. This significantly reduces the risk of replacement of the building infrastructure. In the event of a large scale storm, where the retaining wall collapses, the building will be suspended while remediation takes place. The use of Loffelstein retaining blocks has proven to be very effective against storm surges. Where new walls are required, or repairs are done to old walls, foundations have been established down to bedrock. This method, although not indestructible to ocean forces, has up to now been successful. The existing wall may well require replacement in the future, but with the current rock outcrop in front of the life guard facility and subsequent reduced wave energy, the wall has proven to function adequately. The path/shape of the existing wall will not change, even if a new wall is required. This results in no additional changes to the sediment dynamics in the near shore zone (be it erosion, wave energy refraction, or accretion).

Public Participation:

Initial objection to the proposed facility expansion, by The Pearls of Umhlanga Body Corporate, resulted in the undertaking of a consultative process between the Applicant, The Pearls Body Corporate, and the project Architect. The result is a layout (See Appendix C - Preferred Layout) which is to the satisfaction of all parties.

3. ACTIVITY DESCRIPTION

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

<p>GN. R 544 (Listing Notice 1)</p>	<p>16</p>	<p><i>“Construction or earth moving activities in the sea, an estuary, or within the littoral active zone or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater, in respect of –</i></p> <ul style="list-style-type: none"> <i>i. fixed or floating jetties and slipways;</i> <i>ii. tidal pools;</i> <i>iii. embankments;</i>
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¹ Chrystal, C, 2015: *Stormwater Management Plan & Coastal Development Assessment, The Umhlanga Life Guard Facility Upgrades, Ethekwini Municipality: Coastal Stormwater & Catchment Management Department, Durban.*

		<p><i>iv. rock revetments or stabilising structures including stabilising walls;</i></p> <p><i>v. buildings of 50 square metres or more; or</i></p> <p><i>vi. infrastructure covering 50 square metres or more –</i></p> <p>but excluding:</p> <p><i>a. if such construction or earth moving activities will occur behind a development setback line; or</i></p> <p><i>b. where such construction or earth moving activities will occur within existing ports or harbours and the construction of earth moving activities will not increase the development footprint or throughput capacity of the port or harbour;</i></p> <p><i>c. where such construction or earth moving activities is undertaken for purposes of maintenance of the facilities mentioned in (i)-(vi) above; or</i></p> <p><i>d. 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.”</i></p> <p><u>The proposed activity entails earth moving activities within 100 metres of the high-water mark of the sea in respect of buildings of 50 square metres or more which necessitates the completion of a Basic Assessment Process.</u></p>
<p>GN. R 544 (Listing Notice 1)</p>	<p>18</p>	<p><i>“The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from:</i></p> <p><i>(i) the seashore;</i></p> <p><i>(ii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater,</i></p> <p><i>But excluding where such infilling, depositing , dredging, excavation, removal or moving;</i></p> <p><i>a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or</i></p> <p><i>b) occurs behind the development setback line.”</i></p> <p><u>The proposed activities will take place within 100 metres of the high-water mark of the sea and will not be deemed as maintenance, but rather “expansion” and “upgrading” which necessitates the completion of a Basic Assessment Process.</u></p>
<p>GN. R 544 (Listing Notice 1)</p>	<p>43</p>	<p><i>“The expansion of structures in the coastal public property where the development footprint will be increased by more than 50 square metres, excluding such expansions within existing ports or harbours</i></p>

		<p><i>where there would be no increase in the development footprint throughput capacity of the port or harbour.”</i></p> <p><u>The proposed expansion exceeds 50m² in size and is situated within coastal public property, resulting in the triggering of this listed activity, and the completion of a Basic Assessment Process.</u></p>
<p>GN. R 544 (Listing Notice 1)</p>	<p>45</p>	<p><i>“The expansion of facilities in the sea, an estuary, or within the littoral active zone or a distance of 100metres of the high-water mark of the sea or an estuary, whichever is the greater, in respect of-</i></p> <p>(v) <i>Buildings of 50 square meters or more; or where such expansion will result in an increase in the development footprint of such facilities.”</i></p> <p><u>The proposed expansion covers a structural development footprint of 245m² and falls within 100m of the of the coastal high water mark. As such a Basic Assessment EIA process is triggered.</u></p>
<p>GN.R 983 (Listing Notice 1)</p>	<p>52</p>	<p><i>“The expansion of structures in the coastal public property where the development footprint will be increased by more than 50 square metres, excluding such expansions within existing ports or harbours where there will be no increase in the development footprint of the port or harbour and excluding activities listed in activity 23 in Listing Notice 3 of 2014, in which case that activity applies.”</i></p> <p><u>The activity falls on land which is privately owned by The Pearls, but falls within a reservation area created by virtue of a registered servitude in favour of the Municipality. The the structure that is to be expanded is considered coastal public property, and the expansion thereof requires the undertaking of a Basic Assessment EIA process.</u></p>
<p>GN.R 983 (Listing Notice 1)</p>	<p>54</p>	<p><i>“The expansion of facilities - (iv) in front of a development setback; in respect of- (e) buildings where the building is expanded by 50 square metres or more; or but excluding- (aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; or (bb) where such expansion occurs within an urban area.”</i></p> <p><u>As assessment of the urban footprint of eThekweni Metropolitan Municipality notes that the site of the proposed expansion does not fall within the urban edge. However this is assumed to be a mapping error. Therefore, as the proposed expansion falls within the development setback line, and within a distance of 100 metres inland of the high-water mark of the sea, a Basic Assessment EIA process needs to be undertaken.</u></p>

<p>GN.R 985 (Listing Notice 1)</p>	<p>23</p>	<p><i>“The expansion of infrastructure of structures where the physical footprint is expanded by 10 square metres or more; Where such development occurs – (b) in front of a development setback adopted in the prescribed manner; (e) In KwaZulu-Natal: (xi) In urban areas: (cc) Areas seawards of the development setback line or within 100 metres of the high-water mark of the sea if no such development setback line is determined.”</i></p> <p><u>The proposed facility falls in front of the development setback line and the footprint will be expanded by more than 10 square metres, therefore requiring the need to undertake a Basic Assessment EIA process.</u></p>
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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;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

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.

<p>Preferred Layout (A1)</p>	<p>This application relates specifically to the need for the expansion of the existing facility which has reached capacity and is not able to serve the general public to the optimum capability. Through a consultative public participation process with stakeholders and Interested and Affected parties, an amended, preferred layout has been provided, This layout takes into consideration the need for the expansion, and the services required in association with the facility, the sensitive receiving environment, and the aesthetically sensitive nature of the surrounding area. The assessment only takes into account the preferred layout as it meets all of the abovementioned criteria.</p>
<p>Alternate Layout (A2)</p>	<p>The original layout provided is considered as an alternative layout. However it is to be noted that the layout was</p>

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	produced as a simple, provisional sketch to indicate what the Applicant was hoping to achieve with the proposed upgrade. The layout did not take into consideration stakeholder engagement or the public participation process. It also did not include all of the amenities required through the proposed expansion, or provide enough detail on the proposed expansion. As such this alternative has not been further assessed in this assessment report.
Property Location and Activity	The present property contains existing infrastructure and serves a very specific purpose (lifesaving). Therefore an alternative location cannot be considered.
Activity/Operational Alternative	An operational alternative has not been considered as the option considered is the only way to reach the intended objective which is to provide safety to bathers and beach users.
No-Go Alternative	A no-go alternative has been included.

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.

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1 ² (preferred or only site alternative)	29°	43′	29.15″	31°	05′	21.00″
Alternative S2 (if any)	0	′	″	0	′	″
Alternative S3 (if any)	0	′	″	0	′	″

In the case of linear activities:						
Alternative:	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only route alternative)						
• Starting point of the activity	0	′	″	0	′	″
• Middle point of the activity	0	′	″	0	′	″
• End point of the activity	0	′	″	0	′	″
Alternative S2 (if any)	" " " " " "					
• Starting point of the activity	0	′	″	0	′	″
• Middle point of the activity	0	′	″	0	′	″
• End point of the activity	0	′	″	0	′	″
Alternative S3 (if any)	" " " " " "					
• Starting point of the activity	0	′	″	0	′	″
• Middle point of the activity	0	′	″	0	′	″
• End point of the activity	0	′	″	0	′	″

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

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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.

No alternative localities can be considered as the application is for the upgrade of an existing, well-used community facility that has reached capacity and is in need of expansion.

6. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	Size of the activity:
Alternative A1 ³ (preferred activity alternative)	267 m ²
Alternative A2 (if any)	m ²
Alternative A3 (if any)	m ²

or, for linear activities:

Alternative:	Length of the activity:
Alternative A1 (preferred activity alternative)	~38m long x 13m wide
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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)	~280 m ²
Alternative A2 (if any)	m ²
Alternative A3 (if any)	m ²

7. SITE ACCESS

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

Describe the type of access road planned:

From the M12 take the third exit and stay on the M12. Continue on to Lighthouse Road, turn left on to Tanager Road. Turn right onto Lagoon Road.

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.

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

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;
- 8.3. the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 8.4. the exact position of each element of the application as well as any other structures on the site;
- 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;
- 8.6. walls and fencing including details of the height and construction material;
- 8.7. servitudes indicating the purpose of the servitude;
- 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);
- 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
- 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.

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.

11. ACTIVITY MOTIVATION

11.1. Socio-economic value of the activity

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What is the expected capital value of the activity on completion?	In excess of R 1.5 million	
What is the expected yearly income that will be generated by or as a result of the activity?	N/A	
Will the activity contribute to service infrastructure?	YES	
Is the activity a public amenity?	YES	
How many new employment opportunities will be created in the development phase of the activity?	~20	
What is the expected value of the employment opportunities during the development phase?	~ R200 000	
What percentage of this will accrue to previously disadvantaged individuals?	80%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	N/A	
What is the expected current value of the employment opportunities during the first 10 years?	N/A	
What percentage of this will accrue to previously disadvantaged individuals?	N/A	

Please note that it is not anticipated that additional employment opportunities will be created during the operational phase, as it is understood that all of the relevant posts have been filled at the lifesaving facility, and that future employment opportunities will become available on a needs basis.

11.2. Need and desirability of the activity

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

The Umhlanga Rocks Lifeguard facility is located along the promenade above the Umhlanga Rocks Main Beach. The Club Facility currently provides various services to the public. These include; lifesaving over the main beach, ski boat storage, an informal restaurant for fundraising and a base for a charter company. The facility also serves as the base for the Umhlanga Rocks Surf Lifesaving Club. Accordingly, it is evident that the Club Facility provides important services to the Umhlanga Rocks Main Beach area and that it is important that it continue to provide these services.

Public amenity:

The Umhlanga Rocks Main Beach has grown in popularity in recent years, particularly during the holiday periods. The increase in visitor numbers to the area surrounding the site, as well as the exponential growth in development has resulted in the current facility being insufficient in nature. As is stated in the Coastal Policy Green Paper (1998), "Adequate public facilities shall be provided at appropriate coastal locations."⁴ "The ICM Act indicates that it's a "people centred" Act which amongst other things requires government to provide access to the coast to all as well as provide amenities for these users. Refer to ICM Act Clause 2 (a) (d) "to secure equitable access to the opportunities and benefits of coastal public property".⁵ In the spirit of this Act the municipality is required to provide not only access, but also opportunities in the form of facilities. In this case the upgrades and expansion of the Umhlanga Life Guard facility provide the necessary amenities to an area which has seen rapid development over the past

⁴ Department of Environmental Affairs and Tourism, 1998: *Coastal Policy Green Paper "Towards Sustainable Coastal Development in South Africa"*.
http://www.polity.org.za/polity/govdocs/green_papers/src/costalgp03.html#Chapter_9 Accessed 04/09/2013

⁵ National Environmental Management: Integrated Coastal Management Amendment Act, Act 24 of 2008, Amended 2014.
https://www.environment.gov.za/sites/default/files/legislations/nema_amendment_act24.pdf Accessed: 26/05/2015

decade. It is worth noting that further development in the form of Cornubia and the third Pearl's tower are progressing, which will add more pressure on the facilities at Umhlanga Beach. In response to this, eThekweni Municipality has a responsibility to provide the best possible scenario to ensure the safety of all beach goers, not only in the water bathing, of which the Umhlanga Lifeguard operations play a large part thereof."⁶

Accordingly, the club will require substantial upgrade in order to cater for the growing demand on the services which it provides. Without this expansion the Club Facility will not be able to effectively provide its services to the beach users and swimmers on the Umhlanga Rocks Main Beach.

Lifeguard facility:

Active Club membership has expanded over the last ten to fifteen years from around 60 members to over 300 hundred members. At present the URSLC has 136 registered nippers, (aged from 8 to 14), and around 60 juniors and seniors with about 100 plus social members.

The current structure does not have enough space to house all the equipment (trailers, long boards, skis etc.) that is needed and some equipment has to be kept at private residences and brought to the club when necessary.

With regards to on site facilities, there are 6 shower heads downstairs in one shower area to cater for all the members (male, female, junior, senior and nipper). There are no separate showers for males or females. Locker facilities for 200 active members are needed in the change room area, and are presently not catered for. There are no toilet facilities downstairs, and there is only one ladies and one men's toilet upstairs. In addition, wheelchair access needs to be made available to all areas of the clubhouse, on both floors.

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

Essential services in terms of health and safety provided by lifesaving, community cohesion and development through community activities and involvement.

Umhlanga is considered to be a Recreation and Tourism Node which provides opportunity for mixed investment and which services the surrounding area with respect to commercial and social services (eThekweni Northern SDP, 2012/13)⁷. The eThekweni Northern SDP lists the upgrading of life-saving facilities and emergency management support/first aid facilities as an important future development goal. In this way international safety and services standards, including professional lifeguards, emergency management, quality of supports facilities etc. will be achieved and maintained (eThekweni Northern SDP, 2012/13). In addition, the facility will offer a base from which businesses can continue to operate, further contributing to the local economy, providing possible employment opportunities and additional services.

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

Social Responsibility:

The expansion of the club facility will have a number of desirable outcomes; firstly, as mentioned above, the URSLC operates out of the current facility. The URSLC undertakes numerous social responsibility initiatives in the community, these include; provision of swimming lessons to historically disadvantaged children, raising water safety awareness, training lifeguards, and providing volunteer lifeguards to watch over the

⁶ Chrystal, C, 2015: *Stormwater Management Plan & Coastal Development Assessment, The Umhlanga Life Guard Facility Upgrades*, Ethekeweni Municipality: Coastal Stormwater & Catchment Management Department, Durban.

⁷ Futureworks, (2012/13 Review): *eThekweni North Spatial Development Plan*. http://www.durban.gov.za/Resource_Centre/reports/Framework_Planning/Documents/N_SDP_Final_Draft_2012_17_Oct_2012_Revision.pdf Accessed: 06/11/2013

Main Beach.⁸ The expansion of the Club Facility will allow the URSLC to continue to successfully engage in these important social responsibility initiatives. It will further allow the club to expand in order to cater for the growing demand for its services.

Tourism:

Planning documentation (Umhlanga Node Precinct Plan [2008], eThekweni North SDP [2012/13 etc.]) lists Umhlanga as a primary international and domestic Tourism and Recreation Node. Objectives therefore include reinforcing and enhancing Umhlanga Rocks' role as a main tourism, holiday and recreation destination (domestic, international and business). The competitive edge for this node is to be a tourism destination of choice, meeting the needs and expectations of local and international visitors. The implementation of a number of projects, including existing infrastructure expansion and upgrades, is recommended to enhance the public realm, encourage a mix and range of activities and leisure opportunities, improve pedestrian movement, and improve the legibility and sense of place of Umhlanga.⁹ The upgrade of the existing lifeguarding facility will ensure the implementation of this objective is fulfilled.

Service Provision:

The responsible implementation of expansion projects along the coastline will ensure that objectives listed in the Coastal Policy Green Paper¹⁰ will be achieved. This entails adequate public facilities being provided at appropriate coastal locations to meet recreational needs and to ensure public health and safety. In the same instance, adverse impacts on coastal ecosystems can be minimised and mitigated through the responsible implementation of development practices associated with the required service provision.

Health and Safety:

The Northern Municipal Planning Region (NMPR), which stretches from the northern banks of the Umgeni River up to and including the town of Tongaat in the north, accounts for 26% (60,093 ha) of the area of eThekweni, and is home to roughly 31% (1 150 000) of the metropolitan population of 3 510 000. It is anticipated that the population increase within eThekweni will increase by 1.1% per annum by 2030, necessitating the need to utilise and improve the capacity of the existing infrastructure to accommodate growth and provide best possible services to the general public.¹¹

The highly fragile, but relatively intact, coastal assets of the northern coastal corridor (Umhlanga, Durban North, Umdloti and Tongaat Beach) should be vigorously protected and appropriately developed to provide a residential/recreation/ tourism corridor that provides a high quality natural coastal experience which complements the hard working urban beachfront of the central metropolitan area (eThekweni North SDP, 2012/13).

Blue Flag Status:

A Blue Flag is an international award given to beaches that meet excellence in the areas of safety, amenities, cleanliness and environmental standards. The strict criteria of the programme are set by the international coordinators of the Blue Flag campaign in

⁸Umhlanga Rocks Life Saving Club: <http://www.umhlangalifesaving.co.za/>. Accessed 04/09/2013.

⁹ ASM Consortium, 2008: *Umhlanga Node Precinct Plan*.
http://www.durban.gov.za/Resource_Centre/reports/Framework_Planning/Documents/U%20Node%20Final%20Complete%20Precinct%20Plan%20with%20annexures%2005-08.pdf Accessed: 04/09/2013

¹⁰ Department of Environmental Affairs and Tourism, 1998: *Coastal Policy Green Paper "Towards Sustainable Coastal Development in South Africa"*.
http://www.polity.org.za/polity/govdocs/green_papers/src/costalgp03.html#Chapter_9 Accessed: 04/09/2013

¹¹ Futureworks, (2012/13 Review): *eThekweni North Spatial Development Plan*.
http://www.durban.gov.za/Resource_Centre/reports/Framework_Planning/Documents/N_SDP_Final_Draft_2012_17_Oct_2012_Revision.pdf Accessed: 06/11/2013

Europe, the FEE (Foundation for Environmental Education).¹² Umhlanga is not presently listed as a Blue Flag beach, as it was in the past. However, it is expected that discussions presently undertaken with WESSA will yield a pilot project partnership in this regard, for the future. Incidentally, it is expected that an upgraded and improved lifeguard facility will significantly improve the possibility of achieving Blue Flag status as well as the many economic and social benefits that are associated with Blue Flag status.

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:

National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008)	DEA	2008
National Water Act (Act No 36 of 1998)	Department of Water Affairs (DWA)	1998
National Environmental Management Act (Act No 107 of 1998 [NEMA]) as amended	DEA	1998
National Water Act (Act No 36 of 1998)	Department of Water Affairs (DWA)	1998
National Heritage Resources Act (Act No 25 OF 1999)	South African Heritage Resources Agency (SAHRA)/ Amafa AkwaZulu-Natali (Amafa)	1999
National Environmental Management Protected Areas Act (Act No 57 OF 2003 [NEMPA])	DEA	2003
National Environmental Management Biodiversity Act (Act 10 of 2004)	DEA	2004
National Water Act (Act No 36 of 1998)	Department of Water Affairs (DWA)	1998

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

If yes, what estimated quantity will be produced per month?

*4-6m³

*Please note that this value is an estimate and will depend directly on the phase of the construction period (i.e. site establishment, construction, site closure etc.) as well as the upgrading of the existing facility.

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

Construction solid waste will be stored in designated skips, at the site camp, until such time as the volume accumulated is sufficient to be transported to a general landfill site.

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

¹² Blue Flag South Africa: <http://blueflag.org.za/index.php/about-blue-flag/blueflag-south-africa.htm> Accessed: 06/11/2013

Three registered landfill sites are located within the eThekweni Municipality. Of these three, the La Mercy (G:M:B+ Class 2) and Bisasar Road (G:L:B+) landfill sites are suitable sites due to the varied nature of the material they receive.¹³ It is however recommended that the La Mercy site be used for disposal as it is closer to the construction site and will entail less travelling.

Will the activity produce solid waste during its operational phase? **YES**

If yes, what estimated quantity will be produced per month? **Unknown**

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

The volume of solid waste produced at the site will remain the same as it is at present and is not expected to increase. The waste will continue to be disposed of via the municipal waste stream, as it is at present.

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

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? **NO**

If yes, contact the KZN Department of Economic Development, Tourism & 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? **NO**

If yes, contact the KZN Department of Economic Development, Tourism & 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? **NO**

If yes, what estimated quantity will be produced per month? m³

Will the activity produce any effluent that will be treated and/or disposed of on site? **NO**

If yes, contact the KZN Department of Economic Development, Tourism & 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? **NO**

If yes, provide the particulars of the facility:

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

¹³ <http://www1.durban.gov.za/durban/services/cleansing/gastoelec/disposal>

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

--

13.3. Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO
--	----

If yes, is it controlled by any legislation of any sphere of government?

YES	NO
-----	----

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

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

Emissions will take the form of dust and engine emissions that will result from the operation of vehicles and construction equipment on site. This will be limited to the construction phase of the project and will not continue during the operational phase. Mitigation measures for such emissions have been included in the site specific Environmental Management Programme (EMPr). See Appendix F for further details.

13.4. Generation of noise

Will the activity generate noise?

	NO
--	----

If yes, is it controlled by any legislation of any sphere of government?

	NO
--	----

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:

Noise produced will be from vehicles and equipment and will be limited to the construction phase. Noise generated during the operational phase will be the equivalent of present day volumes.

14. WATER USE

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

<input checked="" type="checkbox"/> municipal	<input type="checkbox"/> water board	<input type="checkbox"/> groundwater	<input type="checkbox"/> river, stream, dam or lake	<input type="checkbox"/> other	<input type="checkbox"/> 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:

	litres
--	--------

Does the activity require a water use permit from the Department of Water Affairs?

	NO
--	----

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:

Specific architectural designs have been implemented with regards to the minimisation of the elements on the structure. These measures include the following:

Balau timber cladding, and balau sliding solar screens (a naturally very durable wood with a fire rating of Class A, equivalent to steel):

- Timber cladding provides an aesthetically pleasing finish on the building;
- The cladding and solar screens limit the solar radiation directly on the building, thus reducing the temperature and need for artificial cooling;
- The sliding solar screens allow for maximum use of natural lighting, whilst limiting direct solar radiation into the building during peak radiation times (such as early mornings).

Living walls and rooftop gardens:

- Reduce the solar absorption of the building, thus reducing the building temperature and the need for artificial cooling;
- Provides an aesthetically pleasing design;
- Allows for the slowing down of rainwater flow velocity thus reducing the flow event and possibly offsetting the increased structural footprint and consequent hardened surface.

Rainwater harvesting:

- Rainwater storage tanks will catch water from the veranda and the roof gardens. This water will be used to wash equipment, and if necessary, water the gardens, thus reducing reliance on municipal water.
- The storing of rainwater will reduce the water which would usually flow directly into the existing municipal storm water pipe, thus reducing any potential beach erosion activity.

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

Alternative energy sources have not been investigated in this application predominantly due to the aesthetic impact that they will have on the surrounding developments, such as The Pearls.

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.

The section has only been completed once, with the information pertaining to the preferred alignment.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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Alternative S1:

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
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Alternative S2 (if any):

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):

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
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site (Please cross the appropriate box).

Alternative S1 (preferred site):

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea- front
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Alternative S2 (if any):

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea- front
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Alternative S3 (if any):

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea- front
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Has a specialist been consulted for the completion of this section?

NO

If YES, please complete the following:

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

Postal code:

Telephone:

E-mail:

Cell:

Fax:

Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?

NO

If YES, specify and explain:

Are there any special or sensitive habitats or other natural features present on any of the alternative sites?

YES

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If YES, specify and explain:

The facility is located along the Umhlanga Rocks beachfront, therefore presenting a sensitive seashore habitat. However, due to extensive development along the back shore, biodiversity can only be considered from the littoral/intertidal zone towards the sea, which will in no way be impacted upon by the development.

In response to queries raised by IAP's, the Coastal Stormwater & Catchment Management Department noted the following: "The existing building falls within the area anticipated to be affected by future sea level rise. One has to trade off risk of damage/loss of the structures verse functionality and cost. This recognizes the life span of this type of infrastructure and the need to refurbish regularly as a result of the severe corrosion as well as the need to take on some additional risk, but moderated as these are not significant investments, in order to meet the ICM Act requirements of the enjoyment of the coast by all. It is noted that the building and proposed expansion are supported on piles, which are founded on bedrock or equivalent frictional strength. This significantly reduces the risk of replacement of the building infrastructure. In the event of a large scale storm, where the retaining wall collapses, the building will be suspended while remediation takes place. The existing wall may well require replacement in the future, but with the current rock outcrop in front of the life guard facility and subsequent reduced wave energy, the wall has proven to function adequately. The path/shape of the existing wall will not change, even if a new wall is required. This results in no additional changes to the sediment dynamics in the near shore zone (be it erosion, wave energy refraction, or accretion).

Based on an evaluation of the coastal processes operating at this site it was decided that the "risks" of expansion of this facility are acceptable. Coastal maintenance will be required periodically, but with the ever increasing demand of development and beach users, the access and safety of bathers is of high importance. The ICM Act requires authorities to provide amenities that meet the demand of such operations, although we recognise that buildings so close to the near shore are not ideal, we have taken a balanced approach for the proposed Umhlanga Lifeguard facility extension."¹⁴

Are any further specialist studies recommended by the specialist?		
If YES, specify:		
If YES, is such a report(s) attached in <u>Appendix D</u> ?	YES	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):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	NO	YES / NO	YES / NO
Dolomite, sinkhole or doline areas	NO	YES / NO	YES / NO
Seasonally wet soils (often close to water bodies)	NO	YES / NO	YES / NO
Unstable rocky slopes or steep slopes with loose soil	NO	YES / NO	YES / NO

¹⁴ Chrystal, C, 2015: *Stormwater Management Plan & Coastal Development Assessment, The Umhlanga Life Guard Facility Upgrades, Ethekwini Municipality: Coastal Stormwater & Catchment Management Department, Durban.*

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Dispersive soils (soils that dissolve in water)	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	NO	YES	NO	YES	NO
An area sensitive to erosion	YES*	YES	NO	YES	NO

***In terms of spring and high tide events, the seashore is prone to erosion. However existing engineering design has, to date suitably accommodated these events. As was noted above, in the event of a large scale storm, where the retaining wall collapses, the building will be suspended while remediation takes place. The existing wall may well require replacement in the future, but with the current rock outcrop in front of the life guard facility and subsequent reduced wave energy, the wall has proven to function adequately.**

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).

4. GROUND COVER

Has a specialist been consulted for the completion of this section?		NO
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?		NO
If YES, specify and explain: 		
Are there any special or sensitive habitats or other natural features present on any of the alternative sites?		NO
If YES, specify and explain: 		
Are any further specialist studies recommended by the specialist?		YES NO
If YES, specify: 		
If YES, is such a report(s) attached in <u>Appendix D</u> ?		YES NO
Signature of specialist: _____		Date:

Please note that the entire site has been completely transformed due to the urban nature of the surrounding environment. The only indigenous vegetation found in close proximity to the site is as a result of horticultural and landscaping practices. It is however a recommendation of the architect and the EMPr that any vegetation planted in the rooftop garden and the living walls is local "dune" plants (*Carpobrotus* etc.) or any indigenous, locally occurring vegetation.

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The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

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
Sport field	Cultivated land	Paved surface	Building or other structure	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.

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		NO	The existing lifeguard facility is situated on the Umhlanga Beach front. The indigenous dune vegetation is non-existent due to the surrounding urban environment. Development starts on the beach front and continues inland resulting in little to not natural area. However biodiversity can be considered from the littoral/intertidal zone towards the sea. However the development footprint will in no way encroach into this area.
Low density residential		NO	
Medium density residential		NO	
High density residential	YES		The direct surrounding area is dominated by medium density residential sites. These sites include The Pearls of Umhlanga and Cabana Beach which are complexes / high-rise buildings housing flats, apartments and hotels. Impacts expected to be felt by The Pearls or Cabana Beach can be expected exclusively during the construction phase and will relate to construction (noise and possibly aesthetic) impacts. These impacts will be mitigated against in the EMPr and are not expected to be significant. The building has been designed through a consultative stakeholder process, which has resulted in minimal aesthetic impact.
Informal residential		NO	
Retail, commercial & warehousing	YES		The greater Umhlanga region consists of numerous business/landuse types typical of an urban environment. These sites will not be directly impacted on by the development but may be impacted indirectly as a result of

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			increased traffic flow in Umhlanga during the construction phase.
Light industrial		NO	
Medium industrial		NO	
Heavy industrial		NO	
Power station		NO	
Office/consulting room		NO	
Military or police base/station/compound		NO	
Spoil heap or slimes dam		NO	
Quarry, sand or borrow pit		NO	
Dam or reservoir		NO	
Hospital/medical centre		NO	
School/ creche		NO	
Tertiary education facility		NO	
Church		NO	
Old age home		NO	
Sewage treatment plant		NO	
Train station or shunting yard		NO	
Railway line		NO	
Major road (4 lanes or more)		NO	
Airport		NO	
Harbour		NO	
Sport facilities		NO	
Golf course		NO	
Polo fields		NO	
Filling station		NO	
Landfill or waste treatment site		NO	
Plantation		NO	
Agriculture		NO	
River, stream or wetland		NO	
Nature conservation area		NO	
Mountain, hill or ridge		NO	
Museum		NO	
Historical building		NO	
Protected Area		NO	
Graveyard		NO	
Archaeological site		NO	
Other land uses (describe)	YES		The upgrade is situated on the Umhlanga Beach Front and is thus bordered to the east by the sea, to the north and south by seashore and to the west by The Pearls and Cabana Beach developments. Mitigation measures recommended in the BAR, the EMPr and by relevant organisations/departments/personnel will be implemented in the construction phase which will mitigate impacts as best as possible. Post-construction impacts are expected to be negligible.

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?		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:		
Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		NO
If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.		

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;
- (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;
 - (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;
- (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.

An advert was placed in The Mercury on the 10th May 2013. A copy thereof can be found in Appendix E.

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 Economic Development, Tourism & 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.

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.

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

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subregulation 54(2) in the manner agreed by the KZN Department of Economic Development, Tourism & 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.

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.

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

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

Consolidated City Comment, 21/05/2013

1. Ethekwini Water and Sanitation:

No objection to the proposal. However, the existing lifeguard building is located very close to existing sewer. Caution and protection thereof should be exercised during construction of this facility.

2. Environmental Planning & Climate Protection Department:

This Department requests that the following issues be addressed on the basic Assessment Report:

- Layout plans of proposed facility must be included in the Basic Assessment Report;
- All potential impacts on the receiving environment must be assessed; and
- An Environmental Management Programme (EMP) needs to be prepared. The EMP must also include details of any rehabilitation or landscaping to be required.

3. Durban Solid Waste:

DSW has no requirements for this proposal.

4. Ethekwini Traffic Authority: Transport Planning

Traffic Department has no comment.

5. Geotechnical Engineering:

No geotechnical objection to the expansion of the lifeguard facility.

The underlying rock is likely Vryheid Formation sandstone but could vary somewhat in depth along the length of the structure. This is seen by the layered hard and softer reefs off shore (and by inference, below the site). Given the potential for high energy erosive episodes depleting beach sands, the structure must be founded into rock at depth so a geotechnical founding investigation should be carried out to determine rock levels.

6. Disaster Management:

This proposal is of no concern to this Department.

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

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

As no local municipality exists within the eThekwini Metropolitan Municipality, please see above.

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

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

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 NO

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

Comment:

Coastwatch KwaZulu-Natal, 17 May 2013

1. The artist's sketch shows significant intrusion onto the beach. It is recommended that there be no intrusion or obstruction at these points.
2. 'Waterloffel' or retaining bricks are not suitable structures for sea defences under high energy wave inundation.
3. The building design is to show sound and innovative methods of addressing existing problems within the coastal zone.

Response:

1. Noted, your comment has been passed on to the Applicant and Architect. The ground floor extension in no way expands onto the beach front or past the existing Loffelstein block wall.
2. Noted. Input from the Municipality's Coastal Stormwater and Catchment Management Department notes the following with regards to waterloffel/retaining bricks: "The use of water Loffelstein retaining blocks has proven to be very effective against storm surges. Where failure has occurred, it has generally been based on the old style retaining wall system that is founded on gabions (flexible and permeable base)."
3. As the foundations and structural integrity of the existing structure are to remain, extensive alternations in terms of innovative methods of addressing existing problems within the coastal zone will not be possible.

Comment:

Carolyn Schwegman, WESSA, 20 May 2013

It is unclear as to whether WESSA will provide further comment and will not provide comment at present.

Response: Noted.

Comment:

Ezemvelo KZN Wildlife, 23 May 2013

The BAR is to assess the following:

1. The potential for the property to be impacted upon by future coastal erosion events;
2. Proximity to the coastal erosion setback line, and the subsequent potential need for reinforcement or protection structures;
3. Climate change and effects of sea level rise;
4. The location of the proposed development in relation to Coastal Vulnerability Index (CVI).
5. Potential negative impacts on dune vegetation and dune hydrogeomorphology.

Response:

1. It's current locality places it within the proposed future coastal erosion line. Mitigation measures are in the form of the present structural engineering and are considered the most practicable solution to potential erosion events bearing in mind that the existing structure cannot be relocated.
2. The site falls within the coastal erosion setback line indicating that it will be prone to storm surge events. However as mentioned, damage to the structure was minimal as the structures piling and foundation was built to bedrock
3. The facility falls into the medium term category regarding the Impacts of Failure of the Infrastructure. This recognizes the life span of this type of infrastructure and the need to refurbish regularly as a result of the severe corrosion as well as the need to take on some additional risk, but moderated as these are not significant investments, in order to meet the ICM Act requirements of the enjoyment of the coast by all.
4. According to the eThekweni Metro CVI Fact Sheet¹⁵, Umhlanga Rocks falls within a High Risk Area. "This section of coast is considered to have high vulnerability to the effects of coastal erosion and sea-level rise damage. This is primarily due to the fact that the physical parameters are low, and this is largely as a result of the low beach width (mean 48m) and dune width (mean

¹⁵ Oceanographic Research Institute (ORI): CVI Fact Sheet, eThekweni Metro.
ftp://ftp.durban.gov.za/CSCM_TP/FEWS/TU_Delft/eThekweni%20CVI%20Fact%20Sheet.pdf Accessed: 19/02/2013

5m) values. There is also very little vegetation behind the back beach (mean 57m).”

5. Due to the completely transformed nature of the coastline along the stretch where the facility is located, no dunes are present. As the expansion will be of an existing facility, on land which is completely transformed, it is not expected that dune vegetation and hydrogeomorphology will be altered any further.

Comment:

Eskom, 3 June 2013

Not within Eskom’s area of supply.

Response: Noted.

Comment:

Department of Water Affairs (DWA), 26 June 2013

1. Management of solid waste;
2. Management of any hazardous waste;
3. Stormwater management plan/system including prevention of erosion and sedimentation.
4. Spill contingency plans.
5. Environmental Management Plan.

Response:

1. Construction waste to be stored at the site camp, which will be shielded by shaded cloth/netting. General during the operation phase will feed into the municipal waste stream.
2. Hazardous waste recommendations are listed in the EMP.
3. A Stormwater Management Plan has been produced by the eThekweni Municipality’s Coastal Engineering Department and can be found in Appendix G of this document.
4. Measures to mitigate spills have been included in the EMP.
5. An Environmental Management Programme has been developed and is included in Appendix F of this document.

Comment:

Telkom SA Limited, 25 July 2013

No Telkom infrastructure will be affected.

Response: Noted.

Comment:

Coastwatch, WESSA Durban Branch and Birdlife Port Natal, 5 February 2014

1. Applicant: Applicant details and responsibilities are unclear.
2. Motivation: Motivation is unclear, however the coastal zone does not have infinite carrying capacity. The project is to be viewed in conjunction with other applications in the area.
3. Footprint: The exact footprint is unclear but appears to show expansion over the existing footprint. Not enough information is available.
4. Design: Lack of information, without a suitable engineering design being available insufficient information is provided for decision making. The new design should show innovative and sound methods of addressing existing problems within the coastal zone and not exacerbate such conditions.
5. Impacts and Mitigation regarding construction: issues have been adequately addressed.
6. Stormwater: Stormwater discharge to the marine environment is a concern. Insufficient information is provided.
7. Climate Change and Sea Level Rise Planning Documents: Consideration needs to be taken within areas that are susceptible to climate change and sea level rise. Planning related documents are to be assessed in terms of the identified planning documents.

8. Operational Phase Sustainable Practices: Operational phase resource conservation measures and integrated waste management needs to be written into an operational phase EMPr.
9. Cumulative Impacts / Beach Erosion: It is concurred that impacts on the facility are likely.
10. Without the engineering and architectural measures mentioned and a detailed design of the retaining wall being explained the extent of the potential impacts from the proposed activities remains unknown. The responsibility of maintenance and upgrade of the facility is to be defined.

Response:

1. The Umhlanga Rocks Surf Lifesaving Club are responsible for undertaking the lifeguarding activities along the beachfront, and use the Municipality's facility to complete this activity. The land is designated as Beach Amenity Servitude, but the maintenance of and responsibility for the facility will be for the eThekweni Municipality.
2. It is conceded that the seashore does not have a finite carrying capacity and that the utmost care must be taken of the coastline. However, as the facility provides an integral safety function to the general public, it cannot be relocated or removed. It is to be noted that although the facility is being expanded, the footprint is being extended onto a completely transformed area and that no additional expansion onto the coastline is proposed.
3. No further expansion onto the tidal zone is proposed and the existing retaining wall and the front of the facility (facing the ocean) is to remain. The existing retaining wall which was at the rear of the facility will be demolished, and a new retaining wall will be constructed, as is noted on the layout plans attached in Appendix C.
4. Insufficient detail was available on the drawings and artist's sketch included with the dBAR. Please see more detailed plans in Appendix C.
5. Noted.
6. A Stormwater Management Plan has been developed by the Municipality's Coastal Stormwater and Catchment Management Department. This report is attached in Appendix D.
7. The relevant documents have been assessed in the completion of the final Basic Assessment Report, and have been referred to where necessary.
8. Sustainable practices have been included in the amended layout plan. These include the use of rainwater harvesting tanks, which will be used to wash equipment, the use of rooftop gardens and living walls to reduce the solar absorption of the structure. It is a recommendation of the EMPr that environmental awareness be implemented at the facility, that low energy bulbs are used wherever possible and that waste separation is implemented.
9. Noted.
10. As was noted in the Stormwater Management Plan and Coastal Development Assessment, the existing retaining wall has performed to date, and it is expected that the design thereof, and the fact that the foundation of the structure is built into rock, will protect the structure from future storm surge events. Although storm surge events, and sea level rise are out of the control of the Applicant, the Applicant will be responsible for the remediation of damage to the structure, from these events.

Comment:

Amafa aKwaZulu-Natali, 2 April 2014

There is a possibility of shipwreck material and Shakaan Era Iron Age material which could be overlooked by construction team and therefore induction on identification of such material is essential before construction activities commence.

Response:

The site is a fully transformed site as the structure is an existing structure which requires upgrading. The site is surrounded by paved surfaces which have been established through construction activities and subsurface layer works. As such, it is considered unlikely that the materials listed will be found on the site. If any

unknown materials are found on site, construction will be stopped immediately, and the relevant Heritage personnel will be contacted immediately.

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.

Casea Charters, 7 May 2013

Would like to retain their basic requirements on site.

The Pearls of Umhlanga Development (Pty) Ltd, 10 May 2013

The Pearls directly faces the lifesaver's club and the lifesaver's club impacts on parts of the development. The Pearls of Umhlanga contributed 1 Million Rand towards the redecoration of the lifesavers building and requests a meeting with role players.

Owners of the Pearls of Umhlanga, 10 May 2013

No comment to include at this time.

Toni Torino, 30 May 2013

Information was requested concerning the ski-boat launch site.

Charmain Klevansky, 30 May 2013

The character of the facility will hopefully remain, regardless of its aesthetic impact on surrounding land users.

Sterigerms SA, 14 June 2013

Robert Nienaber of Sterigerms SA questioned whether the municipality would add any additional services to the Facility as he had some suggestions in this regard.

Thabathi Taylor Consulting, 20 June 2013

Discussions with the city had been initiated to provide parking for the Clubs' tractor.

Larson, Falconer, Hassan and Parsee Attorneys, 28 June 2013

Was the EAP still accepting comments? When and to whom was the report distributed? Have there been objections raised by third parties? If so, what is the process moving forward?

Larson, Falconer, Hassan and Parsee Attorneys, 26 July 2013

The client had lost a purchaser for the property as a result of the Application. A timeline of the application was requested for future disclosure to potential buyers.

Pearls of Umhlanga, 30/01/2014

An extension of the commenting timeframes was requested as the Pearls had paid towards the upgrade and were contacting their attorneys regarding an agreement between the Municipality and The Pearls.

Norman Brauteseth & Associates, 3 March 2014

The objector wishes at the outset to draw attention to the fact that the Lifeguard Facility is physically located within a Beach Amenity Reserve Servitude over a small portion of the common property of the Pearls.

The objector objects to the nature and scope of the proposed upgrades for the following reasons:

1. The upgrade is inconsistent with the agreement in terms of which the objector paid R1 million to the Municipality in 2007 to cover the costs of the “cosmetic” upgrade of the facility.
2. The current and/or proposed uses of the facility are unlawful as they are inconsistent with the terms of Deed of Servitude.
3. The siting of the upgrade will unreasonably interfere with the objector’s property rights.
4. The Lifesaving Club’s operation of a commercial restaurant is in violation of the terms of the servitude.
5. It is unclear as to whether the restaurant will sub-let the property to an outside restaurateur and if so, to whom the rent will be paid.
6. The proposed upgrade will cause visual intrusion due to its locality between the northern-most block of the Pearls and the sea.
7. Odours caused by the restaurant.
8. Noise and general nuisance from the commercial operation, including additional traffic and congestion in the access to the facility.
9. The objector contends that for the reasons advanced above, the environmental authorisation should be refused.
10. The objector requests that any environmental authorisation issued includes various stipulations.
11. The building plan may not reflect uses which contradict the registered servitude.
12. The upgraded building plan may not depict a building which exceeds four meters in height.
13. No alcohol may be sold in or from the facility.

Body Corporate of The Pearls, 3 March 2015

The email dated the 27th October 2014 refers. The Trustees have consulted with their Residents and have no objections to the plans that were submitted on the 22nd August 2014. However concerns were raised over noise pollution control, outdoor cooking, time restrictions, vehicular traffic and adherence of the conditions specified in the Beach amenity reserve uses. Filters are to be placed on the extractor fans to prevent cooking smells and the landscaped garden on the roof-top, must be incorporated into the final design of the building.

Umhlanga UIP, 14 April 2015

The external design is looking great and now meets with Pearls requirements as per attached plans. Please note the importance of the user group input into the internal design requirements.

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):

The Pearls of Umhlanga Development (Pty) Ltd, 10 May 2013

The comments were included in the comments register and the stakeholder was included on the IAP Register.

Larson, Falconer, Hassan and Parsee Attorneys, 26 July 2013

Correspondence was submitted to Larson, Falconer, Hassan and Parsee Attorneys on 30/07/2013 detailing the NEMA Basic Assessment timeframes.

Larson, Falconer, Hassan and Parsee Attorneys, 28 June 2013

Details of the Public Participation Process was submitted to the IAP.

Pearls of Umhlanga, 30 January 2014

An extension on timeframes was provided. A legal representative for The Pearls provided comment on the 03/03/2015, with regards to the issues raised.

Norman Brauteseth & Associates, 3 March 2014

- Layout: The Applicant was approached with regards to this correspondence. A consultative process ensued between The Pearls, the Applicant and the appointed architect. The layout provided thus takes into consideration the issues raised by The Pearls (height restrictions, rooftop gardens for aesthetics etc.), as well as the needs and desires of the applicant with regards to the upgrade of the facility.
- Operation of restaurant: The restaurant will take the form of a small kiosk type food outlet. This will require the use of a kitchen which will also be used by staff when training workshops take place. Small scale kiosk type edibles will be prepared on site which assist the lifesaving club to generate a small income for building maintenance etc. The kiosk will be run by the Umhlanga Surf and Lifesaving Club and will not be sub-letted out.
- Odours/noise: Due to low level food preparation, waste will be limited to that of a domestic level and disposed of accordingly. Cooking odour will also be limited as a hi-tech extractor (silent type) will be used to limit cooking odours. In terms of user noise levels; the facility is restricted to member's usage and no loud parties per se will be allowed. This will be managed by the applicable municipal by-laws.
- Traffic/facility access: The number of parking bays provided will be reduced from 5 to 7, due to the extended expansion footprint. The parking bays will only be available for emergency vehicles and Senior Beach Maintenance staff.
- High water mark: The eThekweni Municipality: Coastal Stormwater & Catchment Management Department's Stormwater Management Plan & Coastal Development Assessment for the Umhlanga Life Guard Facility Upgrades states the following: "Based on an evaluation of the coastal processes operating at this site it was decided that the "risks" of expansion of this facility are acceptable. Coastal maintenance will be required periodically, but with the ever increasing demand of development and beach users, the access and safety of bathers is of high importance. The ICM Act requires authorities to provide amenities that meet the demand of such operations, although we recognise that buildings so close to the near shore are not ideal, we have taken a balanced approach for the proposed Umhlanga Lifeguard facility extension."

Body Corporate of The Pearls, 3 March 2015

1. Noise will be managed by the applicable municipal bylaws.
2. Odour from indoor cooking will be prevented through the use of a hi-tech extractor (silent type). The Comment regarding outdoor cooking has been passed on to the Applicant and it is assumed this will be forwarded on to the Lifeguard Facility Club.
3. Noted.
4. Noted. This has been passed on to the Applicant for assessment and implementation. Access to the site will be specifically for emergency services, disabled personnel and Senior Beach Maintenance staff.
5. Extractor fans will be fitted to the cooking areas.
6. Noted. This is a recommendation of the final Basic Assessment Report.

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:

- **The current facility which is to be expanded is a well-established facility that has been in use since the 1980's, whilst the lifesaving club started in 1953.¹⁶ As such it is not feasible for an alternative locality to be used for the lifesaving club.**

Indirect impacts:

None

Cumulative impacts:

None

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

- **The status quo would remain and the greater Umhlanga community, as well as patrons and holiday makers that visit the beach will not be serviced to the standard required and existing infrastructure will continue to serve the community at a substandard level.**

Indirect impacts:

- **The status quo would remain and the greater Umhlanga community, as well as patrons and holiday makers that visit the beach will not be serviced to the standard required and existing infrastructure will continue to serve the community at a substandard level.**

Cumulative impacts:

- **The status quo would remain and the greater Umhlanga community, as well as patrons and holiday makers that visit the beach will not be serviced to the standard required and existing infrastructure will continue to serve the community at a substandard level.**

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	Alternative S2
There are no foreseeable impacts; therefore no mitigation measures are necessary.	

¹⁶ Umhlanga Rocks Life Saving Club: <http://www.umhlangalifesaving.co.za/>. Accessed 04/09/2013.

Should the no-go alternative prevail, the community of Umhlanga and the surrounding regions will continue to be serviced at a level which is beyond capacity and which does not fulfil its potential.	
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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):

Alternative A1 (preferred alternative)

The following are direct impacts which will influence the planning and design of the expanded structure:

Planning/Architecture:

- As per the eThekweni draft IDP, serious consideration needs to be taken within areas that are susceptible to climate change and sea level rise, particularly coastal areas with land a few metres above the high water mark. A recommendation of the IDP is that Shoreline Management Plans (such as the Ohlanga-Tongati Local Area Plan and Coastal Management Plan) are required to determine what adaptation interventions if any are required now or in the future.¹⁷ It is imperative that the recommendations listed in planning documents such as these, be adhered to in the design of the expanded structure to ensure that precautionary measures are put into place with regards to extreme sea events.
- Best international practice regarding sea-level rise and changing coastal dynamics encourages managed retreat away from the shoreline as the best practicable option. However as the proposed development is the expansion of an existing facility, this is not possible. Engineering design implemented in the construction of the original structure ensured that the foundations of the structure were built onto rock, ensuring strength and stability. This, in conjunction with retaining walls, have provided structurally sound, to date.
- Although significant events of the nature of the extreme sea events experienced in 2007 have not taken place within the last few years, it is predicted that events of this nature (in conjunction with tides, equinoxes etc.) take place approximately every 18 years. As such site specific planning and design is necessary for the longevity of the expansion of the existing facility.
- Beaches with badly planned, inappropriate and poorly maintained stormwater systems are often further prone to extreme sea events as the cohesiveness that was supplied by the groundwater has been lost. As such it is imperative that the stormwater management plan developed is put into place, and that existing stormwater drains are impacted as minimally as possible.
- Within the DAEA Best Practice, Coastal Erosion Guide it notes that coastal amenities such as concrete lifesaving facilities that have been damaged should be replaced with more appropriate “softer” solutions, e.g. temporary wooden lifesaving towers.¹⁸ This type of design is not possible for a structure such as the existing structure as the existing foundations are in place, however elements of the wooden structural design have been included in the architectural layout plans.
- Due to the location of the structure along a shoreline which is dominated by up market hotels and accommodation, aesthetics will have to be considered in the architectural design of the structure.

Indirect impacts:

¹⁷ eThekweni Municipality: *Draft Integrated Development Plan 2012/13 to 2016/17*
http://www.durban.gov.za/City_Government/City_Vision/IDP/Documents/Final%20Adopted%20idp%2030%20May%202012.pdf

¹⁸ KZN DAEA, Coastal Biodiversity and Management Unit (2008): *Living with Coastal Erosion in KwaZulu-Natal: A short-term, best-practice guide.*
<http://www.kzndae.gov.za/Portals/0/Environment/Erosion%20strategy%20edoc.pdf>
 Accessed: 12/11/2013

<p>No indirect impacts noted.</p> <p><i>Cumulative impacts:</i> No cumulative impacts noted.</p>
<p>Alternative A2 (if any)</p> <p><i>Direct impacts:</i></p> <p><i>Indirect impacts:</i></p> <p><i>Cumulative impacts:</i></p>

<p>No-go alternative (compulsory)</p> <p><i>Direct impacts:</i></p> <ul style="list-style-type: none"> The status quo would remain and the greater Umhlanga community, as well as patrons and holiday makers that visit the beach will not be serviced to the standard required and existing infrastructure will continue to serve the community at a substandard level. <p><i>Indirect impacts:</i></p> <ul style="list-style-type: none"> The status quo would remain and the greater Umhlanga community, as well as patrons and holiday makers that visit the beach will not be serviced to the standard required and existing infrastructure will continue to serve the community at a substandard level. <p><i>Cumulative impacts:</i></p> <ul style="list-style-type: none"> The status quo would remain and the greater Umhlanga community, as well as patrons and holiday makers that visit the beach will not be serviced to the standard required and existing infrastructure will continue to serve the community at a substandard level.
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Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:	Alternative A2:
<ul style="list-style-type: none"> Within the process/technology/layout phase it will have to be determined what design features will be implemented to mitigate the aforementioned issues. According to international convention, the following measures can be implemented: <ul style="list-style-type: none"> ➤ Hard engineering techniques – Using permanent concrete and rock constructions to “fix” or consolidate the coastline and protect the inland assets. These techniques - usually in the form of seawalls, groynes, detached breakwaters or revetments - represent a significant share of protected shoreline (>70% in the case of Europe). (It should be noted that resorting to hard engineering solutions should only be undertaken in exceptional cases and only after a detailed environmental assessment and authorisation is obtained). ➤ Soft engineering techniques – Building with natural processes in mind, relying on natural elements such as sand dunes, vegetation to prevent erosive forces from reaching the built environment, and the use of sandbags and beach nourishment schemes. ➤ Managed retreat – Removal and relocation of houses and other infrastructure away from erosion prone areas. Suitable stormwater management design is to be implemented in the design phase. 	

- All relevant stakeholders are to be informed and made aware of the design process to ensure the expanded facility is in line with local planning documentation, the vision of the Umhlanga region, the current users and the surrounding landowners.

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:

Soils

During the construction phase, soils will be excavated and cleared for the construction of the expanded facility. Potential disturbances include compaction and potential pollution by hydrocarbons. Furthermore, if stormwater control measures are not implemented during the construction phase, soil erosion may occur.

Surface/ground water

Construction practices may increase surface runoff and as such, adequate stormwater measures will need to be implemented. Waste generated during the construction phase may enter the environment through surface water runoff. Hazardous waste (diesel, oils, cement) will be generated during the construction phase. Improper management of these wastes may result in the pollution of beach sand and sea through surface and sub-surface drainage.

Air quality and Noise Pollution

Air pollution related to particulate and dust generation will occur during construction, however, this is not considered to be significant. During the construction phase, the operation of machinery and equipment, as well as the construction vehicle traffic will increase noise levels.

Cultural and Historical

No heritage resources were observed within or adjacent to the proposed development area. Should any heritage resources, as defined in the National Heritage Resources Act 25 of 1999, be discovered during the course of development activities, the developer must cease all work immediately, and adhere to standard protocol.

Visual

Due to the location of the site in a popular tourism area as well as its location in relation to numerous up-market hotels and accommodation facilities the visual impact is considered significant if construction is to take place during the tourist "high season".

Marine Habitat

The Marine Habitat along the coastline is classified according to D'MOSS¹⁹ as rocky shores and sandy beaches. According to the D'MOSS layer the shoreline is not a protected area. However due to the sensitivity of the receiving environment, utmost care should be taken to ensure that under no circumstances are the flora and fauna negatively impacted upon by the construction. This includes the prevention of spillage, concrete runoff, general/construction/hazardous waste etc.

Traffic

¹⁹ <http://citymaps.durban.gov.za/internetwebsite/index.html> Accessed: 13/11/2013

The presence of heavy vehicle traffic (construction vehicles) will be limited to the construction period.

Socio-Economic

The expansion is expected to have a positive long term impact on the area and greater community as it will provide employment opportunities during the construction phase as well as improving the services rendered to members of the general public.

Waste

The volume of waste produced will increase in the construction phase. However if mitigation measures that are specified in the EMP are adhered to then impacts will be minimal to non-existent. Waste produced must be correctly disposed of at a registered landfill site able to deal with the waste being disposed of.

Public Safety

During construction the work area will need to be cordoned off for the safety of the public.

Heritage

There is a possibility of shipwreck material and Shakaan Era Iron Age material on site.

Indirect impacts:

Soils

Insufficient stormwater control measures may result in localised levels of soil erosion, which may lead to decreased environmental health and water quality.

Cumulative impacts:

Soils

During the construction phase, soils will be excavated and cleared for the construction of the expanded facility. Potential disturbances include compaction and potential pollution by hydrocarbons. Furthermore, if stormwater control measures are not implemented during the construction phase, soil erosion may occur.

Surface/ground water

Construction practices may increase surface runoff and as such, adequate stormwater measures will need to be implemented. Waste generated during the construction phase may enter the environment through surface water runoff. Hazardous waste (diesel, oils, cement) will be generated during the construction phase. Improper management of these wastes may result in the pollution of beach sand and sea through surface and sub-surface drainage.

Air quality and Noise Pollution

Air pollution related to particulate and dust generation will occur during construction, however, this is not considered to be significant. During the construction phase, the operation of machinery and equipment, as well as the construction vehicle traffic will increase noise levels.

Cultural and Historical

No heritage resources were observed within or adjacent to the proposed development area. Should any heritage resources, as defined in the National Heritage Resources Act 25 of 1999, be discovered during the course of development activities, the developer must cease all work immediately, and adhere to standard protocol.

Visual

Due to the location of the site in a popular tourism area as well as its location in relation to numerous up-market hotels and accommodation facilities the visual impact is considered significant if construction is to take place during the tourist "high season".

Marine Habitat

The Marine Habitat along the coastline is classified according to D'MOSS²⁰ as rocky shores and sandy beaches. According to the D'MOSS layer the shoreline is not a protected area. However due to the sensitivity of the receiving environment, utmost care should be taken to ensure that under no circumstances are the flora and fauna negatively impacted upon by the construction. This includes the prevention / mitigation of spillage, concrete runoff, general/construction/hazardous waste etc.

Traffic

The presence of heavy vehicle traffic (construction vehicles) will be limited to the construction period.

Socio-Economic

The expansion is expected to have a positive long term impact on the area and greater community as it will provide employment opportunities during the construction phase as well as improving the services rendered to members of the general public.

Waste

The volume of waste produced will increase in the construction phase. However if mitigation measures that are specified in the EMP are adhered to then impacts will be minimal to non-existent. Waste produced must be correctly disposed of at a registered landfill site able to deal with the waste being disposed of.

Public Safety

During construction the work area will need to be cordoned off for the safety of the public.

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct Impacts:

- The communities involved will ultimately be served at a substandard level which is not in line with Government standards. This level may decrease further over time as infrastructure is not of sufficient capacity, resulting in the lifesavers not being able to fulfil their function with regards to community health and wellbeing.
- Opportunity cost in loss of short term employment.

Indirect impacts:

- The communities involved will ultimately be served at a substandard level which is not in line with Government standards. This level may decrease further over time as infrastructure is not of sufficient capacity, resulting in the lifesavers not being able to fulfil their function with regards to community health and wellbeing.

Cumulative impacts:

- The communities involved will ultimately be served at a substandard level which is not in line with Government standards. This level may decrease further over time as infrastructure is not of sufficient capacity, resulting in the lifesavers not being able to fulfil their function with regards to community health and wellbeing.
- Opportunity cost in loss of short term employment.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	Alternative S2
<u>Soil</u>	

²⁰ <http://citymaps.durban.gov.za/internetwebsite/index.html> Accessed: 13/11/2013

- Topsoil/vegetation to be separated from subsoil, where still available within the construction footprint;
- Soil should be stockpiled in such a way as to minimize runoff;
- Erosion berms or alternative mitigation measures must be implemented where necessary;
- Care must be taken to ensure that in removing vegetation adequate erosion control measures are implemented;
- Exposed soils and material stockpiles must be protected against wind erosion; and
- The location of stockpiles shall take into consideration the prevailing wind directions and locations of sensitive receptors.

Vegetation and Fauna

- All construction areas should be demarcated prior to construction to ensure that the footprint of the impacts are limited (including areas where vehicles may traverse);
- All alien invasive species within the construction and development footprint should be removed and follow up monitoring and removal programmes should be initiated throughout the construction phase and once construction is complete;
- Reseed cleared areas with an indigenous grass seed mix to prevent soil erosion;

Waste Management and Pollution Prevention

- Demarcated areas including the location and layout of waste storage facilities, ablution facilities, stockpiling and spoil areas and hazardous material storage areas where waste can be securely contained during the construction phase should be established. When adequate volumes have accumulated all waste is to be removed from site and disposed of at a licensed facility. This must be done at a minimum at least once per month;
- Where possible, separate waste receptacles (for example glass, plastic, organic material etc.) shall be provided to allow for recycling;
- Waste is not to be buried on site;
- The Contractor shall submit a Method Statement detailing a solid waste control system (storage, provision of bins, site clean-up schedule, bin clean-out schedule and point of disposal as a minimum) to the ER for approval;
- Storage of waste volumes must not exceed those stipulated in NEM:WA, Schedule 1;
- Hydrocarbons should be stored in a bunded storage area capable of containing 110% of the volumes of liquid being stored;
- All hazardous materials including paints, turpentine and thinners must be stored appropriately to prevent these contaminants from entering the environment, i.e. in the bunded area;
- Prior to removal, empty drums must be stored in a bunded area to prevent spillage;
- A spill-kit is to be available on site at all times.

Air Quality

- Heavy vehicles and machinery should be serviced regularly to minimise exhaust fume pollution;

- Soil stockpiles must be located in areas to limit the erosive effects of the wind, and to limit dust;
- Removal of vegetation must be avoided until such time as soil stripping is required, which will limit dust.
- Haulage distances should be kept to a minimum;
- Material loads must be suitably covered and secured during transportation;
- Environmentally friendly soil stabilisers may be used as additional measures to control dust and construction areas, where necessary;
- All equipment should be kept in good working order;
- Should excessive emissions be observed, the Contractor is to have the equipment seen to as soon as possible;
- Equipment must be operated within its specifications and capacity and should not be overloaded;
- All machinery/plant should be serviced and lubricated regularly to ensure a good working order;
- Ensure that the potential noise source will conform to the South African Bureau of Standards recommended code of practice, SANS Code 10103:2008, so that it will not produce excessive or undesirable noise when it is released;
- All the Contractors' equipment must be fitted with effective exhaust silencers and shall comply with the South African Bureau of Standards recommended code of practice and the South African National Standard (SANS) Code 0103:1983, for construction plant noise generation.

Cultural and Historical

- Induction training for the ECO and construction personnel the on identification of heritage material is essential before construction activities commence.
- Should any heritage resources, as defined in the National Heritage Resources Act 25 of 1999, be discovered during the course of development activities, the developer must cease all work immediately, and adhere to the standard protocol as laid out in the aforementioned Act.

Traffic

- Provide sufficient area for the storage of heavy vehicles within the construction site;
- Ensure that all road diversions and closures are considered as part of the development footprint and do not add any unnecessary roads;
- Ensure that heavy / large load traffic is appropriately routed and appropriate safety precautions are taken to prohibit road collisions and traffic incidences;
- Ensure that vehicle operators are suitably licensed, have had appropriate environmental and safety induction, are aware of specific site procedures, and are well rested and cognisant when operating heavy or unsafe vehicles / machinery;
- Ensure that sufficient warning and safety signage has been erected throughout the construction site; and
- Where necessary, traffic calming measures need to be constructed to ensure the slow movement of vehicles and machinery.

<p><u>Monitoring</u></p> <ul style="list-style-type: none"> The contractor must appoint an on-site Environmental Liaison Officer (ELO) who will manage the day to day compliance with the EMPr. An independent Environmental Control Officer (ECO) must be appointed to conduct monthly site audits and monitoring of compliance to the EMPr. 	
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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):

Alternative A1 (preferred alternative)

Direct impacts:

- No other processes, technologies, layouts or alternatives have been considered as the end goal of the expansion will not be attained if this is considered. The most cost-effective, reliable and long term options have been considered in the process, technology and layout.

Indirect impacts:

- No indirect impacts identified.

Cumulative impacts:

- No cumulative impacts identified.

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

- Should the expansion not be considered, optimum levels of community service provision will not be achieved.
- Continued community health and safety will be put in jeopardy as increased tourist numbers cannot be adequately protected/served.

Indirect impacts:

- Should the expansion not be considered, optimum levels of community service provision will not be achieved.
- Maintenance costs may increase as the current infrastructure ages with no upgrades or improvements.

Cumulative impacts:

- Should the expansion not be considered, optimum levels of community service provision will not be achieved.
- Maintenance costs may increase as the current infrastructure ages with no upgrades or improvements.
- Continued community health and safety will be put in jeopardy as increased tourist numbers cannot be adequately protected/served.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:

As no impacts have been flagged in terms of the process, technology, layout or other alternatives associated with the construction phase, it is not expected that mitigation measures will need to be implemented.

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:

- Given the additional space the lifeguards will be able to undertake their duties better and more effectively.
- Club members will have sufficient storage space to store all lifesaving related equipment at the facility rather than at their homes.
- The club outdoor area will facilitate socialising within the club and enhance club cohesion.
- Environmental impacts associated with the operational phase specifically with regards to the expansion of the existing facility are expected to be non-existent as the facility ties into existing municipal infrastructure in terms of waste management, effluent, electricity etc. As such, no environmental impacts stemming from the facility are expected.

Indirect impacts:

- The kiosk will provide beverages and basic food stuffs for sale to the general public. This will also provide funds to the club which can be used for maintenance, training etc.

Cumulative impacts:

- Impacts on the facility during the operational phase can be expected. However please note that the following risks are inherently associated with any development situated along the seashore and that the existing engineering measures have proven to be sufficient to date.

Inherent Risks ²¹	Specific Threats	Associated Primary Impacts	Associated Secondary Impacts
Sea Level Rise (associated with global climate change)	Land-sea interface Estuaries / rivers	<ul style="list-style-type: none"> • Increased flood levels in estuaries / rivers • Flooding of low lying areas adjacent beach and estuaries /rivers • Undercutting of dune system • Undercutting of beachfront facilities and infrastructure 	<ul style="list-style-type: none"> • Loss of facilities, infrastructure and economic investment in flooded / undercut areas. • Loss of development potential in areas at risk. • Change in recreational potential of beaches and estuaries with steepening beaches, eroding dunes and estuary banks. • Loss / damage to environmental assets / biodiversity refuges.

²¹ eThekweni Municipality, 2006: *Ohlanga-Tongati Local Area Coastal Management Plan (Draft)*. http://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=2&ved=0CDAQFjAB&url=http%3A%2F%2Fwww.durban.gov.za%2FDocuments%2FCity_Governme nt%2FDevelopment_Planning_Management%2FOhlanga%2520Tongati%2520LUMS%2520Guidelines%2520revised%2520Sept%25202008.pdf&ei=vyaCUv7QHlm2hQfa-oDYDq&usq=AFQjCNHMDXofJ-wQiB1iY1WPi6UqbwI3FA&sig2=uWKhSX1mwjGA3oNZcvoBdA&bvm=bv.56146854,d.d2k
Accessed: 12/11/2013

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			<ul style="list-style-type: none"> • Environmental risk / pollution risk associated with flooding / damage to waste management and stormwater infrastructure.
<p><u>Beach / Coastal Erosion</u> (ongoing natural process, not specifically associated with sea level rise)</p>	<p>Land-sea interface</p>	<ul style="list-style-type: none"> • Undercutting of dune system • Undercutting of beachfront facilities and infrastructure 	<ul style="list-style-type: none"> • Loss of facilities, infrastructure and economic investment in undercut areas. • Ongoing costs of repair / stabilisation. • Environmental risk / pollution risk associated with damage to waste management and stormwater infrastructure. • Change in recreational potential of beaches with steepening beaches & eroding dunes
<p><u>Land Instability</u></p>	<p>Primary, secondary & tertiary dune areas</p>	<ul style="list-style-type: none"> • Dune blowouts, slumps, slips and landslides 	<ul style="list-style-type: none"> • Ongoing costs to remove windblown sand or repair damaged infrastructure. • Environmental risk / pollution risk associated with damage to waste management and stormwater infrastructure. • Loss / damage to environmental assets / biodiversity refuges. • Limited development potential in areas at risk (economic and social

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

- Optimum levels of community service provision will not be achieved.
- Continued community health and safety will be put in jeopardy as increased tourist numbers cannot be adequately protected/served.

Indirect impacts:

- Optimum levels of community service provision will not be achieved.
- Maintenance costs may increase as the current infrastructure ages with no upgrades or improvements.

Cumulative impacts:

- Optimum levels of community service provision will not be achieved.
- Maintenance costs may increase as the current infrastructure ages with no upgrades or improvements. Continued community health and safety will be put in jeopardy as increased tourist numbers cannot be adequately protected/served.

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Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	Alternative S2
<p>All mitigation measures included in the site specific EMPr will need to be adhered to in order to reduce environmental impacts. However, no significant operational impacts have been identified.</p>	

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):

Alternative A1 (preferred alternative)

Direct impacts:

- **The only foreseeable impact is that of routine maintenance checks and operations associated with any type of structural upgrade. Maintenance that will be undertaken is not environmentally intensive and will have little to no impact on the receiving environment.**

Indirect impacts:

- **The structural upgrade will have an improved lifespan as a result of regular maintenance procedures.**

Cumulative impacts:

Improved service provision for all the greater community

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

- **Optimum levels of community service provision will not be achieved.**
- **Continued community health and safety will be put in jeopardy as increased tourist numbers cannot be adequately protected/served.**

Indirect impacts:

- **Optimum levels of community service provision will not be achieved.**
- **Maintenance costs may increase as the current infrastructure ages with no upgrades or improvements.**

Cumulative impacts:

- **Optimum levels of community service provision will not be achieved.**
- **Maintenance costs may increase as the current infrastructure ages with no upgrades or improvements.**
- **Continued community health and safety will be put in jeopardy as increased tourist numbers cannot be adequately protected/served.**

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	Alternative A2
<p>All mitigation measures included in the site specific EMPr will need to be adhered to in order to reduce environmental impacts. However, no significant operational impacts have been identified.</p>	

2.4. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING 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:

Alternative S1 (preferred alternative)

The proposed expanded lifesaving facility will not be decommissioned, thus impacts have not been investigated.

Direct impacts:

None

Indirect impacts:

None

Cumulative impacts:

None

Alternative S2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

The proposed expanded lifesaving facility will not be decommissioned, thus impacts have not been investigated.

Direct impacts:

None

Indirect impacts:

None

Cumulative impacts:

None

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

The proposed lifesaving facility will not be decommissioned as it provides essential services to the general public.

Alternative S2

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):

Alternative A1 (preferred alternative)

The proposed expanded lifesaving facility will not be decommissioned, thus impacts have not been investigated.

Direct impacts:

None

Indirect impacts:

None

Cumulative impacts:

None

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Alternative A2
<i>Direct impacts:</i>
<i>Indirect impacts:</i>
<i>Cumulative impacts:</i>
No-go alternative (compulsory)
<p style="color: blue; margin: 0;">The proposed expanded lifesaving facility will not be decommissioned, thus impacts have not been investigated.</p> <p style="margin: 0;"><i>Direct impacts:</i> None</p> <p style="margin: 0;"><i>Indirect impacts:</i> None</p> <p style="margin: 0;"><i>Cumulative impacts:</i> None</p>

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	Alternative A2
<p style="color: blue; margin: 0;">The proposed lifesaving facility will not be decommissioned as it provides essential services to the general public. Should this however be required a condition should be that a decommissioning plan be prepared by an appropriately qualified specialist appointed by the applicant. This plan must be submitted to the Competent Authority for review and approval.</p>	

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)	Alternative S2
<p style="color: blue; margin: 0;">An onsite Environmental Liaison Officer (ELO) must be appointed to oversee and ensure that the EMPr is correctly and stringently implemented and maintained for the duration of the construction phase of the activity. The ELO must be responsible for the day to day environmental monitoring of the construction of the lifeguard facility.</p> <p style="color: blue; margin: 0;">An independent Environmental Control Officer (ECO) must be employed to conduct monthly audits of the activity for the duration of the construction phase. The ECO must audit the compliance of the EMPr and specify any corrective measures that may be required. The ECO must also have the contractual authority to issue penalties if any significant non-compliance with the EMPr occurs.</p>	
Alternative A1 (preferred alternative)	Alternative A2
<p style="color: blue; margin: 0;">An onsite Environmental Liaison Officer (ELO) must be appointed to oversee and ensure that the EMPr is correctly and stringently implemented and maintained for the duration of the construction phase of the activity. The ELO will must be responsible for the day to day environmental monitoring of the construction of the lifeguard facility.</p> <p style="color: blue; margin: 0;">An independent Environmental Control Officer (ECO) will must be employed to conduct monthly audits of the activity</p>	

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for the duration of the construction phase. The ECO will must audit the compliance of the EMPr and specify any corrective measures that may be required. The ECO will must also have the contractual authority be in the position to issues penalties if any significant gross non-compliance with the EMPr occurs.

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)

The impacts related to the expansion of the existing Umhlanga Lifeguard Facility will generally occur during the construction phase of the activity. The majority of these impacts can be mitigated as described in the document above. Furthermore, detailed mitigation and management principles for the construction phase have been included in the Environmental Management Programme (EMPr).

The proposed activity is unlikely to have any significant negative impacts on the receiving environment if the mitigation measures and management of the impacts are undertaken in accordance with this report and the EMPr. The negative impacts are considered to be of low significance and short duration. The negative impacts are considered to be unlikely, or if they occur, will still have a low risk rating for the receiving environment. It is imperative that the findings and recommendations of the Basic Assessment Report are carried through to the project Environmental Management Programme (EMPr) and monitored by an Environmental Control Officer (ECO). The approved EMPr must be in place for the construction activities as well as the decommissioning of the contractor's camp. An independent ECO must be appointed to monitor compliance with the EMPr and any specific conditions of Environmental Authorisation (should a positive decision be received).

The social impact of the proposed project will be of high significance to the local and wider community during the operational phase. The impact shall be of a positive long term significance with a high impact.

The proposed project should not result in impacts on the natural or social environment that are highly detrimental, or result in undue risks. The nature and types of negative impacts do not outweigh the potential benefits of this project, provided the impacts of construction phase are adequately mitigated.

Type of Impacts

The significant negative impacts include the sites potential for storm surge events, a larger footprint, air (dust suspension) and noise pollution (limited to the construction phase), traffic (mainly pedestrian) disruption and waste generated from the construction phase. These impacts can be appropriately mitigated to acceptable levels.

Social impacts are likely to be associated with the traffic (mainly pedestrian) disruption and the blocking off of the construction area; this will be limited to the construction phase.

Likelihood

Negative impacts are likely to occur during the construction phase, while the project benefits will be definite during the operational phase. Negative impacts can however be mitigated to acceptable levels provided the recommendations of the consultants are adhered to.

Duration

The duration of most impacts will be short term, negative impacts will be limited to the construction phase and the longer term positive impacts will be for the life of the structure.

Spatial Scale

Negative impacts as noted above will be localised in scale while the positive impacts will be for the greater Umhlanga region.

Intensity

Impacts on the local natural environment are likely to be moderate to low as much of the area has already been impacted by commercial activities and the fact that the project involves the reconstruction of an existing structure. Negative impacts will be offset by MODERATE to HIGH BENEFITS in terms of a the expanded structure and consequent service provision.

Overall Environmental Significance

The overall environmental impact in terms of the natural environment will be of a LOW NEGATIVE impact and will be limited to the construction period. Benefits associated with the expansion and operation are expected to be HIGHLY POSITIVE.

In the light of the impending need for the expansion of the existing facility, the impacts identified herein, the definite successful mitigation of these impacts, and the definite positive impacts that will be forthcoming from the activity, it is our opinion that there are no fatal flaws associated with the project that should prevent it from receiving environmental approval.

Alternative S2

Alternative A1 (preferred alternative)

The impacts related to the expansion of the existing Umhlanga Lifeguard Facility will generally occur during the construction phase of the activity. The majority of these impacts can be mitigated as described in the document above. Furthermore, detailed mitigation and management principles for the construction phase will have been included in the Environmental Management Programme (EMPr).

The proposed activity will have nois unlikely to have any significant negative impact on the receiving environment if the mitigation measures and management of the impacts are undertaken in accordance with this report and the EMPr. The negative impacts are considered to be of low significance and short duration. The negative impacts are considered to be unlikely, or if they occur, will still have a low risk rating for the receiving environment. It is imperative that the findings and recommendations of the Basic Assessment Report are carried through to the project Environmental Management Programme (EMPr) and monitored by an Environmental Control Officer (ECO). The approved EMPr must be in place for the construction activities as well as the decommissioning of the contractor's camp. An independent ECO must be appointed to enforce monitor compliance with the EMPr and any specific conditions of Environmental Authorisation (Should a positive decision be recieved)compliance.

The social impact of the proposed project will be of high significance to the local and wider community during the operational phase. The impact shall be of a positive long term significance with a high impact.

The proposed project should not result in impacts on the natural or social environment that are highly detrimental, or result in undue risks. The nature and types of negative impacts do not outweigh the potential benefits of this project, provided the impacts of construction phase are adequately mitigated.

Type of Impacts

The significant negative impacts include the sites potential for storm surge events, a larger footprint, air (dust suspension) and noise pollution (limited to the construction phase), traffic (mainly pedestrian) disruption and waste generated from the construction phase. These impacts can be successfully appropriately mitigated to acceptable levels.

Social impacts are likely to be associated with the traffic (mainly pedestrian) disruption and the blocking off of the construction area; this should will be limited to the construction phase.

Likelihood

Negative impacts are likely to occur during the construction phase, while the project benefits will be definite during the operational phase. Negative impacts can however be mitigated to acceptable levels provided the recommendations of the consultants are adhered to.

Duration

The duration of most impacts will be short term, negative impacts will be limited to the construction phase and the longer term positive impacts will be for the life of the structure.

Spatial Scale

Negative impacts as noted above will be localised in scale while the positive impacts will be for the greater Umhlanga region.

Intensity

Impacts on the local natural environment are likely to be moderate to low as much of the area has already been impacted by commercial activities and the fact that the project involves the reconstruction of an existing structure. Negative impacts will be offset by MODERATE to HIGH BENEFITS in terms of a the expanded structure and consequent service provision.

Overall Environmental Significance

The overall environmental impact in terms of the natural environment will be of a LOW NEGATIVE impact and will be limited to the construction period. Benefits associated with the expansion and operation are expected to be HIGHLY POSITIVE.

In the light of the impending need for the expansion of the existing facility, the impacts identified herein, the definite successful mitigation of these impacts, and the definite positive impacts that will be forthcoming from the activity, it is our opinion that there are no fatal flaws associated with the project that should prevent it from receiving environmental approval.

Alternative A2

No-go alternative (compulsory)

The no-go alternative will have highly significant negative social and economic impacts, of a long term duration on the surrounding communities. Basic levels of essential services will not be met even as tourist numbers in the Umhlanga region increase. Maintenance costs may increase as the current infrastructure ages with no upgrades or improvements.

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	
If "NO", please contact the KZN Department of Economic Development, Tourism & 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:

<p>The authorisation should include the following provisions:</p> <ul style="list-style-type: none"> • An EMPr has been compiled for the Site Establishment and Construction phases, the implementation of which must commence prior to the contractor moving on site. • An Environmental Liaison Officer (ELO) must be appointed for day to day environmental management and an independent Environmental Control Officer (ECO) to complete compliance audits of the EMPr for the duration of the construction phase. • The following comments set out by stakeholders in the comments section, with regards to servitudes, must be upheld, particularly with regards to the following: <ul style="list-style-type: none"> ➢ As per the eThekweni Water and Sanitation Division, the existing lifeguard building is located very close to an existing sewer. Caution and protection thereof should be exercised during construction of this facility. ➢ Design and construction of the facility should take into account the Coastwatch comment, which notes that the intrusion of the built structure onto the beach cannot take place as the 'beach environment' in front of this structure is defacto intertidal zone. ➢ As per the DWA, solid/construction/general waste is to be managed during the construction and post-construction phase and a suitable stormwater management system is to be implemented. ➢ Access to the site, and parking at the site is only to be made available to emergency services, disabled personnel and senior beach maintenance staff. ➢ An odour control extractor fan is to be fitted to the kitchen unit, to prevent cooking odours exiting the facility. ➢ All municipal noise by-laws are to be adhered to by the Lifesaving Club and its users. • Coastal development shall be planned and managed to minimise disruption of dynamic coastal processes and to avoid exposure to significant risk from natural hazards. • Activities that lead to physical disturbance of natural drainage patterns, near-shore sediment transport patterns, water quality or indigenous coastal vegetation must be avoided, or if unavoidable strictly controlled. • Environmentally sustainable measures recommended in the attached architectural layout plans are to be implemented during the construction phase. These include the erection of living walls, a rooftop garden, rainwater harvesting tanks etc. • Any further zoning/servitude issues associated with this Application should be addressed separately, so as not to hinder the Environmental Component of this Application. • Based on the consultative process undertaken in providing the recommended/preferred layout for this Application, the conditions proposed for inclusion in the (lawyers) letter dated 03/03/2014 are no longer considered

relevant to the Application and thus are not proposed as Conditions of Authorisation.

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