

Draft Basic Assessment Report

FOR THE PROPOSED DEMOLISHING AND RE-BUILD OF A RESIDENTIAL DWELLING SITUATED AT 18 EASTMOOR CRESCENT, LA LUCIA WITHIN THE ETHEKWINI MUNICIPALITY

EIA REFERENCE NUMBER: DM/0005/2017




Prepared by:

1World Consultants (Pty) Ltd
P. O. Box 2311, Westville, 3630
Tel: 031 262 8327
Contact: Fatima Peer
Email: fatima@1wc.co.za

DRAFT BASIC ASSESSMENT REPORT

**For the Proposed Demolishing and Re-build of a Residential Dwelling Situated at 18
 Eastmoor Crescent, La Lucia Within the Ethekweni Municipality**

EIA Reference Number: DM/0005/2017

Verification Page			Rev 1.1	
Report No. ENV17003	March 2017	Status	Draft	
© COPYRIGHT 1World Consultants (Pty) Ltd				
Verification	Capacity	Name	Signature	Date
Author	EAP	Roschel Maharaj		10 February 2017
Reviewed by	Project Manager	Fatima Peer		13 February 2017
Approved by	Reviewer	Yusuf Raja		02 March 2017

Executive Summary

1World Consultants (Pty) Ltd have been appointed by Arup (Pty) Ltd, on behalf of the landowner and applicant, Mr. Sizwe Nxasana, to undertake the required environmental services for the proposed demolishing and re-build of a residential dwelling situated at 18 Eastmoor Crescent, La Lucia within the eThekweni Municipality. The proposed re-build of the residential dwelling is located within 100m from the High Water Mark (HWM) of the sea within an urban, residential area.

The existing residential dwelling will be demolished. There will be a re-build of a new residential dwelling on a similar development footprint. The extent of the proposed new development is 1144m². The area is currently zoned as special residential. The site is located within 100m from the High Water Mark (HWM) of the sea. The site is located within an urban area. The proposed development will entail moving, removing and excavation of soil of more than 5m³ from a distance of 100m inland of the High Water Mark (HWM) of the sea. The following are proposed:

- New residence
- New covered entrance
- New covered terrace
- New pool
- New reflection pond
- New guard house
- Driveway – new paving
- Staff quarters

Three layout alternatives were generated by the architect, for the proposed re-build of the residential dwelling. All three layout alternatives are well within the property extent of 1144m². Layout 3 has been chosen as the preferred alternative. The Eastmoor Cubes Comparison Layout and areas generated are based on the preferred alternative. The preferred site alternative is a site that is well established with an existing residential dwelling within an urban area approximately 100m from the High Water Mark (HWM) of the sea. The site is currently occupied by an existing two-storey house with a pool. The existing residential dwelling will be demolished and re-built. The proposed re-build of the new residential dwelling would be limited to the boundary of the property. Thus, adverse environmental impacts will be kept to a minimal.

The Public Participation Process involved consultation with the relevant authorities, the landowners affected along the way, community leaders and other identified Interested and Affected Parties (I&APs). Newspaper advertisements were published and site notices were erected on site to inform the general public of the Basic Assessment Process. A public meeting was not requested or held prior to the distribution of the Draft BAR.

Specialist studies included:

- A Vegetation Assessment and Report to assess and identify the main vegetation types in the developmental area was conducted.
- A Geotechnical Study was conducted by MSJ Geotechnical Consulting Services (Pty) Ltd.
- A Stormwater Layout Plan was designed by PLB Consulting Structural and Civil Engineers.
- Layout Options and Site Plans were designed by Pellerade Design House

The Draft BAR and EMP are hereby circulated to registered I&AP's for a 30-day review and comment period. The comments and responses provided to 1World Consultants (Pty) Ltd will be incorporated into a Comments and Responses Report which will be included in the Final BAR for subsequent submission to the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (KZN EDTEA) for a decision on the Environmental Authorisation.

This BAR has been prepared in Accordance with the EIA Regulations, 2014 and follows the requirements for a BAR in Appendix 1 of GNR 982.

Table of Contents

BASIC ASSESSMENT REPORT	3
(A) ENVIRONMENTAL ASSESSMENT PRACTITIONER	3
(B) LOCATION OF THE ACTIVITY	4
(C) PROPOSED PLANS	4
(D) SCOPE OF THE PROPOSED ACTIVITY	6
(i) Applicable Listed Activities	6
(ii) Project Description	6
(iii) Alternatives	7
(E) POLICY AND LEGISLATIVE CONTEXT	13
(F) NEED AND DESIRABILITY	14
(G) MOTIVATION FOR THE PREFERRED SITE, ACTIVITY AND TECHNOLOGY ALTERNATIVE	14
(i) Preferred Site Alternative	14
(ii) Preferred Technology Alternative.....	18
(H) THE PROPOSED PREFERRED ALTERNATIVE	19
(i) Alternatives	19
(ii) Public Participation	19
(iii) Issues Raised by the I&APs.....	20
(iv) Environmental Attributes (geographic, physical, biological, social, economic, heritage and cultural aspects)	20
(I) IMPACT ASSESSMENT	22
(i) Methodology	22
(ii) Impacts Identified.....	24
(iii) Significance of Impacts	25
(J) MITIGATION MEASURES	26
(K) SUMMARY OF SPECIALIST STUDY FINDINGS AND IMPACTS	32
(L) ENVIRONMENTAL IMPACT STATEMENT	33
(M) CONDITIONS OF AUTHORISATION	34
(N) ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE	34
(O) RECOMMENDATIONS OF THE EAP	34
(P) TIMEFRAMES	34
(Q) UNDERTAKING UNDER OATH OR AFFIRMATION BY THE EAP	35
APPENDICES	36

INTRODUCTION

1World Consultants (Pty) Ltd have been appointed by Arup (Pty) Ltd, on behalf of the landowner and applicant, Mr. Sizwe Nxasana, to undertake the required environmental services for the proposed demolishing and re-build of a residential dwelling situated at 18 Eastmoor Crescent, La Lucia within the eThekweni Municipality. The proposed re-build of the residential dwelling is located within 100m from the High Water Mark (HWM) of the sea within an urban, residential area.

Table 1: Project Specifications

Ward	Ward 35
Property Description	18 Eastmoor Crescent, La Lucia Ext 6, Erf 1180
Property Extent	1144m ²
Proposed Area Schedule on Ground Floor	214.5m ²
Proposed Area Schedule on First Floor	184.14m ²
Floor Area Ratio	398.64m ²
Proposed number of levels	2 Storeys
Development Specifications	<ul style="list-style-type: none"> • New residence • New covered entrance • New covered terrace • New pool • New reflection pond • New guard house • Driveway – new paving • Staff quarters

As per GN R982 of the EIA Regulations, 2014, a Basic Assessment (BA) Process has been undertaken and the environmental outcomes, impacts and residual risks of the proposed Listed Activity being applied for have been noted in this BA Report and assessed accordingly by the Environmental Assessment Practitioner (EAP). The requirements of the BA Process have been noted in Appendix 1 of the EIA Regulations, GNR 982 (2014) and are consequently adhered to in this report.

It must be noted that the Listed Activities in terms of GN R983 of the EIA Regulations, 2014, are applicable to this proposed project and will trigger activities in the construction and operational phase. This BA Report focuses on the potential impacts that may arise during the construction and operational phases and provides recommended mitigation measures.

Ultimately, the outcome of a BA Process must be to provide the Competent Authority, the Department of Economic Development, Tourism and Environmental Affairs (DEDTEA), with sufficient information to provide an informed decision on the Application, in terms of Environmental Authorisation (EA), in order to avoid or mitigate any detrimental impacts that the activity may inflict on the receiving environment.

BASIC ASSESSMENT REPORT

(A) ENVIRONMENTAL ASSESSMENT PRACTITIONER

Business name of EAP: **1World Consultants (Pty) Ltd**
 Physical address: **181 Winchester Drive, Reservoir Hills,**
 Postal address: **P.O. Box 2311, Westville,**
 Postal code: **3630** Cell: **082 640 4900**
 Telephone: **031 262 8327** Fax: **086 726 3619**
 E-mail: fatima@1wc.co.za

Table 2: Names and Expertise of Representatives of the EAP

Name and Title	Qualifications and Affiliations	Experience at Environmental Assessments
Fatima Peer	B.Sc (Hons) Pr. Sci. Nat., IAIAsa	6 years
Roschel Maharaj	B.Sc., IAIAsa	1 year
Bryan Paul	B.Sc., IAIAsa	1 year
Yusuf Raja	B.Sc., IAIAsa	14 years

A company profile, CV's and Project Experience for 1World Consultants (Pty) Ltd is provided in Appendix A.

Table 3: Names and Expertise of Specialists

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 E
Amit Ramjee (MSJ Geotechnical Consulting Services (Pty) Ltd)	Pr. Eng	Geotechnical Specialist	Geotechnical Investigation (Section K)	Geotechnical Investigation for New Residence in La Lucia, Erf 1180, Umhlanga Rocks, KwaZulu-Natal.
PLB Consulting Structural and Civil Engineers	-	Structural/ Civil Engineers (Stormwater Unit)	Stormwater Layout Plan (Section K)	Stormwater Layout Plan
Pellerade Design House	B Architecture	Architecture, Interior Architecture, Project co-ordination and Interior Design	Layout options and Site Plan (Sections D, G and H)	Layout options and Site Plan
Bryan Paul (1World Consultants)	B.Sc. (Zoology and Botany with Geography)	Vegetation specialist	Vegetation Assessment (Section K)	Vegetation Assessment and Report: Proposed demolishing and re-build of a residential dwelling situated at 18

				Eastmoor Crescent, La Lucia within the eThekweni Municipality.
--	--	--	--	--

(B) LOCATION OF THE ACTIVITY

The proposed re-build at 18 Eastmoor Crescent is located within Ward 35 of the eThekweni Municipality. Map 1 below depicts the general locality of 18 Eastmoor Crescent. The 21-digit Surveyor General (SG) number for the property affected is provided below. The co-ordinates for the proposed development are also provided in Table 4.

Table 4: Site Details

	<i>Demolishing and re-build of:</i>
Property Description	18 Eastmoor Crescent, La Lucia Ext 6, Erf 1180
SG Number	NOFU01750000118000000
Property Size	1144m ²
GPS Coordinates	29° 44' 34.46" S; 31° 04' 41.76" E

(C) PROPOSED PLANS

The Layout Plan for the proposed demolition and re-build of a residential dwelling situated at 18 Eastmoor Crescent, La Lucia is provided in Appendix B. The following are proposed:

- New residence
- New covered entrance
- New covered terrace
- New pool
- New reflection pond
- New guard house
- Driveway – new paving
- Staff quarters

Table 5 below provides an indication of the development schedule. Map 1 below provides an indication of the general locality of the residential dwelling situated at 18 Eastmoor Crescent and the distance from the HWM of the Sea.

Table 5: Development Schedule

Council Area Schedule – La Lucia Ext 6, Erf 1180	
Stand Area	1144.0m ²
Floor Area Ratio (f.a.r)	398.64m ²
Coverage	33.0%
Area Schedule – Ground Floor	
Residence	176.4m ²
Staff Quarters	30.5m ²
Guard House	7.6m ²
Area Schedule – First Floor	
Residence	184.14m ²

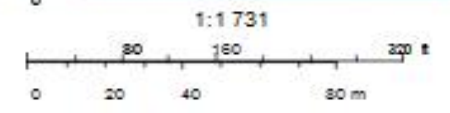
Map 1: General Locality of the Residential Dwelling Situated at 18 Eastmoor Crescent and Distance from the HWM of the Sea



March 6, 2017

**18 Eastmoor
Crescent**

HWM of the Sea



©Thaloudi
Map Viewer
Copyright

(D) SCOPE OF THE PROPOSED ACTIVITY

(i) Applicable Listed Activities

In terms of the Environmental Impact Assessment (EIA) Regulations (2014), promulgated in terms of the National Environmental Management Act, 1998 (NEMA), certain Listed Activities are specified for which either a Basic Assessment (GNR 983 and 985) or full Scoping and EIA (GNR 984) is required. The following Listed Activity in Government Notice (GN) R983 (Listing Notice 1) are triggered, requiring a Basic Assessment (BA) Process for the proposed demolishing and re-build of a residential dwelling situated at 18 Eastmoor Crescent, La Lucia.

Table 6: Relevant Activities from EIA Regulations 2014

Activity Number	Description	Applicability
GNR 983, Activity 19 (iii)	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 of more than 5 cubic metres from- (iii) a distance of 100 metres inland of the high-water mark of the sea.	The proposed development is located within 100m from the High Water Mark (HWM) of the sea and will require more than 5 cubic metres of material to be excavated specifically for the pool and reflection pond.

Hence, a BA Process is required. An enquiry with regards to the proposed development was submitted to KZN EDTEA. The Response is provided for review in Appendix C of this Draft BAR.

(ii) Project Description

The existing residential dwelling will be demolished. There will be a re-build of a new residential dwelling on a similar development footprint. The extent of the proposed new development is 1144m². The area is currently zoned as special residential. The site is located within 100m from the High Water Mark (HWM) of the sea. The site is located within an urban area. The proposed development will entail moving, removing and excavation of soil of more than 5m³ from a distance of 100m inland of the High Water Mark (HWM) of the sea. The following are proposed:

- New residence
- New covered entrance
- New covered terrace
- New pool
- New reflection pond
- New guard house
- Driveway – new paving
- Staff quarters

The area schedule of the proposed new residential dwelling is as follows:

Ground Floor

Residence	:	176.4m ²
Staff Quarters	:	30.5m ²
Guard House	:	7.6m ²
Sub Total	:	214.5m²

First Floor

Residence	:	184.14m ²
Sub Total	:	184.14m²

Therefore, Total Residence : **398.64m²**

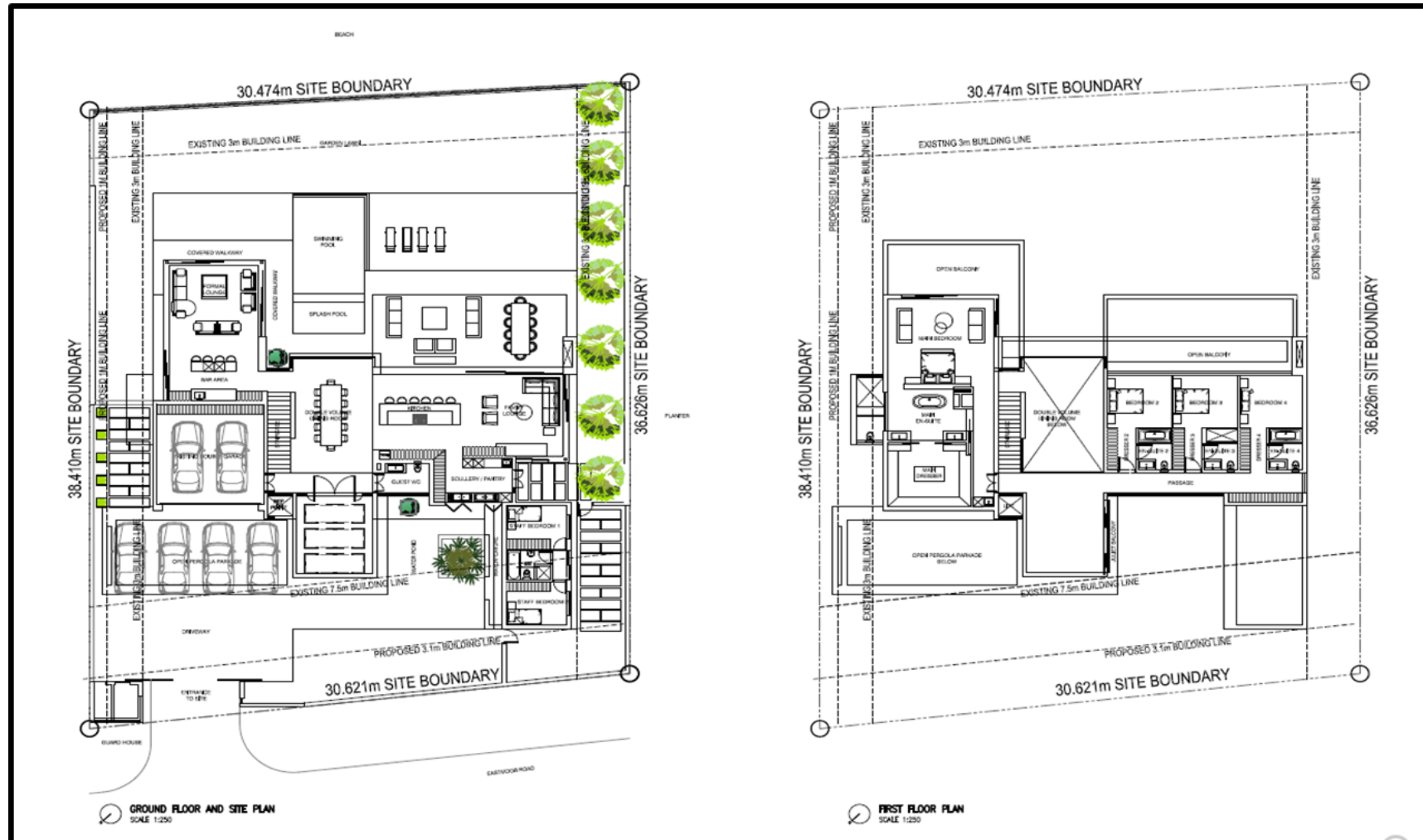
(iii) Alternatives

Three layout alternatives were generated by the architect, for the proposed re-build of the residential dwelling. All three layout alternatives are well within the property extent of 1144m². Refer to Layout 3, 2, and 1 provided below.

Appendix B provides A3 drawings of the Layout Plans as well as the Cubes Comparison Layout between the Existing Footprint and the proposed New Footprint.

1. Preferred Alternative: Layout 3

Ground Floor and First Floor for the proposed re-build of the residential dwelling. Layout 3 has been chosen as the preferred alternative. The Cubes Comparison Layout and areas generated are based on the preferred alternative. Refer to Layout 3, preferred option and Figure 1 below for the Eastmoor Cubes Comparison Layout between the Existing Footprint and proposed New Footprint.



Preferred Alternative - Layout 3: Ground Floor and First Floor Layout for the Proposed Re-build of the Residential Dwelling Situated at 18 Eastmoor Crescent, La Lucia.

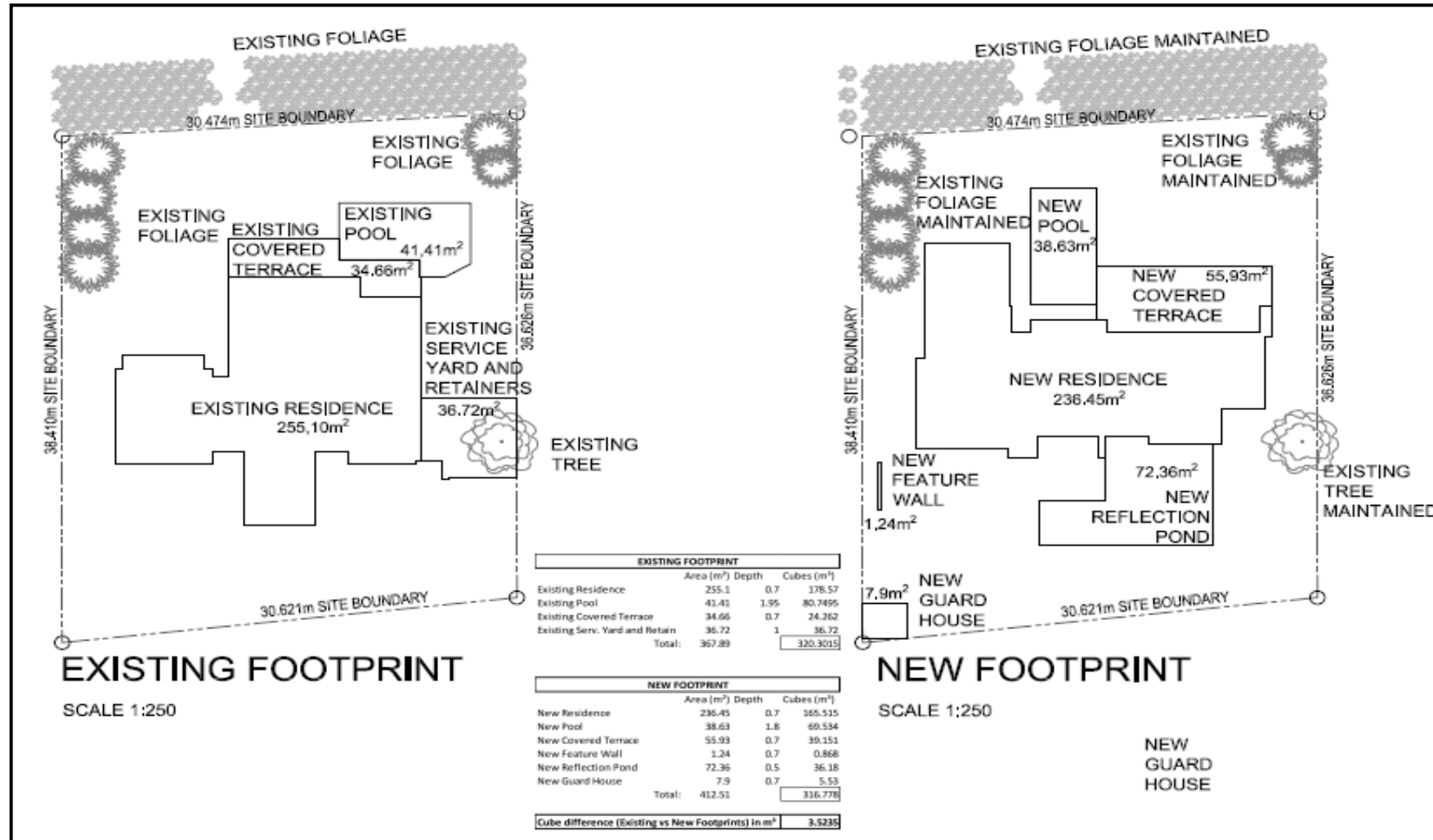


Figure 1: Eastmoor Cubes Comparison based on the Preferred Layout for the Proposed Re-build of the Residential Dwelling Situated at 18 Eastmoor Crescent, La Lucia.

2. Proposed Alternative Layout 2:

Layout 2 of the Ground Floor and First Floor for the proposed re-build of the residential dwelling.;

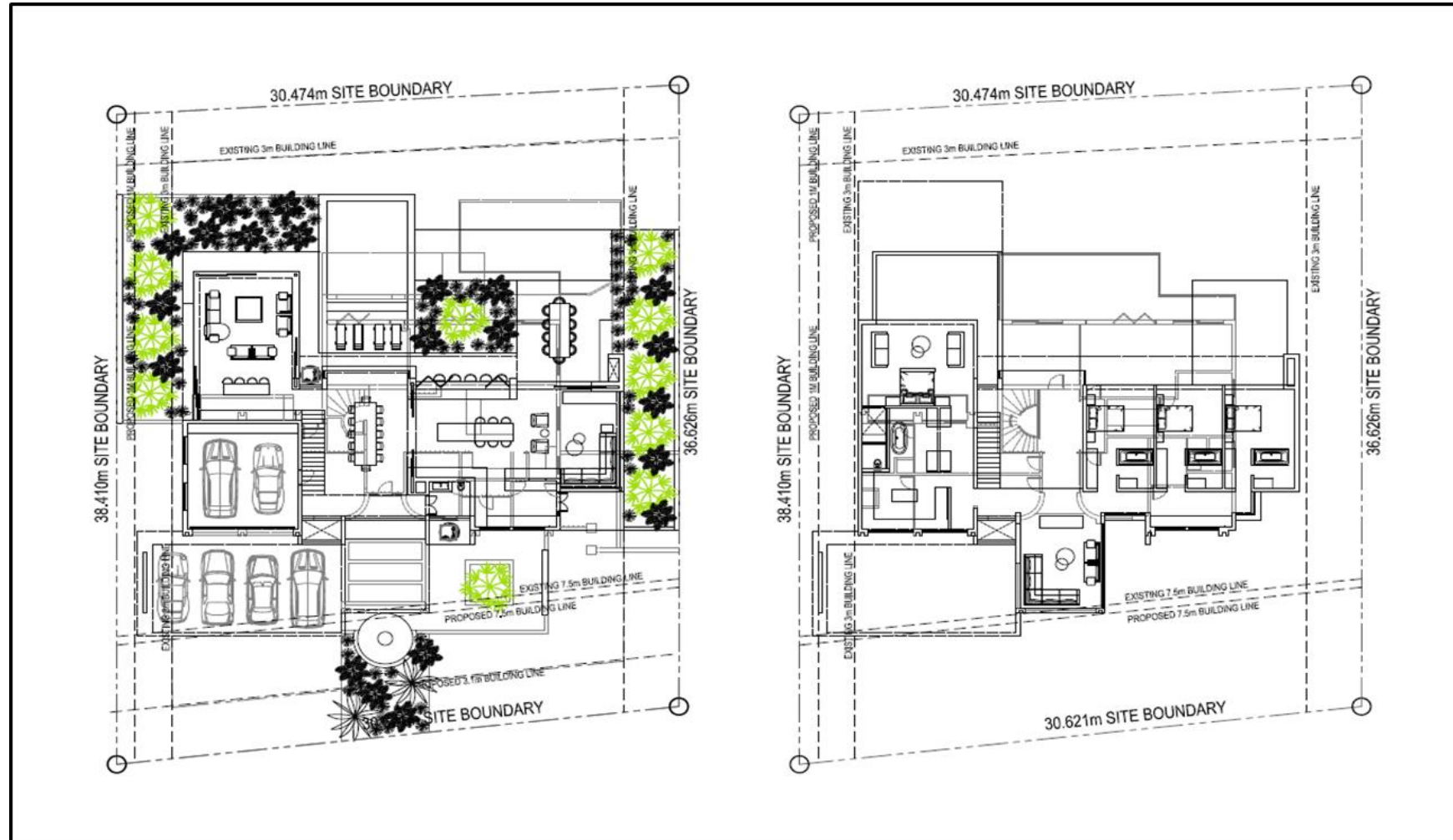
3. Proposed Alternative Layout 1:

Layout 1 of the Ground Floor and First Floor for the proposed re-build of the residential dwelling.;

Refer to Layout 2 and 1 below.



Alternative 2 - Layout 2: Ground Floor and First Floor for the Proposed Re-build of the Residential Dwelling Situated at 18 Eastmoor Crescent, La Lucia.



Alternative 3 - Layout 1: Ground Floor and First Floor for the Proposed Re-build of the Residential Dwelling Situated at 18 Eastmoor Crescent, La Lucia

(E) POLICY AND LEGISLATIVE CONTEXT

Table 7 provides a list of all applicable legislation, policies and/or guidelines of any sphere of government that are relevant to the application as contemplated in the EIA regulations.

Table 7: Applicable Legislation, Policies and/or Guidelines

Title of Legislation, Policy or Guideline	Administering authority	Date
National Environmental Management Act (Act 107 of 1998) – for its potential to cause degradation of the environment (Section 28).	Department of Environmental Affairs	1998
EIA Regulations GNR 983 and 985 – for identifying the triggers for a basic assessment.	Department of Economic Development, Tourism and Environmental Affairs	2014
Environmental Conservation Act (Act 73) – for potential environmental degradation.	Department of Environmental Affairs	1989
National Water Act (Act 36 of 1998) – for potential to cause pollution of water resources defined under the Act (Section 19).	Department of Water Affairs and Forestry	1998
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) – for protection of agricultural resources and for control and removal of alien invasive plants.	National Department of Agriculture	1983
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) – for protection of biodiversity.	Department of Agriculture and Environmental Affairs & Ezemvelo KZN Wildlife	2004
The National Heritage Resources Act (Act No 25 of 1999 as amended) – for the identification and preservation of items of heritage importance.	Department of Arts and Culture (Amafa KwaZulu-Natal)	1999
Guideline 4: Public Participation in support of the EIA Regulations (2005) and EIA Regulations GNR 982 for Public Participation Guidelines.	Department of Economic Development, Tourism and Environmental Affairs	2006 and 2014
EIA Regulations GNR 982 – for guidelines on the process to be followed and the format of the BAR.	Department of Economic Development, Tourism and Environmental Affairs	2014
eThekweni Municipality By-Laws	eThekweni Municipality	Current

(F) NEED AND DESIRABILITY

Since the applicant/ developer is the land owner, it is only feasible that the proposed development occurs within the boundaries of the property. The project entails the demolishing and re-building of a residential dwelling situated at 18 Eastmoor Crescent, La Lucia. La Lucia is a suburb in Umhlanga Rocks within the eThekweni Municipality. The population within the Umhlanga suburb ranges from permanent residents, retired persons, hotels and holiday houses. The need and desirability of the project is mostly personal to the developer since it is to serve as his private residence. However, there are socio-economic aspects linked to development and growth within the area. Any additional investors in the area, be it holiday makers or retired people, will be attracted by ongoing growth and development of the properties and the general municipal income is thus bound to increase. The new development is expected to increase property values of the local neighborhood.

Local labour for the semi and un-skilled aspects of construction will be acquired during the construction phase, creating jobs for people in the vicinity of the project. Procurement of local construction material and other goods and services would be required, thus, supporting local businesses. During the operational phase, the inhabitants of the house will make use of local labour, local supermarkets, small shops and other businesses, thus supporting and boosting the local economy.

(G) MOTIVATION FOR THE PREFERRED SITE, ACTIVITY AND TECHNOLOGY ALTERNATIVE

The proposed demolition and re-build of the residential dwelling triggers Listing Notice GNR 983, Activity 19 (iii) of the EIA Regulations. As per GNR 982, Appendix 1(2)(b) and 1(3)(g), alternatives for the proposed development to be identified and considered. Chapter 1 of the EIA Regulations provides an interpretation of the word "alternatives", which are options "in relation to a proposed activity, mean(ing) different means of meeting the general purpose and requirements of the activity, which may include alternatives to the-

- a) Property on which or location where the activity is proposed to be undertaken;*
 - b) Type of activity to be undertaken;*
 - c) Design or layout of the activity;*
 - d) Technology to be in the activity; or*
 - e) Operational aspects of the activity;*
- And includes the option of not implementing the activity."*

Based on the above, the following alternatives are presented for the proposed re-build of the residential dwelling.

(i) Preferred Site Alternative

The preferred site alternative is a site that is well established with an existing residential dwelling within an urban area approximately 100m from the High Water Mark (HWM) of the sea. The site is currently occupied by an existing two-storey house with a pool. The existing residential dwelling will be demolished and re-built. The proposed re-build of the new residential dwelling would be limited to the boundary of the property. Thus, adverse environmental impacts will be kept to a minimal.

Figure 2 below provides an aerial view of the existing residential dwelling situated at 18 Eastmoor Crescent. Figure 3 below is an illustration of the property in relation to the High Water Mark (HWM) of the sea. No site alternatives have been proposed as the existing property is privately owned. It is therefore much more feasible for the proposed development to take place within this property.

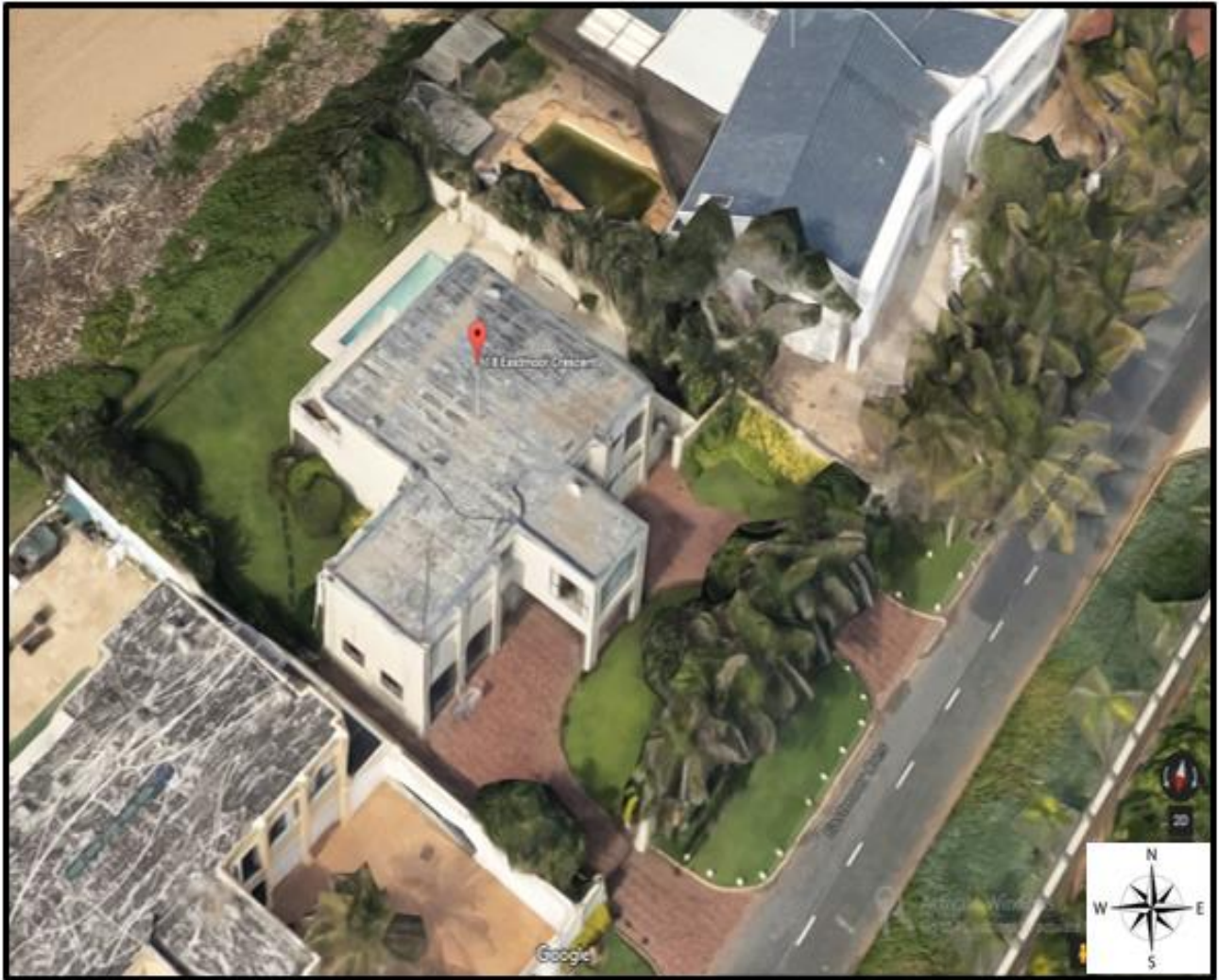


Figure 2: An Aerial view of the Existing Residential Dwelling Situated at 18 Eastmoor Crescent, La Lucia.

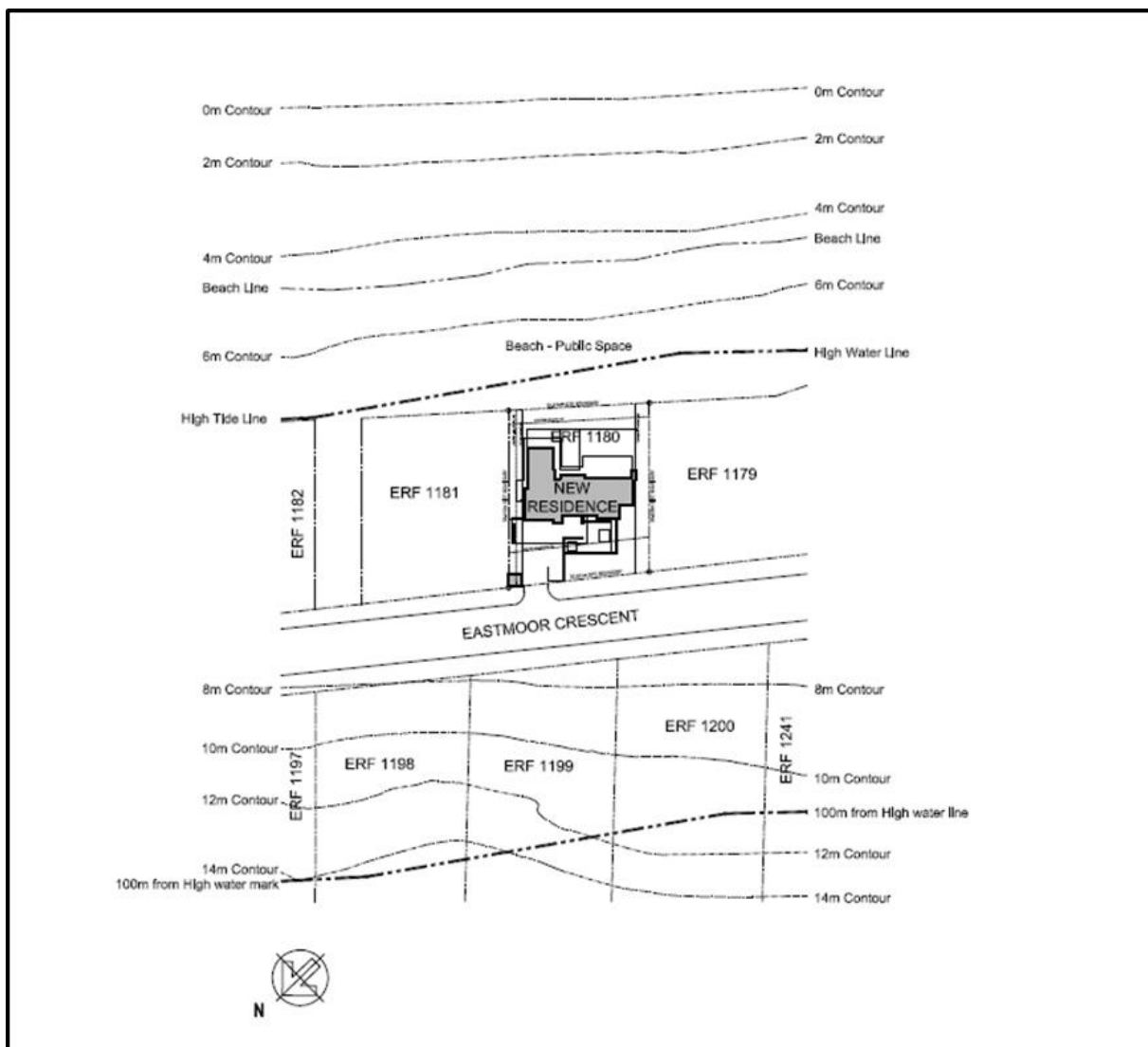


Figure 3: High Tide Diagram of 18 Eastmoor Crescent in relation of the High Water Mark (HWM) of the sea.

Site Photographs

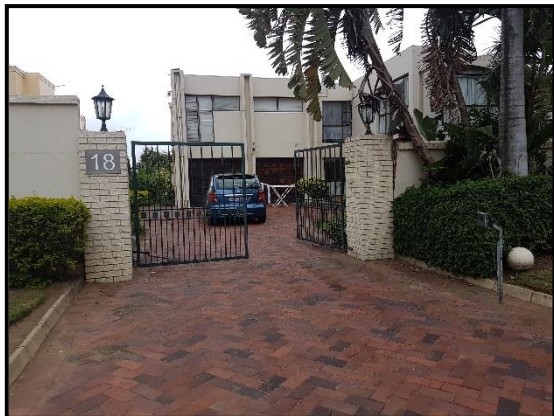


Plate 1: Main entrance to 18 Eastmoor Crescent.



Plate 2: Front view and main entrance of the existing residential dwelling.



Plate 3: East facing side of the existing dwelling (sea view).



Plate 4: Existing pool area on East side of the property.



Plate 5: East view of property (Sea View).



Plate 6: Front view of existing Residential Dwelling from Eastmoor Crescent (main road).

(ii) Preferred Technology Alternative

Based on the site plan prepared by the architects, Pellerade Design House, the following can be noted:

Structural Notes:

- All structural work to be executed in strict accordance with engineer's details and specifications.
- All foundations, foundation walls, structural concrete work and sub soil storm water drainage to civil and structural engineering specifications.
- Concrete surface beds on 250micron green poly-thene damp proof membrane to comply with SABS 952, on 150mm layers of hardcore compacted to structural engineer's details and specifications.
- 230x600mm concrete foundations for 230mm walls.
- 300x600mm pad foundations for 460x460mm brick columns.

Wall Notes:

- 280mm brick walls with gundle brickgrip dpc for external walls unless specified otherwise.
- 110mm brick walls with gundle brickgrip dpc for internal walls unless specified otherwise.
- All brickwork min 7 mpa class 2.
- Wire ties to be placed every 3 brick courses in foundation walls, there after every 5 brick courses.

Drainage Notes:

- All plumbing and drainage works not specified must be executed in strict accordance with SABS 0400-1990 part p.
- All sub-soil sewer drains to have a minimum internal diameter of 100mm and be laid at a gradient not less than 1:40 towards an intersecting manhole or municipal connection.
- Access points to be provided into all discharge stacks at any suitable height, not exceeding 2m above finished ground level.
- Inspection eyes to all bends and junctions in soil and waste pipes.
- Roding eyes at head of drain at all changes of direction and at max of 25m intervals.
- Drain pipe to be encased in min 100mm concrete.
- All waste pipe to have 65mm re-seal traps.
- All waste pipes to be accessible over entire length for repairs and cleaning.
- All waste pipes under floor slab to be sleeved.
- All soil fittings with vertical discharge greater than 1200mm to have antisiphon vent pipes.
- Rainwater downpipes to discharge a min of 2440mm from any open gully.

Pipe Sizes:

- Bath 50mmØ
- Shower 50mmØ
- Basin 38mmØ
- Sink 50mmØ
- W.c. 110mmØ
- O.v.p. 110mmØ

(iii) No-Go Alternative

The No-Go Alternative is the option of not undertaking the proposed re-build of the residential dwelling situated at 18 Eastmoor Crescent. There would be no negative environmental implications that may have resulted from the construction phase. Based on the current and projected developments in the Umhlanga suburb, a no-go alternative does not seem necessary. The No-Go Alternative also takes away the potential of an investor, which in turn provides financial aid to the locals (people, shops and other).

The client wishes to make the home more personal to accommodate for their daily needs and open the home to the natural landscape which surrounds the home. The aim was to also maximise the roof height which the client was allowed for. The Architects did try to reuse the existing structures at first, but were advised by the structural engineer that the existing foundation structure would not be able to sustain the new proposal and new foundations should therefore be allowed for.

(H) THE PROPOSED PREFERRED ALTERNATIVE

The following measures were implemented to fulfill the required Public Participation Process:

(i) Alternatives

Three layout options were designed by Pellerade Design House, to be referred to as Pellerade. All three layout options are within the property extent. Layout 3, as designated by Pellerade, has been chosen as the preferred layout by the client. The preferred alternative possibly accommodates for more space for the client's belongings and needs. A site plan was then designed by Pellerade based on the preferred Layout (Layout 3). The aim was to open the home to the natural landscape that surrounds it as well as to maximise the roof height he is allowed for. Pellerade did try and reuse the existing structures at first, but was advised by the structural engineer that the existing foundation structure would not be able to sustain the new proposal and new foundations should be allowed for.

(ii) Public Participation

- Newspaper Advertisement

A newspaper advertisement was published to inform the public of the BA Process. The advertisement was published in the predominant language of the project area, English in the Northglen News Newspaper, on 07 March 2017. A copy of the advertisement is provided in Appendix D.

- Site Notice Boards

Site notice boards were erected on the site and in close proximity to the development site on 07 March 2017. The notice boards have been provided in English with illustrations of the plan. A copy of the site notice board and pictures is provided in Appendix D of this Draft Basic Assessment Report. The purpose of the notice board is to inform the community members of the proposed BA Application and the proposed demolishing and re-build of the residential dwelling situated at 18 Eastmoor Crescent, La Lucia. Contact details of the EAP were also provided to facilitate public participation.

- Written Notifications

Interested and Affected Parties (I&APs) were identified and notified of the Basic Assessment. A Background Information Document (BID) was prepared and distributed via email and Post. The BID provided information on the proposed development, the site and on the process to be followed by the EAP. A copy of the BID and the distribution list, is provided in Appendix D. The BID together with Notification Letters were hand delivered to neighbors on 10 February 2017. Signed acknowledgements of receipts will be provided in Appendix D of the Final BAR.

- **Public Meeting**

No public meetings were requested nor required following distribution of the BID, publication of the advertisement and erection of the site notice boards up to date of distribution of this Draft BAR.

(iii) Issues Raised by the I&APs

Copies of the Draft BAR were circulated to the following I&APs for review and comment:

- Ezemvelo KZN Wildlife
- Department of Water and Sanitation
- Amafa Heritage
- KZN Department of Economic Development, Tourism and Environmental Affairs.
- eThekweni Municipality (various departments)
- Ward Councilor Heinz Ulrik De Boer – Ward 35

All registered I&APs were notified on the availability of the Draft BAR and of the deadline for comment. All I&APs were reminded that in terms of the EIA Regulations (2014), GNR 982 43(2), all State Departments that administer a law relating to a matter affecting the environment, specific to the Application, must submit comments within 30 days to the Environmental Assessment Practitioner (1World Consultants (Pty) Ltd). Should no comment be received within the 30-day commenting period, it is to be assumed that the relevant State Department has no comment to provide.

All comments received on the BID are summarized below and those following the distribution of Draft BAR will be inserted in the Final BAR. The full report is provided as the Comments and Responses Report in Appendix D.

Issues / Comments Raised Following Review of the BID:

No Issues or comments have been raised to date.

Issues / Comments Raised Following Review of the Draft BAR:

Any issues or comments raised will be recorded in the Final BAR

(iv) Environmental Attributes (geographic, physical, biological, social, economic, heritage and cultural aspects)

The eThekweni Municipality is located on the east coast of South Africa in the Province of KwaZulu-Natal. KZN is bordered by three district municipalities, namely, iLembe in the north, UGu in the south and uMgungundlovu in the west. The eThekweni Municipal Area (EMA) spans an area of approximately 2297km², extending from Tongaat in the North to Umkomaas in the South and from the coastline in the East to Cato Ridge in the West and is characterized by coastal plains and steep and dissected topography (eThekweni Municipality SDF, 2016-2017).

The eThekweni Municipality (EM) is situated at the centre of the Maputaland-Pondoland-Albany Region, an area described as a "Biodiversity Hotspot", one of only 34 in the world. Over 50% of the world's plant species and 42% of all terrestrial vertebrate species are endemic to the 34 global biodiversity hotspots, despite these areas covering only 2.3% of Earth's land surface. The Maputaland-Pondoland-Albany biodiversity hotspot region is home to more than 7, 000 species of vascular plants, 25% of which are restricted (endemic) to this area (Conservation International, 2013).

Durban is situated at the centre of this region in a transitional zone of the warm tropical and cooler temperate elements. Varied topography, climatic conditions and Durban's unique biogeographical position have resulted in a wide range of terrestrial and aquatic ecosystems that play host to a rich diversity of organisms. Marine ecosystems in Durban exist seaward of the High Water Mark and include sandy beaches, rocky shores and the in-shore marine environment (eThekweni Municipality SDF, 2016-2017).

A draft BAR has been submitted to AMAFA/ Heritage KwaZulu Natali, (hereafter referred to as 'AMAFA'), is the provincial heritage conservation agency for KwaZulu-Natal. AMAFA was established as a statutory body in terms of the KZN Heritage Act of 1997, replaced by the KZN Heritage Act of 2008. AMAFA administers the permit process for demolition and alteration of protected structures in KZN. Unless stated by AMAFA, a Heritage Impact Assessment (HIA) will not be undertaken for the proposed development since the existing building is not older than 60years, and no artefacts or heritage significance were identified on site. Comment from AMAFA will be included in the Appendix D of the Final BAR. A demolition permit has been granted for the existing structure.

(I) IMPACT ASSESSMENT

(i) Methodology

EIA Regulation 982, 2014 prescribes the requirements and aims of environmental impact assessments. In terms of the regulations, the following objectives are specified:

- Determine the nature, significance, consequence, extent, duration and probability of impacts; and
- The degree to which these impacts:
 - Can be reversed,
 - May cause irreplaceable loss of resources, and
 - Can be avoided, managed or mitigated

The impacts of any development including the construction and operational phases are identified, using the following definitions:

Term	Description
significant impact	<i>an impact that may have a notable effect on one or more of the aspects of the environment or may result in non-compliance with accepted environmental quality standards, thresholds or targets and is determined through rating the positive and negative effects of an impact on the environment based on criteria such as duration, magnitude, intensity and probability of occurrence.</i>
cumulative impact	<i>In relation to an activity, means the past, present and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may become significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities.</i>

The potential impacts are listed and assessed for significance. Significance is assessed by scoring each impact based on four variables viz. probability, severity, duration and spatial impact. The four variables, with their score criteria are detailed below:

Frequency/ Probability (FR)

(Frequency or likelihood of activities impacting on the environment)

- 1: Almost Never / impossible
- 2: Very seldom / highly unlikely
- 3: Infrequent / Seldom
- 4: Often / Regular
- 5: daily / Highly regular

Severity (SV)

(Degree of change to the baseline environment in terms of reversibility of impact; Sensitivity of receptor, duration of impact and threat to environment and health standards)

- 1: Insignificant / not harmful / totally reversible
- 2: Small / potentially harmful / reversible within 05 years
- 3: Significant / slightly harmful / needs specific mitigation to reverse in a time span of between 05 and 15 years
- 4: Great / harmful / irreversible
- 5: Disastrous / extremely harmful / totally irreversible and damaging

Duration (DR)

(Length of time over which activities will cause change to the environment)

- 1: One day to a month
- 2: One month to a year
- 3: One year to ten years
- 4: Life of project
- 5: Post closure

Spatial Scope (SS)

(Geographic coverage)

- 1: Activity Specific
- 2: Site specific
- 3: Area
- 4: Regional
- 5: National

The impacts are also scored taking any mitigation into consideration. The impacts are scored and scaled for significance as follows:

- **Negligible** (scoring of 3 or less) – The impact is unimportant / indiscernible and hence insignificant – little or no mitigation adequately addresses the impact.
- **Low** (scoring of 4 to 9) – The impact is of little importance since it is easily and adequately mitigated.
- **Medium** (scoring of 10 to 15) – The impact is considerable and requires adequate mitigation to reduce potential damage to the environment.
- **High** (scoring of 16 or more) – the impact is adverse and may never be adequately mitigated. The impact has a high probability of causing cumulative effects of other less significant impacts. It may be considered to be a fatal flaw of the project and requires intense consideration.

(ii) Impacts Identified

The impacts of the construction and operation phases for the proposed demolishing and re-build of a residential dwelling situated at 18 Eastmoor Crescent are summarised in Table 8, 9 and 10 below.

A Demolition Permit has been granted and is valid for a period of 12 months from the date of issue. However, the permit is subject to review should circumstances warrant such actions.

Table 8: Impacts Identified and Associated Mitigation Measures for the Demolition Phase

Nature of Impact	Frequency		Severity		Duration	Spatial Scope	Impact Score with Mitigation	Significance
	Unmitigated	Mitigated	Unmitigated	Mitigated				
DEMOLITION PHASE OF THE PREFERRED ALTERNATIVE								
Dust emission	5	3	2	1	2	1	7	Low
Noise and Vibration	5	4	2	1	1	1	7	Low
Visual Quality	5	4	2	1	1	1	7	Low
Disturbance to the local population and pedestrians	3	2	2	1	1	1	5	Low
Waste Management	4	3	2	1	1	1	6	Low
Safety for the Demolition Workers	3	2	2	1	2	1	6	Low

Table 9: Impacts Identified and Associated Mitigation Measures for the Construction Phase

Nature of Impact	Frequency		Severity		Duration	Spatial Scope	Impact Score with Mitigation	Significance
	Unmitigated	Mitigated	Unmitigated	Mitigated				
CONSTRUCTION PHASE OF THE PREFERRED ALTERNATIVE								
Traffic Pressures and access	5	3	3	2	2	3	10	Medium
Soil erosion and stormwater	3	2	3	2	2	2	8	Low
Ground water pollution (sea)	4	2	3	1	3	3	9	Low
Surface water pollution (sea)	4	2	4	2	2	2	8	Low
Risk of alien invasive encroachment into disturbed areas.	2	1	3	2	3	1	7	Low

Flora - Damage and removal of existing indigenous vegetation.	2	1	2	1	2	1	5	Low
Fauna - Hunting/ Fishing/ Poaching by construction workers.	2	1	2	1	2	1	5	Low
Waste and littering around the site.	4	3	3	2	3	2	10	Medium
Noise disturbance	5	4	2	1	3	2	10	Medium
Air Quality	4	2	4	2	2	2	8	Low
Visual Quality	5	4	3	2	3	2	11	Medium
Public safety and health	5	4	3	2	3	2	11	Medium
Existing Infrastructure Disturbance	4	3	3	2	3	3	11	Medium
Social Impacts	4	3	3	3	4	3	13	Medium

Table 10: Impacts identified and Associated Mitigation Measures for the Operational Phase

Nature of Impact	Frequency		Severity		Duration	Spatial Scope	Impact Score with Mitigation	Significance
	Unmitigated	Mitigated	Unmitigated	Mitigated				
OPERATIONAL PHASE OF THE PREFERRED ALTERNATIVE								
Noise and Disturbance	2	1	2	1	4	1	7	Low
Visual impacts	3	2	3	2	4	2	10	Medium
Surface run-off including stormwater management	3	2	2	1	2	2	7	Low

(iii) Significance of Impacts

Demolition Phase:

Based on the outcome of the impact assessment matrix noted in Table 8 above, the overall significance of the impacts with mitigation measures for the demolition phase, is noted to be **LOW** i.e. the impact is of little importance since it is easily and adequately mitigated.

Construction Phase:

Based on the outcome of the impact assessment matrix noted in Table 9 above, the overall significance of the impacts with mitigation measures for the construction phase, is noted to be **LOW/MEDIUM** i.e. the impact is reasonable but requires mitigation to reduce potential impacts to the environment.

Operational Phase:

Based on the outcome of the impact assessment matrix noted in Table 10 above, the overall significance of the impacts with mitigation measures for the operational phase, is noted to be **LOW** i.e. the impact is of little importance since it is easily and adequately mitigated.

(J) MITIGATION MEASURES

Demolition Phase
<p>Dust emissions – the release of heavy metals, cladding, timber etc. or the on-site crushing.</p> <ul style="list-style-type: none"> • Soft strip (of all retaining walls and windows) before demolition to act as a screen against dust. • Water suppression methods can be utilized such as; hand-held sprays or hoses • Avoid explosive blasting and rather use appropriate manual or mechanical alternatives • Bag and remove any biological debris or damp down such material before demolition • Re-vegetate earthworks and exposed areas/soils stockpiles to stabilize surfaces • Use hessian where re-vegetation is not possible to cover topsoil.
<p>Noise and Vibration disturbance - the presence of personnel and machinery will present a nuisance to the area.</p> <ul style="list-style-type: none"> • Personnel must be trained in etiquette regarding noise and trespassing, as well as in health issues and occupational safety. • Construction activities must be limited to normal construction industry working hours. • A registered contractor providing a project schedule must be employed. Penalties for extending the timeline could be enforced to try and minimise the period of impact. • In addition, construction vehicles and machinery should be fitted with the appropriate noise muffling devices and must be appropriately maintained to ensure that the machines and vehicles do not produce excessive noise disturbance. • No loud music is allowed on site and workers must always be aware of disturbance to neighbours. • The contractor will inform the surrounding offices and community in advance or prior to operations that bear the risk of nuisance and accidents. • The contractor will be responsible for compensating if the vibration during demolition will damage any structures.
<p>Visual Quality - the area is urban residential and surrounding neighbors may not appreciate the presence of a rubble formed and dust emissions that can alter the visual aesthetics of a residential area during demolition.</p> <ul style="list-style-type: none"> • The site must be well maintained and neat. The use of screening during construction is recommended. • The contractor must adhere to project schedule in order to minimise the length of the demolition period. • If facilities such as toilets, bins, tanks and stockpiles are left uncovered or unfenced this could have a negative visual impact on the community as well as potential visitors in the area and could pose a health and safety issue.
<p>Disturbance to the local population and pedestrians – local population and pedestrians run the risk of injury from demolition works on site.</p> <ul style="list-style-type: none"> • Install corresponding signs, hoarding boards, temporary alternate route for bypasses. • Obtain necessary hoarding permits from the City • Install barriers (GI sheets, geo-net) especially at the western side of the building facing the road, to shield from dust and aggregates. • All excavations to be clearly marked • Provide adequate lighting at demolition site to increase visibility at night, to prevent accident.

Waste Management – littering and Improper storage/ disposal of waste and/or debris accumulated during demolition may affect neighbors as well as contaminate/ pollute the sea. It must be noted that even though there will be excavations, majority will be re-used on site so there should be minimal construction spoilt/ waste generated.

- Personnel must be trained in etiquette regarding littering and waste management.
- Demolition debris must be stockpiled and disposed of at an appropriate and licensed disposal facility. Debris can also be re-used in the construction of the dwelling.
- Hazardous waste bins must be clearly marked, stored in a contained area (or have a drip tray) and covered (either stored under a roof or the top of the container must be covered with a lid).
- A hazardous waste disposal certificate must be obtained from the waste removal company as evidence of correct disposal.
- In the case of a spill of hydrocarbons, chemicals or bituminous, the spill should be contained and cleaned up and the material together with any contaminated soil collected and disposed of as hazardous waste to minimize pollution risk.
- On-site chemical toilets will be provided for domestic purposes during construction phase. These should be screened from the neighbours as far as is practically possible.
- The contractors will be responsible for the maintenance of the chemical toilets.
- Waste will be collected by an accredited waste company and disposed of at an appropriate and licensed waste disposal facility.
- Littering is prohibited and general housekeeping must be enforced.

Safety for Demolition workers – Workers are at risk and are prone to injury should they not have adequate training, gear and knowledge of the processes on site.

- Make mandatory the use of safety gears (helmets, safety belts, masks, gloves and boot) by workers depending on the nature of the work.
- Necessary planning and safety approach will be made for rescue during emergency.
- Workers will be provided with first aid and health facilities at the site.

Construction Phase

Traffic pressures and Access – presence of construction vehicles and personnel leading to traffic congestion, dust, noise and threat of accident.

- Construction vehicles and personnel must adhere to business hours. This may be relaxed to accommodate abnormal vehicles so they may not hinder daily life and/or regular traffic.
- Construction vehicles to use predetermined and agreed routes to and from site.
- Pointsmen to guide traffic for entry and exit of construction vehicles must be used where required.
- Safety measures such as appropriate pavements, speed humps, signage boards for construction site and vehicles and for workmen will be implemented to slow down traffic within the development.
- Construction phase must be as short as possible. Reliable building contractors must be employed to avoid delays.
- The site must be wet regularly to minimise dust. Vegetation must be removed as and when required only.
- Vehicles must park on demarcated site only.

Soil erosion and stormwater – heavy rains may cause a nuisance to the neighbouring properties and also cause pollution to the sea by localised high levels of erosion. Loss of stockpiles, instability of soils and associated loss of vegetation may also result. Ecological disturbances from high levels of erosion are also possible.

- Project management of construction activities must be done to ensure that only small and/or necessary portions will be disturbed at any given time. Vegetation must not be removed until necessary.
- Soil erosion measures must be placed on sensitive areas like banks and slopes.

- All stock piles must be covered with suitable material to prevent loss of sediment via wind/ water.
- Topsoil (top 300mm layer minimum) must be removed prior to the construction by earthmoving equipment. Topsoil must be stored in heaps of not higher than 2m in a way that prevents damming. Stored top soil must not be compacted.
- Top soil must not be used as fill material for backfilling of excavations on site.
- Minimize the amount of area that needs to be disturbed and the amount of time spent on sensitive areas.
- Offsite runoff around disturbed areas should be diverted to reduce the amount of stormwater which comes into contact with exposed soils, as a result there will be less erosion.
- A storm water layout has been designed and must be implemented once approved by the municipality, for both the construction and operational phases to prevent stormwater from pooling and to direct stormwater to any existing stormwater infrastructure on the surrounding roads and residential areas. This plan can include the following mitigation methods during construction;
 - Interceptor Ditches/Dikes
 - Stream bank stabilisation: riprap, gabion, reinforced concrete, asphalt paving etc.
 - Silt fencing
- Upon completion of construction top soil must be replaced in bare ground areas.
- All surfaces hardened due to construction activities are to be ripped and imported materials removed, this must be done in consultation with the Contractor/s and the ECO. The ECO is to ensure that these areas are adequately rehabilitated and re-vegetated where appropriate.

Groundwater pollution – Pollution of ground surfaces and water may result from chemical substance spills and sewage spills. It must be noted that no groundwater issues have been identified to date. Pollution of ground water would be difficult as no source receptor pathways have been identified for the site.

- Chemical substances must be mixed or handled on impervious surfaces. Concrete must be mixed on impervious surfaces. There should be a contained/ designated area for washing out and cleaning of concrete mixing equipment, to further prevent pollution. In addition, wash waters from site should be collected and disposed of off-site.
- An adequate number of chemical toilets for the staff must be provided and serviced regularly. The positioning of the toilets must be determined taking cognisance of the neighbours. The ECO must authorise the positioning of the toilets.
- Spills that result in the contamination of ground and/or surface water must be reported immediately to the ECO
- Spills must be managed in the following manner:
 - Stop the spill
 - Contain the spill
 - Report significant spills to DWS and the Local Municipality Water and Sanitation Department.
 - Remove spilled material for treatment/disposal.
 - Determine any possible impact to soils, groundwater, storm water, etc.
 - Undertake any necessary remedial actions
 - Document the spill

Surface water pollution (sea) – protection of the sea includes the water, the floodlines and the bed. This site is contained. There are no watercourses within the property or close to it. Access to the sea is difficult. The boundary wall on the seaward side will not be demolished. The only potential for pollution is uncontrolled dumping in the sea which will be difficult

- Comments from Ezemvelo and Environmental protection bodies must be kept in consideration in order to protect the sea which is located 100m from the site.
- A no-go area to protect the sea must be demarcated. The limits of the working space must be demarcated and adhered to. No personnel working on the site, may enter the designated no-go areas.
- Environmental training must be provided to personnel.

<ul style="list-style-type: none"> • No laundry and bathing is allowed in the water courses or sea. Contractors must provide ablution facilities to staff. • Abstraction of water for construction use is prohibited unless obtained legally. Municipal water must be brought in by tanker/vessels to the site for use by the contractors. • Concrete and cement mixing wash areas should be placed at least 20m from any watercourse/ surface water drainage line/ the sea to minimise the risk of run-off entering a water source. • Storage areas for any chemical, fuel (for machinery), oil, cement etc., should be located above any flood line and away from high risk areas (i.e.; 10m from a water source) to minimise the risk of spill entering the water.
<p>Risk of alien invasive encroachment into disturbed areas – alien species are able to easily invade a wide range of ecological niches thereby altering natural systems.</p> <ul style="list-style-type: none"> • Protect as much indigenous vegetation as possible. • Ongoing alien plant control must be undertaken particularly in the disturbed areas. Areas which have been disturbed will be quickly colonised by invasive alien species. An ongoing management plan must be implemented for the clearing/eradication of alien species. • Monitor all sites disturbed by construction activities for colonisation by exotics or invasive plants and control these as they emerge.
<p>Flora - Damage and removal of existing indigenous vegetation</p> <ul style="list-style-type: none"> • Identify sensitive flora on the site prior to construction. A vegetation Assessment has been conducted by a specialist. • Comments from Ezemvelo and Environmental protection bodies must be kept in consideration in order to protect the flora on the site and surrounds. • Prior to the clearing of the site, the ECO and if necessary the Biodiversity Specialist must ensure that all plants of conservation significance are removed. • A site boundary must be erected to identify the limits of the construction site. Construction activities must be limited to within these boundaries. • Burning of removed vegetation is prohibited. • Sealant, coatings, adhesives and glazing's, can be toxic to flora, if released in to the environment. Therefore, the products used should be stored and used carefully, to save resources as well as protect the environment. • The ECO is to ensure that a list of any indigenous trees/ shrubs which are to be removed is provided. This list must include the tree/ shrub species and the number of each species.
<p>Fauna - Hunting/ Fishing/ Poaching by construction workers.</p> <ul style="list-style-type: none"> • Identify sensitive fauna on the site prior to construction. • Trapping/snaring/killing of animals including snakes and reptiles is prohibited. • Fishing by employed staff on this stretch of the sea is prohibited. • Sealant, coatings, adhesives and glazing's, can be toxic to fauna, if released in to the environment. Therefore, the products used should be stored and used carefully, to save resources as well as protect the environment.
<p>Waste and littering around the site - Improper storage/ disposal of waste and litter may affect neighbours as well as contaminate/ pollute identified water sources.</p> <ul style="list-style-type: none"> • Personnel must be trained in etiquette regarding littering and waste management. • Hazardous waste bins must be clearly marked, stored in a contained area (or have a drip tray) and covered (either stored under a roof or the top of the container must be covered with a lid). • A hazardous waste disposal certificate must be obtained from the waste removal company as evidence of correct disposal. • In the case of a spill of hydrocarbons, chemicals or bituminous, the spill should be contained and cleaned up

<p>and the material together with any contaminated soil collected and disposed of as hazardous waste to minimize pollution risk.</p> <ul style="list-style-type: none"> • On-site chemical toilets will be provided for domestic purposes during construction phase. • The contractors will be responsible for the maintenance of the chemical toilets. • Waste will be collected by an accredited waste company and disposed of at an appropriate and licensed waste disposal facility. • Littering is prohibited and general housekeeping must be enforced.
<p>Noise disturbance - the presence of personnel and machinery will present a nuisance to the area.</p> <ul style="list-style-type: none"> • Personnel must be trained in etiquette regarding noise and trespassing, as well as in health issues and occupational safety. • Construction activities must be limited to normal construction industry working hour – avoid nighttime hours. • Route construction related traffic along roadways that will cause least disturbance. • A registered contractor providing a project schedule must be employed. Penalties for extending the timeline could be enforced to try and minimise the period of impact. • In addition, construction vehicles and machinery should be fitted with the appropriate noise muffling devices and must be appropriately maintained to ensure that the machines and vehicles do not produce excessive noise disturbance. • No loud music is allowed on site and workers must always be aware of disturbance to neighbours.
<p>Air Quality - Dust generated from construction vehicles and on-site activities.</p> <ul style="list-style-type: none"> • Dust control measures/suppression of dust must be implemented timeously by the contractor. • Water trucks must be utilized to wet exposed road surfaces or stockpiled areas. The dust levels must be kept as minimal as possible to ensure minimal impact to the surrounding community and the environment. • Vehicles are to be kept in good condition to minimise vehicular fumes. Should excessive emissions be observed, the Contractor must remove the vehicle from the site. • Dust and mud should be controlled at vehicle exit and entry points to prevent the dispersion of dust and mud beyond the site boundary. • Speed limit sign boards should be erected during the construction phase to limit dust emissions.
<p>Visual Quality - the area is urban and surrounding neighbors, including businesses, may not appreciate the presence of a construction site in the vicinity.</p> <ul style="list-style-type: none"> • The site must be well maintained and neat. The use of screening during construction is recommended. • The contractor must adhere to project schedule in order to minimise the length of the construction period. • Inspections of the site by an Environmental Control Officer are required. • If facilities such as toilets, bins, tanks and stockpiles are left uncovered or unfenced this could have a negative visual impact on the community as well as potential visitors in the area and could pose a health and safety issue.
<p>Public safety and health – occupational safety, security and health of staff and public in general.</p> <ul style="list-style-type: none"> • The design and planning of the development must be conducted by trained and relevant consultants. • Skilled contractors must be utilised for specialised tasks. • Unskilled labour must be trained relevantly including environmental training. • Buildings and/or steel structures must be constructed according to engineers specifications. • Fire safety measures must be included in the design of the facility. Fire safety equipment must be provided on site during construction. • First aid kits are required on site as well as an incident records file. • Construction related vehicles must adhere to speed limits of the surrounding roads and a limit of 20km/hr on

<p>site.</p> <ul style="list-style-type: none"> • Safety gear including hard hats and safety shoes must be provided and worn at all times while on site. • Emergency numbers must be clearly visible on site. • Trespassing and/or utilising the site as a thorough fare is prohibiting by unauthorised persons. • Contractor staff are prohibited from trespassing over the site boundaries. • Interaction with neighbours and objecting parties at the site must be well documented. A complaints register must be readily available on site. Interaction with external parties must be courteous. • Although the Contractor is responsible for ensuring that the environmental awareness training of staff members is put in place, it must be the direct responsibility of the appointed ECO to carry out the training. Each staff member is to sign a register confirming their attendance at this training. This register must be included in the site Environmental file.
<p>Disturbance to Existing Infrastructure – the roads, footpaths and crossings are infrastructure that are utilised by the community. Water, electricity, telecommunications, roads and railway infrastructure must also be considered.</p> <ul style="list-style-type: none"> • Stakeholders must be notified as soon as possible. This includes the community, the municipalities, the service providers and ward councilor. • Servitudes of infrastructure must be confirmed prior to design of the development and permission granted. • No-Go areas must be demarcated.
<p>Socio Economic Impacts – Job creation and possible economic benefit to construction material suppliers in the area.</p> <ul style="list-style-type: none"> • Community members and leaders must be notified as soon as possible by posting notice boards with illustrations on site. • Local people should be employed where possible • Ward councilors must be involved in the public participation. • Strict penalties must be built into tenders to deal with issues such as petty crime, fence cutting, trespassing etc.
<p>Operational Phase</p>
<p>Noise and Disturbance</p> <ul style="list-style-type: none"> • All noise generating plant such as air conditioning, refrigeration, fans, etc. are to comply with noise standards.
<p>Visual impacts</p> <ul style="list-style-type: none"> • All flood lighting to comply with relevant standards. • No unauthorized or un-approved structures are to be erected.
<p>Surface runoff</p> <ul style="list-style-type: none"> • Proper management and disposal of waste must occur during the lifespan of the project, including during the operational phase. The applicant must ensure regular maintenance of all drainage systems within the project area as they help in improving site drainage, and reduce pollutants entering surface waters and groundwater. • Grass filter stripes can also be used as they function by slowing runoff velocities, trapping sediment and other pollutants and providing a modest infiltration.

(K) SUMMARY OF SPECIALIST STUDY FINDINGS AND IMPACTS

Geotechnical Investigation

MSJ Geotechnical Consulting Services Pty (Ltd) conducted the Geotechnical Investigations for the proposed re-build of the residential dwelling. The Geotechnical Report can be reviewed in **Appendix E**.

The fieldwork was conducted on 13 December 2016. A single soil sample was collected from the site to assess the suitability for construction and for foundations and was sent to SGS Matrolab Group (Pty) Ltd for laboratory testing. Laboratory testing was undertaken to classify materials and to assess their suitability for use in construction. The test results confirmed that the beach sands beneath the site are non-plastic with silt and clay content less than 6% with the remainder consisting mainly of fine grained, and to a lesser extent, of medium grained sand. Therefore, it is expected to be suitable as a general fill material.

According to the Geotechnical Investigation, the proposed earthworks are expected to be fairly limited because the building is being positioned on a relatively flat area. It is recommended that strip footings should not be less than 0.8m in width while pad foundations should be at least 1.2m wide. A differential settlement of 5mm should be allowed for in the design of normal shallow foundations.

Stormwater Management Plan

A Stormwater Layout has been designed by PLB Consulting Structural and Civil Engineers, for the new residence on 18 Eastmoor Crescent. The Stormwater Layout has not been approved by the Municipality to date.

The Stormwater Layout can be reviewed in **Appendix E**, Drawing No. SW100.

Demolition Permit

(Permission to demolish in terms of Regulation E of the National Building Regulations and Building Standards Act, 103 of 1977, as amended.)

Permission to demolish the existing residential dwelling situated on 18 Eastmoor Crescent has been granted. This demolition permit lists the various conditions that must be adhered to during the demolition phase, thus ensuring compliance to legislation. The Demolition Permit can be reviewed under **Appendix E**.

The purpose of the National Building Regulations and Building Standards Act No. 103 of 1977:

“Complying with the requirements of the National Building Regulations

(1) The requirements of the National Building Regulations shall be complied with by:

(a) adhering to the requirements of all the prescriptive regulations; and

(b) satisfying all functional regulations by:

(i) adopting building solutions that comply with the requirements of the relevant part of SANS 10400 (the application of the National Building Regulations); or

(ii) reliably demonstrating, or predicting with certainty, to the satisfaction of the appropriate local authority, that an adopted building solution has an equivalent or superior performance to a solution that complies with the requirements of the relevant part of SANS 10400.”

Heritage Impact Assessment

AMAFA KwaZulu-Natali (Zulu for 'Heritage KwaZulu-Natal') commonly known as AMAFA is a provincial heritage conservation agency for KwaZulu-Natal. AMAFA was established as a statutory body in terms of the KZN Heritage Act of 1997, replaced by the KZN Heritage Act of 2008. AMAFA has developed a system that allows local authorities to fully comply with heritage legislation, with minimum impact on financial and human resources. Sites which are proclaimed gain the status of either Provincial Landmark (Site in ownership of the State) or Heritage Landmark (Site in private ownership). Once proclaimed they are included in the Schedule of protected Sites. The public can apply to AMAFA to have a site proclaimed. This application will be considered by the Council of AMAFA. Once approved, the site will be added to the schedule.

The existing residential dwelling situated at 18 Eastmoor Crescent, is no older than 60 years and no artefacts of heritage significance were identified on site. A Draft BAR has been submitted to AMAFA, the local authority responsible for KZN Heritage aspects. Unless stated by AMAFA, Comment from AMAFA following review of the Draft BAR, will be included in Appendix D of the Final BAR.

Vegetation Impact Assessment

A Vegetation Survey to assess and identify the main vegetation types in the developmental area was conducted. The assessment aids in identifying all significant ecological habitats within the area with special emphasis on the conservation of Red Data plants in the area and their populations. The vegetation survey aids in identifying all impacts that have the potential to disrupt the ecology of the area and where possible project the impact significance. Based on the vegetation survey, the specialist is able to suggest or recommend mitigation techniques and methods of impact avoidance or reduction when necessary. A survey was conducted to assess the probable impact of the development. The entire site was walked and data was recorded.

The proposed construction site is noted to be completely devoid of the original vegetation that would be expected in this vegetation type, but as is common for this area the coastal grasslands and coastal seashore vegetation overlaps substantially. Therefore, two seashore species were found, one that may be affected by the development and the other just outside of the developmental footprint. The site will be utilized for the development of a new double story residential building but a substantial amount of the existing vegetation will remain intact. Much of the vegetation present on site is concentrated in flower beds and along the boundaries of the property. Some of the species present are in fact indigenous but commonly used in landscaping and have been planted for aesthetical purposes. Majority of the species present do not have any ecological importance, with the exception of the single and well established *Mimusops caffra* (29°44'34.70"S and 31° 4'41.27"E). This tree is protected in terms of the National Forest Act of 1998. This tree may not be cut, disturbed, damaged or destroyed without a license granted by DAFF.

In terms of the faunal elements of this site, there were no species recorded at the time of the study and there is a very low possibility that species of conservation importance will occur directly in the development footprint. At the time of the study there was very limited habitat, and in the event that species should venture onto site they will be able to vacate the area and inhabit more suitable areas nearby.

The Vegetation Assessment Report can be reviewed as **Appendix E**.

(L) ENVIRONMENTAL IMPACT STATEMENT

Through this Basic Assessment, it has been concluded that the proposed development is not expected to have any significant, adverse or lasting impacts on the environment when considering the excavation of soils within 100m of the sea. The project will have positive impacts, viz: Short term skills development; job creation; and potential increase in property values. The positive impacts will be long term as the local economy will be boosted.

The construction phase is short term and is not anticipated to cause any further detriment to the environment

provided the post construction rehabilitation is implemented. The development will in fact aid in the establishment of indigenous vegetation in the immediate vicinity of the site. The EMP must be adhered to and will ensure that any negative impacts however minimal are not magnified.

During the post construction phase of the project, the contractors must ensure that all hazardous materials are removed from the site and that rehabilitation of land is undertaken according to the requirements of the EMP.

(M) CONDITIONS OF AUTHORISATION

In terms of Monitoring and Auditing, the following are recommended to ensure protection of the environment during construction:

- An ECO must monitor the construction site and activities on a monthly basis for the duration of the demolition and construction phases,
- An ECO must document the findings and submit a monthly report to the Competent Authority;
- The Project Manager and Contractor are responsible for the implementation of the EMP and protection of the environment for the duration of the construction period.
- An ECO must monitor the facility on a bimonthly basis for the operational phase, for a period of 6 months following completion of construction to ensure that rehabilitation has been successful.

(N) ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

- The layout plans and designs of the residential dwelling have been completed and are included in this Draft BAR as Appendix B. However, these still require approval and Environmental Authorisation from the Competent Authority; the Department of Economic Development, Tourism and Environmental Affairs.
- The provided stormwater management plan is also subject to review and approval by the municipality.
- Comment from AMAFA is also required to confirm that an AMAFA permit is not required

(O) RECOMMENDATIONS OF THE EAP

The information contained in this report and the documentation attached hereto, in the view of the EAP, is sufficient for the Public Participation Process (PPP). Should the Competent Authority request additional studies to be conducted, this shall be conducted and obtained to assist the Competent Authority in making an informed decision.

The EMP, which includes recommended conditions and mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application, is provided. Refer to Appendix F for a full Environmental Management Plan. The EMP must be read in conjunction with the BAR.

(P) TIMEFRAMES

An environmental authorisation valid for five (05) years is requested. Construction may commence at any time within this 5-year period.

(Q) UNDERTAKING UNDER OATH OR AFFIRMATION BY THE EAP

(i) 1World Consultants (Pty) Ltd hereby confirms that the information provided in this Basic Assessment Report is correct at the time of the compilation and distribution for review. Input from specialists was utilised in the compilation of the Report.

(ii) 1World Consultants (Pty) Ltd confirms that all comments received from Stakeholder and I&APs have been included in this report. It is to be noted that in terms of the EIA Regulations (2014), GNR 982 43(2), all State Departments that administer a law relating to a matter affecting the environment, specific to the Application, must submit comments within 30 days to the EAP. Should no comment be received within the 30-day comment period, it will be assumed that the relevant State Department has no comment to provide.

(iii) All information from the specialist studies have been included in this Basic Assessment Report. Recommendations from the specialists have been included in the EMP.

(iv) All information and comments received in response to this Basic Assessment Report will be summarized and responded to in a final version of the Report, which will be submitted to EDTEA for consideration in terms of issuing Environmental Authorisation.

For 1World Consultants (Pty) Ltd:



Fatima Peer B.Sc. (Hons) Pr. Sci. Nat.
SENIOR ENVIRONMENTAL ASSESSMENT PRACTITIONER

APPENDICES

The following appendices must be attached as appropriate:

Appendix	Description of Contents
A	Company Profile Project Experience of EAP Curricula Vitae of EAP Team
B	Proposed Layout Plans and Eastmoor Cubes Comparison Layout
C	EIA Enquiry Response Application for Environmental Authorisation (draft version) Acknowledgement and Acceptance of Application
D	Newspaper advertisement Copy of notice board and photograph of notice boards at site Background Information Document, distribution list and acknowledgement of receipts Comments and Responses Report Copies of correspondence with I&AP's
E	Geotechnical Report Stormwater Layout Plan Demolition Permit Vegetation Assessment Report
F	Draft Environmental Management Plan