

S24G REF. NO.: DM/S24G/0004/2017

FINAL SECTION 24G APPLICATION

FOR THE RECTIFICATION OF THE UNLAWFUL COMMENCEMENT AND
CONTINUATION OF THE DEVELOPMENT SITUATED AT 56 OCEAN TERRACE,
ISIPINGO LOCATED WITHIN THE ETHEKWINI MUNICIPALITY

[June 2018]



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SECTION 24G APPLICATION

For the Rectification of the Unlawful Commencement and Continuation of a Listed Activity, for AKR Property Development (Pty) Ltd, situated at 56 Ocean Terrace, Isipingo Located within eThekweni Municipality

S24G Ref No.: DM/S24G/0004/2017

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Verification	Capacity	Name	Signature	Date
Author	EAP	Roschel Maharaj		08 January 2018
Reviewed by	EAP	Adila Gafoor		14 February 2018
Approved by	Project Manager	Fatima Peer		23 February 2018

Executive Summary

1World Consultants (Pty) Ltd has been appointed by AKR Property Development (Pty) Ltd, to undertake the required environmental services for the Section 24G rectification of the unlawful commencement and continuation of a listed activity at 56 Ocean Terrace, Isipingo Beach, located within eThekweni Municipality. The development of “Ocean Terrace” is located within 100m of the High-Water Mark (HWM) of the sea within an urban area. The development includes the construction of the multi-storey complex and supporting structures of “Ocean Terrace”, including access driveways and parking to service 15 units in total. The existing site area is 1921m². The development footprint is approximately 1600m² and includes a new entrance driveway (via Delta Road), a new boundary wall, basement and upper floor, ground floor parking deck, and third floor. The development triggered the need for a Section 24G Application to retrospectively authorise the development since the development is located within 100m of the High-Water Mark (HWM) of the sea and required more than the legislated threshold of 5 cubic metres of material to be excavated/moved from site.

The preferred site alternative is a site that is well established within an urban area approximately 100m from the High-Water Mark (HWM) of the sea. The surrounding land uses are well-established, residential dwellings, including a neighbouring multi-storey building. A boundary wall was constructed with construction being limited to the boundary of the property. Thus, adverse environmental impacts to the surrounds was kept to a minimal. No site alternatives have been proposed since the property is privately owned, and the development was proposed by the property owner.

A Public Participation Process was initiated and involved consultation with the relevant authorities, the landowners surrounding the site, 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 S24G Application Process. A public meeting was not requested nor held prior to the distribution of the Draft S24G Application.

Specialist studies included:

- A Geotechnical Study, by Peter Allen & Associates Consulting Geotechnical Engineers, and Kisten Consulting Engineers cc.
- Stormwater Management Plan and Report, by Vawda Engineers cc
- A Traffic Impact Assessment Report, by AG Traffic and Transportation Consultants (Pty) Ltd.
- Shadow Impact Assessment, by Hard Black Architects.

The Draft S24G application and EMP were circulated to registered I&AP's for a 30-day review and comment period. The comments and responses provided to 1World Consultants (Pty) Ltd are incorporated into a Comments and Responses Report included in the Final S24G Report for subsequent submission to the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (KZN-EDTEA) for a decision on retrospectively granting the Environmental Authorisation.

This S24G Application has been prepared in Accordance with the EIA Regulations, 2017 and follows the format and requirements for a Basic Assessment Report (BAR) as per Appendix 1 of GNR 326 and as instructed by KZN-EDTEA.

Table of Contents

Executive Summary	ii
1. INTRODUCTION	5
1.1. Terms of Reference	6
1.2. Background	6
1.3. Directive in Terms of Section 24G Application.....	6
1.4. Motivation for S24G Application	6
2. SECTION 24G APPLICATION	7
2.1. Environmental Assessment Practitioner.....	7
3. LOCATION OF THE PROPOSED ACTIVITY	8
4. DEVELOPMENT ACTIVITY	11
5. LEGISLATION AND GUIDELINES APPLICABLE	16
5.1. Applicable listed activities.....	16
5.2. Policy and Legislative Context	17
6. NEED AND DESIRABILITY	18
7. MOTIVATION FOR THE PREFERRED SITE, ACTIVITY AND TECHNOLOGY ALTERNATIVE	18
7.1. Preferred Site Alternative	19
7.2. Preferred Technology Alternative	19
7.3. No-Go Alternative.....	20
Site Photos	21
8. ENVIRONMENTAL ATTRIBUTES (GEOGRAPHIC, PHYSICAL, BIOLOGICAL, SOCIAL, ECONOMIC, HERITAGE AND CULTURAL ASPECTS)	23
9. PUBLIC PARTICIPATION PROCESS	25
9.1. Objectives of the PPP	25
9.2. Public Participation Process Followed	25
9.2.1. Background Information Document (BID)	25
9.2.2. Newspaper Advertisement	25
9.2.3. Site Notice Boards	26
9.2.4. Landowner Notifications	26
9.2.5. Public Meeting	29
Issues Raised by the I&APs.....	29

10.	IMPACT ASSESSMENT.....	30
10.1.	Methodology	30
10.2.	Impacts Identified.....	32
10.3.	Significance of Impacts	33
11.	MITIGATION MEASURES	34
12.	SUMMARY OF SPECIALIST STUDY AND FINDINGS.....	39
12.1.	Geotechnical Investigation.....	39
12.2.	Stormwater Management Plan.....	39
12.3.	Traffic Impact Assessment.....	40
12.4.	Minimisation of Shadows on Beaches Policy for eThekweni: Shadow Impacts on Beaches and Residential Amenities	40
13.	ENVIRONMENTAL IMPACT STATEMENT.....	47
14.	IMPACT MANAGEMENT MEASURES FROM SPECIALIST STUDIES	48
14.1.	Geotechnical Investigation.....	48
14.2.	Stormwater Management Plan.....	48
15.	CONDITION OF AUTHORISATION.....	48
16.	RECOMMENDATIONS OF THE EAP	49
17.	TIMEFRAMES.....	49
18.	UNDERTAKING UNDER OATH OR AFFIRMATION BY THE EAP.....	49
	APPENDICES.....	51

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SECTION 24G APPLICATION (REF NO.: DM/S24G/0004/2017)

1. INTRODUCTION

1World Consultants (Pty) Ltd have been appointed by AKR Property Development (Pty) Ltd to undertake the required environmental services for the rectification of the unlawful commencement and continuation of a listed activity for AKR Property Development (Pty) Ltd situated at 56 Ocean Terrace, Isipingo Beach located within eThekweni Municipality. AKR Property Development (Pty) Ltd has commenced with the afore-mentioned activity, which was, at all relevant times, listed pursuant to section 24(2) of NEMA as an activity that requires environmental authorisation prior to commencement. The construction of the multi-storey residential complex necessitated excavation of soils within 100m of the High-Water mark of the sea.

Table 1: Project Specifications

Applicant	
Project Applicant	Mr. Rabindra Dukhi
Trading Name	AKR Property Development (Pty) Ltd
Contact Person	Trivolan Govender
Landowner	
Landowner Details	Mr. Rabindra Dukhi
Project Details	
Ward	90
Property Description	56 Ocean Terrace, Isipingo Beach, Erf 986
Zoning of Site	General Residential 1
Property Extent	1921 m ²
Proposed Area Schedule of Basement	545.36m ²
Proposed Area Schedule on Ground Floor	291.13m ²
Proposed Area Schedule of Upper Levels	763.51m ²
Total Floor Area Ratio (far)	1600 m ²
Proposed Number of levels	3
Number of Apartments	15
Development Specifications	<ul style="list-style-type: none"> • New Entrance Driveway (via Delta Road) • New Boundary Wall • Basement and Upper Floor • Ground Floor (Parking Deck) • Third Floor (Additional 3 units)

Section 24G of NEMA, without affecting any criminal liability of a person who has acted in contravention of, makes provision for that person to submit an application to the relevant MEC/ Minister, which, if successful, will enable that person lawfully to continue with the listed or specified activity and/or legalise an otherwise unlawful structure, with effect from the date on which the authorisation is issued.

Ultimately, the outcome of an S24G application must be to provide the Competent Authority, the Department of Economic Development, Tourism and Environmental Affairs (EDTEA), with sufficient information to provide an informed decision on the Application, in terms of retrospectively granting the Environmental Authorisation (EA), to avoid or mitigate any detrimental impacts that the activity may inflict on the receiving environment.

1.1. Terms of Reference

The following legislation requirements must be complied with, to legalise the activities:

- A retrospective report, detailing the development and noting the impacts of building within 100m of the High-Water Mark of the sea.
- Prepare an EMP which will provide mitigation measures for identified impacts.
- Conduct Public Participation, including stakeholder participation with the Municipality.
- Apply for authorisation from the KZN EDTEA via the S24G process.

1.2. Background

The KZN Department of Economic Development, Tourism and Environmental Affairs (KZN - EDTEA), was informed on 18 May 2017 of the construction of a multi-storey residential complex located at 56 Ocean Terrace, Isipingo Beach. A site visit was conducted on 18 July 2017 by the department officials to verify the activities on site. It was then noted and confirmed by the department that the property was located within 100m from the High-Water Mark of the sea, triggering listed activities as per EIA Regulations 2017. Additionally, it was observed that construction activities had already commenced, and two levels of the multi-storey complex were already under construction.

A warning letter was issued to the client on 11 September 2017 and the department advised that the matter can be resolved by means of retrospectively authorising the construction of the multi-storey residential complex via the NEMA *Section 24G process, Rectification of the unlawful commencement of activity*.

The Warning Letter, as well as 1World's Response e-statement, can be reviewed under Appendix A.

1.3. Directive in Terms of Section 24G Application

An S24G application was submitted to the Department on 31 October 2017 for the rectification of the unlawful commencement and continuation of a listed activity for AKR Property Development (Pty) Ltd situated at 56 Ocean Terrace. A site visit followed on 12 December 2017 with the EAP and officials of the Compliance Monitoring and Enforcement Unit of the Department. It was observed that the construction is near completion and would be ready to be sold from February 2018.

A Directive was then issued to the client and EAP in terms of Section 24G of NEMA 1998 (Act No. 107 of 1998) confirming the process to be followed. Consequently, the Section 24G application has been lodged with the department for review and consideration.

The S24G Application, the Directive and 1World response statement may be reviewed under Appendix A.

1.4. Motivation for S24G Application

The property owner, Rabindra Dukhi, of AKR Property Developments (Pty) Ltd purchased the property in May 2016, with the intention of completing the already commenced construction. Refer to Appendix A for a copy of the Title Deed.

AKR Property Development (Pty) Ltd took over the property on 06 May 2016, however, at this stage the site was already cleared, and construction had commenced. AKR Property Development (Pty) Ltd had appointed their independent Contractor on 10 June 2016.

The table below brings the following dates to your attention:

Table 2: Dates of Interest

Description	Date
Date of Ownership by AKR Property Development	06 May 2016
Construction Period from AKR Property Contractor	20 Months
Construction Start Date by AKR Property Contractor	10th June 2016 (Month 1 of 20)
Construction End Date	January 2018 (Month 20 of 20)

The property owner, Rabindra Dukhi, also amended the building plans to include an additional storey on the building. His attention was only brought to the environmental authorisation requirements, when he enquired it at the Municipality level, following recommendation by his architect to ensure that authorisations were in place. Mr. Dukhi then contacted the relevant authorities himself.

The commencement of construction was not maliciously intended to circumvent the laws. In fact, Mr. Dukhi had contacted the authorities himself. Mr. Dukhi is now keen to correct and rectify the unlawful activity via Section 24G as recommended. Mr. Dukhi was not aware of the need for environmental authorisation. His architect, appointed for amending the plans, brought his attention to it possibly being required. He has not disagreed with the legislation but was simply ignorant of the fact that it is required for his development. This appeals process is to rectify the matter, not to dispute it. Consequently, he has timeously appointed an EAP to handle the appeals process and prepare the required report.

2. SECTION 24G APPLICATION

2.1. 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 3: Names and Expertise of Representatives of the EAP

Name and Title	Qualifications and Affiliations	Role	Experience at Environmental Assessments
Fatima Peer	B.Sc (Hons) Pr. Sci. Nat., IAIAsa	Senior EAP	7 years
Adila Gafoor	B. Soc. Sci. (Geog) IAIAsa	EAP	3 years
Roschel Maharaj	B.Sci. IAIAsa	Junior EAP	2 ¹ / ₂ years

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

Table 4: 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
Peter Allen	BSc Eng Pr. Eng	Geotechnical Specialist	Section 12 - Summary of Specialist Study and Findings.	Geotechnical/ Stability Investigation: Proposed Flats: 56 Ocean Terrace: Isipingo Beach
Mr. A. S. Vawda	Pr. Eng.	Civil and Structural Engineering	Section 12 - Summary of Specialist Study and Findings.	Stormwater Management Report for 56 Ocean Terrace
Andile Gqaji	BSc. Hon Pr. Eng.	Transportation Planning	Section 12 - Summary of Specialist Study and Findings.	Traffic Impact Assessment Report for the Scheme Amendment Application to General Residential 1 zone, 56 Ocean Terrace, Isipingo Beach
Rajesh Mahadeo	Registered Prof	Shadow Impact Assessment	Section 12 - Summary of Specialist Study and Findings.	Architectural Solar Study Pertaining to the Guiding Principles of the Local Authority of Erf 986 of Isipingo Beach, 56 Ocean Terrace, Isipingo, Durban.

Specialist Declarations as per table 4 above can be reviewed under Appendix B.

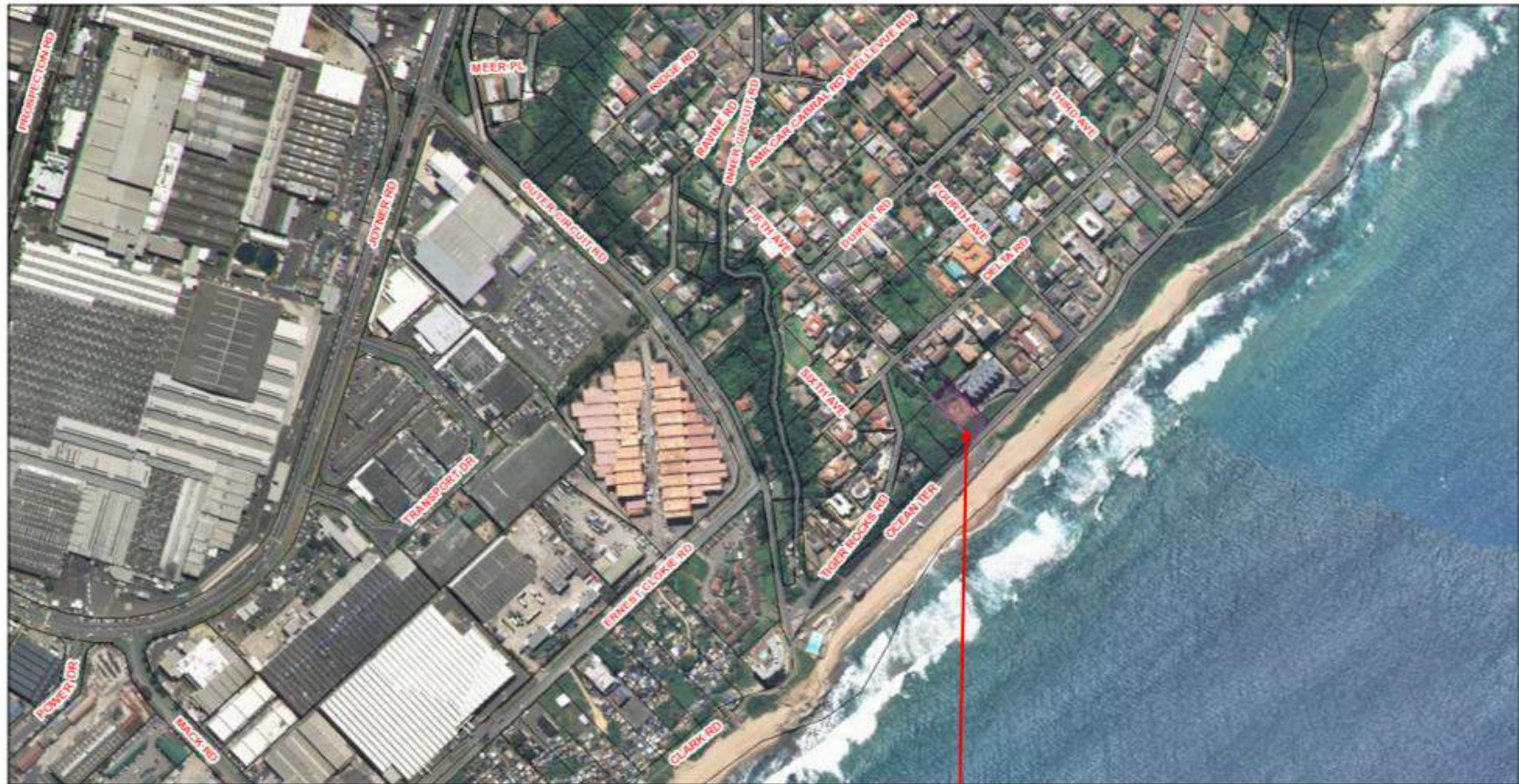
3. LOCATION OF THE PROPOSED ACTIVITY

The development at 56 Ocean Terrace is located within Ward 90 of the eThekweni Municipality. Map 1 below depicts the general locality of 56 Ocean Terrace projecting a larger overview of the project area, while, Map 2 below is a zoomed in image providing an indication of the general locality of the development site and the distance from the HWM of the sea. 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 5.

Table 5: Site Details

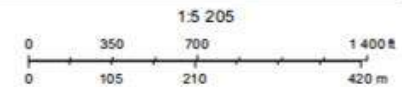
Development of a Multi-Storey Residential Complex	
Property Description	56 Ocean Terrace, Isipingo Beach, Erf 986
SG Number	N0FT01560000098600000
Property Size	1921m ²
GPS Coordinates	30° 00' 06.13" S 30° 56' 38.47" E

Map 1: General Locality of the Development Site at 56 Ocean Terrace, Isipingo Beach



January 29, 2018

56 Ocean Terrace



(Source: eThekweni Municipality Corporate GIS Website)

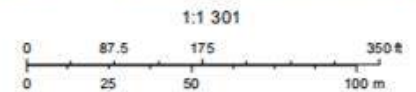
Map 2: Development Site and the Distance from the HWM of the Sea



January 29, 2018

56 Ocean Terrace

HWM of the Sea



(Source: eThekweni Municipality Corporate GIS Website)

4. DEVELOPMENT ACTIVITY

AKR Property Development (Pty) Ltd has commenced with the unlawful construction of a multi-storey residential complex, which necessitated excavation of soils within 100m of the High-Water Mark of the sea. The subject site is located at 56 Ocean Terrace, Isipingo Beach, on the South Coast of the eThekweni Municipality. Map 2 above is a zoomed in image providing an indication of the general locality of the development site and the distance from the HWM of the sea. The development is limited to the site Erf 986 Isipingo. The site extent is 1921m² and the development covers approximately 83% of the site. The height is within the town planning allowances of three storeys. The development includes:

- New Entrance Driveway (via Delta Road)
- New Boundary Wall
- Basement and Upper Floor
- Ground Floor (Parking Deck)
- Third Floor

The development has two lower levels and three upper levels, comprising a parking level and 15 apartments in total. A Traffic Impact Assessment was completed, and the parking area in terms of capacity was designed accordingly. The plumbing and electrical design of the development also aligns to the proposed development capacity in terms of residential usage.

Table 6 below provides an indication of the development schedule.

Table 6: Development Schedule as per latest Architects plans

Schedule of Areas	
Site Area	1921.0 m ²
Permitted Floor Area	1921.0 m ²
Existing FAR	1280.0 m ²
Proposed FAR	320.0 m ²
Total FAR	1600.0 m ²
Development Schedule	
Proposed Basement	2 x 3 bedroom/ 1 x 2 bed flats
Proposed Upper Level	2 x 3 bedroom/ 1 x 2 bed flats
Proposed Ground Floor	Parking Deck (32 Cars)
Proposed 1 st Floor	2 x 3 bedroom/ 1 x 2 bed flats
Proposed 2 nd Floor	2 x 3 bedroom/ 1 x 2 bed flats
Proposed 3 rd Floor	2 x 3 bedroom/ 1 x 2 bed flats
Total Number of Units	15
Total Parking Required	27 Bays
Parking Provided	32 Bays

The design of the development does take into consideration the risks that are posed by rise in sea levels. The boundary walls will be within the site boundary of Erf 986. However, as per map 2 provided above, the distance from the HWM of the sea to the boundary of the property is 57.9m. The property is approximately 24.1m above mean sea level, hence there is no risk of the boundary wall and driveway being affected by the rise in sea level.

Refer to Appendix C for a letter received from Vawda Engineer confirming the above.

The boundary wall on the east elevation is approximately 2m long and has been reconstructed with the bank adjacent being stabilized. The storm water on the driveway has been controlled by adding storm water grating and sump which is linked to the storm water drainage system. Figure 1 below is an image of the adjacent bank post re-habilitation.



Figure 1: Adjacent Bank Post Re-habilitation.

The above has been confirmed via a letter provided by Bravo Projects and Suppliers i.e. Contractor. Refer to Appendix C.

The methods undertaken for Bank Stabilisation has been outlined by Landscape Services and can be reviewed under Appendix C.

An Environmental Management Plan and a site rehabilitation plan have been prepared. The nature of the material which will be removed during the rehabilitation phase will be of the building and construction material such as concrete, bricks, timber etc. Most of the infill consisted of existing original natural site material that was excavated during preparation for the new structure.

The plans/ layouts are presented below in the following order:

- Layout 1 – Development Plan of the Basement and Upper Floor as well as Ground Floor (Drawing No. SR17/02/0009);
- Layout 2 – Development Plan of the Third Floor (Drawing No. SR17/02/0002);
- Layout 3 – Site Plan (Drawing No. SR17/02/0009)

The layouts presented below may be reviewed in A3 under Appendix C.

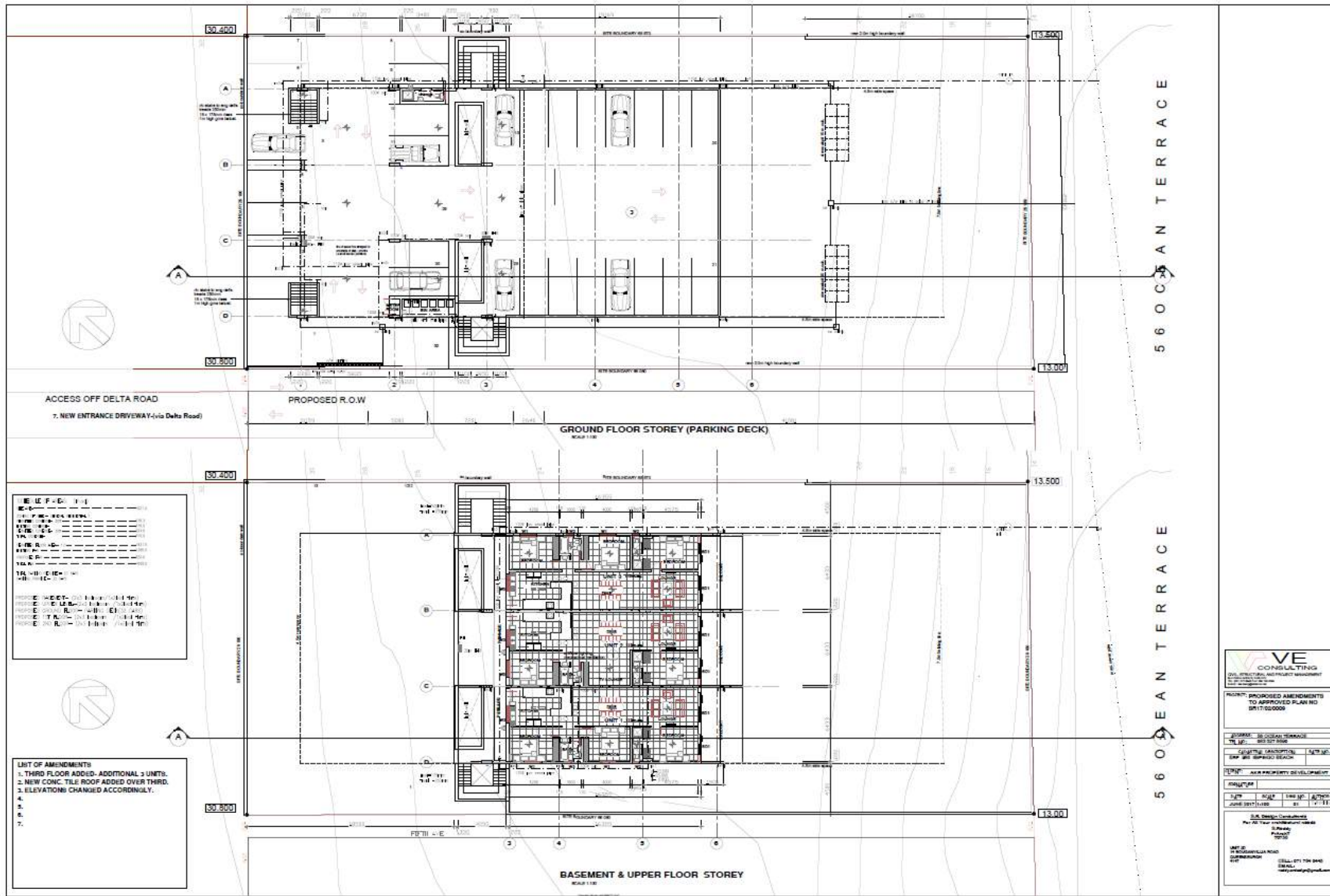


Figure 2: Layout 1 – Development Plan of the Basement and Upper Floor as well as Ground Floor (Drawing No. SR17/02/0009)

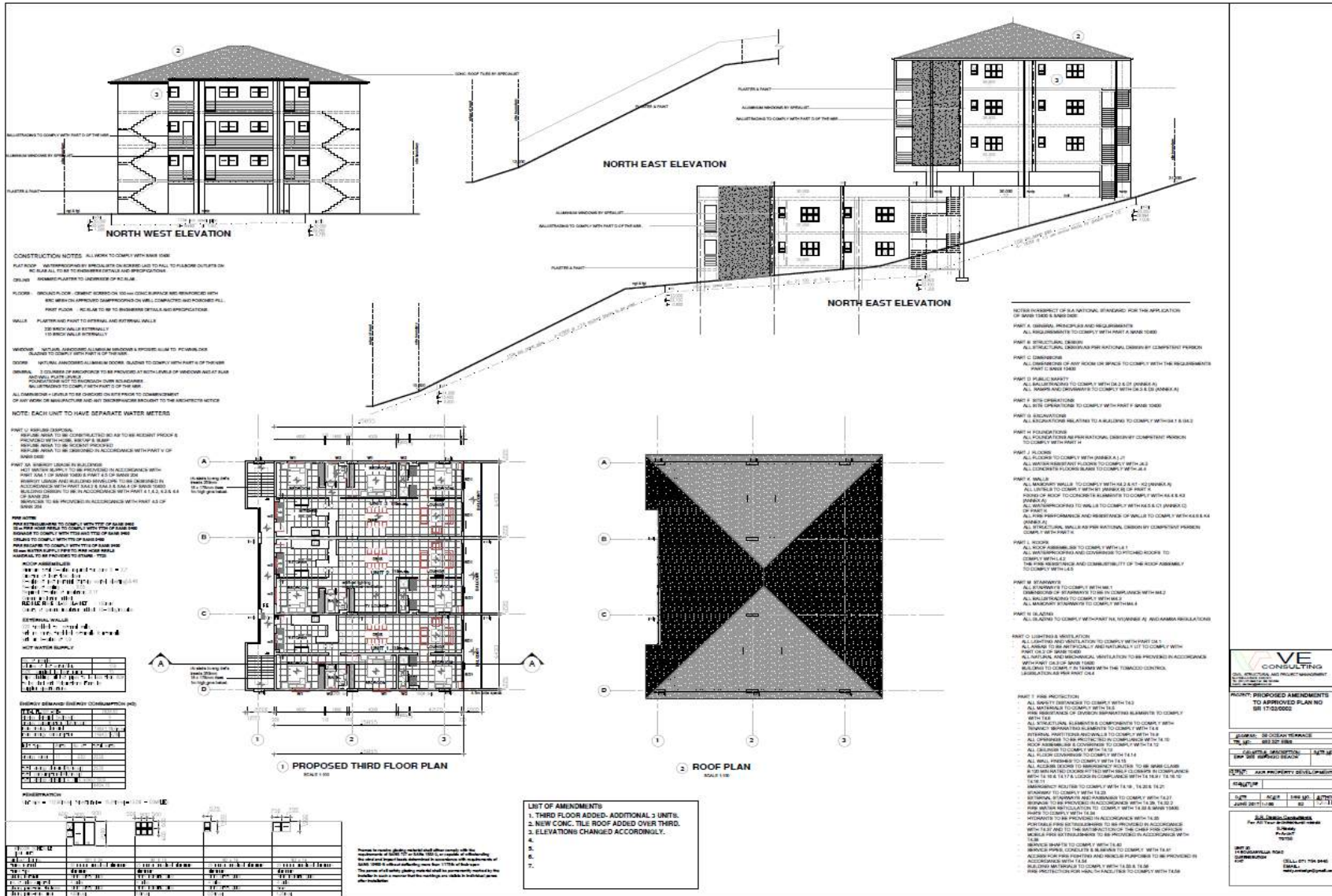


Figure 3: Layout 2 – Development Plan of the Third Floor (Drawing No. SR17/02/0002)

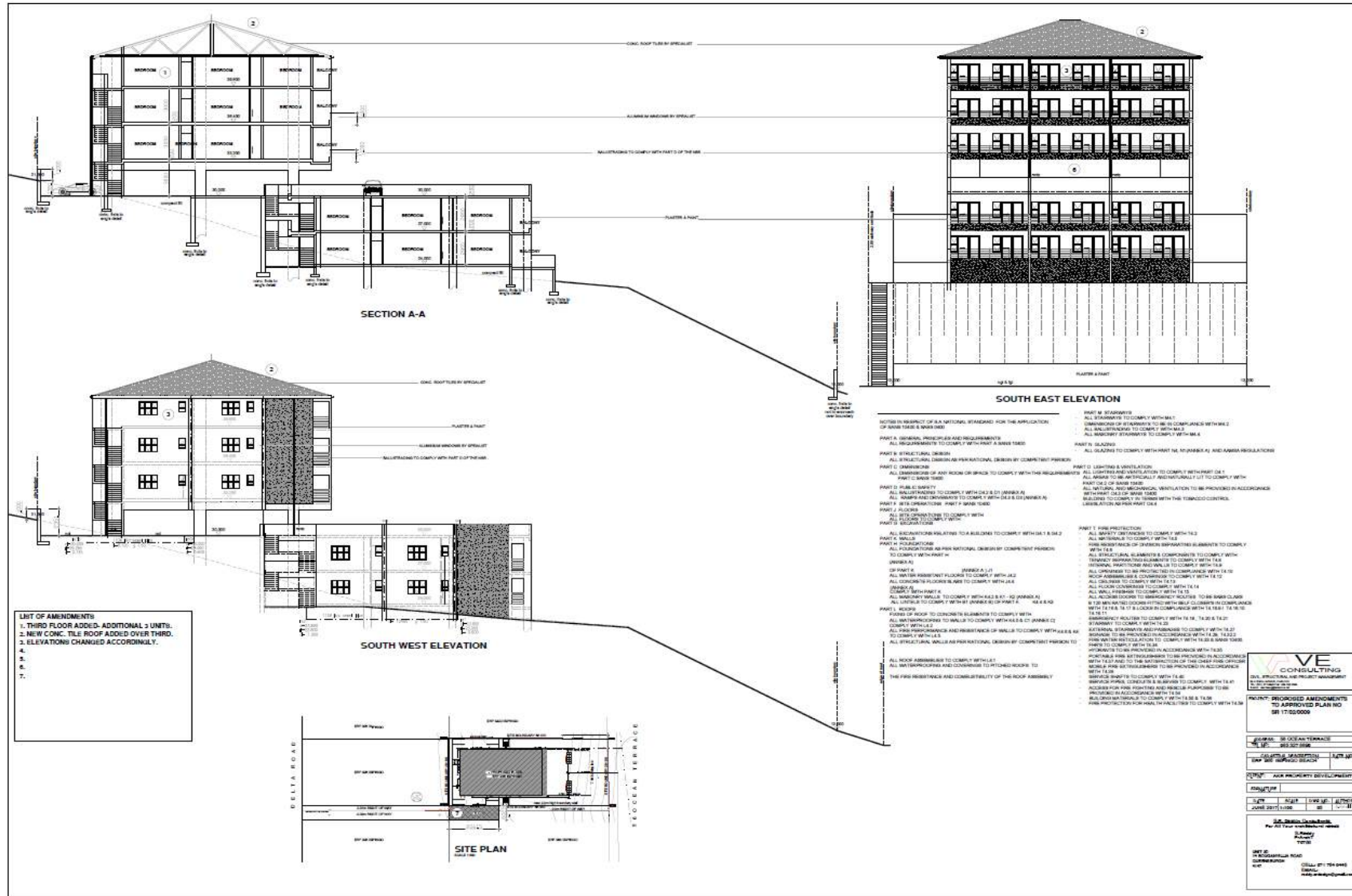


Figure 4: Layout 3 – Site Plan (Drawing No. SR17/02/0009)

5. LEGISLATION AND GUIDELINES APPLICABLE

5.1. Applicable listed activities

In terms of the Environmental Impact Assessment (EIA) Regulations 2017, promulgated in terms of the National Environmental Management Act, 1998 (NEMA), certain Listed Activities are specified for which either a Basic Assessment (GNR 327 and 324 of 2017) or full Scoping and EIA (GNR 325 of 2017) is required. The following Listed Activity in Government Notice (GN) R327 (Listing Notice 1) of 2017 are triggered, requiring a Basic Assessment (BA) Process. However, since the development is near completion, a Directive in terms of section 24G has been issued for the unlawful commencement and continuation of a listed activity for AKR Property Development (Pty) Ltd situated at 56 Ocean Terrace, Isipingo.

The 2017 EIA Regulations are referenced despite the project commencing prior to the 2017 Regulations coming into effect. Regardless of which Regulation is used in the decision-making process, the threshold as described below was exceeded for this development.

Table 7: Relevant Activities from EIA Regulations 2017

Regulation Year	Listed Activity, NEMA	Description of Activity	Applicability to the Project
2017	LN 1, Activity 19A	<p>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—</p> <ul style="list-style-type: none"> (i) the seashore; (ii) the littoral active zone, an estuary or a distance of 100 metres inland of the highwater mark of the sea or an estuary, whichever distance is the greater; or (iii) the sea; — 	<p>The proposed development is located within 100m of the High-Water Mark (HWM) of the sea and required more than 5 cubic metres of material to be excavated.</p> <p>Infill for the development, comprised of re-used, natural site material. The nature of the material which will be removed during the remaining of the development activities, including the rehabilitation phase, is building and construction material such as concrete, bricks, timber etc.</p>

Hence, a Retrospective Basic Assessment Process is required. The Warning Letter, S24G Application and Directive in terms of S24G are provided under Appendix A.

5.2. Policy and Legislative Context

Table 8 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 8: 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 327 and 324 – for identifying the triggers for a basic assessment.	Department of Economic Development, Tourism and Environmental Affairs	2017
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 326 for Public Participation Guidelines.	Department of Economic Development, Tourism and Environmental Affairs	2006 and 2017
EIA Regulations GNR 326 – for guidelines on the process to be followed and the format of the BAR.	Department of Economic Development, Tourism and Environmental Affairs	2017
eThekwini Municipality By-Laws	eThekwini Municipality	Current
Public Participation guideline in terms of NEMA EIA Regulations	Department of Economic Development, Tourism and Environmental Affairs	2017
Spatial Development Framework	eThekwini Municipality	2016-2017
Integrated Development Plan	eThekwini Municipality	2013/12 to 2016/17

National Building Regulations and Building Standards Act No. 103 of 1977	Creative Commons Attribution-Noncommercial-No Derivative Works 2.5 South Africa License.	1998
National Environmental Management: Integrated Coastal Management Amendment Act, 2014 (Act No. 36 of 2014)	Department of Economic Development, Tourism and Environmental Affairs	2014

6. NEED AND DESIRABILITY

Since the applicant/ developer is the land owner, it is only feasible that the development occurs within the boundaries of the property. The need and desirability of the project is mostly personal to the developer. The project entails the construction of a multi-storey residential complex situated at 56 Ocean Terrace, Isipingo Beach. Isipingo is a town situated 19 kilometres South of Durban in KwaZulu-Natal. AKR Property Development (Pty) Ltd aims on improving the quality of life through innovative developments of properties such as residence. The Isipingo area comprises of several multi-storey complexes situated along the coastline. The development at 56 Ocean Terrace is in line with development along the coastline.

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 location of the development is situated at a site that is most appealing for residential accommodation. 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 apartments will make use of local labour, local supermarkets, small shops and other businesses, thus supporting and boosting the local economy.

7. MOTIVATION FOR THE PREFERRED SITE, ACTIVITY AND TECHNOLOGY ALTERNATIVE

The development of a multi-storey residential complex triggers Listing Notice 1, GNR 327, Activity 19A (ii) of the EIA Regulations (2017). As per GNR 326 (2017), Appendix 1(2)(b) and 1(3)(g); alternatives for the 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.”*

No alternatives have been considered for the development as the client had taken over the property once construction had already commenced.

7.1. Preferred Site Alternative

The preferred site alternative is situated within an urban area approximately 100m from the High-Water Mark (HWM) of the sea. The construction of the multi-storey residential complex is near completion. The development is limited to the boundary of the property. Thus, adverse environmental impacts will be kept to a minimal. No site alternatives have been proposed as the existing property is privately owned, and the development is near completion. Therefore, it is feasible for the development to take place within this property boundary.

7.2. Preferred Technology Alternative

All work is to comply with SANS 10400. Based on the site plan prepared by the architects, VE Consulting, the following can be noted:

Flat Roof:

- Waterproofing by specialists on screed laid to fall to fullbore outlets on RC slab.
- All to be according to engineer's details and specifications.

Ceiling:

- Skimmed plaster to underside of RC slab.

Floors:

- Ground Floor - cement screed on 100 mm concrete surface bed reinforced with BRC mesh on approved damp-proofing on well compacted and poisoned fill.

Walls:

- Plaster and paint to internal and external walls
- 220 Brick walls externals
- 110Brick walls internally

Windows:

- Natural anodised aluminum windows and epoxied aluminum to PC winbloks glazing to comply with Part N of the NBR.

Doors:

- Natural anodised aluminum doors. Glazing to comply with Part N of the NBR.

General:

- Two courses of brick-force to be provided at both levels of windows and at slab and wall plate levels.
- Foundations not to encroach over boundaries.
- Balustrading to comply with Part D of the NBR.

All dimensions and levels to be checked on site prior to commencement of any work or manufacture and any discrepancies brought to the architects notice. Each unit to have separate water meters.

7.3. No-Go Alternative

The No-Go Alternative is the option of not continuing with the development of the multi-storey residential complex situated at 56 Ocean Terrace, Isipingo Beach. Should the Department not grant Environmental Authorisation, the client may be instructed to decommission the site amongst other conditions. Based on the fact that the Isipingo beach area is a relatively built up area with several multi-storey buildings in the surrounding area of the subject site, decommissioning would not be necessary.

Site Photos



Plate 1: Apartments at Basement Level, Sea View.



Plate 2: Basement Level View.



Plate 3: View of the Bank on Seaward Side of the Property.



Plate 4: Upper Basement Level.



Plate 5: Ground Level, Parking Deck.



Plate 6: Land Adjacent to 56 Ocean Terrace.



Plate 7: Upper Level Apartments.



Plate 8: Driveway Access Via Delta Road.



Plate 9: View of the Bank on Seaward Side of the Property.



Plate 10: Seaward Side of 56 Ocean Terrace.

8. 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 characterised by coastal plains and steep and dissected topography (eThekweni Municipality SDF, 2016-2017).

The eThekweni Municipality (EM) is situated at the center 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 center 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).

The study area is situated in the town of Isipingo, situated 19 kilometres south of Durban in KwaZulu-Natal. The area is blessed with a fascinating mix of cultures and a unique history. Under apartheid it was first a “whites only” area but was then reclassified as Indian. The vibrant town is conveniently located near the Chief Albert Luthuli (M4) highway and is surrounded by a number of factories that offer employment to the people of the area. Prospecton, the adjacent industrial area, is the location of South Africa’s

largest automobile assembly plant, Toyota. The facility, covering almost 9 square kilometres is a place of employment for many Isipingo residents.

The town is built on a high ridge of sand at the mouth of the Isipingo River and forms part of the eThekweni Municipal area. It is named after the river whose name is thought to be derived from the intertwined cat-thorn shrubs present in the area, of the river's winding course. The town comprises Isipingo Rail, Lotus park, Isipingo Hills, Orient Hills, Malukazi and Isipingo Beach. The area has fine beaches and regularly frequented by fishermen, especially during the sardine run. The beach is one of the area's major attractions. The Durban International Airport is situated on the fringes of Isipingo Beach. Neighbouring suburbs include Amanzimtoti and Umlazi.

Tourism remains one of the most significant components of the metropolitan economy. Recreation opportunity is considered to be the main tourist resource within the eThekweni Municipal Area and is based largely on the natural qualities of the coast. The coastline and beaches are significant tourist anchors for accommodation, commercial and entertainment development. Durban's central beachfront is arguably the most important tourism and recreation resource in the eThekweni Municipal Area. According to SA Tourism, research conducted in 2005, the value of foreign tourist to KZN was R6,9 billion with the eThekweni Municipality attracting 1,1 million foreign tourists. The Durban Beachfront was found to be the most popular attraction among foreign tourists, and was visited by approximately 875 000 foreign tourists (64% of tourism to KZN). Accordingly, the KwaZulu-Natal Tourism Authority analysis of the value of KZN's regional tourism markets concluded that Durban captures around 33% of foreign consumer spending in the province (eThekweni Municipality SDF, 2016-2017).

It is therefore understood that the development at 56 Ocean Terrace will also bring the following secondary and tertiary value to the area:

- Increase tourism opportunities in the Isipingo area;
- Potential skills development and employment; and
- Potential increase in property values.

The Draft S24G Application was submitted to AMAFA. AMAFA is the authority responsible for KZN Heritage aspects. As per the comment received from AMAFA, an application I form must be completed and lodged with the Heritage Authority. An application I form is required for the condonation/ approval/ rectification of the unlawful commencement or continuation of work on, or damage of, protected heritage resources. The process of the application I form will be run concurrently to that of the final S24G application. Unless stated by AMAFA, a Heritage Impact Assessment (HIA) will not be undertaken for the development since the development is complete and is situated within an urban residential area.

9. PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) is a requirement in terms of the 2017 EIA Regulations of the National Environmental Management Act, 1998 (Act 107 of 1998) and it forms an integral part of any EIA process. This section provides information pertaining to the PPP that was conducted by 1World Consultants during this Retrospective Basic Assessment Process. The purpose of this process is to gather information from the community and relevant Stakeholders that could ultimately affect the decision-making process concerning continuation of construction and operational phases of the development. The community and public have been identified as I&APs (Interested and Affected Parties) and have been given the opportunity to participate in this process. Their comments, whether positive or negative, will influence the decision of the Authorities and the developer's final actions.

9.1. Objectives of the PPP

The PPP has the following objectives:

- To inform I&APs as well as all Stakeholders of the development and the S24G application;
- To provide an opportunity for I&APs and Stakeholders to raise concerns and make suggestions;
- To promote transparency and an understanding of the project and its consequences;
- To serve as a structure for liaison and communication with I&APs and Stakeholders.

Any conclusions agreed upon must be socially, financially and technically acceptable and feasible in order to meet the requirements of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998), and the vision of the development.

9.2. Public Participation Process Followed

The following PPP was conducted for the development in light of the retrospective basic assessment:

9.2.1. Background Information Document (BID)

Stakeholders and Interested and Affected Parties (I&AP's) were identified and notified of the S24G Application. A Background Information Document (BID) was prepared and distributed to stakeholders and I&AP's which provides an outline of the development and aims to:

- (i) inform I&AP's on how to participate in the S24G application;
- (ii) encourage responses to documents that will be distributed for review; and
- (iii) encourage I&AP's to attend any public meetings.

A copy of the distribution list and BID are included under Appendix D.

9.2.2. Newspaper Advertisement

A newspaper advertisement was published to inform the public of the S24G Application. The advertisement was published in the predominant language of the project area, English, in the Southern Star Newspaper, on 27/02/2018. A copy of the advertisement is included Appendix D.

9.2.3. Site Notice Boards

Site notice boards were erected on the site and in close proximity to the development site on 14 February 2018. As per Chapter 6, Regulation 41(4)(a) of 2017, the size of the notice boards was approximately 60cm by 42cm (size A2). The notice boards have been provided in English with illustrations of the plan. The purpose of the notice board is to inform the community members of the S24G Application and the development of the multi-storey residential complex situated at 56 Ocean Terrace, Isipingo Beach. Contact details of the EAP were also provided to facilitate public participation.

A copy of the site notice board and pictures are provided in Appendix D of this S24G Application.

9.2.4. Landowner Notifications

Interested and Affected Parties (I&APs) were identified and notified of the S24G Application. A Background Information Document (BID) was prepared and distributed via hand delivery. The BID together with Notification letters were hand delivered to neighbours within 100m of the preferred site on 14 February 2018. The BID provided information on the development and the S24G Application as well as the process to be followed by the EAP. A register was drawn up and those properties that were accessible have signed the register to confirm receipt of the BID as well as the notification letter. The signed register has been included under Appendix D.

Map 3 below indicates the properties identified within 100m of 56 Ocean Terrace. Table 9 below lists the physical addresses of those identified properties within 100m of the development site. The outcome of distributing the BID during the site visit is stated in Table 9.



MAP 3: PROPERTIES WITHIN A 100 m OF 56 OCEAN TERRACE

Table 9: Physical Addresses of Landowners within 100m of 56 Ocean Terrace as per Map 3 Above.

	Physical Address	BID Delivery	EAP Comment
	56 Ocean Terrace, Isipingo Beach	N/A	Client and Development Site
A	5 Tiger Rocks Road, Isipingo Beach	Yes	The property was inaccessible. A copy of the BID was deposited into the post box at the property.
B	52 Ocean Terrace, Isipingo Beach	Yes	The BID was hand delivered and received by Mr. Naveen.
C	50 Ocean Terrace, Isipingo Beach	Yes	The BID was hand delivered and received by Ms. Jeanette.
D	48 Ocean Terrace, Isipingo Beach	Yes	The property was inaccessible. A copy of the BID was deposited into the post box at the property.
E	46 Ocean Terrace, Isipingo Beach	Yes	The BID was hand delivered and received by Ms. Fahmeeda.
F	47 Delta Road, Isipingo Beach	Yes	The property was inaccessible. A copy of the BID was deposited into the post box at the property.
G	49 Delta Road, Isipingo Beach	Yes	The BID was hand delivered and received by Mr. Sam.
H	51 Delta Road, Isipingo Beach	Yes	The property was inaccessible. A copy of the BID was deposited into the post box at the property.
I	53 Delta Road, Isipingo Beach	Yes	The BID was hand delivered and received by Ms. Naidoo.
J	55 Delta Road, Isipingo Beach	Yes	The property was inaccessible. A copy of the BID was deposited into the post box at the property.
K	56 Delta Road, Isipingo Beach	Yes	The BID was hand delivered and received by Mr. Mohamed.

9.2.5. 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 the draft S24G Application.

Issues Raised by the I&APs

Copies of the S24G application were circulated to the following I&APs for review and comment:

- KZN Department of Transport
- Ezemvelo KZN Wildlife
- Department of Water and Sanitation
- AMAFA Heritage
- KZN Corporate Governance and Traditional Affairs
- Ward Councilor Gordon MacKay – Ward 90
- Commission on Restitution of Land Rights
- eThekweni Municipality (various departments)
- KZN Department of Economic Development, Tourism and Environmental Affairs.

All registered I&APs were notified on the availability of the draft S24G application for comment. All I&APs were reminded that in terms of the EIA Regulations (2017), GNR 326 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 and draft S24G application are summarised below. **Issues/ Comments Raised Following Review of the BID**

Landowners have not requested for a copy of the draft S24G Application following distribution of the BID. Comments have been received from the following I&APs:

- Commission on Restitution of Land Rights
- eThekweni Municipality (various departments)

Issues/ Comments Raised Following Review of the draft S24G Application

Comments have been received from the following I&APs:

- KZN Department of Economic Development, Tourism and Environmental Affairs.
- Ezemvelo KZN Wildlife
- eThekweni Municipality (various departments)
- AMAFA Heritage

A full Comments and Responses Report can be reviewed under Appendix D.

10. IMPACT ASSESSMENT

10.1. Methodology

EIA Regulation GNR 326 (2017) 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.

10.2. Impacts Identified

The impacts of the construction and operation phases for the development of the multi-storey residential complex situated at 56 Ocean Terrace are summarised in Table 10 and 11.

The duration of the construction phase was 20 months.

Table 10: Impacts Identified and Associated Mitigation Measures for the Construction Phase

Nature of Impact	Impact Type	Frequency		Severity		Duration	Spatial Scope	Impact Score with Mitigation	Significance
		Unmitigated	Mitigated	Unmitigated	Mitigated				
CONSTRUCTION PHASE OF THE PREFERRED ALTERNATIVE									
Traffic Pressures and access	Direct	5	3	3	2	2	3	10	Medium
Soil erosion and stormwater	Cumulative	4	3	4	3	2	2	10	Medium
Ground water pollution (sea)	Indirect	4	2	3	1	3	3	9	Low
Surface water pollution (sea)	Indirect	4	2	4	2	2	2	8	Low
Risk of alien invasive encroachment into disturbed areas.	Cumulative	2	1	3	2	3	1	7	Low
Flora - Damage and removal of existing indigenous vegetation.	Direct	2	1	2	1	2	1	5	Low
Fauna - Hunting/ Fishing/ Poaching by construction workers.	Indirect	2	1	2	1	2	1	5	Low
Waste and littering around the site.	Cumulative	4	3	3	2	3	2	10	Medium
Noise disturbance	Direct	5	4	2	1	3	2	10	Medium
Air Quality	Direct	4	2	4	2	2	2	8	Low
Visual Quality	Direct	5	4	3	2	3	2	11	Medium
Public safety and health	Direct	5	4	3	2	3	2	11	Medium
Existing Infrastructure Disturbance	Indirect	4	3	3	2	3	3	11	Medium

Social Impacts	Cumulative	4	3	3	3	4	3	13	Medium
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Table 11: Impacts identified and Associated Mitigation Measures for the Operational Phase

Nature of Impact	Impact Type	Frequency		Severity		Duration	Spatial Scope	Impact Score with Mitigation	Significance
		Unmitigated	Mitigated	Unmitigated	Mitigated				
OPERATIONAL PHASE OF THE PREFERRED ALTERNATIVE									
Noise and Disturbance	Indirect	2	1	2	1	4	1	7	Low
Visual Impacts	Indirect	3	2	3	2	4	2	10	Medium
Air Quality	Indirect	2	2	1	1	3	3	9	Low
Surface run-off	Cumulative	3	2	2	1	2	2	7	Low
Stormwater Management and Maintenance of Structures	Cumulative	3	2	2	1	2	2	7	Low
Sea level rise due to climate change	Indirect	1	1	4	4	5	4	14	Medium
Bank Stabilisation and Rehabilitation	Cumulative	3	3	3	2	5	2	12	Medium

10.3. Significance of Impacts

Construction 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 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 11 above, the overall significance of the impacts with mitigation measures for the operational phase, is noted to be **LOW/MEDIUM** i.e. the impact is of little importance since it is easily and adequately mitigated.

11. MITIGATION MEASURES

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 must 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 neighboring 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.
- Minimise 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
- New Stormwater Infrastructure Construction must be developed strictly according to specifications from the Stormwater Layout Plan in order to ensure efficiency.
- Earth, stone and rubble is to be properly disposed of so as not to obstruct natural water path ways over the site (i.e. these materials must not be placed in stormwater channels, drainage lines or rivers unless part of an approved anti-erosion program.
- There should be a periodic checking of the site's drainage system to ensure that the water flow is unobstructed.
- 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 only potential for pollution is uncontrolled dumping in the sea which will be difficult.

- 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.
- No laundry and bathing are allowed in the 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 the sea to minimise the risk of run-off entering the sea.

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.

- 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
- Monitor all sites disturbed by construction activities for colonisation by exotics or invasive plants and control these as they emerge.

Flora - Damage and removal of existing indigenous vegetation

- 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 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.

Fauna - Hunting/ Fishing/ Poaching by construction workers.

- 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.

Waste and littering around the site - Improper storage/ disposal of waste and litter may affect neighbors as well as contaminate/ pollute the sea.

- 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.
- 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 or will be collected and kept in a designated area on site until ready for disposal.
- Littering is prohibited, and general housekeeping must be enforced.

Noise disturbance - the presence of personnel and machinery will present a nuisance to the area.

- 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 – avoid night time 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.

Air Quality - Dust generated from construction vehicles and on-site activities.

- Dust control measures/suppression of dust must be implemented timeously by the contractor.
- Water trucks must be utilised 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.

Visual Quality - the area is urban and surrounding neighbors, including businesses, may not appreciate the presence of a construction site in the vicinity.

- 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.

Public safety and health – occupational safety, security and health of staff and public in general.

- 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 site.
- 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 neighbors 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.

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.

- 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.

Socio Economic Impacts – Job creation and possible economic benefit to construction material suppliers in the area.

- 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.

Operational Phase

Noise and Disturbance

- All noise generating plant such as air conditioning, refrigeration, fans, etc. are to comply with noise standards.

Visual impacts

- All flood lighting to comply with relevant standards.
- No unauthorised or un-approved structures are to be erected.

Air Quality

- The proposed operational phase activities may affect air quality as a result of emissions caused by exhaust fumes and dust generation. The effect on air quality is expected to be very localised and minor.

Surface runoff - 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.

Stormwater Management and Maintenance of Structures - Proper management maintenance must be conducted throughout the lifespan of the operational phase.

- The site must be managed in order to prevent pollution of drains or groundwater, due to suspended solids, silt or chemical pollutants.
- Earth, stone and rubble is to be properly disposed of so as to not obstruct natural water path ways over the site (i.e. these materials must not be placed in stormwater channels, drainage lines or rivers unless part of an approved anti-erosion program.
- There should be a periodic checking of the site's reticulation store to ensure that the water flow is unobstructed.

Sea level rise due to climate change – Densely populated coastal areas are at elevated risk of storm surges and flooding due to sea level rise caused by climate change. The design of the house does take into consideration the risks that are posed by rise in sea levels. The distance from the HWM of the sea to the boundary of the property is 57.9m. The boundary wall is at a height of 2m which will be maintained. The building will also be situated at least approximately 4-5m above sea level reducing the risk of being affected by rise in sea level.

- Vegetation provides a buffer and breaks waves.
- Breakwater structures are offshore structures intended to break waves, reducing the force of wave action, and encourage sediment accretion.
- Sand bags can be placed outside of the property boundary.

Bank Stabilisation and Rehabilitation

- Planting on the banks may be desirable where natural or man-made processes or human intervention have resulted in bare soil being exposed. In many cases, planting represents the most sustainable option for stabilising such banks.
- Soil roughening reduces and detains runoff and improves vegetation establishment. Used to loosen the soil for improved soil properties for improved vegetation establishment.
- Short retaining walls reduces effective slope angle, provides cover for pioneering woody vegetation, holds soil in place on moist

sites while allowing it to drain.

- Gabions can be used as retaining walls and are economical solutions and a good alternative to other retaining structures due to their flexibility and permeability. Gabions are used to stabilise and protect slopes that may be susceptible to erosion. Gabion baskets and reno mattresses have some advantages over loose rock buttresses because of their modularity and ability to be stacked in various shapes.
- Sand-bags can be used for bank stabilisation. Installation and maintenance complexity are minimal, since vegetation does not grow through the fabric.

12. SUMMARY OF SPECIALIST STUDY AND FINDINGS

12.1. Geotechnical Investigation

Peter Allen & Associates Consulting Geotechnical Engineers conducted the Geotechnical Investigations for the development of a multi-storey residential complex.

A field visit was conducted in early February 2017, where it was found that the site area has a natural surface that rises at a 15° angle from Ocean Terrace, which is considered a stable angle. The slope has been cut to accommodate for the project. The area is underlain by recent dune sand, Berea Red Sand and loose sand that extends several meters below ground level. This type of sand is highly compressible and would pose a significant risk to the foundation movement even under low pressure.

A general inspection of the site geomorphology and topography revealed that there were no signs of latent or incipient instability that would be triggered by the development. An inspection was also conducted on other buildings in the area which revealed no evidence of damage caused by lateral soil movements. Additionally, there was no evidence of groundwater seepage on site, which generally associated with potentially unstable areas. Thus, it becomes apparent that the stand is stable enough to hold the development.

The Geotechnical Investigation Report can be reviewed under Appendix E.

12.2. Stormwater Management Plan

A Stormwater Management Plan was conducted by Vawda Engineers, for the development. The Stormwater Layout has not been approved by the Municipality to date. However, the developer is engaged in communications with the municipality to gain the necessary approval.

Currently, stormwater drains in a south-easterly direction and overland flow drains towards the lower end of the property. The applicable design standards used for this development is from the eThekweni Municipality: Design Manual Guidelines and Policy for the Design of Stormwater Drainage Systems.

The stormwater management system comprises of the following aspects;

- An attenuation storage area is located in the lower portion of the property that has been identified for stormwater drainage.
- Overland flow and rainwater downpipes that discharge into an attenuation storage area.
- Roof downpipes that will discharge above ground and drain towards attenuation storage.
- An outlet pipe of maximum diameter 160mm. The outlet is capable of passing a peak discharge of the pre-development 1:10 year storm recurrence interval.

The Stormwater Management Plan can be reviewed in Appendix E.

12.3. Traffic Impact Assessment

In order to determine the likely traffic impact that the proposed development would have on the road network, it was necessary to ascertain the current traffic performance of the traffic system within the vicinity of the development site. Manual traffic counts were undertaken on Wednesday, 27 January 2016. The traffic counts were used to determine the current level of traffic at affected intersection in the vicinity of the development site. The access to the development would be a priority-controlled intersection, with priority given to Delta Road.

A traffic management is not required for this assessment since the proposed Scheme Amendment Application of the General Residential 1 zone, situated at 56 Ocean Terrace, Isipingo Beach, south of Durban, to establish a high density residential development is expected to have a negligible impact on the road network within the Isipingo Beach area and particularly on Delta Road. It is recommended that the Scheme Amendment application be approved from a traffic and transportation engineering point of view. The analysis of the proposed residential development generated traffic showed that the existing road network surrounding the development site would be able to accommodate the additional traffic generated by the proposed development.

The Traffic Impact Assessment Report can be reviewed under Appendix E.

12.4. Minimisation of Shadows on Beaches Policy for eThekweni: Shadow Impacts on Beaches and Residential Amenities

The beachfronts of eThekweni are collectively one of the municipality's key tourism assets, and any future development along the beachfronts needs to ensure that this asset is not undermined. The recreational use of any beach is highly dependent on direct sunlight, and therefore the positioning of developments close to the beach can compromise beach amenity through overshadowing. Arising out of the Umhlanga Node Study conducted by the Municipality in 2005/ 2006, the eThekweni Municipality recommended that a city-wide policy be implemented. The "**Minimisation of Shadows on Beaches Policy for eThekweni: Shadow Impacts on Beach and Residential Amenities**" has been developed and aims to manage the shadow impacts of all future coastal developments in the eThekweni municipal area.

Current building heights along the city's beachfronts range from 2 to 40 story's. The shadow impacts of these buildings are associated with their height, orientation and position on site including whether they cast a shadow of a swimming or non-swimming beach. The Shadow Impact Assessment focuses on winter conditions as the worst-case scenario because this is the season when direct sunlight is most wanted, but also when beach overshadowing is most extreme. To protect the beach from overshadowing in the afternoons, two key strategies were adopted:

1. Limit Shading Period
2. Orientation of buildings

The Policy Requirement for the **Limiting of Shading periods** are that "*New Coastal Development shall not result in shadows before 3pm in midwinter (all beaches) and before 4 pm in midwinter (swimming beaches)*".

The Policy Requirement for the **Orientation of Buildings** are that "*New development to meet specific orientation requirements to limit impact of shadows before 3pm (all beaches) and 4pm (swimming beaches) in midwinter*".

Based on the Shadow Simulations below, the shadow projections indicate that the actual impacted area will be relatively small, and it must be noted that the projected shadows over the beach area is that of a non-swimming beach. Overall, the impacts are not considered to be significant. It is important to note that the height of the proposed development is in keeping with that of the neighbouring buildings.

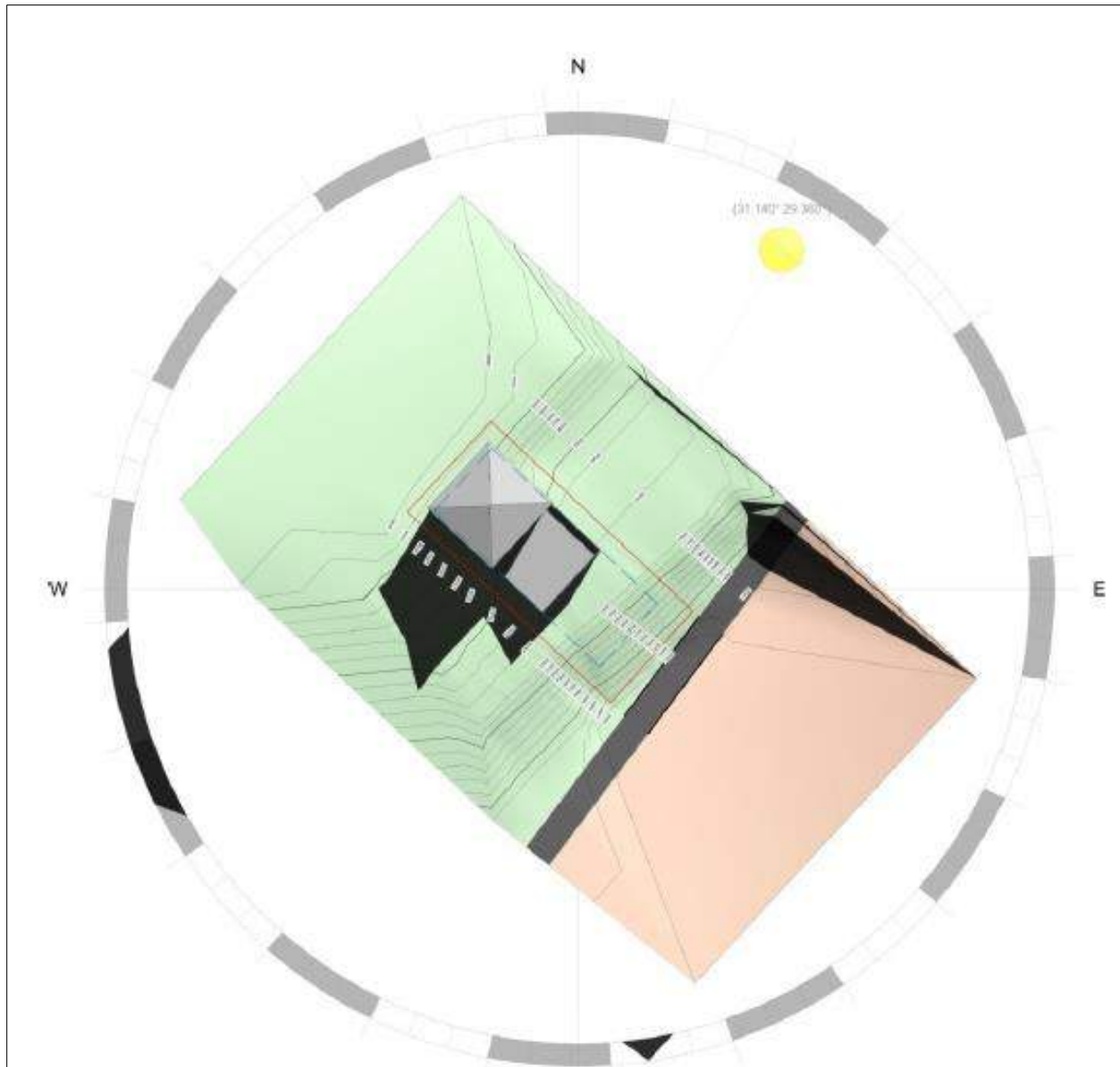


Figure 5: Shadow Impact Assessment/Study in Mid-Winter on 21st June @ 10AM

The building in this hour of the day does not limit user's enjoyment of a sunny beach by causing any casting of shadows. The shadow cast on the south-west is set back and possibly does not infringe over the boundary of the neighbouring vacant site.

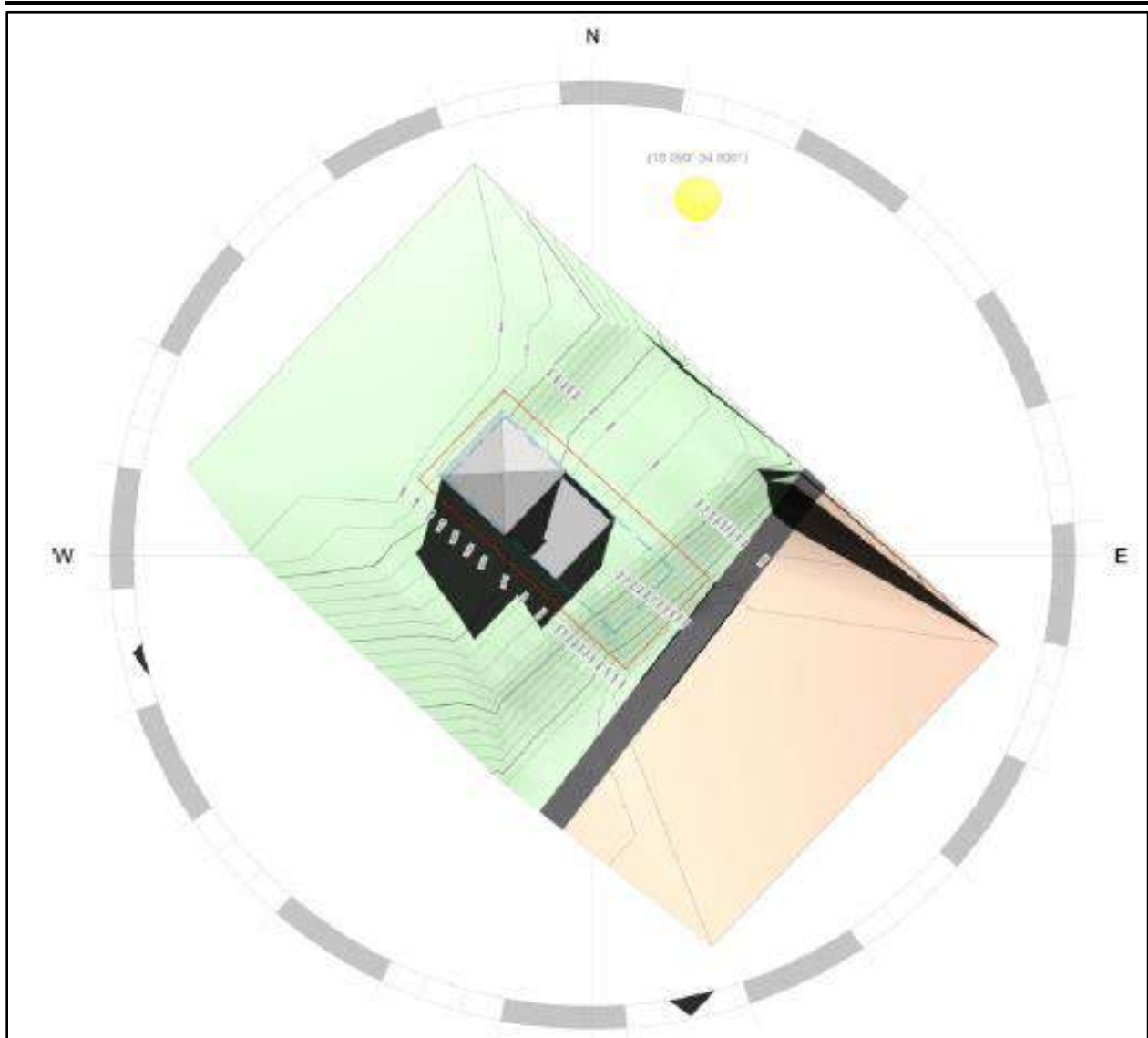


Figure 6: Shadow Impact Assessment/Study in Mid-Winter on 21st June @ 11AM

The building in this hour of the day does not limit user's enjoyment of a sunny beach by causing any casting of shadows. The shadow cast on the south-west is affecting mostly the side road and a bit on the vacant site which could possibly not go over the boundary during this specific hour of the day and therefore not compromising the rights of potential neighbours to direct sunlight.

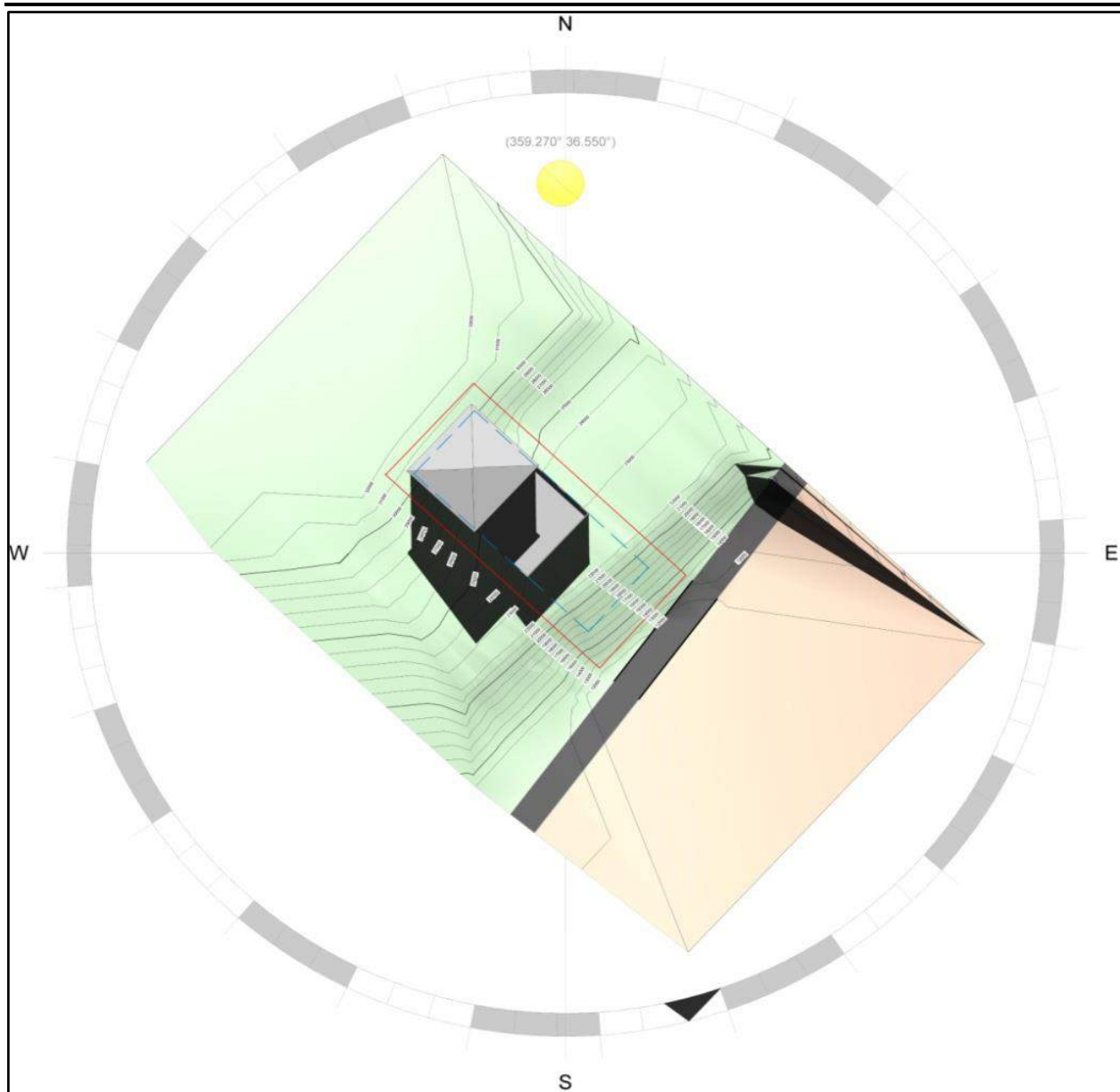


Figure 7: Shadow Impact Assessment/Study in Mid-Winter on 21st June @ 12PM

The building in this hour of the day does not limit user's enjoyment of a sunny beach by causing any casting of shadows. The shadow cast on the south-west is affecting mostly the side road and a bit on the vacant site which could possibly not go over the neighbours boundary during this specific hour of the day and therefore not compromising the rights of potential neighbours to direct sunlight.

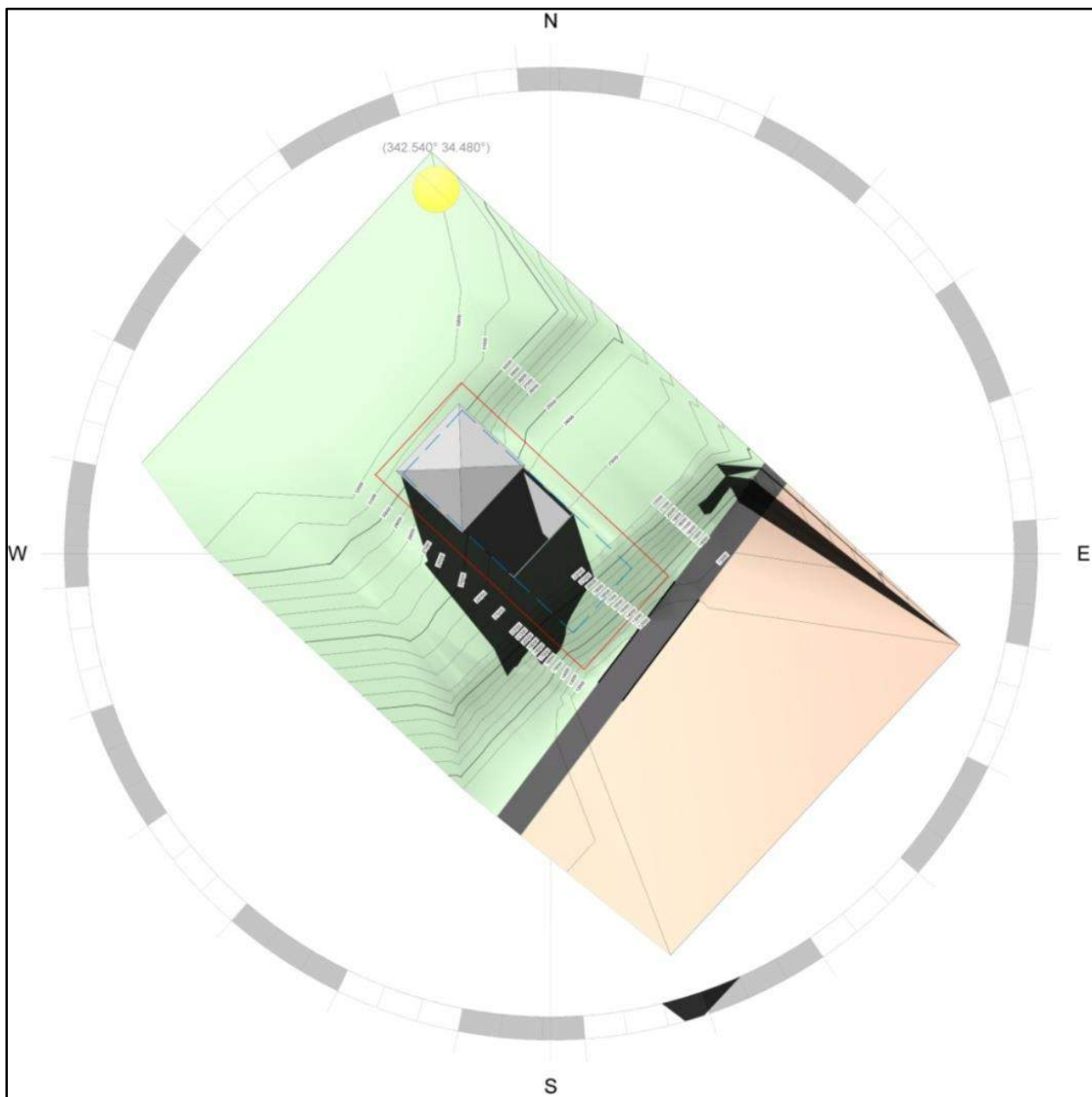


Figure 8: Shadow Impact Assessment/Study in Mid-Winter on 21st June @ 1PM

The building in this hour of the day does not limit user's enjoyment of a sunny beach by causing any casting of shadows. The shadow cast on the south-west is affecting mostly the side road and a bit on the vacant site which could possibly not go over the neighbours boundary this specific hour of the day and therefore not compromising the rights of potential neighbours to direct sunlight.

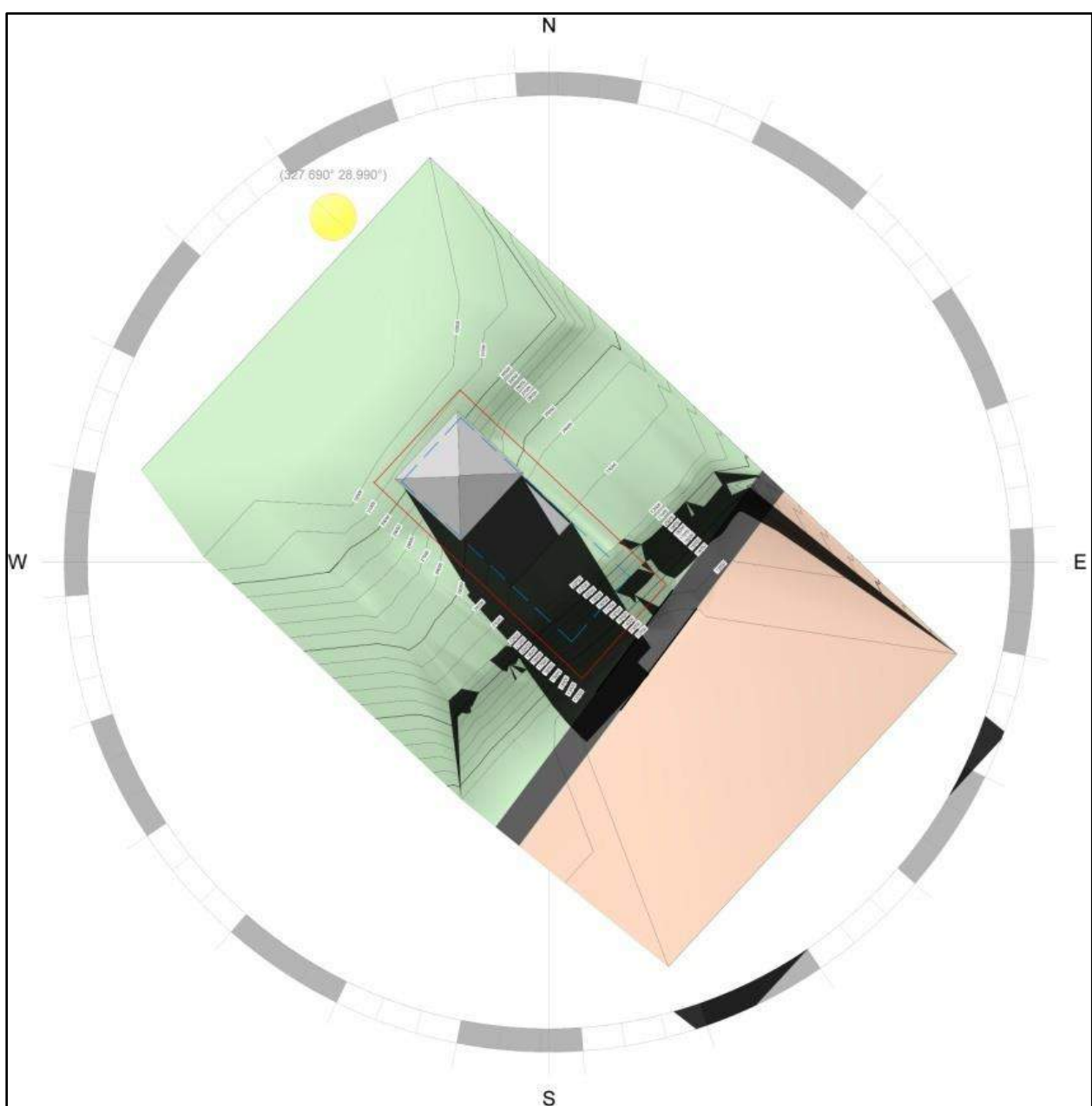


Figure 9: Shadow Impact Assessment/Study in Mid-Winter on 21st June @ 2PM

The building in this hour of the day does not limit user's enjoyment of a sunny beach by causing any casting of shadows. The shadow cast shows the building casting a shadow on the street, and not the beach.

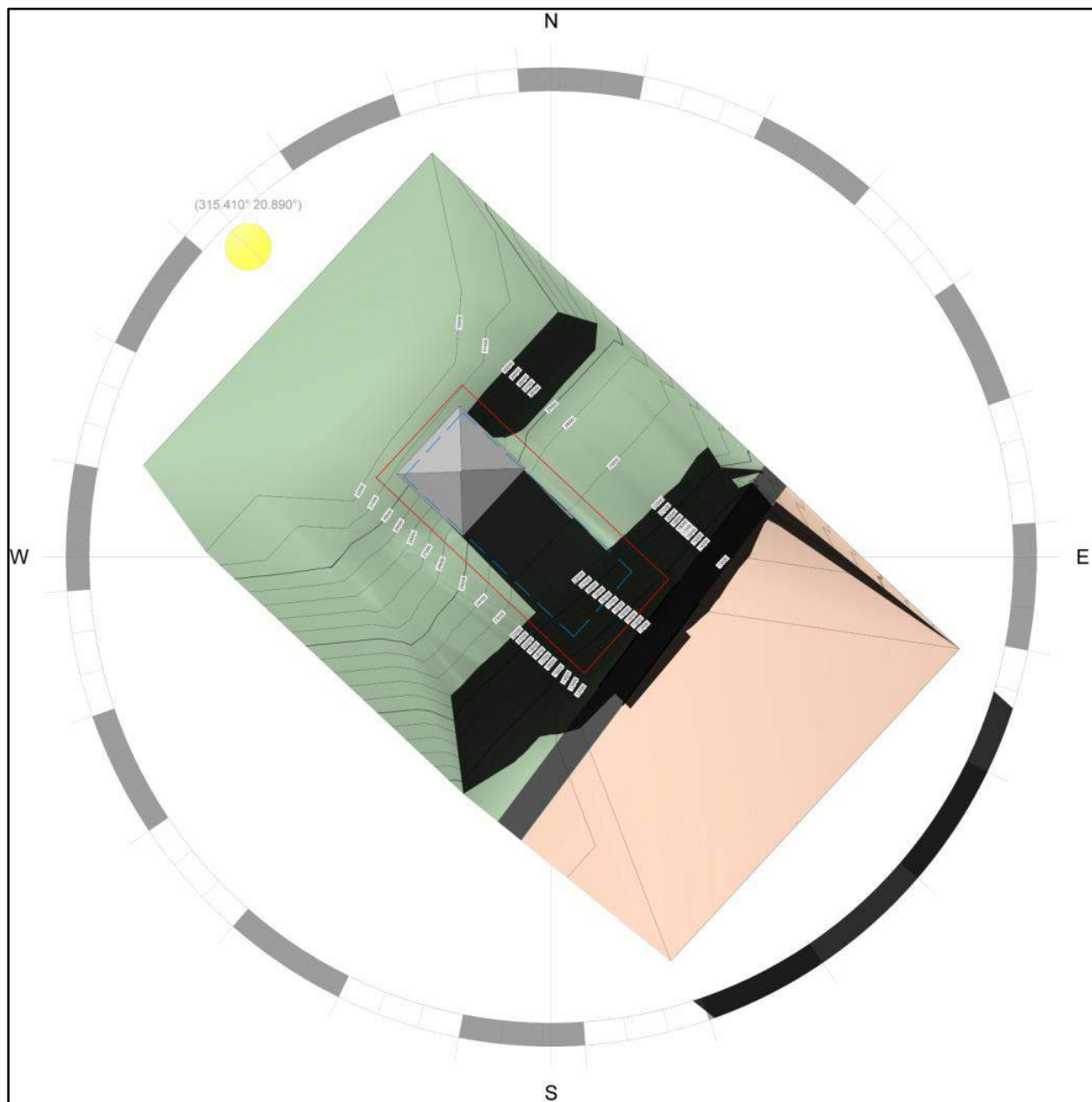


Figure 10: Shadow Impact Assessment/Study in Mid-Winter on 21st June @ 3PM

The Shadow study shows the building casting a shadow on the beach. There are no life-guards or any sign of life guard stations on this beach. This section of the beach (opposite ERF 986) is very rough, there are a group of rocks in and around the water. Therefore, it can be assumed that this section seldom has a huge crowd and therefore not ideal for swimming. Tiger Rocks swimming pool is at close proximity; hence crowds are mostly attracted to that area as opposed to the affected area at 2 - 3pm and is the worst-case scenario taking into account the month and time of day.

The full Shadow Simulations Study can be reviewed under Appendix E.

13. ENVIRONMENTAL IMPACT STATEMENT

According to the **Geotechnical Investigation**, the site is underlain by loose sand of very recent geological origin, and this material is known to extend to a depth of several meters below ground level. For a four storey building, with moderate column loads, the relatively high compressibility of the sand will be such that there would be a significant risk of differential foundation movement even under a low bearing pressure. It is thus recommended that the proposed building be supported on pressure grouted auger piles. Piles will carry the load in friction in the sand, and may be typically augered to a depth of approximately 10m below underside of pile cap.

Geosure (Pty) Ltd has carried out an integrity test on 1 February 2017 for 17 piles. The test results confirm that no acoustic anomalies are shown that could be representing structural defects in the piles over the effective depth range of the test. A certificate was issued in terms of Piling Guarantee No. 1000/32313 in the name of Shona Piling CC. The certificate and letter confirming the above can be reviewed under Appendix E.

According to the **Stormwater Management Plan**, the Local Municipality policy requires that privately owned sites should make provision for and manage their own stormwater runoff. Such management may be the provisions of soak pits or structures such as attenuation ponds or tanks (with controlled outlets where necessary), all to ensure that the rate of runoff is reduced to pre-development states and that runoff is not concentrated onto any adjacent or otherwise neighboring states.

According to the **Traffic Impact Assessment**, Since the proposed Scheme Amendment Application of the General Residential 1 zone, situated at 56 Ocean Terrace, Isipingo Beach, south of Durban, to establish a high density residential development comprising of a maximum of 18 units as per zoning controls is expected to have a negligible impact on the road network within the Isipingo Beach area and particularly on Delta Road, consequently, it is therefore, recommended that the Scheme Amendment application be approved from a traffic and transportation engineering point of view.

Several impacts have been identified and rated as can be viewed on tables 8 and 9 above. Based on the outcome of the Impact Assessment in Section above, the overall significance of the impact are Low to Medium during the construction phase; and Low during the operational phase.

Through this S24 G Application, it has been concluded that the 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 was long term (20 months) and was 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.

14. IMPACT MANAGEMENT MEASURES FROM SPECIALIST STUDIES

14.1. Geotechnical Investigation

A number of precautions, that are consistent with sound building practices on dune sand slopes, must be taken to ensure that the development is stable. The following recommendations are made:

- a. Foundations:
 - Due to the nature of the underlying soils, it is recommended that a bearing pressure of not more than 100kPa be utilised for this design.
 - Pressure grouted auger piles are recommended as they will be able to carry the load of the friction in the sand. These piles must be augered at a depth of 10m.
 - Augered piles are the most cost effective foundation types for this development, in addition to minimising the risk of damage that could occur as a result of differential foundation movement.
 - A safe load capacity can be estimated assuming an average allowable side friction in the natural sand of approximately 40kPa, and a safe load carrying capacity of 630Kn for a 500mm diameter pile.
- b. Earthworks:
 - Cut a fill should be formed at a batter preferably not steeper than 30° to the horizontal.
 - Growth of vegetation must be initiated early in the project to prevent erosion.
 - There should not be a concentrated discharge of surface water on to slopes, which could cause localised soil erosion.
 - Steeper slopes should be retained by retaining walls or dry stack walls.
 - All earthworks must be properly planned and supervised to avoid irrevocable damage.
- c. Stormwater:
 - Stormwater should be discharged into the existing Municipal stormwater system.
 - Use of attenuation tank is recommended to avoid high flow rate into the stormwater reticulation system.
 - Regular maintenance of the stormwater disposal system is crucial to avoid unnecessary blockages. These blockages could give rise to exposed foundations and flooding of buildings.

14.2. Stormwater Management Plan

The following recommendations have been made by the engineers;

- A pipe of maximum diameter 160mm to be used for outlet control.
- A stormwater line to be provided from the lower end of the property to the nearest municipal connection point.
- An going maintenance management plan is required, to ensure that the storage facilities are kept free of silt and debris so as to prevent any blockages that may arise.
- Storm events greater than 1:50 year to be adequately dissipated

15. CONDITION OF AUTHORISATION

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

- 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 during the Operational Phase over a one year period with an audit carried out once every two months to ensure that rehabilitation has been successful.

16. 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. A rehabilitation plan has been compiled and must be adhered to.

Refer to Appendix F for a full Environmental Management Plan (EMP) and Rehabilitation Plan. The EMP must be read in conjunction with the S24G Application.

17. TIMEFRAMES

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

18. UNDERTAKING UNDER OATH OR AFFIRMATION BY THE EAP

(i) 1World Consultants (Pty) Ltd hereby confirms that the information provided in this S24G Application 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 Stakeholders and I&AP's have been included in this report. It is to be noted that in terms of the EIA Regulations (2017), 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 S24G Application. Recommendations from the specialists have been included in the EMP.

(iv) All information and comments received in response to this S24G Application will be summarised and responded to in a final version of the Report, which will be submitted to EDTEA for consideration in terms of issuing a retrospective Environmental Authorisation.

For 1World Consultants (Pty) Ltd:



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

APPENDICES

The following appendixes must be attached as appropriate:

Appendix	Description of Contents
A	Warning Letter S24G Application Directive in Terms of S24G Title Deed
B	Company Profile of EAP Project Experience of EAP Curricula Vitae of EAP Team EAP Declaration Specialist Declarations
C	Engineering and Contractor Reports Plans of Existing Development
D	Distribution list Background Information Document Proof of BID Circulation Newspaper Advertisement Copy of Site Notice Board Photograph of Site Notice Boards Landowner Notification Register Comments and Responses Report Copies of Correspondence with I&AP's Addendum to S24G Application
E	Geotechnical Report Storm Water Management Plan Traffic Impact Assessment Shadow Impact Assessment
F	Final Environmental Management Plan Final Rehabilitation Plan