

Draft Basic Assessment Report



**Draft Basic Assessment Report for the proposed Regent Estate Development,
eThekweni Municipality KZN.**

A Project of MET Developments (Pty) Ltd.

14th August 2020



agriculture & environmental affairs

Department:
Agriculture
& Environmental Affairs
PROVINCE OF KWAZULU-NATAL

File Reference Number:
Application Number:
Date Received:

(For official use only)

**THIS REPORT WAS COMPILED BY WALLACE AND GREEN (PTY) LTD. IN TERMS OF
APPENDIX 1 TO GNR 326 (AS AMENDED)**

2014 NEMA EIA Regulations (As amended), Appendix 1- 3(a) a basic assessment report must contain the information that is necessary for the competent authority; (i) EAP who prepared the report and (ii) the expertise of the EAP, including curriculum vitae.

3 (1) (a) details of (i) the EAP who prepared the report; and (ii) the expertise of the EAP. Please see Appendix H for EAP Declaration and full Curriculum Vitae.

DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Table 1: Details of the Environmental Assessment Practitioner

Contact Persons	Ms. Simitha Koobair (Certified EAP)
Postal Address	24 Agar Place Riverside, Durban North 4051
Telephone	031 563 4466
Facsimile	086 613 8535
E-mail	simitha@wallaceandgreen.co.za
Qualification	Bachelor of Science (Honors) in Geography
Professional Registrations	EAPASA
Voluntary Memberships	IAIAsa
Experience	>7 years

Table 2: Details of the project Applicant

DETAILS OF THE PROJECT APPLICANT

Applicant	MET Developments
Representative	Mr. Moegamat Behardien
Physical Address	101 Jan Hofmeyer Road, Westville, Durban, 3630
Postal Address	P.O. Box 489, Westville, 3630
Telephone	031 266 2483/ 083 645 3870
Facsimile	086 725-9433
E-mail	moegamat@metbuilders.co.za

EXECUTIVE SUMMARY

Wallace and Green has been appointed by MET Developments to provide independent Environmental Consulting Services for the proposed Regent Estate Development by conducting a Basic Assessment (BA) Report in terms of the Environmental Impact Assessment (EIA) Regulations of 2014 (GNR 326 of December 2014), as promulgated under the National Environmental Management Act (NEMA) (Act No. 107 of 1998).

The total extent of the site is approximately 7.6ha. Majority of the site is covered by D'MOSS and is within a Critical Biodiversity Area. The proposed Regent Estate Development is located within Westville, Ward 92 of the eThekweni Municipality. The site is bordered by the M19 to the South, vacant land to the West, residential and vacant land to the East and Aller River and Clermont Township to the North. The property is currently vacant and is accessed from Glengarry Place. There are three electrical pylons that are located on the western section of the site. There are walkways and evidence of subsistence crop cultivation and illegal dumping that is taking place on a portion of the site.

The proposed development entails the following:

- Removal of indigenous vegetation;
- Construction of 309 two-bedroom units (13 blocks will consist of 18 units each and 5 blocks will consist of 15 units each);
- Internal roads and parking bays;
- Water supply infrastructure which includes pipelines and a steel 400kl tank together with a pump station;
- Stormwater infrastructure which includes pipelines and stormwater retention ponds;
- Sewer infrastructure which includes pipelines, manholes and a low volume on site package plant.

This BA follows the legislative process prescribed in the Environmental Impact Assessment (EIA) Regulations (2014). This report constitutes the draft Basic Assessment Report (DBAR) which details the environmental outcomes, impacts and residual risks of the proposed activity. The report aims to assess the key environmental issues and impacts associated with the development, and to document Interested and Affected Parties' (I&APs) issues and concerns. Furthermore, it provides background information of the proposed project, a motivation and details of the proposed project, and describes the public participation undertaken to date.

The objective of this report is to provide the project's I&APs, stakeholders, commenting authorities, and the competent authority (CA), with a thorough project description and BA process description. The outcome being to receive productive comment / input, based on all information generated to date and presented herein.

In order to protect the environment and ensure that the development is undertaken in an environmentally responsible manner, there are several significant portions of environmental legislation and specialists' studies that were taken into consideration during this study and are elaborated on in this report.

The KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (KZN EDTEA) is the lead / competent authority for this BA process and the development needs to be authorised by this Department.

TABLE OF CONTENTS

THIS REPORT WAS COMPILED BY WALLACE AND GREEN (PTY) LTD. IN TERMS OF APPENDIX 1 TO GNR 326 (AS AMENDED)	3
DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER	3
DETAILS OF THE PROJECT APPLICANT	3
EXECUTIVE SUMMARY	4
TABLE OF CONTENTS	5
APPENDICES	6
APPENDIX 1: NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998): ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2014 (AS AMENDED)	7
Section 1: DESCRIPTION OF THE PROPOSED ACTIVITY & LOCALITY	9
Section 2: SITE DESCRIPTION OF SURROUNDING LAND USE AS PER SECTION 3(H) (IV) AND (K) ...	29
Section 3: POLICY AND LEGISLATIVE FRAMEWORK	40
Section 4: MOTIVATION, NEED AND DESIRABILITY	43
Section 5: PUBLIC PARTICIPATION	45
Section 6: IMPACT ASSESSMENT	48

APPENDICES

Appendix A: Site Plan(s)

Appendix A1 - Google Image
Appendix A2 - Locality Map
Appendix A3 - Sensitivity Map

Appendix B: Site Photographs

Appendix C: Facility illustration(s)

Appendix C1 - Preferred Layout
Appendix C2 - Alternative Layout
Appendix C3 - Services Layout

Appendix D: Specialist Reports

Appendix D1 - Alien Invasive Management Plan
Appendix D2 - Aquatic Assessment
Appendix D3 - Ecological Assessment
Appendix D4 - Open Space Management Plan
Appendix D5 - Engineering and Stormwater Management Plan
Appendix D6 - Geotechnical Assessment
Appendix D7 - Heritage Survey
Appendix D8 - Traffic Impact Assessment
Appendix D9 - Wetland Delineation and Functional Assessment

Appendix E: Public Participation

Appendix E1 - PPP Summary
Appendix E2 - Site Notice
Appendix E3 - Proof of Site Notice
Appendix E4 - Advertisement
Appendix E5 - Proof of Advertisement
Appendix E6 - BID & Comment Form
Appendix E7 - I&AP Database
Appendix E8 - Public Participation Plan

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and Expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information

Appendix J1 - EDTEA Pre-application Minutes of Meeting
Appendix J2 - Sales Agreement
Appendix J3 - Proof of WUL Submission to DWS

**APPENDIX 1: NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998):
ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2014 (AS AMENDED)**

SECTION OF APPENDIX 1 OF THE EIA REGULATIONS	DESCRIPTION OF THE SECTION	ASSOCIATED SECTION WITHIN THE BAR
3a	Details of the EAP and CV	Page 3
3b	Location of the activity	Section 1.5
3c	A layout plan	Section 1.6
3d	Description of the scope of the proposed activity including the triggered and specified activities, associated structures and infrastructure and the way the proposed development relates to the triggered activities	Section 1.2 and 1.3
3e	Description of the policy and legislative context within which the development is proposed and how is each one applicable and to the proposed activity	Section 3
3f	A motivation for the need and desirability (including the development at that specific location)	Section 4
3g	A motivation for the preferred site, activity and technology alternative	Section 1.4
3h (i)	Details of all the alternatives considered	Section 1.4
3h (ii)	Details of the Public Participation Process (PPP) undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs	Section 5
3h (iii)	A summary of the issues raised by interested and affected parties, and an indication of the way the issues were incorporated, or the reasons for not including them	Section 5
3h (iv)	The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects	Section 2
3h (v)	The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts- (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated;	Section 6.2
3h (vi)	The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives	Section 6.1
3h (vii)	Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects	Section 6.2
3h(viii)	The possible mitigation measures that could be applied and level of residual risk	Section 6.2
3h(ix)	The outcome of the site selection matrix	Section 6.2

3h(x)	If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such	Section 1.4
3h(xi)	A concluding statement indicating the preferred alternatives, including preferred location of the activity	Sections 4.2 and 6.3
3i	A full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including- (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures	Section 6.2
3j	An assessment of each identified potentially significant impact and risk	Section 6.2
3k	Where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final report	Section 2
3l	An environmental impact statement containing a map and a summary of the positive and negative impacts of the proposed development and alternatives	Section 6.3
3m	Based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr	Section 6.4
3n	Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation	Section 6.8
3o	A description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed	Section 6.5.
3p	A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation	Section 6.8
3q	Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised	Section 6.6
3r	An undertaking under oath or affirmation by the EAP	Refer to Appendix H
3s	Where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts	Not Applicable

SECTION 1: DESCRIPTION OF THE PROPOSED ACTIVITY & LOCALITY

1.1 Project Title

Proposed Regent Estate Development, eThekwin Municipality, KZN.

1.2 Description of the Activities to be Undertaken Including Associated Structure and Infrastructure as per Section 3(d) (ii)

2014 EIA Regulations (As amended), Appendix 1- 3(d) a description of the scope of the proposed activity, including (ii) a description of the activities to be undertaken including associated structures and infrastructure.

MET Developments proposes the establishment of an affordable residential development within the Westville suburb, situated in Ward 92 of the eThekwin Municipality. As indicated in Figure 1 below, the site is boarded by the M19 to the South, vacant land to the West, residential and vacant land to the East and the Aller River and Clermont Township to the North. The property is currently vacant and is accessed from Glengarry Place.



Figure 1: Google Image of Site

Please refer to Appendix A1 and A2: Site Plan - Google Image and Locality Map.

The proposed development will entail the construction of 309 two-bedroom units, internal roads and parking bays; water supply infrastructure which includes pipelines and a steel 400kl tank together with a pump station; stormwater infrastructure which includes pipelines and stormwater retention ponds; as well as sewer infrastructure which includes pipelines, manholes and a low volume on site package plant, which will discharge treated effluent into the Aller River.

Approximately 4ha of the 7.6Ha site will be developed whilst the remainder will be left as Private Open Space. Whilst majority of the site is classified as DMOSS and CBA, approximately 2.1Ha of the development will be constructed within a transformed area (as per the Ecological Assessment) and the remainder of 1.9Ha within the CBA and DMOSS area.

The project engineer (Escongweni BPH) engaged with various officials from eThekweni Municipality, who confirmed that there is a 75mm diameter uPVC water reticulation pipeline, which terminates at the cul-de-sac on Glengarry Place (see Figure 2). As indicated in Figure 3, the proposed development will be connected to the existing 75mm diameter municipal supply line which will supply water to the Regent Development via a 400kl on-site storage tank and a booster pump. The total length for the bulk water reticulation will be approximately 800m with a 75mm dia. uPVC. The total length for the internal water reticulation will be approximately 250m with a 50mm dia. uPVC. As per the Bulk Water Report, the Developer is to make an application to eThekweni Municipality to attain approval for the water connection point. **Please refer to Appendix D4: Specialist Reports - Bulk Water Report, dated August 2020.**

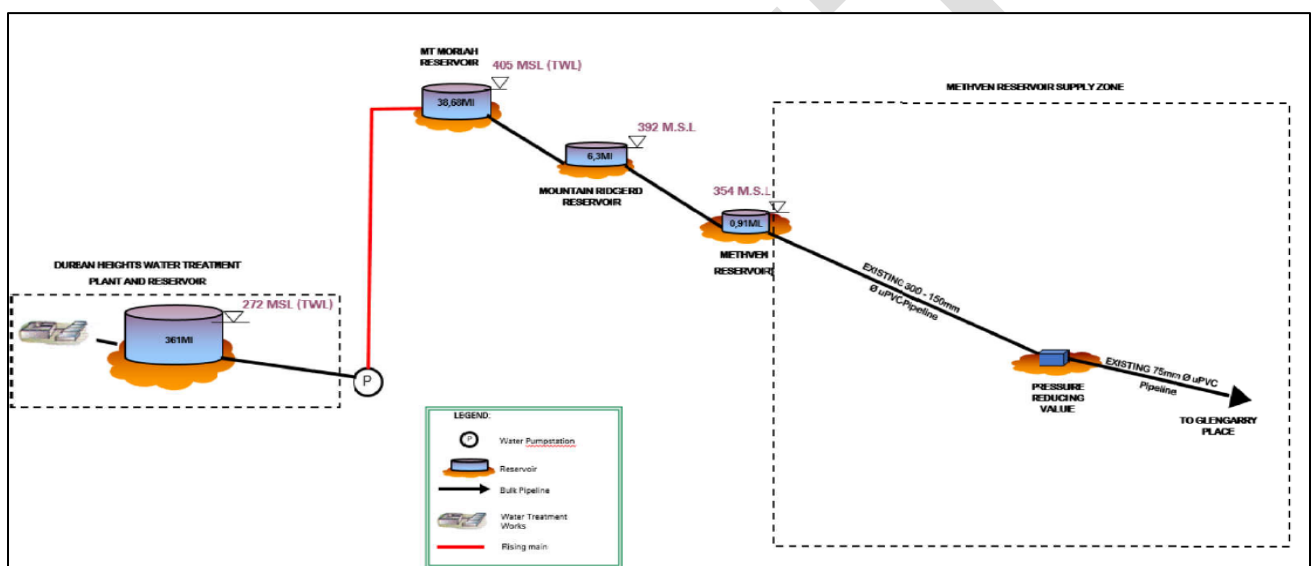


Figure 2: Bulk Water Supply from Reservoir

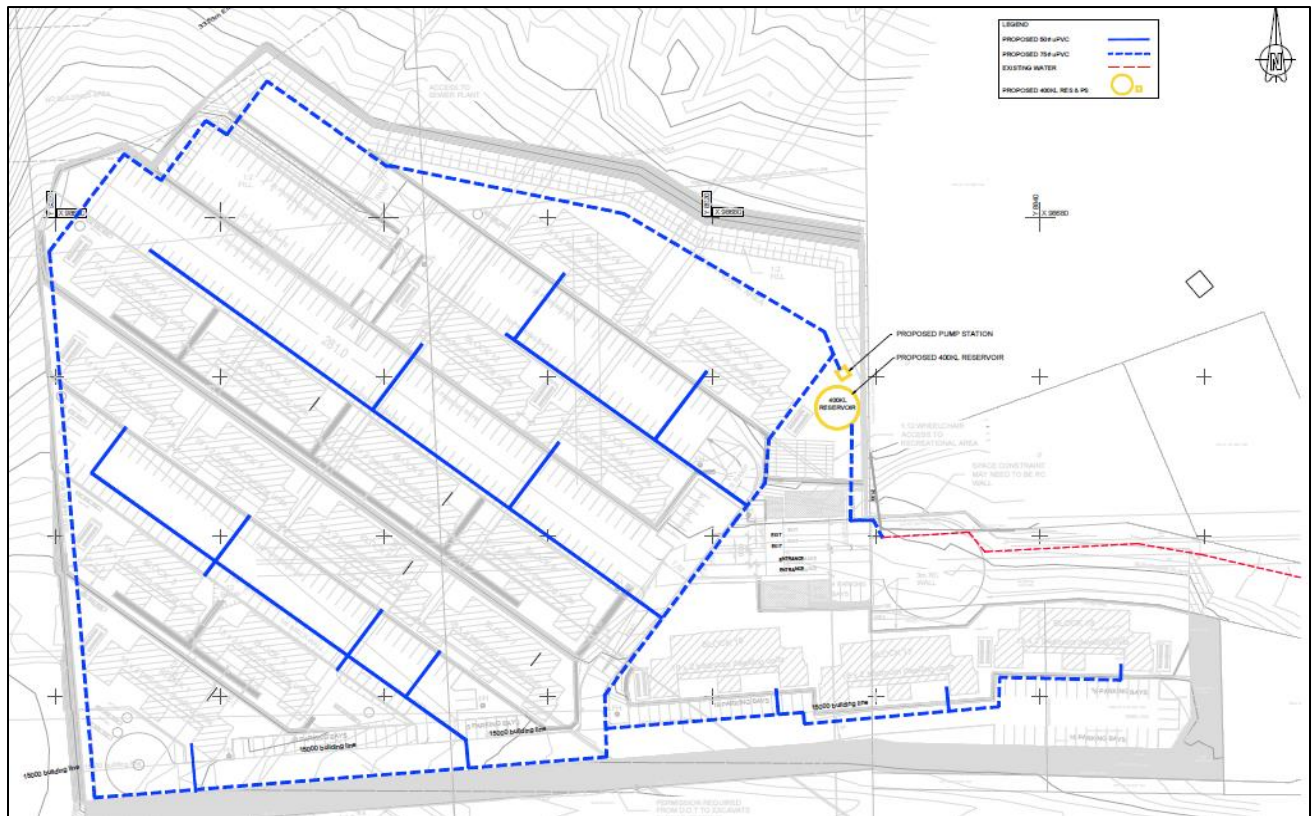


Figure 3: Water Layout for Regent Estate Development

The New Germany WWTW is approximately 1km west of the proposed Regent Estate Development, however it cannot accommodate the effluent from the proposed development as it does not have available capacity. Furthermore, the plant has severe process challenges due to the incoming industrial effluent as well as infrastructure that has aged and become inadequate resulting in poor compliance. An on-site package plant (Integrated Fixed Activated Sludge Plant) with a capacity of 500m³ has been proposed to treat the effluent emanating from the residential units. The treated effluent will be discharged into the Aller River and the sludge will be collected by an appropriate service provider and disposed of at a registered landfill site. As indicated in Figure 4, the length of the effluent discharge is approximately 200m with a 110mm dia. uPVC. The dimension of the discharge headwall is 3m x 2m. The water quality of the effluent discharge will be within the ambits of the DWS general limits and the average discharge volume would be 200 kl/day. The total length for the sewer reticulation will be approximately 600m with a 110mm dia. uPVC. The total length for the sewer collector will be approximately 182m with a 160mm dia. uPVC. As per the Bulk Sewer Report, the Developer is to make an application to eThekweni Municipality to attain approval for the on-site package plant. Furthermore, a Service Level Agreement between the Developer and eThekweni Municipality or Service Provider (e.g. SewTreat) needs to be in place to ensure the sludge is removed and disposed of at a registered landfill site. **Please refer to Appendix D4: Specialist Reports - Bulk Sewer Report, dated August 2020.**

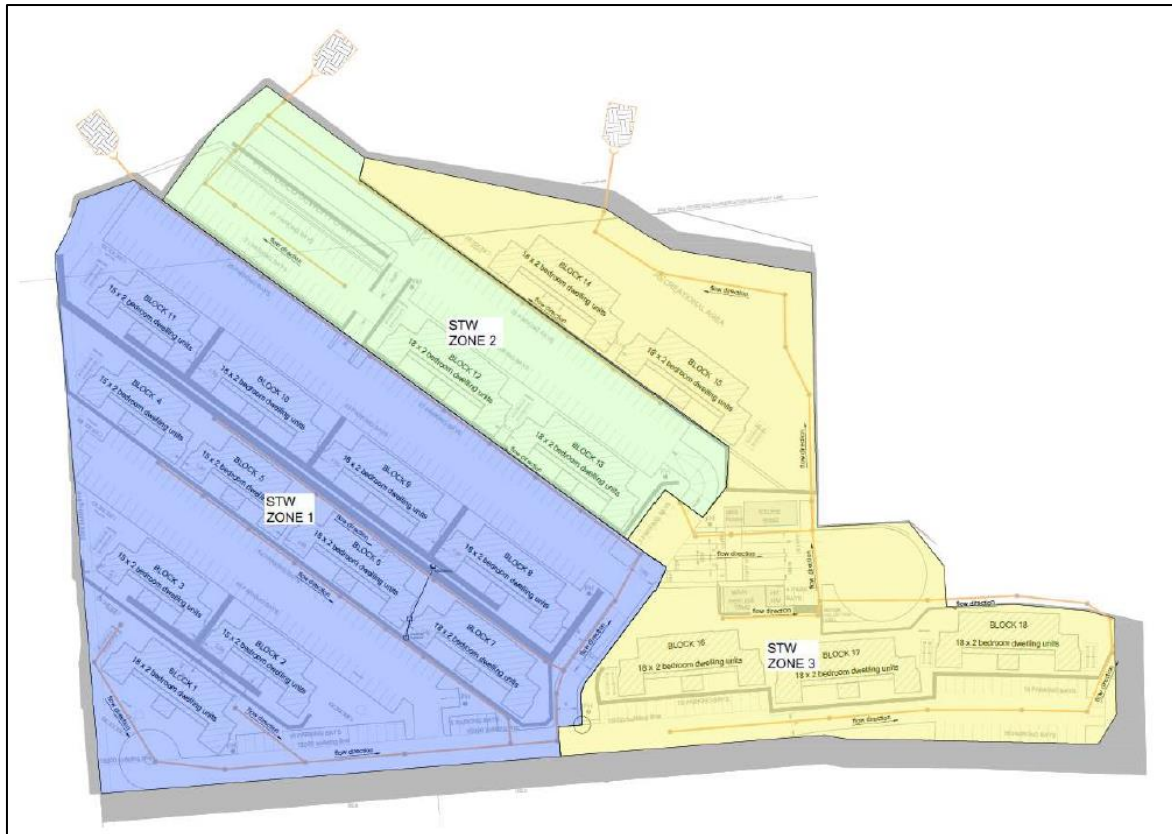


Figure 5: STW Zones

Three Natural Bio-Retention Ponds will be installed- on site to manage stormwater emanating from the proposed development. As indicated in Figure 6, Retention Pond 1 is 177.84 m3 and the outlet control for the tank will consist of a 450mm class 100D concrete pipe. Retention Pond 2 is 68.4 m3 and the outlet control for the tank will consist of a 375mm class 100D concrete pipe. Retention Pond 3 is 19.44 m3 and the outlet control for the tank will consist of a 450mm class 100D concrete pipe. Internal stormwater networks will discharge into these ponds and overflow through a controlled outlet pipe. Reno Mattress/gabions will be provided near outlet structures of each pond prior to discharge of stormwater. These will serve as energy dissipators as well as scour protection to prevent the stormwater from flowing out of the site at a high velocity. The ponds will have controlled inlets, an earth berm to act as a retention pond embankment as well as an overflow box which will then discharge into the Aller River at a controlled rate.

Please refer to Appendix D4: Specialist Reports - Stormwater Management Plan, dated August 2020.

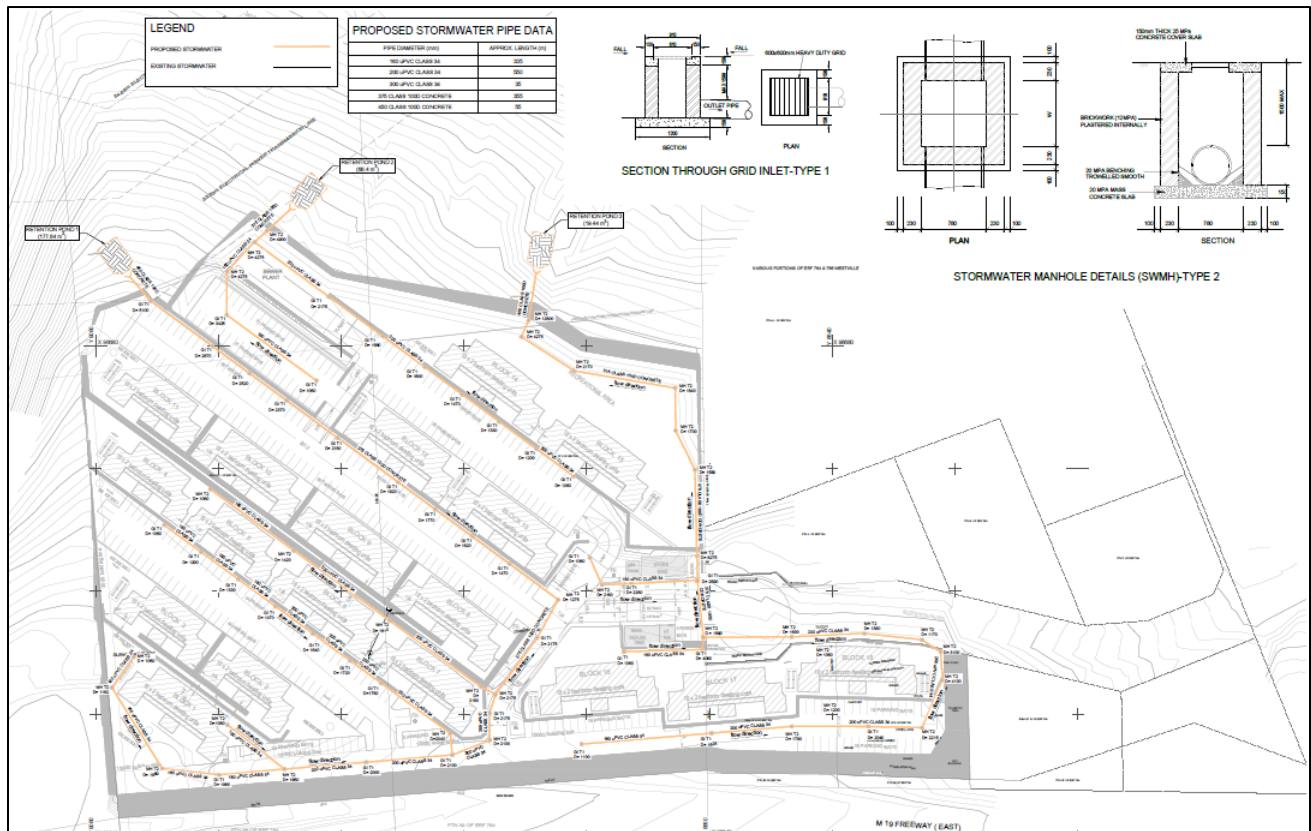


Figure 6: Stormwater Layout

Internal roads with a total length of approximately 970m and 7.5m in width has been proposed for the Regent Estate. Approximately 422 perpendicular parking bays have been proposed. **Please refer to Appendix C3: Services Layout – Proposed Road Layout, dated August 2020.**

Wetland Delineation and Functional Assessment:

Parisara Consulting T/A Aeon Nexus undertook the Wetland Delineation and Functional Assessment for the proposed development. There are no wetlands on site, however, there is one wetland that occurs within the Department of Water and Sanitation regulated 500m buffer. Additionally, one river riparian system is located on the northern boundary of the site. The single wetland found within the surrounding 500m buffer was assessed not to be at risk. **Please refer to Appendix D9: Specialist Reports - Wetland Delineation and Functional Assessment, dated August 2020.**

Geotechnical Assessment:

Geosure (Pty) Ltd undertook a Geotechnical Assessment was undertaken to be underlain by weathered sandstone bedrock of the Natal Group. The sandstone bedrock is overlain by residual sandstone soils, colluvium and occasional fill. Groundwater seepage was not observed during the field investigation. Given the relatively elevated nature of the site, the development of a persistent shallow groundwater activity is assessed to be low generally. However, an intermittent shallow perched groundwater condition may occur during and after periods of sustained and/or heavy rainfall, particularly in areas of deeper bedrock and along the central and north-eastern slopes of concave conformation. Based on the results of the fieldwork undertaken during the investigation, the site is considered suitable for the proposed development, provided recommendations given in the report are adhered to. **Please refer to Appendix D5: Specialist Reports - Geotechnical Assessment, dated April 2018.**

Heritage Impact Assessment:

The Heritage Impact Assessment was undertaken by Umlando: Archaeological Surveys and Heritage Management for the proposed development. No heritage sites were noted during the investigation, and no further heritage mitigation was thus required. **Please refer to Appendix D6: Specialist Reports - Heritage Impact Assessment, dated August 2020.**

Ecological Impact Assessment:

The Ecological Impact Assessment was undertaken by Leigh-Ann de Wet in August 2020 for the proposed development. The preliminary plan indicates where the building will be taking place, with allowances for open space encompassing riparian areas along with some steep forested areas. Although there is some disturbance due to the presence of a powerline and various servitudes across the site as well as some pathways for thoroughfare and fields, most of the site is comprised of mixed alien and indigenous vegetation typical of the area, with a large number of aliens in disturbed areas such as alongside roads and servitudes and in areas fully cleared in the past. **Please refer to Appendix D3: Specialist Reports - Ecological Impact Assessment, dated August 2020.**

Open Space Management Plan:

The Open Space Management Plan was undertaken by Leigh-Ann de Wet in August 2020 for the proposed development. As the site is located within DMOSS, and the aim is to maintain the remainder of the site as open space until future development occurs, the site must be managed as such. This should be done with a view to maintain and improve standing indigenous vegetation by reducing dumping, use as a thoroughfare, fire frequency and alien infestation as part of a management plan. This plan is designed to be used in conjunction with other management plans for the development and is also an adaptive management plan, which means that it should be consistently updated to include new relevant management tasks and priorities if and when they occur. **Please refer to Appendix D7: Specialist Reports - Open Space Management Plan, dated August 2020.**

Alien Invasive Management Plan:

The Alien Invasive Management Plan was undertaken by Leigh-Ann de Wet in August 2020 for the proposed development. As part of the wider management plan for Regent Estate, IAP species already recorded from the site, and those introduced to the site in the future, must be controlled throughout the life of the development. Although this plan provides a section detailing general control measures for IAP species, it is recommended that a species-specific approach be taken. As such, a programme for each of the most problematic of the IAP species already recorded from the site is included. Included in this is the full area of Regent Estate including areas that will be disturbed for the construction but not the operation phases (including gardens and open space). Control of IAP species is an ongoing process and should be continued throughout the life of the development, with priority given to natural areas, primarily the forest. **Please refer to Appendix D1: Specialist Reports - Alien Invasive Management Plan, dated August 2020.**

Traffic Impact Assessment:

A Traffic Impact Assessment was undertaken by Arup in August 2020 for the proposed development. Based on the recommended rates, the proposed residential development is expected to generate a total of 386 trips during the AM and PM peak hours respectively. Intersection analyses for the “existing (2020)” and “future (2025)” background traffic scenarios indicate that some road upgrades are already required to adequately accommodate the current traffic. Further road upgrades are required in order to adequately support the residential development. It is recommended that these upgrades be implemented at the cost of the developer and include:

- Signalisation of Strathay Place and Dunkeld Road intersection with an additional short through-lane from the east (with associated exit lane on the western approach) and a short refuge lane on the northern approach.

- It is recommended that a 2m sidewalk be provided on one side of the Glengarry PI-Scone PI link between the development and the Strathay Rd/Scone PI intersection.
- It is recommended that traffic calming be implemented along Glengarry Place.

Please refer to Appendix D8: Specialist Reports – Traffic Impact Assessment, dated August 2020.

1.3 All Listed and Specific Activities Triggered and Applied for as per Section 3(d) (i)

2014 NEMA EIA Regulations (as amended), Appendix 1- 3(i) all listed and specified activities triggered and being applied for:

Table 3: Listed and specified activities triggered and being applied for

GNR	Activity Number	Activity as per legislation	Activity applicability
Listing Notice 1 (Basic Assessment)			
Government Notice Regulation (GNR) No. 327 of the EIA Regulation (2014)	Activity 27	<i>The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.</i>	The establishment of the Regent Estate (residential units, roads and associated service infrastructure) will result in the clearance of more than 1 hectare of indigenous vegetation.
Listing Notice 3 (Basic Assessment)			
Government Notice Regulation (GNR) No. 324 of the EIA Regulation (2014)	Activity 4	<i>The development of a road wider than 4 metres with a reserve less than 13,5 metres. (d) in KwaZulu-Natal (viii) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (xi) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;</i>	The proposed development will entail constructing roads that are 7.5m in width with a road reserves less than 13.5m within a CBA and DMOSS.
	Activity 12	<i>The clearance of an area of 300 square metres or more of indigenous vegetation (d) in KwaZulu-Natal (v) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (xi) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;</i>	The establishment of the Regent Estate (residential units, roads and associated service infrastructure) will result in the clearance of more than 300 square metres of indigenous vegetation within a CBA and DMOSS.
	Activity 14	<i>The development of</i>	The proposed development will entail the construction of a sewer outfall which will have a

		<p>(ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs –</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, Measured from the edge of a watercourse;</p> <p>(d) in KwaZulu-Natal</p> <p>(vii) Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.</p> <p>(xi)(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, zoned for a conservation purpose;</p>	<p>footprint of 10sqm that is within 32m of the Aller River, within a CBA and DMOSS.</p>
--	--	--	--

It has been confirmed with EDTEA in the pre-application meeting, the specific listed activities for which an EA is being sought, is without operational aspects. Thus, the EA is only required for the development or construction phase, including rehabilitation of the cleared areas and post-construction monitoring thereof. This is significant because it determines the duration for which the EA is required, the scope of the EMPr and auditing requirements post construction and rehabilitation. **Refer to Appendix J1 – EDTEA Pre-application Meeting Minutes.**

1.4 Description of Feasible Alternatives as per Section 3(h) (i)

2014 NEMA EIA Regulations (as amended), Appendix 1- 3(H) a full description of the process followed to reach the proposed preferred alternative within the site, including (i), (iv).

“Alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to —

- (a) **The property on which or location where it is proposed to undertake the activity;**
Alternative S1 (Only Site Alternative): Regent Estate Development, Glengarry Place, Westville
The proposed development will take place on REM of Portion 1, 2, 8 and 9 of Erf 764 Westville, within eThekweni Municipality, KwaZulu-Natal Province. The proposed development lies in the Umgeni catchment and falls within the quaternary catchment of U20M. The properties are in the process of been transferred to MET Developments. The properties are been purchased with the sole purpose to develop the Regent Estate. No other properties were purchased by the applicant; thus, no site alternative properties / locations are applicable. **Refer to Appendix J2 – Sales Agreement**
- (b) **The type of activity to be undertaken;**
The proposed activities are associated with the construction of the Regent Estate Development and associated infrastructure. No alternative types of activities were considered feasible as the Developer's intention was to construct a residential estate.

(c) The design or layout of the activity;

Two layout alternatives were considered for the proposed development layout:

Alternative A1 (Preferred alternative) – 4ha Development Footprint

The applicant MET Developments proposes the establishment of a development that is affordable, easily accessible and close to retail centres. The site is approximately 7.6ha in extent and is situated within Municipal Ward 92 of the eThekweni Metropolitan Municipality, KwaZulu-Natal. The development will comprise of 309 two-bedroom residential units, parking bays, internal roads as well as sewer, water and stormwater infrastructure. **Alternative A1 (preferred) is depicted in Figure 7 below and Appendix C1 – Preferred Layout.**

Approximately 4ha of the 7.6Ha site will be developed whilst the remainder will be left as Private Open Space. Whilst majority of the site is classified as DMOSS and CBA, approximately 2.1Ha of the development will be constructed within a transformed area and the remainder of 1.9Ha within the CBA and DMOSS area (portion of the grassland area and forest). Please refer to the sensitive maps attached in **Appendix A3**. Furthermore, no wetlands will be impacted upon as there are no wetlands that have been identified on site. There will be minimal to no impact on the Aller River, which forms the northern boundary of the site, as the proposed development is approximately 150m away from the river, with the exception however for the effluent discharge point. The effluent will be treated to the general limit parameters of the Department of Water and Sanitation. The proposed development/boundary of the estate will also reduce the current impact of anthropogenic activities such as dumping and walkways as well as control/remove the alien invasive species on site. In addition, the proposed development is aligned with the planning initiatives for the area and is therefore considered a viable and sustainable development that will contribute to regional economic growth.

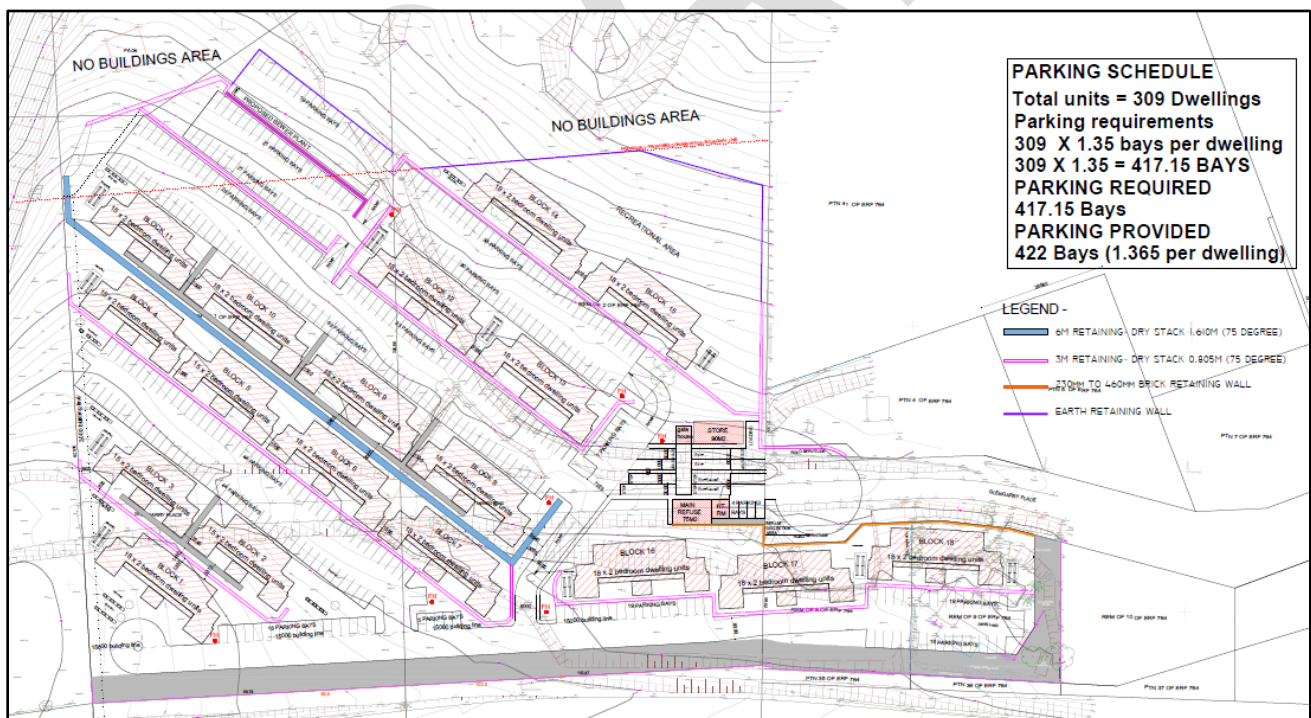


Figure 7: Illustrating Alternative A1 (preferred) of the proposed Regent Estate development

Alternative A2 – 4.5ha Development Footprint

The site is approximately 11.5ha in extent and is situated within eThekweni Metropolitan Municipality, KwaZulu-Natal. Alternative A2 proposes the establishment of a residential and institutional (school) development together with parking bays, internal roads as well as sewer, water and stormwater

infrastructure. **Alternative A2 (Not recommended)** is depicted in Figure 8 below and Appendix C2 – Alternative Layout.

Approximately 4.5ha of the 11.5Ha site will be developed. Of the 4.5Ha developable area, approximately 3.5Ha of the proposed development will be constructed within a CBA and DMOSS area. The stormwater layout is designed to include only 1 hardened stormwater attenuation tank. Sewer on the site was proposed to be handled at the New Germany Waste Treatment Works, however the sewer connection option was not feasible as it would require a sewer pump station and rising main via pipe jacking across the M19 highway to a terminal manhole prior to connecting into an existing 160mm sewer pipe leading to the 12Ml/day New Germany Wastewater Treatment Works.

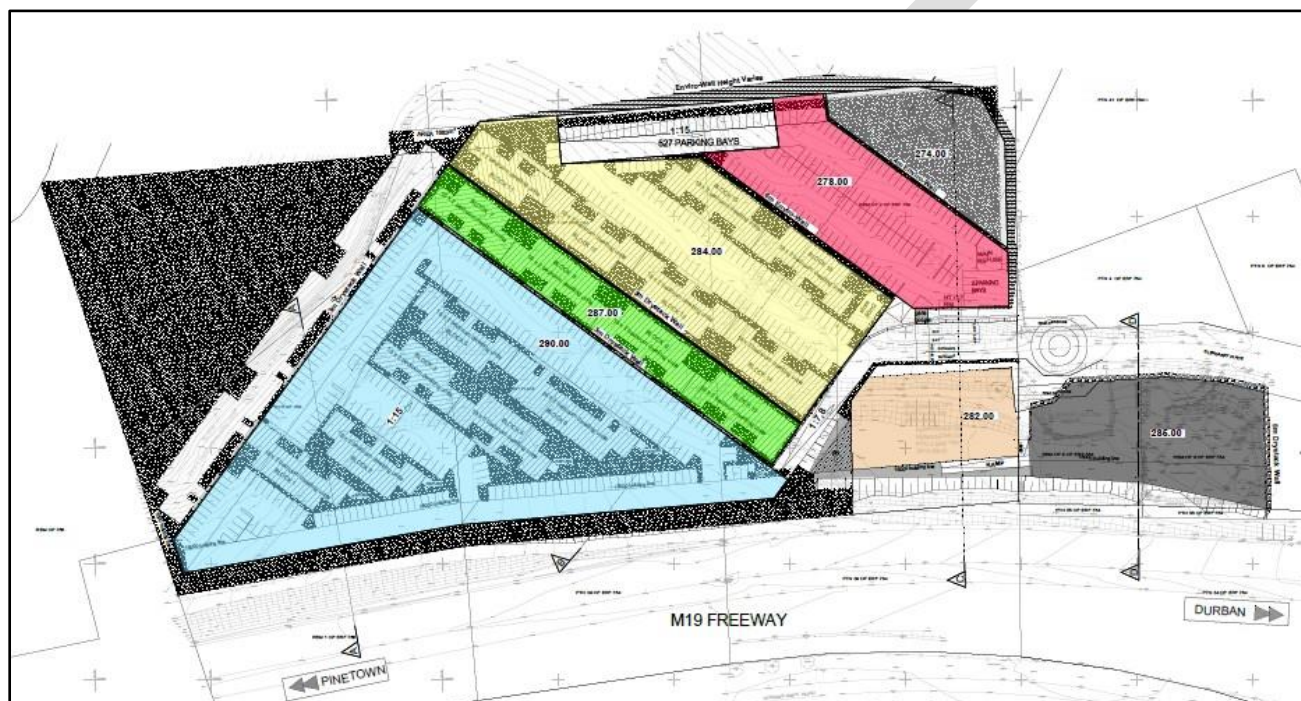


Figure 8: Illustrating Alternative A2 of the proposed Regent Estate Development

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

All construction activities (building works / geyser and plumbing installations) will be in line with the National Building Regulations and Building Standards, together with the Occupational Health and Safety regulations.

Water Supply

Two options were considered in terms of supplying water to the proposed development:

First option (preferred): The proposed development will be connected to the existing 75mm diameter municipal line which will supply water to the development via a 400kl on-site storage tank and a booster pump to deliver water at the required pressure.

Second option: Bypass the existing 75mm diameter municipal supply line with a parallel 160mm diameter line before the municipal pressure reduced valve to handle peak flows. A municipal test would be required to confirm if the proposed off-take point could sustain a peaked flow 0.0017m³/s for the proposed development to avoid on site storage and booster pump.

Sewer

An on-site package plant (Integrated Fixed Activated Sludge Plant) has been proposed to treat the effluent emanating from the residential units. The size of the plant would be 13m x 10m x 4m deep and will have a 2.5-day retention. The total volume of the Integrated Fixed Activated Sludge Plant will be 500m³. Figure 9 below illustrates the process overview and equipment to be installed and Table 4 provides a brief description of the process and function as per the proposal submitted by SewTreat. Figure 10 illustrates a typical drawing/layout of the proposed plant.

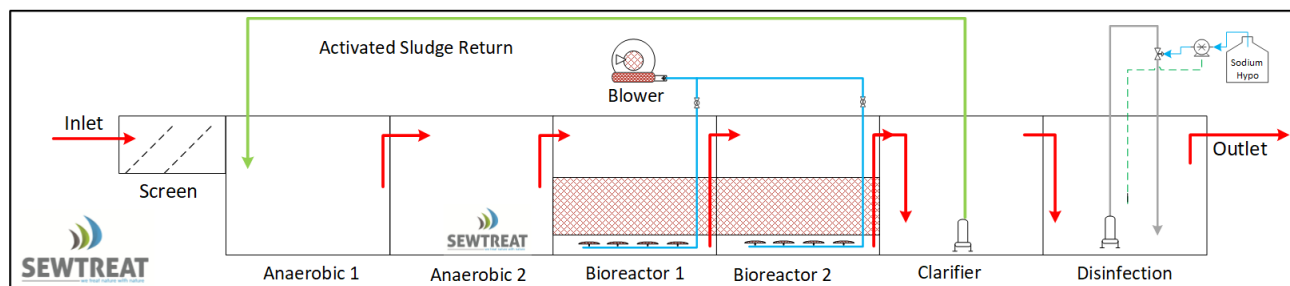


Figure 9: Process Overview

Table 4: Process and Function

Process	Function
Screen	Screening is imperative to remove all inorganics from the incoming effluent. This can be done Manually or automatic. Screening remove the plastics, pads, condoms and all other material that cannot be digested in the biological wastewater treatment plant. Screen apertures is normally 20mm and/or 40mm
Anaerobic Phase	The anaerobic treatment (Also called Septic Phase) assist in a 50% to 70% reduction of the COD and BOD. The Anaerobic phase also assist in the separation of solids from liquids
Aerobic	Aerobic phase or Bioreactor's main objective is the reduction of Ammonia through nitrification this is done by air injection via air blower through micro bubble diffusers. Nitrification is the biological process where ammonium (NH ₄ ⁺) is oxidized and converted into the nitrate (NO ₃ ⁻). PVC Pall rings to be installed in the tank to create. Moving Bed Bioreactor to allow for bacterial growth at a rate of > 148m ² /m ³ of surface area.
Clarification	Clarification (Also called Anoxic or Humus phase) assist with de-nitrification in anaerobic conditions. De-nitrification is biological process that involves the conversion of nitrate (NO ₃) into nitrogen gas (N ₂). The sludge that settles in this phase is called activated sludge which is then returned to the anaerobic and aerobic phase to assist in sludge breakdown. This process also reduces the quantity of sludge removed from the system significantly.
Disinfection	Disinfection means the removal, deactivation or killing of pathogenic microorganisms resulting in termination of growth and reproduction. This ensures the water is safe for re-use. There are various methodologies of disinfection, we prefer Sodium hypochlorite, although this results in a monthly consumable, it is the most effective and reliable disinfection method.
Control Room	A control room serves as a clean, lockable space where the equipment and electrical panels be installed into. The control room must be well ventilated to ensure the distribution of heat from the mechanical equipment. Also serves as lockable space which offers security.
Chlorine Dosing	Sodium Hypochlorite dosing pump, the pump has a sensor that automatically measures and dose the correct amount of sodium hypochlorite into the final effluent. The average dosing is 8ppm with a residual of 2ppm
Bacteria Dosing	A blend of 21 species of bacteria is constantly dosed into the system to enhance the system, this is imperative in high COD applications and also where there is a lot of chemicals that

	is fed into the plant. By dosing the bacteria, it ensures that there is always sufficient biomass.
Electrical Panel	There are 4 types: The basic panel is a wall mounted DB with no indicator lights, switches or intelligence. The Small IP65 panels is small panels with indicator light and switches and a basic GSM module. The Large IP65 panel is a complete panel with labelling, indicator lights, and full GSM integration. The PLC is the ultimate in control, intelligence and integration.
16 Flow Meter	Flow meters are optional, we prefer to install a digital IFM type flow meter that is connected to the GSM router that delivers daily flow rates via SMS.
Final Polishing	Sludge bags are used for the removal of excess sludge, this will be done periodically. The sludge bags are perforated and allows the water to drain while retaining the sludge. It is also a very cost-effective solution for sludge drying beds.

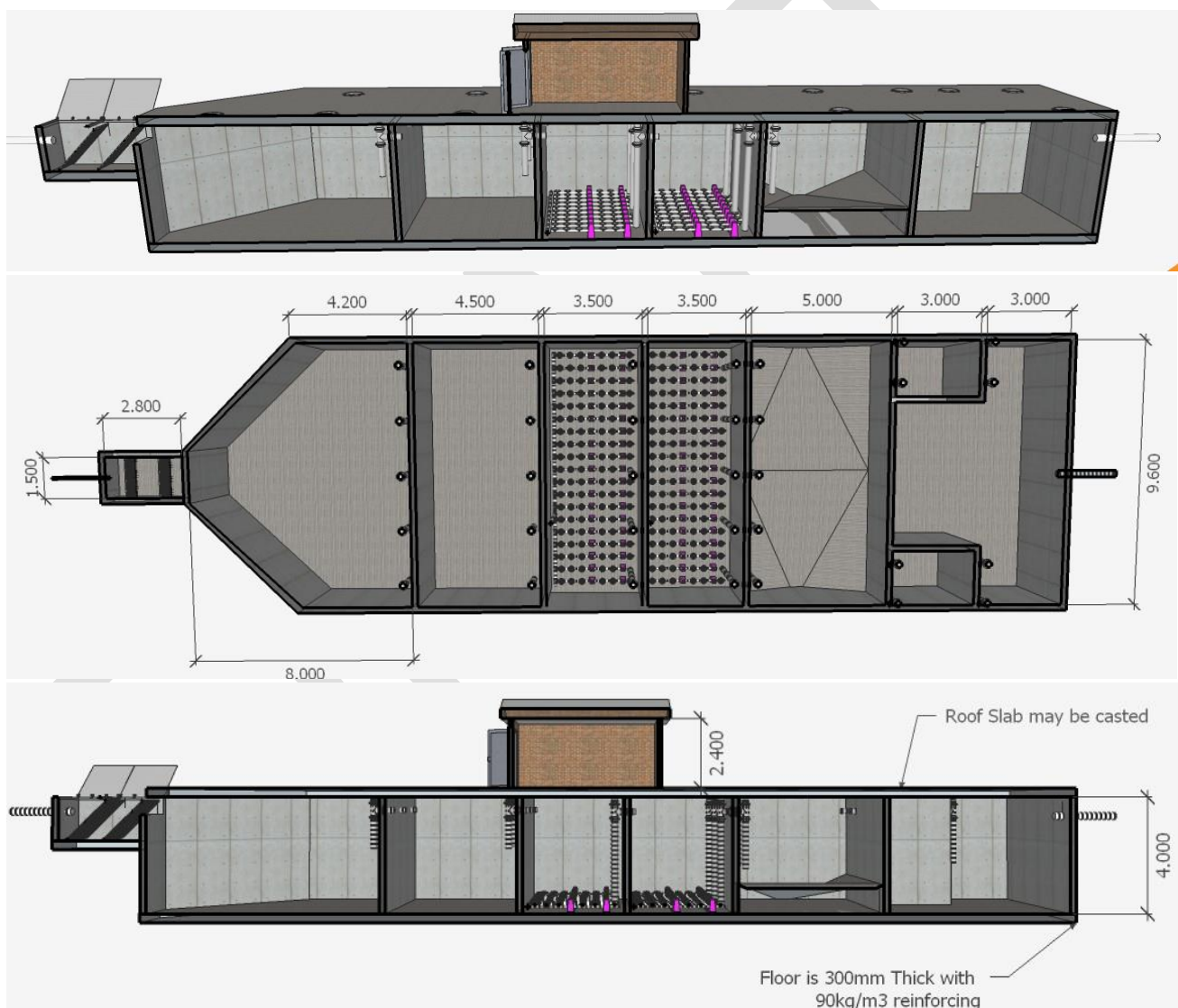


Figure 10: Typical Drawing of IFAS Plant

The treated effluent will be discharged into the Aller River and the sludge must be disposed of at a registered landfill site. The length of the effluent discharge pipeline is approximately 200m with a 110mm dia. The dimension of the discharge headwall is 3m x 2m. Water quality effluent discharge will be within the DWS ambits for General limits and the average discharge volume would be 200 kl/day.

(e) The operational aspects of the activity; and

The operational aspects relate to the daily operations of the Regent Estate Development i.e. utilising the available facilities; and the operations of a residential development such as waste management, storm water management etc.

No other alternatives were deemed feasible or applicable to this development. Management measures relating to the operational aspects of the Regent Estate development, e.g. stormwater management, waste management areas have been addressed as per the EMPr.

(f) The option of not implementing the activity.

The no-go alternative implies that the status quo remains, and the proposed regent Estate will not be developed. By not developing the land, it is likely that the property would become subject to land invasions and unauthorised dumping, specifically in the grassland and forest area, contributing to the degradation of the land. The site will continue to be disturbed by anthropogenic activities which include the creation of paths for use as a short cut through the valley.

From an environmental perspective, the positive impacts of the “no go” alternative will be that the D'MOSS, CBA and critically endangered ecosystem will not be disturbed. However, the site will transform if not managed efficiently and the potential of alien species invasion would increase. Currently these alien invasive species are not being removed and if the development is not undertaken, then this would increase the infestation and thus impacting on the indigenous species. Furthermore, should the development not go ahead, there will be no discharge of treated effluent into the Aller River and no excess sludge disposal.

From a social perspective, if the development is not implemented;

- Potential temporary and permanent employment opportunities (which can be offered to the local community) will not be available if the development is not approved.

From an economic perspective, if the ‘no-go ’is implemented;

- The proposed development is considered a viable development that will contribute to economic growth in the area. Should the no-go option be implemented, the economic profile of the general area will remain unchanged and will not be improved.
- It is envisaged that property values will increase at a gradual rate over several years as a result of the Regent Estate Development, however, if not implemented this will not materialise.

The main conclusion from the above mention, is that a no development option will have adverse socio-economic consequences. Although the “No-Go” alternative may be preferred in the interests of preserving the existing DMOSS and CBAs, the need for development must however be evaluated holistically taking into consideration of the positive socio-economic impacts as well as the ecological impacts due to development.

1.5 Project Locality as per Section 3(b) (i) – (iii)

2014 EIA Regulations, Appendix 1- 3(b) the location of the activity, including: (i) the 21 Surveyor General code of each cadastral land parcel.

Table 5: Location of the Proposed Activity

District Municipality	eThekweni Metropolitan Municipality
Local Municipality	eThekweni Metropolitan Municipality

Ward	92
Area / Town / Village	Westville
Property Description	REM of Portion 1, 2, 8 and 9 of Erf 764 Westville

Table 6 below provides details on the property and Figure 11 illustrates the project boundary together with the Erven description.

Table 6: Details of the properties are listed as follows:

Erf Description	Physical Address	21 Digit Surveyor Code
REM of Portion 1 of Erf 764 Westville	12 Glengarry Place, Atholl Heights	NOFT03800000076400001
REM of Portion 2 of Erf 764 Westville	8 Glengarry Place, Atholl Heights	NOFT03800000076400002
REM of Portion 8 of Erf 764 Westville	7 Glengarry Place, Atholl Heights	NOFT03800000076400008
REM of Portion 9 of Erf 764 Westville	5 Glengarry Place, Atholl Heights	NOFT03800000076400009

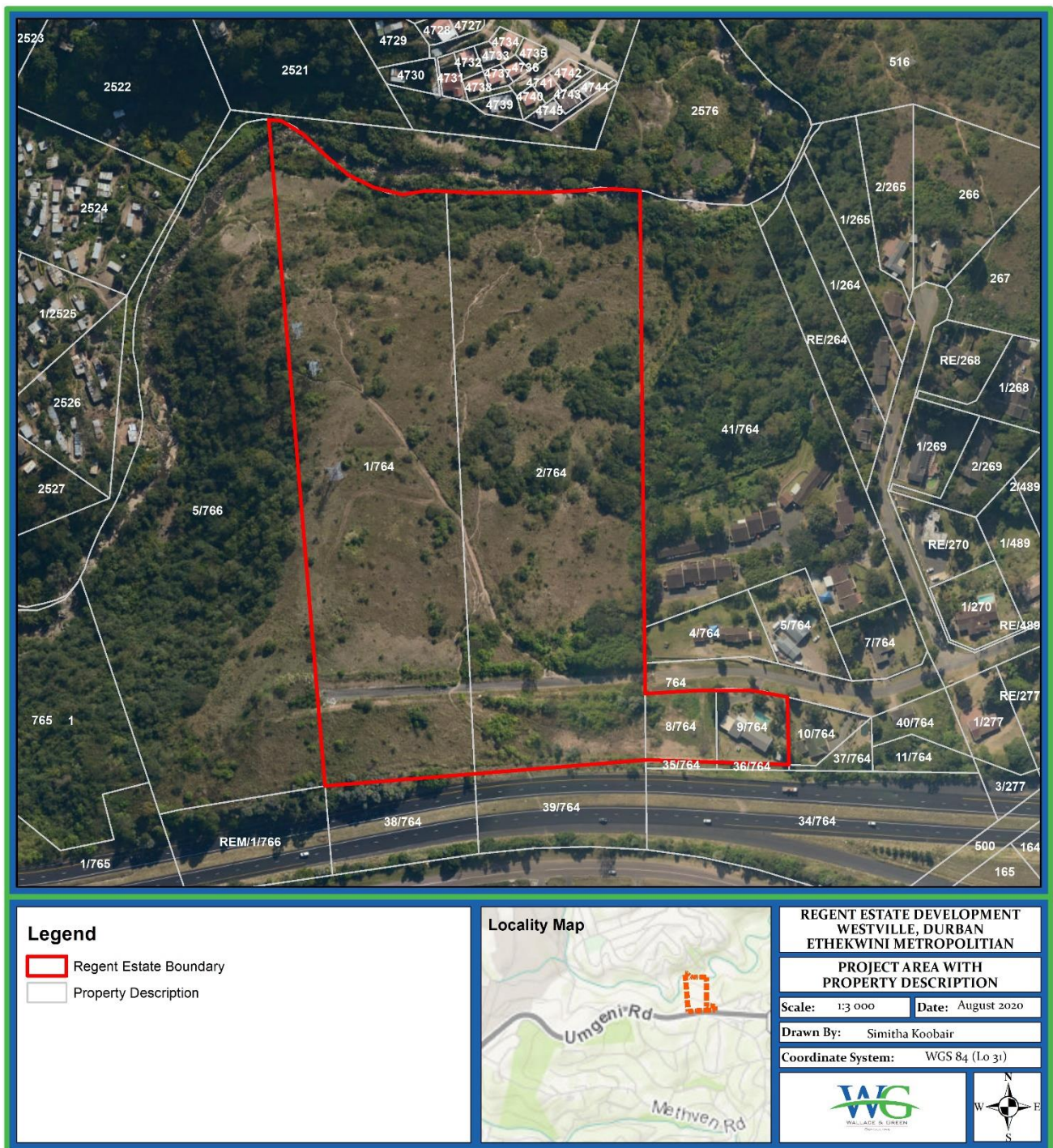


Figure 11: Project Boundary and Erven Description

Site Alternative

Alternative:

Alternative S1¹ (preferred or only site alternative)

Latitude (S):

29°	48'	26.72"	30°	54'	28.20"
-----	-----	--------	-----	-----	--------

Longitude (E):

Design or Layout Alternative

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

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3

Size of the activity:

7.6 ha
11.5 ha
N/A

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

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3

Size of the site/servitude:

4 ha
4.5 ha
N/A

1.6 Site Access

Does ready access to the site exist?	YES	<input type="checkbox"/>
If NO, what is the distance over which a new access road will be built		
Describe the type of access road planned: Accessibility to the site is via Glengarry Place as the proposed development is planned at the end of the cul-de-sac.		

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

¹ "Alternative S.." refer to site alternatives.

² "Alternative A.." refer to activity, process, technology or other alternatives.

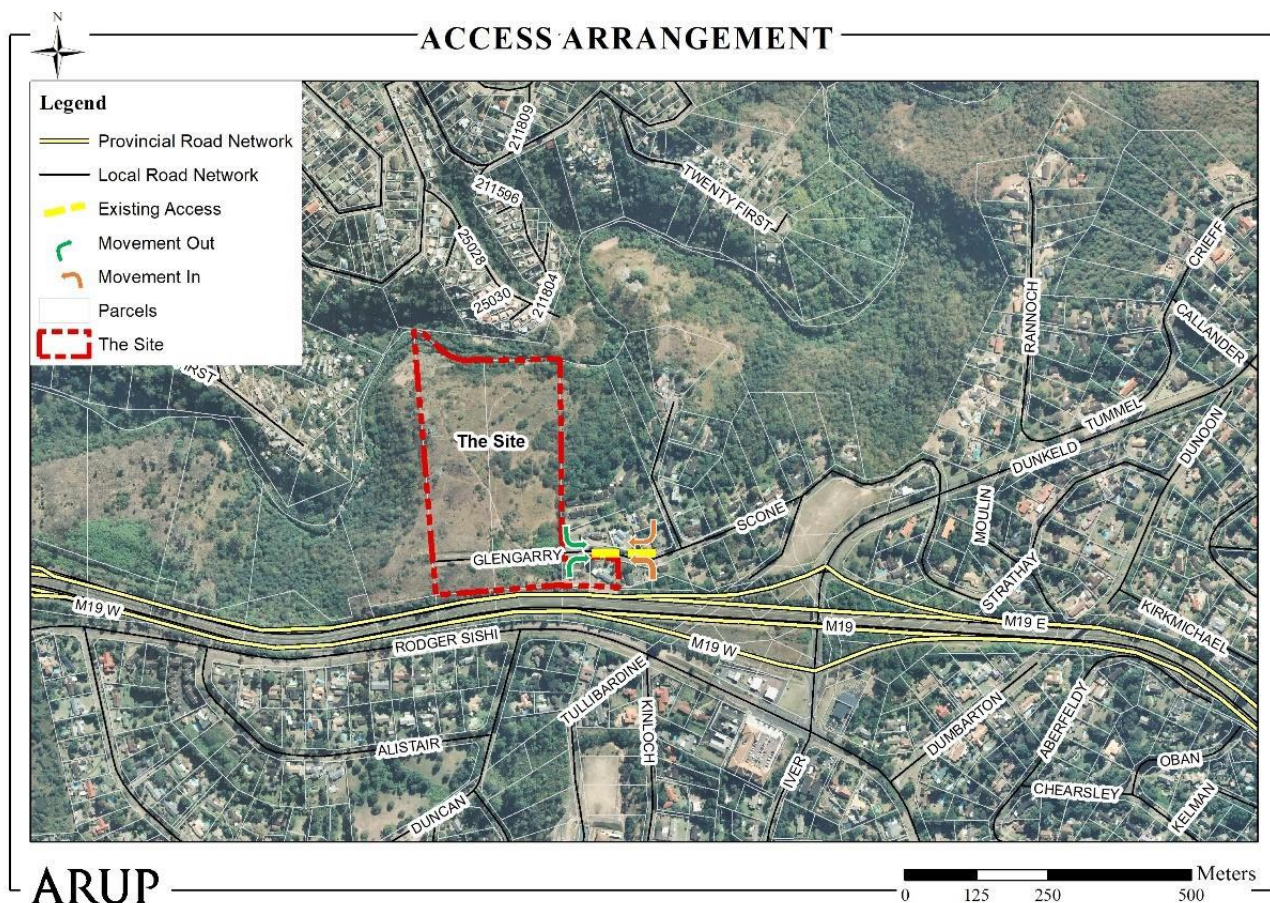


Figure 12: Map illustrating the access roads for the proposed Regent Estate development

1.7 Zoning and Land Use Rights

What is the land currently zoned for?		
Special Residential 1 and Road Reserve		
Will any person's rights be negatively affected by the proposed activity/ies?	<input type="checkbox"/>	NO
Will the activity be in line with the following?		
The Provincial and Local Spatial Development Framework	YES	<input type="checkbox"/>
The Provincial and Local Integrated Development Framework	YES	<input type="checkbox"/>
The Provincial Environmental Management Framework	YES	<input type="checkbox"/>

The Provincial Planning Commission has recently released its Provincial Growth and Development Strategy (PGDS) and Plan (PGDP) that provide a very clear roadmap towards what is required to be done to achieve the Province's key objectives. The Province's vision is encapsulated in the following words – "A prosperous province with a healthy, secure and skilled population, acting as a gateway to Africa and the world."

The PGDS is the primary strategy driving growth and development in the Province and the PGDP is the implementation plan based on the strategic objectives that have been identified. These strategic objectives include, amongst others – job creation, human and community development, strategic infrastructure and spatial equity.

It is important to provide a broader context to the question of need and to ensure that the proposal is aligned to the sub-regional needs and roles and that it adds value. The development is in line with Goal 3 and 4 of the Kwazulu-Natal Provincial Growth and Development Strategy (PGDS) in which land reform must address human

and community development strategic infrastructure. Infrastructure delivery has a direct impact on quality of household and community life, as well as impacting on how efficiently the economy functions and on the utilisation of a region's potential. In addition, the proposed development addresses the need for the inclusion of affordable housing units as required by the eThekweni Municipality.

1.8 Water Use and Bulk Service Availability

Please indicate the source(s) of water that will be used for the activity.

The 0.9ML Methven Road Reservoir supplies the Westville North/Atholl Heights area and will therefore supply the proposed Regent Estate Development. However, as per discussions between the project engineer and eThekweni Municipality, the reservoir cannot supply the reservoir zone based on its capacity and rather acts as a break pressure tank. The project engineers have recommended that the proposed development be connected to the existing 75mm diameter municipal supply line which will supply water to the Regent Development via a 400kl on-site storage tank and a booster pump. The water storage requirement is 48 hours.

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

Not Applicable

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water & Sanitation? Please provide proof that the application has been submitted to the Department of Water & Sanitation.

Yes. The proposed development triggers a Section 21 (c), (f), (g) and (i) water use under the National Water Act, 1998 (Act No. 36 of 1998 (NWA)). An application has been submitted to the Regional Department of Water and Sanitation (DWS) under the Water Use Licence Application and Appeals Regulation, 2017 via the eWULA system. Proof of submission is attached as Appendix J3.

Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as an Appendix.)

As per the Bulk Water Report, the Developer is to make an application to eThekweni Municipality to attain approval for the water connection point. As per the Bulk Sewer Report, the Developer will also need to make an application to eThekweni Municipality to attain approval for the on-site package plant as there is no available capacity at the New Germany WWTW. A Service Level Agreement between the Developer and eThekweni Municipality or Service Provider (e.g SewTreat) needs to be in place to ensure the sludge is removed and disposed of at a registered landfill site. As per the client, the electricity supply infrastructure will be upgraded by eThekweni Municipality.

1.9 Energy Efficiency

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

In terms of energy efficiency, the proposed development should be undertaken during normal working hours to reduce the use of artificial lighting. Additionally, the contractor will be advised to transport all construction materials on site at the same time where possible, and the collection of

waste material conducted simultaneous with other activities to reduce the amount of fuel usage for such transportation. Waste management methods (i.e. recycling and reusing), as well as water conservation measures and sourcing local materials are recommended and are included in the EMPr.

Describe how alternative energy sources have been considered or been built into the design of the activity, if any.

- **All light fittings will be of the LED technology type.**
- **Consideration will be given to solar powered LED street lighting.**
- **The bulk electrical load estimate is based upon energy efficient equipment such as gas stoves, heat pumps, inverter type air conditioning units, etc.**

DRAFT

SECTION 2: SITE DESCRIPTION OF SURROUNDING LAND USE AS PER SECTION 3(H) (IV) AND (K)

2014 NEMA EIA Regulations (as amended), Appendix 1- 3(H) a full description of the process followed to reach the proposed preferred alternative within the site, including (iv) and 3 (K) a summary of findings and impact management measures identified in any specialist report complying with Appendix 6 to these regulations and an indication as to how these findings and recommendations have been included in this report.

2.1 Topography and Biophysical Environment

The Regent Estate is located on a geomorphological spur, a sloping piece of land dropping convexly into a valley to the north. The Aller River meanders from the west to the east, creating an incised valley with interlocking spurs. The site is bordered to the north by the Aller River which is incised into the valley. The terrain around the proposed development is mostly in its natural state, with a few footpaths and a vehicle track. The slopes are moderate to steep, displaying westerly to north easterly aspects. Steep slopes define the western section of the site and relatively flat terrain define the south western portion.

Majority of the site falls within an Irreplaceable Critical Biodiversity Area as well as a D'MOSS area, whilst the full site falls within a Critically Endangered Ecosystem. Vegetation within the study site is a mix of bushveld and forest. Grassland comprises of grassland with isolated or clumped shrubs and small trees. Forests occur alongside the river. Areas of the site are disturbed due to anthropogenic impacts which include the creation of paths for use as a short cut through the valley, areas used as a dump site and areas of vegetation that are dominated by alien invasive species. Some areas have been used for cultivation of crops and areas beneath pylons are heavily invaded. The majority of the site is comprised of indigenous vegetation.

Photographs taken within the project area showing the surrounding topography are included in the sections below:

	
<p>Northern view of Regent Estate</p>	<p>Eastern view of Regent Estate</p>



Figure 13: Collage of photos showing the surrounding topography.

2.2 Fauna and Flora

2.2.1 Fauna

Much of the site falls within an Irreplaceable Critical Biodiversity Area, as well as a D'MOSS area and the full site falls within a Critically Endangered Ecosystem. Vegetation within the study site is a mix of bushveld (not strictly thornveld as per the Mucina and Rutherford as there are no dominant *Vachellia* on site) and forest. Grassland comprises of grassland with isolated or clumped shrubs and small trees. Forests occur within the drainage lines (not wetlands) and alongside the river. Areas of the site are disturbed due to anthropogenic impacts which include the creation of paths for use as a short cut through the valley, areas used as a dump site and areas of vegetation that are dominated by alien invasive species. Some areas have been used for cultivation of crops and areas beneath pylons are heavily invaded. The majority of the site is comprised of indigenous vegetation. The vegetation types of the study are briefly described as indicated in **Table 7**.

Table 7: Vegetation communities of the Regent Estate Site

Vegetation Community	Sub-community	Description
Fields		A monoculture, no real floral biodiversity contribution. Faunal contribution - acting as a corridor for faunal movement and foraging area for insect-eating birds and small mammals and associated predators.
Transformed		Areas that already include residential buildings and associated gardens.

Functional Vegetation	Degraded	<p>Disturbed areas are located adjacent to roads bordering the site, as well as within servitudes (under powerline pylons) on site and adjacent to walking paths at the edges of forest. These areas also occur within the drainage lines and riparian areas where disturbance has taken place. They also occur where large amounts of dumping have been done on site.</p> <p>Although some indigenous species are present in these areas, they tend to be ruderal or weedy species. Low-growing disturbed areas include species such as <i>Cynodon dactylon</i>, <i>Melinis repens</i>, <i>Sphagneticola trilobata</i> and <i>Ageratum conyzoides</i>. Taller growing areas, especially where disturbance occurs at forest edges or within forests include <i>Melia azedarach</i>, <i>Tecoma stans</i>, <i>Solanum mauritianum</i>, <i>Lantana camara</i> and <i>Chromolaena odorata</i>.</p>
Indigenous vegetation	Grassland	<p>The grassland is a mix of grassland typical of the region and bushclumps. Grasslands comprise species such as <i>Aristida junciformis</i>, <i>Themeda triandra</i>, <i>Melinis repens</i>, <i>Eragrostis curvula</i> and other grasses along with herbaceous species such as <i>Helichrysum nudifolium</i>, <i>Pentanisia sp.</i>, <i>Polygala hottentotta</i>, <i>Ceratotheca triloba</i> and the dominant <i>Chamaecrista mimosoides</i>.</p> <p>The bushclumps comprise a mix of the dominant species <i>Strychnos spinosa</i>, <i>Dischrostachys cinerea</i>, <i>Combretum molle</i>, <i>Vangueria infausata</i> and <i>Albizia adianthifolia</i> with other less dominant species and occasionally invasive shrubs such as <i>Lantana camara</i>.</p>
	Forest	<p>Forest areas of the site are largely associated with the river and would comprise part of the riparian system. It is essential that an aquatic impact assessment be conducted on site.</p> <p>Forests are dominated by typical species including <i>Albizia adianthifolia</i>, <i>Trichilia dregeana</i>, <i>Syzygium cordatum</i> and others with both alien invasive species and savanna tree species colonising the ecotone between forest and grassland. Such species include <i>Sclerocarya caffra</i>, <i>Combretum molle</i>, <i>Tecoma stans</i>, <i>Melia azedarach</i> and others.</p> <p>Forests form an important role in ecosystem service provision including erosion control, flood attenuation and habitat provision. It is recommended by KZN wildlife that buffers are placed on forests.</p>

2.2.2 Flora

Overall, the expected (POSA and Mucina and Rutherford as well as Paradise Valley Nature Reserve located nearby) and recorded species list include 299 species (see Appendix 1 of the *Ecological Report*) that occur in the region of the Regent Estate site. It is not possible for all of these species to occur in the relatively small area of the study site, and thus only a comparatively small number of species were recorded from the site (78) and, as can be seen in Appendix 1, many of them are invasive alien species. The most common families expected and recorded in the study area include:

- Fabaceae (Pea family) – 27 species;
- Asteraceae (Daisy family) – 23 species;
- Rubiaceae (Coffee family) – 14 species;
- Euphorbiaceae (Spurge family) – 11 species; and
- Poaceae (Grass family) – 18 species

2.2.3 Species of Special Concern

The species list includes 22 Possible and Confirmed Species of Special Concern (SSC). SSC include those species that are listed as Endemic (by POSA), or on one or more of the following lists:

- National Protected Tree List (Government Gazette Vol. 593, 21 November 2014, No. 38215);
- Provincial Protected Species List (Nature Conservation Ordinance No. 15 of 1974);
- National Protected Species List or TOPS (R 1187 of 2007); and
- The National Red List for Plants (redlist.sanbi.org, as given by POSA).

All SSC that are listed by TOPs, the Provincial Conservation Ordinance or the List of Protected Trees require permits if they are cut, destroyed or damaged in any way. These permits must be obtained for the footprint of the development prior to any construction taking place. Two SSC were confirmed for the site: the protected tree *Sclerocarya birrea subsp. caffra* and *Aloe sp.* An application has been submitted to DAFF and EKZN respectively.

2.2.4 Sensitivity

As per the Ecological Assessment, dated August 2020, the overall sensitivity of the site is high and a need for the conservation of as much of the indigenous vegetation of D'MOSS and CBAs is necessary. The current layout provides for some of the proposed development to be located in the low sensitivity degraded areas of the site, with loss of high sensitivity areas including Grassland, forest and D'MOSS. Loss of high sensitivity areas will occur should the development go ahead. The open space on the site should be managed as per the Open Space Management Plan and Alien Invasive Management Plan.

2.2.5 Forest Buffer

Buffers on forests were assessed based on the Ezemvelo KwaZulu-Natal Wildlife guidelines. The forests on site are indigenous but are impacted by anthropogenic impacts as well as alien invasive species and thus approximate secondary forest. Buffer options for the forest include the following:

- A 20m buffer is recommended if the forest is actively managed as a conservation or private open space area for the life of the project including management of alien plants. However, future plans for the site are currently unknown.
- A 50m buffer is necessary if the remainder of the site is managed for alien invasive plants and access restricted, but no other measures put into place.
- Buffers become unnecessary if offsets are considered at the only mitigation.
- The forest area can be used for conservation compatible activities such as hiking and bird watching.

Please refer to Appendix D3: Specialist Reports - Ecological Report dated, August 2020.

As per the recommendations of the Ecological Report, an Alien Invasive Management Plan and Open Space Management Plan was developed for the Regent Estate. Please refer to Appendix D1 and D4 respectively.

2.3 Wetland Environment

As per the Wetland Delineation and Functional Assessment report, no wetlands have been identified on the proposed development site, however one wetland (unchanneled valley bottom wetland) was identified near the southern boundary of the regulated 500m buffer. As per the risk screening, the HGM 1 would not be impacted on as the proposed development site and HGM area are geographically separated; are located in different catchments; and separated by a topographic high drainage divide together with road, trees and buildings as further obstructions. The river riparian (Aller River) was deemed to have a moderate risk, however with mitigation, these can be mitigated to low/no impact. A 32m buffer was recommended for the river riparian.

Please refer to Appendix D9: Specialist Reports - Wetland Delineation and Functionality Assessment dated August 2020.



Figure 14: Map illustrating the wetland delineated within the 500m assessment radius

2.4 Geology and Soils

The Geotechnical assessment compiled by Geosure, dated April 2018 details the results of a preliminary and shallow geotechnical investigation of the Regent Estate. The site was observed to be underlain by weathered sandstone bedrock of the Natal Group. The sandstone bedrock is underlain by residual sandstone soils, colluvium and occasional fill. The granular fill and colluvium and residual soils observed on site are considered susceptible to rapid erosion. Nonetheless, based on the results of the fieldwork, the site is considered suitable for the proposed development.

Groundwater seepage was not observed during the field investigation. Given the relatively elevated nature of the site; the development of a persistent shallow groundwater activity is assessed to be low generally. However, an intermittent shallow perched groundwater condition may occur during and after periods of sustained or heavy rainfall, particularly in areas of deeper bedrock and along the central and north – eastern slopes of concave conformation. **Please refer to Appendix D7: Specialist Reports, Geotechnical assessment dated January 2020.**

2.5 Aquatic

The site is situated within Quarter Degree Square (QDS) 2930DD, the Pongola-Mtamvuna Water Management Area (WMA) 4 and the Quaternary Catchment U20M (DWS, 2016). The closest main river is the uMngeni River. The overall habitat integrities, on the Aller River are classed as Largely Modified (Category D), and on the uMngeni River are classed as Moderately Modified (Category C), respectively. The sites are surrounded and impacted on by urbanisation. The riparian habitats consist of increased alien vegetation with some endemic vegetation present. The current impacts on these rivers include flow-, bed- and channel modifications due to foot paths, road crossings, gabions, bridges etc. Water quality deteriorations are likely due to rubbish dumping and surface runoff as well as sewage from informal settlements and discharges from upstream WWTWs.

The overall water quality of the Aller River is Bad, while the water in the uMngeni River is Poor. Low dissolved oxygen and percentage oxygen saturation combined with exceeding concentrations of electrical conductivity, sodium, colour, saline ammonia, orthophosphate, chemical oxygen demand (COD), *Escherichia coli* (*E. coli*), Faecal coliforms, Total coliforms, Standard Plate Count (SPC) were observed when compared to the applicable guidelines. Since these are the baseline conditions, prior to the proposed Regent Estate Development, most of the exceedances are likely due to surface runoff from urban activities, roads, and effluent discharges from the two upstream WWTWs on the Aller and uMngeni River. The water quality results are available to the public, on request, from both the respective WWTWs.

Based on the aquatic macroinvertebrate assessment, the sites on the Aller and uMngeni Rivers were classed as Seriously/Critically Modified ecological categories (E/F categories). Sufficient water, habitat and flow conditions were available, however, the low SASS5 and ASPT scores indicate a general lack of sensitive species in the study area.

Based on the fish assessment, the sites on the Aller were classed as Critically Modified (F category). However, the uMngeni River is Largely Modified (D category). One *Acanthopagrus berda* were sampled and three *Oreochromis mossambicus* individuals were sampled at the confluence of the Aller and uMngeni Rivers, specifically the uMngeni River Reach. The Mozambique tilapia is classified as Vulnerable according to the IUCN (2020).

Based on the results of the DWS risk assessment, the components scored a low to moderate impact significance. An Aquatic Biomonitoring Programme was compiled for the early identification of emerging impacts to allow for timeous management intervention, which reduces the significance of the impact, alleviates the ecological consequence of that impact, and renders the mitigation procedures more cost effective.

Please refer to Appendix D: Specialist Reports, Hydrological Assessment dated September 2019.

2.6 Cultural / Historical Features

Are there any signs of culturally or historically significant elements, as defined in Section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or paleontological sites, on or within 20m of the site?	<input type="checkbox"/>	NO
If YES, contact a specialist recommended by AMAFA to conduct a heritage impact assessment. The heritage impact assessment must be attached as an appendix to this report.		
Briefly explain the recommendations of the specialist:	<p>As per the Heritage Survey, no heritage sites were noted during the survey and no further heritage mitigation is required. Please refer to Appendix D7 – Heritage Survey.</p> <p>An application was lodged via SAHRIS to AMAFA. Response from AMAFA will be included into the Final BAR.</p>	
Will any building or structure older than 60 years be affected in any way?	<input type="checkbox"/>	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	<input type="checkbox"/>	NO
If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.		

2.7 Socio-economic Environment

What is the expected capital value of the activity on completion?	Approximately R220 million
What is the expected yearly income that will be generated by or as a result of the activity?	N/A due to the property being a residential development.
Will the activity contribute to service infrastructure?	<input type="checkbox"/> NO
Is the activity a public amenity?	<input type="checkbox"/> NO
How many new employment opportunities will be created in the development phase of the activity?	N/A
New skilled employment opportunities created in the construction phase of the project	50
New skilled employment opportunities created in the operational phase of the project	Estate Manager
New un-skilled employment opportunities created in the construction phase of the project	100
New un-skilled employment opportunities created in the operational phase of the project	Garden Services; Cleaner Handyman; Security
What is the expected value of the employment opportunities during the operational and construction phase?	Approximately R2.2 million

2.8 Surrounding Environment and Land Uses

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

Land use character			Description
Natural area	YES	■	The site encompasses DMOSS, CBA Irreplaceable and the Aller River.
Low density residential	■	NO	
Medium density residential	YES	■	There are residential units surrounding the site and within 500m.
High density residential	■	NO	
Informal residential	YES	■	The Claremont Township is north of the project boundary.
Retail commercial & warehousing	YES	■	Shops and restaurants are within 500m of the site.
Light industrial	■	NO	
Medium industrial	■	NO	
Heavy industrial	■	NO	
Power station	■	NO	There are three Eskom pylons on site.
Office/consulting room	YES	■	Quantum Business Centre
Military or police base/station/compound	■	NO	
Spoil heap or slimes dam	■	NO	
Quarry, sand or borrow pit		NO	
Dam or reservoir	■	NO	
Hospital/medical centre	■	NO	The Blair Athol Pharmacy is located within 500m of site.
School/ crèche	YES	■	Star College and Little Dolphin Pre-Primary School are within 500m of the site.
Tertiary education facility	■	NO	
Church	■	NO	
Old age home	■	NO	
Sewage treatment plant	■	NO	There 2 WWTW that are upstream on the Aller River.
Train station or shunting yard	■	NO	
Railway line	■	NO	
Major road (4 lanes or more)	YES	■	The M19 forms the southern boundary of the project area.
Airport	■	NO	
Harbour	■	NO	
Sport facilities	■	NO	
Golf course	■	NO	
Polo fields	■	NO	
Filling station	YES	■	The Athol Heights Caltex Service Station is within 500m of site.
Landfill or waste treatment site	■	NO	
Plantation	■	NO	

Agriculture	YES	<input type="checkbox"/>	Subsistence farming is taking place on a small portion of the site.
River, stream or wetland	YES	<input type="checkbox"/>	The Aller River forms the northern boundary of the site. Furthermore, treated effluent will be discharged into the river.
Nature conservation area	<input type="checkbox"/>	NO	
Mountain, hill or ridge	YES	<input type="checkbox"/>	The site is steep as it slopes towards the Aller River.
Museum	<input type="checkbox"/>	NO	
Historical building	<input type="checkbox"/>	NO	
Protected Area	YES	<input type="checkbox"/>	The site encompasses DMOSS and CBA Irreplaceable.
Graveyard	<input type="checkbox"/>	NO	
Archaeological site	<input type="checkbox"/>	NO	
Other land uses (describe)	<input type="checkbox"/>	NO	

2.9 Nuisance Considerations

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES	<input type="checkbox"/>
If yes, what estimated quantity will be produced per month?	Approx. 150m ³	
How will the construction solid waste be disposed of? (describe)		
<p>The waste hierarchy would be applied when managing construction waste. The first objective will be to reuse and recycle as much waste as possible and whatever cannot be reused or recycled will be disposed of at one of the registered licensed DSW landfills. Recycling to be done by approved recyclers.</p> <p>Waste skips/bins will be provided throughout the construction period. The waste will be recycled or reused whenever possible and the rest disposed to the registered waste disposal site, to avoid the pollution of surrounding areas. Small amounts of hazardous waste such as discarded oil or grease may be generated on site. Hazardous waste will be disposed of at an appropriately licensed and registered hazardous waste disposal facility. Waste management will be dealt with more extensively within the EMPr for the relevant phases of the project.</p> <p>Where will the construction solid waste be disposed of? (provide details of landfill site) Solid Waste will be disposed of at a registered licensed landfill. Site specific details will be provided in the Final BAR. The general waste produced will be disposed at the relevant registered Municipal waste facility. In the unlikely event that hazardous waste is produced these will be collected by a competent waste handling contractor and disposed of at the nearest licensed general waste disposal facility which is the closest to the site.</p>		
Will the activity produce solid waste during its operational phase?	YES	<input type="checkbox"/>
If yes, what estimated quantity will be produced per month?	10m ³	
How will the solid waste be disposed of? (provide details of landfill site)		
<p>All waste will be collected and disposed of at an approved waste disposal and/or recycling facility. Where possible, waste will be reused or recycled. Non-recyclable solid waste will be disposed of at the nearest licensed general waste disposal facility via the municipal collection system.</p>		

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine the further requirements of the application.		
Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?	<input type="checkbox"/>	NO
If yes, contact the KZN Department of Economic Development, Tourism & Environmental Affairs to obtain clarity regarding the process requirements for your application.		
Is the activity that is being applied for a solid waste handling or treatment facility?	<input type="checkbox"/>	NO
If yes, contact the KZN Department of Economic Development, Tourism & Environmental Affairs to obtain clarity regarding the process requirements for your application.		

Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	<input type="checkbox"/>	NO
If yes, what estimated quantity will be produced per month?	N/A m ³	
Will the activity produce any effluent that will be treated and/or disposed of on-site? An Infiltrated Activated Sludge Plant has been proposed for the site which will dispose treated effluent into the Aller River.	YES	<input type="checkbox"/>
If yes, contact the KZN Department of Economic Development, Tourism & Environmental Affairs to obtain clarity regarding the process requirements for your application.		
Will the activity produce effluent that will be treated and/or disposed of at another facility?	<input type="checkbox"/>	NO
If yes, provide the particulars of the facility:	N/A	
Facility name:		
Contact person:		
Postal address:		
Postal code:		
Telephone:	Cell:	
E-mail:	Fax:	
Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:		

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	<input type="checkbox"/>	NO
If yes, is it controlled by any legislation of any sphere of government?	<input type="checkbox"/>	NO
If yes, contact the KZN Department of Economic Development, Tourism & Environmental Affairs to obtain clarity regarding the process requirements for your application.		
If no, describe the emissions in terms of type and concentration:		

Limited dust liberation and emissions during construction phase due to the off-loading of construction materials, such as sand and cement, movement of construction vehicles and clearing. Emissions generated will be in the form of dust, carbon dioxide and other vehicle emissions generated by diesel powered machinery and trucks during the construction process i.e. tip trucks, TLB's, excavators and dust from the movement of the construction vehicles. These emissions will be composed primarily of CO2 and will be of a low concentration. In addition, proper maintenance of vehicles will mitigate high concentrated vehicle emissions. Dust generation can be mitigated by either water spraying and / or dust suppressants or by minimising the area that is cleared and re-vegetating exposed areas as quickly as possible. The speed of construction vehicles and other vehicles should be strictly controlled to avoid excessive dust generation.

Generation of noise

Will the activity generate noise?	YES	<input checked="" type="checkbox"/>
If yes, is it controlled by any legislation of any sphere of government?	<input checked="" type="checkbox"/>	NO
If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.		
If no, describe the noise in terms of type and level:		
<ul style="list-style-type: none"> ▪ During the construction phase noise associated with normal construction activities i.e. vehicles, generators and plant equipment will be used on the site. ▪ However, construction activities will as far as possible be limited to normal working hours (weekdays between 7am and 5pm). Noise levels are to be kept within the legislated limits for the area, in accordance with the requirements of the relevant national and local noise control statutes. ▪ Other noise disruptions could potentially be experienced during the construction phase through activities such as drilling. This will be a temporary disturbance. The ambient noise generated is expected to be well below 85dBA (Occupational Health and Safety Act, 1993; Environmental Regulations for Workplaces, 1987, Noise and Hearing Conservation from SABS 083-1983) at potential receptor sites. ▪ Measures to minimise noise generation during construction are contained in the EMP. ▪ Activities must be in accordance with the Local Municipality by-laws. 		

SECTION 3: POLICY AND LEGISLATIVE FRAMEWORK

2014 NEMA EIA Regulations (as amended), appendix 1- 3(e) a description of the policy and legislative context within which the development is proposed including – (i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report (ii)

3.1 Identification of All Legislation, Policies, Plans, Guidelines, Spatial Tools, Municipal Development Planning Frameworks and Instruments as per Section 3(e)(i) and Compliance of Proposed Activity with Legislation and Policy 3(e)(ii)

Legislation	Section	Relates to
The Constitution (No 108 of 1996)	Chapter 2	Bill of Rights.
	Section 24	Environmental rights.
National Environmental Management Act (No 107 of 1998 [as amended])	Section 2	Defines the strategic environmental management goals and objectives of the government. Applies through-out the Republic to the actions of all organs of state that may significantly affect the environment.
	Section 24	Provides for the prohibition, restriction and control of activities which are likely to have a detrimental effect on the environment.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
	Section 30	Deals with the control of emergency incidents, including the different types of incidents, persons responsible for the incidents and reporting procedures to the relevant authority.
National Environmental Management: Waste Act (No 59 of 2008)		Provides for specific waste management measures and the remediation of contaminated land.
		Regulations for waste management licensee activities
National Environmental Management: Biodiversity Act (No 10 of 2004) Threatened or protected species (GN 388) Lists of species that are threatened or protected (GN 389) Alien and invasive species regulations (GNR 506) Publication of exempted alien species (GNR 509) Publication of National list of invasive species (GNR 507) Publication of prohibited alien species (GNR 508)		Provides for the management and conservation of biodiversity, protection of species and ecosystems, and sustainable use of indigenous biological resources – provisions re alien and invasive species?
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)		The objects of this Act are to provide for the conservation of the natural agricultural resources of the Republic by the maintenance of the production potential of land, by the combating and prevention of erosion and weakening or

		destruction of the water sources, and by the protection of the vegetation and the combating of weeds and invader plants. Section 5 details measures for the prohibition of the spreading of weeds.
National Environmental Management: Air Quality Act (No 39 of 2004)	Section 32	Control of dust
	Section 34	Control of noise
	Section 35	Control of offensive odors
National Heritage Resources Act (No 25 of 1999) and regulations	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.
	Section 38	This section provides for Heritage Impact Assessments (HIAs), which are not already covered under the ECA. Where they are covered under the ECA the provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. The Heritage Impact Assessment (HIA) will be approved by the authorising body of the provincial directorate of environmental affairs, which is required to take the provincial heritage resources authorities' comments into account prior to making a decision on the HIA.
Occupational Health and Safety Act (No 85 of 1993)	Section 8	General duties of employers to their employees
	Section 9	General duties of employers and self-employed persons to persons other than their employees
National Water Act (No 36 of 1998) and regulations	Section 19	Prevention and remedying the effects of pollution
	Section 20	Control of emergency incidents
	Section 21	Licenses for water use
Hazardous Substances Act (No 15 of 1973) and regulations		Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances
National Veld & Forest Fire Act		Provides for a variety of institutions, methods and practices to prevent and combat veld, forest and mountain fires.
National Road Traffic Act (No 93 of 1996)		Provides for controlling transport of dangerous goods, hazardous substances and general road safety
Spatial Planning and Land Use Management Act (No. 16 of 2013).		Provides the framework for spatial planning and land use management in South Africa at the different spheres of government and for the establishment, functions and operations of Municipal Planning Tribunals.

Occupational Health and Safety Act (No 85 of 1993) and regulations		Addresses occupational health and safety aspects
SANS 10103 (Noise Regulations)		The measurement and rating of environmental noise with respect to annoyance and to speech communication
KwaZulu-Natal Planning and Development Act, (No. 6 of 2008);		Strategic spatial development intentions for the municipality based on the IDP and SDF, influenced by and in alignment with adjacent municipalities
KZN Nature Conservation Ordinance (Ordinance No. 15 of 1974)		Protected indigenous plants in general are controlled under the relevant provincial Ordinances or Acts dealing with nature conservation. In KwaZulu-Natal the relevant statute is the 1974 Provincial Nature Conservation Ordinance. In terms of this Ordinance, a permit must be obtained from Ezemvelo KZN Wildlife to remove or destroy any plants listed in the Ordinance.
KwaZulu Natal Heritage Act (Act 4 of 2008)		To provide for the conservation, protection and administration of both the physical and the living or intangible heritage resources of the Province of KwaZulu-Natal; to establish a statutory Council to administer heritage conservation in the Province.

Table 6: Current Environmental Legislation

Regulations and Guidelines
Environmental Impact Assessment Regulations, 2014 (as amended).
Internal Guideline: Generic Water Use Authorisation Application Process, August 2007 by DWA.
The General Policy on Environmental Conservation (January 1994).
DEA (2017), Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa.
Department of Environmental Affairs (2017), Public Participation guideline in terms of NEMA EIA Regulations, Department of Environmental Affairs, Pretoria, South Africa.
Disaster Management Act (57/2002): Directions Regarding Measures to Address, Prevent and Combat the Spread of COVID-19 Relating to National Environmental Management Permits and Licences

Table 7: Current Municipal By-Laws

By-Laws
Draft Storm Water Management Bylaw, 2017
eThekweni Planning and Land Use Management By-law, 2016
Sewage Disposal Bylaw, 2016
Waste Removal Bylaw, 2016
Nuisance Bylaw, 2016

SECTION 4: MOTIVATION, NEED AND DESIRABILITY

4.1 Need and Desirability as per Section 3(f)

The last five years have seen a substantial expansion of the sub-urban development in the greater Durban Metropolitan Region. The applicant had purchased this property with the expectations of constructing a residential development to cater for the rapid rate of urbanisation.

The development proposal is essentially utilization of existing zones and land use typology, which is compatible with surrounding land uses. It is a logical extension of the adjacent existing residential suburbs of the Athol Heights sub region.

The proposed housing development will offer housing to those in the middle-income bracket. In addition, being in an urban area, positions residents closer to places of employment, resulting in shorter daily commutes and more employment opportunities. The development will also provide opportunities for the people who once rented to purchase their own home, especially in view of the current decline in the interest rates.

The construction of the residential units will contribute to continued employment in society. The development will yield a positive contribution to the socio-economic value of the site and impact positively on surrounding property values. It will enhance the surrounding landowner's property value as well as the general aesthetics of the site. The proposed development is located within an area that is already built up with access to schools, hospitals and other essential infrastructure. As the area to be developed on is currently vacant – the property is not being utilized to the full potential. Furthermore, jobs will be created during and post-construction and expected value of the employment opportunities is approximately R2.2 million.

A positive decision on the project will allow for the provision of housing to accommodate a vast number of households which will, in turn, lead to the additional spending and investment in local shops and services by the additional households, thereby, boosting the local economy.

The proposed development will result in the loss of approximately 4 hectares of currently undeveloped land. Illegal activities are causing environmental degradation of the site. These include - subsistence farming in sensitive areas and Illegal dumping.

Much of the land intended for development is degraded or transformed. This has obvious impacts on the ecological value of the land and has resulted in a high density of invasive alien plant species. This is explained in greater detail in the Ecological Report (Appendix D). If the development is authorised, 3,6 hectares will be fenced off and set aside as private open space. This portion will include the areas of the property that have been identified as CBA and DMOSS.

Housing is always seen as a benefit for society. The construction of the residential development will ensure continued temporary and permanent employment opportunities in society. Developing the site will yield a positive contribution to the aesthetic value of the area by adequately manage and control the alien vegetation on site.

4.2 Motivation for the Preferred Site, Activity and Technology as per Section 3(g)

The Preferred Site for the proposed Regent Estate Development is the only alternative. The properties have been purchased with the sole purpose to develop the Regent Estate. No other properties were purchased by the applicant; thus, no site alternative properties / locations are applicable. The site is vacant and should the proposed development not be undertaken the site will be susceptible to land invasion, further dumping, spread of alien invasive plants and anthropogenic degradation.

The proposed activities are associated with the construction of the Regent Estate Development and associated infrastructure. No alternative types of activities were considered feasible as the Developer's intention was to construct a residential estate. Whilst the site is considered critically endangered, the site is slowly being degraded due to anthropogenic activities mentioned above. Approximately 4ha of the 7.6Ha site will be developed whilst the remainder will be left as Private Open Space.

All construction activities will be in line with the National Building Regulations and Building Standards together with the Occupational Health and Safety regulations. Recommended alternative energy sources include the following.

- All light fittings will be of the LED technology type.
- Consideration will be given to solar powered LED street lighting.
- The bulk electrical load estimate is based upon energy efficient equipment such as gas stoves, heat pumps, inverter type air conditioning units, etc.

The New Germany WWTW cannot accommodate the effluent from the proposed development as it does not have available capacity. Therefore, an on-site package plant (Integrated Fixed Activated Sludge Plant) with a capacity of 500m³ has been proposed to treat the effluent emanating from the residential units. The treated effluent will be discharged into the Aller River and the sludge will be disposed of at a registered landfill site. The discharge of the effluent will have minimal impact on the Aller River as it will be treated to the GA limits specified by the Department of Water and Sanitation.

SECTION 5: PUBLIC PARTICIPATION

As per the Directions issued by the Minister of Forestry, Fisheries and Environment, stipulated in Government Notice No.650, dated 05th June 2020, new and pending applications for Environmental Authorisation where a Public Participation Process (PPP) as contemplated in Chapter 6 of the Environmental Impact Assessment Regulations (as amended), is required, a Public Participation Plan needs to be compiled by the Environmental Assessment Practitioner and approved by the Competent Authority. **A copy of the draft Public Participation Plan has been attached as Appendix E8**

5.1 Notification of Interested and Affected Parties

- (a) *fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of—*
- (i) *the site where the activity to which the application or proposed application relates is or is to be undertaken; and*
 - (ii) *any alternative site;*

Site notes were displayed on the 6th August 2020 at the site, entrance to Scone Place and the Caltex Athol Heights Service Station.

The noticeboard detailed the proposed activity as well as notifying of the proposed development and inviting stakeholders and I&APs to register. Refer to Appendix E3 for proof of placement of the site notice boards.

- (b) *giving written notice, in any of the manners provided for in section 47D of the Act, to—*
- (i) *the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken;*
 - (ii) *owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken;*
 - (iii) *the municipal councillor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community in the area;*
 - (iv) *the municipality which has jurisdiction in the area;*
 - (v) *any organ of state having jurisdiction in respect of any aspect of the activity; and*
 - (vi) *any other party as required by the competent authority;*

A Background Information Document and notification with an invitation to register as an I&AP were distributed as follows:

- **Emailed to relevant stakeholders and identified I&APs on the 7th August 2020 (Relevant proof is attached as Appendix E6);**
- **Hand delivered to adjacent properties on the 7th August 2020.**
- **Contacted the Councilor of Ward 92, Ms Jabu Alice Dlamini who indicated that she would also disseminate the BID/Information on the project.**

In addition to distributing BIDs, the following was undertaken to identify I&APs:

- **Posted on WhatsApp, Facebook and Westville community Facebook pages/groups on the 6th August 2020 - Requested feedback from individuals that live in the Athol Heights vicinity or**

knows of anyone that resides in the area, aware of a neighbourhood watch or a social media group for the residents in the area.

- **Contacted Nkosi Security's Head Office (Neighbourhood Watch) to determine if there is any community WhatsApp Groups for the Athol Heights area.**

- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in paragraph (c)(ii); and

An advert was placed in The Mercury for the 12th August 2020, which provides information on the project scope of works, location, dates for the review of the draft Basic Assessment Report, details of EAP as well as requested for potential I&APs to register themselves in order to get further information on the project and the EIA process. (Relevant proof is attached as Appendix E5).

Public Meeting

No public meeting was held as no comments/queries have been received till date.

Public Review of the Draft Basic Assessment Report

The Draft Basic Assessment Report (this document) inclusive of specialist reports and Environmental Management Programme (EMPr) is out for public comment from the 14th August – 16th September 2020. Due to the COVID – 19 pandemic, the documents will be available on the Wallace and Green's website: www.wallaceandgreen.co.za or can be made available electronically upon request to I&APs. All stakeholders were contacted on the 11th August 2020 to confirm requirements in terms of safety regulations and the distribution for the review and comment of the DBAR.

5.2 Authority Notification

A pre-application meeting was scheduled with EDTEA prior to the submission of this draft BAR on the 13th August 2020. **Please refer to Appendix J1 - EDTEA Pre-application Minutes of Meeting.**

5.3 Registered Interested and Affected Parties

A proponent or applicant must ensure the opening and maintenance of a register of interested and affected parties and submit such a register to the competent authority, which register must contain the names, contact details and addresses of—

- (a) all persons who, as a consequence of the public participation process conducted in respect of that application, have submitted written comments or attended meetings with the proponent, applicant or EAP;
- (b) all persons who have requested the proponent or applicant, in writing, for their names to be placed on the register; and
- (c) all organs of state which have jurisdiction in respect of the activity to which the application relates.

The contact details of all I&APs will be included into the Final BAR.

5.4 Comments and Responses Report

44. (1) The applicant must ensure that the comments of interested and affected parties are recorded in reports and plans and that such written comments, including responses to such comments and records of meetings, are attached to the reports and plans that are submitted to the competent authority in terms of these Regulations.
- (2) Where a person desires but is unable to access written comments as contemplated in subregulation (1) due to—
- (a) a lack of skills to read or write;
 - (b) disability; or¹³
 - (c) any other disadvantage;
 - (d) reasonable alternative methods of recording comments must be provided for.

All concerns, comments, viewpoints and questions (collectively referred to as ‘issues’) will be documented and responded to adequately in a Comment and Response Report, which will be included into the Final BAR.

SECTION 6: IMPACT ASSESSMENT

6.1 Methodology to Determine and Rank Significance and Consequences of Impacts Associated with all Alternative as per Section 3(h)(vi)

2014 NEMA EIA Regulations (As Amended), Appendix 1- 3(H) (vi) the methodology used in determining and ranking the nature, significance, consequence, extent, duration and probability of potential environmental impacts and risks associated with the alternatives, (v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts can be reversed, may cause irreplaceable loss of resources and can be avoided, managed and mitigated. Appendix 1- 3 (I) A full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity- (i)- (ii). Appendix 1- 3 (J) an assessment of each identified potentially significant impact and risk (i)- (vii)

Scoring of Impacts	
Consequence	
Severity	1 – Insignificant / Non-harmful 2 – Small / Potentially harmful 3 – Significant / Slightly harmful 4 – Great / Harmful 5 – Disastrous / Extremely harmful
Duration	1 – Up to 1 month 2 – 1 month to 3 months 3 – 3 months to 1 year 4 – 1 to 10 years 5 – Beyond 10 years / Permanent
Spatial Scale	1 – Immediate, fully contained area 2 – Surrounding area 3 – Within business unit area or responsibility 4 – Within mining boundary area / Beyond BU boundary 5 – Regional, National, International
Overall Consequence = (Severity + Duration + Extent) / 3	
Likelihood	
Frequency of the Activity	1 – Once a year or once / more during operation / LOM 2 – Once / more in 6 months 3 – Once / more a month 4 – Once / more a week 5 – Daily / hourly
Probability of the Incident / Impact	1 – Almost never / almost impossible 2 – Very seldom / highly unlikely 3 – Infrequent / unlikely / seldom 4 – Often / regularly / likely / possible 5 – Daily / highly likely / definitely
Overall Likelihood = (Frequency + Probability) / 2	
Overall Environmental Significance = Overall Consequence X Overall Likelihood	
Overall Environmental Significance:	
0 - 2.9	Very Low
3 - 4.9	Low
5 - 6.9	Medium - Low
7 - 8.9	Medium
9 - 10.9	Medium - High

Refer to worksheet 1 of the Impact Assessment Matrix- Appendix F

6.2 Impacts that may result from the Planning and Design, Construction, Operational, Decommissioning and Closure Phases as well as Proposed Management of Identified Impacts and Proposed Mitigation Measures

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities.

Refer to Impact Assessment Matrix- Appendix F

6.3 Environmental Impact Statement as per Section 3(l)

Alternative S1 (preferred site) and Alternative A1 (preferred alternative).

The proposed development will entail the construction of 309 two-bedroom units, internal roads and parking bays; water supply infrastructure which includes pipelines and a steel 400kl tank together with a pump station; stormwater infrastructure which includes pipelines and stormwater retention ponds; as well as sewer infrastructure which includes pipelines, manholes and a low volume on site package plant, which will discharge treated effluent into the Aller River

The overall sensitivity of the site is high and a need for the conservation of as much of the indigenous vegetation of D'MOSS and CBAs is necessary. The current layout was designed for a portion of the proposed development to be located in the low sensitivity degraded areas of the site, with loss of high sensitivity areas including Grassland, forest and D'MOSS. The open space on the site should be managed as per the Open Space Management Plan and Alien Invasive Management Plan. There are no wetlands identified on site.

The Basic Assessment considered relevant environmental aspects and impacts from the proposed development and proposed mitigation during the planning, construction and operational phases. The proposed site (S1) and layout alternative (A1) is recommended based on the following:

Planning Phase – Short Term Duration

- *Potential environmental impacts were identified and addressed during the Basic Assessment process.*
- *Specialist studies were undertaken for the proposed development to identify sensitive areas.*
- *The open space on site should be managed as per the Open Space Management Plan.*
- *Alien invader species should be managed as per the Alien Invasive Management Plan.*
- *Permits from DAFF and EKZN should be attained for the removal and relocation of SCCs.*
- *A suitable offset may be undertaken.*
- *The Developer will attain approval from eThekweni Municipality for connection of the services to the site.*
- *The EMPr incorporates the Specialist recommendations to ensure that positive impacts be maximised, and negative impacts be prevented or minimised.*
- *Creation of temporary and permanent employment opportunities for the local community is High-Positive.*

Construction Phase – Short Term Duration

- *The probable impacts on the biophysical environment can all be mitigated Medium impact.*
- *The open space on site should be managed as per the Open Space Management Plan.*
- *Alien invader species should be managed as per the Alien Invasive Management Plan.*
- *Permits from DAFF and EKZN should be attained for the removal and relocation of SCCs.*
- *A suitable offset may be undertaken.*
- *The Developer will attain approval from eThekweni Municipality for the connection of services to the site.*
- *The EMPr incorporates the Specialist recommendations to ensure that positive impacts be maximised, and negative impacts be prevented or minimised.*

- *Creation of temporary and permanent employment opportunities for the local community is High-Positive.*
- *The probable impacts of the dust, noise and visual disturbance, waste, pollution, contamination and stormwater management are Medium-High to High Negative but can all be mitigated too Low to Low- Medium Negative.*
- *The opportunity for temporary and permanent employment is considered Medium to High Positive impact.*

Operation Phase – Long Term Duration

As has been confirmed with EDTEA in the pre-application meeting, this specific listed activity for which an EA is being sought, is without operational aspects. Thus, the EA is only required for the development or construction phase, including rehabilitation of the cleared areas and post-construction monitoring thereof.

- *The definitive impacts associated with improved social, environmental and economic opportunities through the provision of additional residential opportunities and temporary and permanent employment opportunities are all considered Medium-High Positive Impacts.*
- *The probable negative impacts associated with erosion from poor storm water management and inadequate vegetation cover, waste generation, increased traffic volume, waste materials, noise disturbance can all be mitigated to Low to Low-Medium Negative impacts.*
- *The positive impact from improved property value of surrounding communities contributing to increased economic growth and tourism is a High-positive.*

Alternative S2 (Not Applicable)

Direct impacts: / Indirect impacts: / Cumulative impacts

Alternative A2 (Not supported)

The A1 (preferred option) is supported in preference to the A2 alternative.

Approximately 4.5ha of the 11.5Ha site will be developed. Of the 4.5Ha developable area, approximately 3.5Ha of the proposed development will be constructed within a CBA and DMOSS area. The stormwater layout is designed to include only 1 hardened stormwater attenuation tank. Sewer on the site was proposed to be handled at the New Germany Waste Treatment Works, however the sewer connection option was not feasible as it would require a sewer pump station and rising main via pipe jacking across the M19 highway to a terminal manhole prior to connecting into an existing 160mm sewer pipe leading to the 12ML/day New Germany Wastewater Treatment Works.

Alternative A3 (Not supported)

Not Applicable

No-go alternative (compulsory)

The no-go alternative implies that the status quo remains, and the proposed regent Estate will not be developed. By not developing the land, it is likely that the property would become subject to land invasions and unauthorised dumping, specifically in the grassland and forest area, contributing to the degradation of the land. The site will continue to be disturbed by anthropogenic activities which include the creation of paths for use as a short cut through the valley.

From an environmental perspective, the positive impacts of the “no go” alternative will be that the D'MOSS, CBA and critically endangered ecosystem will not be impacted upon. However, the site will transform if not managed efficiently and the potential of alien species invasion would increase. Currently these alien invasive species are not being removed and if the development is not undertaken, then this would increase the infestation and thus impacting on the indigenous species.

Furthermore, should the development not go ahead, there will be no discharge of treated effluent into the Aller River and no excess sludge disposal.

From a social perspective, if the development is not implemented, potential temporary and permanent employment opportunities (which can be offered to the local community) will not be available if the development is not approved.

From an economic perspective, if the 'no-go' is implemented, the economic profile of the general area will remain unchanged and will not be improved. Furthermore, it is envisaged that property values will increase at a gradual rate over several years as a result of the Regent Estate Development, however, if not implemented this will not materialise.

The main conclusion from the above mention, is that a no development option will have adverse socio-economic consequences. Although the "No-Go" alternative may be preferred in the interests of preserving the existing DMOSS and CBAs, the need for development must however be evaluated holistically taking into consideration of the positive socio-economic impacts as well as the ecological impacts due to development.

6.4 Impact Management Measures from Specialist Reports for the Development for Inclusion in the EMPr as per Section 3(m)

2014 NEMA EIA Regulations (as amended), Appendix 1- 3(M) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management outcomes for the development for inclusion in the EMPr

The following outcomes must be considered for this project:

Outcomes:

- All construction work must comply with the conditions of the relevant authorisations, licences and permits.
- The implementation of the environmental management plan and environmental management on-site.
- Environmental impacts are minimised through effective awareness and training for all construction staff including sub-contractors, service providers and suppliers.
- Environmental impacts are minimised in and surrounding the construction area;
- Impact on No-Go areas are avoided through effective demarcation and management of these areas.
- To avoid, prevent and manage any stormwater impacts.
- Impacts on flora and fauna are minimised through adherence of EMPr requirements.
- Impacts resulting from earthworks are managed and guided by specifications and material sourced from authorised sites.
- Vegetation clearance and associated impacts are minimised through adherence of EMPr vegetation clearance requirements.
- Impacts to soil, surface water and groundwater resources are avoided or minimised through the implementation of management actions
- All precautions are taken where possible to minimise the risk of injury or harm.

6.5 Assumptions, Uncertainties and Gaps in Knowledge relating to the Assessment and Mitigation Measures Proposed as per Section 3(o)

The information in this report is based on findings of several specialists' studies. The layouts and engineering drawings of the proposed Regent Estate Development have been provided to the EAP by the engineer and planner respectfully. The following assumptions and limitations relating to this assessment were identified by specialists:

Ecological Assessment:

- The field work was conducted over one day on Wednesday the 22nd of January 2020.
- The site assessment was conducted in summer and does constitute a summer site visit (November to April) as per the guidelines for KwaZulu-Natal as per Ezemvelo KwaZulu-Natal Wildlife.

Wetland Delineation and Functionality Assessment:

- A site visit was conducted on the 23/12/2019 during the wet season of KwaZulu-Natal, thus wetland boundary verification during this period is assumed to be the widest.
- This study is considered as a once off assessment, which can only take into consideration the current condition with some speculation of historical events based on evidence observed on field and with the aid of satellite imagery. Especially since vegetation and habitats often vary temporally and spatially, there must be recognition of fact that certain aspects or features may have been missed if they did not present themselves on the day the site visit.
- The hydrogeomorphic units were assessed in their entirety, even if it included sections of artificial wetland or extended beyond the boundary of the study area; the latter assessed from aerial imagery with limited infield verification and assumed to be accurate within specialist expertise.
- All delineation verification is done using a GPS system. The precision of such systems is generally limited to 5m and therefore this error must be taken into account when utilising the GPS coordinates
- Whilst the assessment techniques applied in this report are used in order to standardise and 'objectify' the assessment of the systems' function, potential impacts and services, it must be noted that much of the information is subjectively collected based on the assessor's previous experience and training. The assessor will, if additional information or counter arguments are provided and verified, hold the right to amend the report if need be
- Monitoring and management of any wetland impacts/remediation/rehabilitation will be advised in accordance with best practice.

6.6 Period for which Authorisation is required, Proposed Monitoring and Auditing and Post Construction Requirements as per Section 3(q)

2014 NEMA EIA Regulations (As Amended), Appendix 1- 3(Q) where the proposed activity does not include operational aspects, the period for which the environmental authorization is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalized.

As has been confirmed with EDTEA, this specific listed activity for which an EA is being sought (i.e. clearance of indigenous vegetation as well as construction in DMOSS and CBAs.), is without operational aspects. Thus, the EA is only required for the development or construction phase, including rehabilitation of the cleared areas and post-construction monitoring thereof.

Based on the time required for the applicant to undertake all necessary Town Planning and Local Municipality processes governing the establishment of the Regent Estate Development; an estimated construction period of 2 years, and a rehabilitation and post-construction monitoring period of 2 years, it is recommended that the environmental authorization is granted for a period of 5 years.

Given the nature of this project, internal environmental audits of the activity and implementation of the EMPr will be undertaken by the ECO. The findings and outcomes of these audits will be recorded in the EMPr file. The environmental audits and associated reports must be conducted and submitted to the CA at intervals as indicated in the EA.

The ECOs must prepare a monthly EAR. The report will be tabled as the key point on the agenda of the Environmental Site Meeting. The Report is submitted for acceptance at the meeting and the final report will be circulated to the Project Manager and filed in the EMPr file. At a frequency determined by the EA, the holder of the EA must submit the monthly reports to the CA in terms of NEMA.

The EMPr (Appendix G) details the post construction, rehabilitation and closure, which will be monitored by the ECO and compliance authorities. One post-construction audit should be conducted once construction is complete. There after an annual audit should be conducted for 3 years in order to ensure that the post construction and rehabilitation outcomes have been achieved.

6.7 Financial Provisions as per Section 3(s)

2014 NEMA EIA Regulations (as amended), Appendix 1- 3(S) where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts.

Not applicable.

6.8 EAP's Opinion on whether or not to Authorise the Activity and Recommendations & Conditions for Authorisation as per Section 3(n) and (p)

2014 NEMA EIA Regulations (as amended), Appendix 1- 3(N) any aspects which were conditional to the findings of the assessment either by EAP or specialist which are to be included as conditions of authorization and (P) a reasoned opinion as to whether the proposed activity should or should not be authorized, and if the opinion is that it should be authorized, any conditions that should be made in respect of that authorization.

The findings of the assessment indicate that the site is sensitive from a biodiversity perspective as the site is classified as DMOSS and CBA Irreplaceable. However, with correct management of the site and a suitable mitigations, the impact can be reduced. Furthermore, no wetlands will be impacted upon as there are no wetlands that have been identified on site. There will be minimal to no impact on the Aller River, which forms the northern boundary of the site, as the proposed development is approximately 150m away from the river, with the exception however for the effluent discharge point. The effluent will be treated to the ambits of the general limit parameters of the Department of Water and Sanitation prior to discharge. The proposed development of the estate will also reduce the current impact of anthropogenic activities such as dumping and walkways as well as control/remove the alien invasive species on site. Measures have been incorporated into the EMPr, which also makes provision for the monitoring and auditing thereof, as well as environmental awareness training for all persons who will be conducting the activity.

It is the EAP's opinion that the activity for which environmental authorisation is being sought, is authorised provided that it is undertaken in accordance with the preferred alternative layout (Alternative A1) on the preferred site (Alternative S1), subject to the following conditions:

Properties and Infrastructure:

- Signage must be placed prior to commencement of construction in order to make the community aware of the upcoming activities.
- The engineer must identify any existing infrastructure services that may be affected prior to commencement of construction.
- Any structures that are required to be removed, must be replaced and any damaged incurred must be repaired.

Biodiversity Areas:

- Removal of alien vegetation must be removed in accordance with the Alien Invasive Management Plan.
- The open space on site must be managed as per the Open Space Management Plan.

Waste Management, Storage Areas:

- The Contractor must ensure that all litter is collected from the work and camp areas daily.
- All hazardous substances must be stored within a secured storage area, with impervious lining and bunding. Drip trays must be used where suitable.
- The mixing of concrete must be done on mortar boards or similar structures to prevent the risk of run-off.
- Chemical toilets must be used as ablution facilities during the construction period by all contractors.

Traffic and Construction Vehicles:

- Appropriate safety signage must be used to cordon off construction areas.
- Construction vehicles must adhere to speed limits.
- Access to the site for site establishment and construction activities must be planned from the existing roads from the newly access road, as per authorised development layout.

Dust and Erosion Control:

- The liberation of dust into the surrounding environment must be effectively controlled by the use of water sprays, fabric containment or curtains, where required.
- Suitable erosion control measures must be implemented in areas sensitive to erosion i.e. storm water discharge points, exposed areas and embankments.
- All exposed surfaces must be re-vegetated and/or stabilised as soon as is practically possible.
- The topsoil must be removed along the proposed pipeline route to suit trench width, at a depth of 150 mm and stockpiled separately to mitigate against topsoil mixing.
- On downhill slopes the trench will also be backfilled so that the backfill material forms cut-off berms at regular intervals, at least 150mm higher than the ground either side of the trench to prevent surface water from running along the trench and eroding the backfilled material.

Watercourse:

- Buffer zone must be implemented.
- Erosion protection measures must be installed during construction.
- Bio-Monitoring should be undertaken during the operational phase to ensure the treated effluent is within the ambits of the GA.

Archaeological Resources:

- Operations exposing archaeological and historical residues, including graves, should cease immediately pending an evaluation by the heritage authorities.

Monitoring and Auditing:

- The EMPr (Appendix G) and conditions thereto should be adhered to.
- An ECO must be appointed and all contractor staff to be trained on the EMPr and Environmental Authorisation requirements prior to commencement of activities.
- Environmental monitoring and auditing shall be undertaken by the ECO on a fortnightly basis with a monthly audit report during the construction phase.
- All maintenance activities during operation must comply with the construction measures detailed in the construction phase of the EMPr.
- All necessary permits / licenses (e.g. Water Use Authorisation, DAFF / EKZN permit) must be obtained prior to commencement of construction or clearing of protected vegetation / natural forest on site.