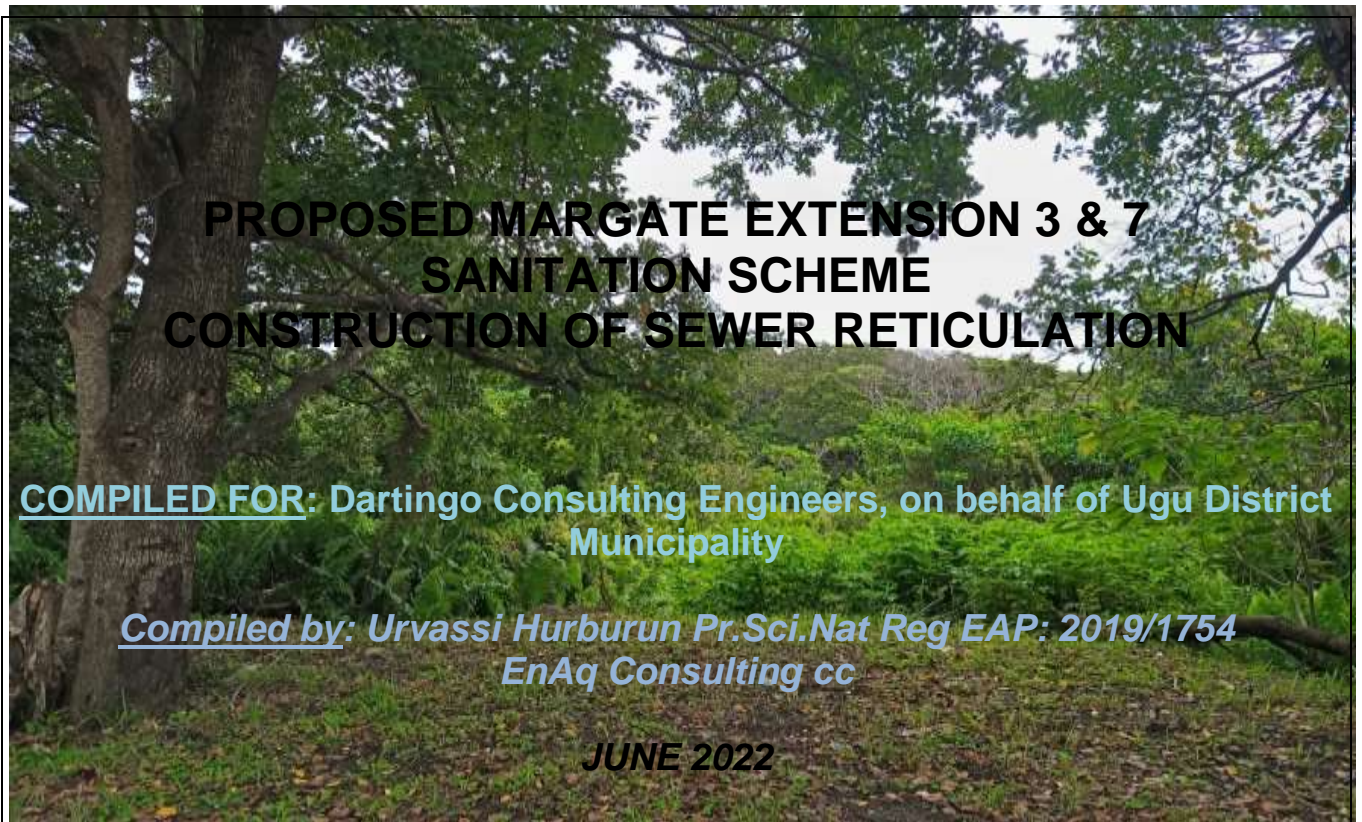




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DRAFT BASIC ASSESSMENT REPORT: FOR PUBLIC & AUTHORITY REVIEW

**EIA REFERENCE NUMBER:
DC21/0013/2022
KZN/EIA/0001762/2022**



PROJECT APPLICANT/CONTACT PERSON: Ugu District Municipality: Dr. Elliot
Michael Sibusiso Ntombela

Postal address: P O Box 33 Port Shepstone 4240

Tel: 039 688 5700 **Email:** Michael.Ntombela@ugu.gov.za

BASIC ASSESSMENT REPORT-DRAFT

Submitted in terms of the Environmental Impact Assessment Regulations, 2014,
amended 07 April 2017, promulgated in terms of the National Environmental
Management Act, 1998
(Act No. 107 of 1998)

THE OBJECTIVES OF THE BASIC ASSESSMENT PROCESS IS TO; THROUGH A CONSULTATIVE PROCESS:

- Determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context.
- Identify the alternatives considered, including the activity, location, and technology alternatives;
- Describe the need and desirability of the proposed alternatives,
- Through the undertaking of an impact and risk assessment process inclusive of cumulative which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and the degree to which these impacts-
 - can be reversed
 - may cause irreplaceable loss of resources; and
 - can be avoided, managed or mitigated;
- Through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to-
 - identify and motivate a preferred site, activity and technology alternative;
 - identify suitable measures to avoid, manage or mitigate identified impacts;
 - Identify residual risks that need to be managed or monitored.

EXECUTIVE SUMMARY

Introduction:

Principal Objective of Report:

This report constitutes the draft Basic Assessment Report for comment by registered IAP's and relevant government authorities. It details the environmental outcomes, impacts and risks of the proposed activity.

The report aims to identify the significant environmental issues and impacts for this proposed development, and to highlight Interested and Affected Parties' (I&APs) issues and concerns. Information of the proposed project, need, and the public participation undertaken to date is also included.

This report has been made available for public and authority comment. The deadline for all comments is the 11 JULY 2022. All comments and issues received will be reviewed, assessed and included in the fBAR where appropriate (which will include cognisance of the comprehensive issues trail ensuing from the public participation process, recommendations and guidelines from the relevant specialist studies, assessment of the negative and positive impacts), together with the EMP, supporting addenda.

All comments and issues received will be assessed and included in the final BAR, which will be submitted to competent authority viz. Department of Economic Development, Tourism and Environmental Affairs (EDTEA) for review and decision making.

Proposed Project Description and Scope:

The proposed project will provide sewer reticulation infrastructure to approximately 489 plots in Ward 6, within the UGU District Municipality, that are currently without water-borne sanitation. The existing infrastructure is currently serviced by on-site sanitation. The proposed reticulation system will discharge into the existing Margate WWTW. Margate is serviced by both water-borne sanitation and septic tanks, and conservancy tanks. These tanks are meant to be de-sludged once a month (sometimes twice), by vacuum tanker. Residents are billed for this service. The conservancy tanks frequently overflow, which poses serious pollution (surface water, groundwater), as well as unpleasant odours, and ultimately pose a health hazard.

The project is situated in Ward 6 within the Ugu District Municipality in the town of Margate, which is located on the south coast of KwaZulu Natal, approximately 20 kilometres south of Port Shepstone along the R61. As this is an urban built-up area, all proposed reticulation will follow existing infrastructure along roads and property lines, therefore alternative route options may not be possible at this stage.

The scope of works will include the following:

To provide sewer reticulation infrastructure to approximately 489 plots, that are presently without waterborne sanitation. the reticulation system will discharge into the existing Margate wastewater treatment works.

Infrastructure will comprise the following

| SCOPE OF WORK/ACTIVITY | DIMENSIONS |
|------------------------|------------|
|------------------------|------------|

| | |
|--|---------------------------|
| Installation of 200mm Ø Bulk Main -u PVC | 2600 m, - 200mm Ø |
| Installation of 160mm Ø Gravity Main-uPVC | 14 455m – 160mm Ø |
| Internal House Connections: 110mm Ø uPVC | 489 connections – 110mm Ø |
| Steel pipes for the exposed pipe (river crossings etc) 200mm Ø | 250 m - 200mm Ø |
| | |

[Coordinates for the proposed PREFERRED site \(as per Layout Plan, Refer Appendix A\).](#)

| Local Municipality | Ward | Catchments | Co-ordinates (approximate centre of project areas) | |
|--------------------|--------|-------------|--|---------------|
| | | | Longitude | Latitude |
| RAY NKONYENI | Ward 6 | Catchment-1 | 30°21'25.50"E | 30°51'37.41"S |
| | | Catchment-2 | 30°21'19.47"E | 30°50'46.00"S |
| | | Catchment-3 | 30°22'0.33"E | 30°50'35.92"S |
| | | Catchment-4 | 30°22'2.41"E | 30°50'48.69"S |

Alternatives:

As this is an urban built-up area, all proposed reticulation will follow existing infrastructure along roads and property lines, therefore alternative route options may not be possible.

❖ **As per Storm Water Management –(Dartingo Consulting Engineers, April 2022)**

During construction, the Contractor shall take necessary measures, to the approval of the Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas.

As per BIODIVERSITY REPORT ('Biodiversity Impact Assessment Margate Ext 3 and 7 Sewerage Infrastructure: the Biodiversity company, February 2022')

The proposed development is not located within any focus area for the National Protected Area Expansion Strategy (NPAES) nor is there one in the surrounding landscape. The proposed development intersects with an area categorised as an Irreplaceable CBA

Considering the above-mentioned information, the proposed development may result in the degradation of intact and functional habitats. However, the likelihood of this is reduced if the appropriate mitigation measures are implemented. It is the opinion of the specialist that the proposed development is favourable, only if all mitigation measures provided within this report are implemented

As per WETLAND REPORT: (Wetland Baseline and Impact Assessment for the Margate Sewer Expansion the Biodiversity company, February 2022')

Eight (8) HGM units were identified within the 500 m regulated area, including various hillslope seeps, Unchanneled Valley Bottom (UVB) wetlands as well as Channeled Valley Bottom (CVB) wetlands.

The ecological importance and sensitivity of the delineated wetlands range from "High" to "Low". A 23 m buffer zone has been calculated and recommended for the proposed sewer pipelines. Furthermore, it is the specialist's opinion that the proposed development can proceed on the condition that all of the recommendations made within this report as well as the prescribed mitigation measures be adhered to.

As per WETLAND REHABILITATION PLAN (*the Biodiversity company, May 2022*)

Regular monitoring and maintenance (such as removing AIP/weeds and encroachment) are required for successful revegetation/rehabilitation projects.

As per GEOTECHNICAL REPORT: Report to Dartingo Consulting Engineers (Pty) Ltd on the Results of a Geotechnical Investigation for the Proposed Gravity Sewer Mains in Margate Extension 3 & 7, Ugu District Municipality, Kwa-Zulu Natal: Geosure Pty, Ltd, April 2022

No signs of instability were observed during the fieldwork. Nonetheless, the geotechnical professional should be engaged during the earthworks phase to ensure that there are no unfavourable conditions exposed during this phase that could lead to instability.

A significant need for the Project is evident from the following:

Margate is serviced by both water-borne sanitation and conservancy tanks. These tanks are meant to be de-sludged once a month (sometimes twice), by vacuum tanker. Residents are billed for this service. The conservancy tanks frequently overflow, which poses serious pollution (surface water, groundwater), as well as unpleasant odours, and ultimately pose as a health hazard.

BENEFITS:

- ◆ Reduce backlogs in provision of basic water and sanitation services in Ugu District Municipality.
- ◆ Provision of adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3.
- ◆ To ensure sanitation, health and hygiene promotion
- ◆ There will be a significant requirement for unskilled labour from the community for the excavation and backfilling of pipeline trenches.
- ◆ It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors.
- ◆ It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation.
- ◆ This project supports the employment of women. The labour force will consist of approximately 100 local labour.
- ◆ To ensure cost recovery for the sanitation service delivery

The project requires a Basic assessment process and environmental authorisation is required from the competent authority being the Department of Economic Development, Tourism and Environmental Affairs (EDTEA). EnAq Consulting cc has been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the Basic assessment process for this proposed project.

Environmental Requirements as per the EIA Regulations 2014 (amended 07 April 2017) and Public participation

| Legislation | Listed Activity Reference | Description as per Regulation | Relevance/Applicability to this Project |
|----------------------|----------------------------------|---|--|
| LN1 OF 2014: GNR 327 | 19i | The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from A watercourse. | <p>As per WETLAND REP, wet areas within project areas 2, 3 and 4 more than 5m³ of soil could be excavated.</p> <p>PROJECT AREA 2: (drake rd-erf-153, 170, 171, 172) START:30°50'35.16"S;; 30°21'13.34"E END: 30°50'35.50"S; 30°21'13.13"E</p> <p>Phillip Rd-Erf 234, 201, 202 START: 30°50'30.70"S; 30°21'14.90"E END: 30°50'30.57"S; 30°21'15.26"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>BOBBY LOCKE –erf 2354 START: 30°50'56.19"S; 30°20'52.60"E END: 30°50'56.02"S; 30°20'53.26"E</p> <p>PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>PROJECT AREA 4: JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> <p>ALTERNATIVE OPTIONS WILL BE ASSESSED FURTHER. (all the above erf are developed)</p> |
| LN1 OF | 31 | The decommissioning of | The existing conservancy structures will |

| | | | |
|-----------------------------------|--------------------------|--|---|
| | <p>14(ii)(a)(d)(vii)</p> | <p>watercourse, measured from the edge of a watercourse</p> <ul style="list-style-type: none"> - Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; <p>The development of- Infrastructure or structures with a physical footprint of 10 square metres or more; Where such development occurs- within a watercourse Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> | <p>START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E</p> <p>DRAKE RD (drake rd-erf-153, ERF 154 170, 171, 172 AND above ERF: 166, 167, 168, 169, AND ERF: 166, 167, 168, 169) (ERF 201 TO 204, AND ERF 217) START: 30°50'39.59"S; 30°21'20.58"E END: 30°50'39.67"S; 30°21'21.70"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>POUND RD (ERF 70, 3655) START: 30°50'51.62"S; 30°21'37.94"E END: 30°50'52.10"S ; 30°21'37.54"E (all the above erf are developed)</p> <p>PROJECT AREA 3:</p> <p>FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>The reticulation will have a footprint of more than 10 square meters and this may be within a watercourse/wet areas, within CBA areas. Alternative options will be investigated. The proposed development intersects with an area categorised as an Irreplaceable CBA</p> <p>PROJECT AREA 4: JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> <p>(all the above erf are developed)</p> |
| <p>Listing Notice 3 of</p> | <p>12(d)(v)</p> | <p>The clearance of an area of 300 square</p> | <p>Some indigenous grasses MAY need to be removed. Alternative options will be</p> |

| | | | |
|----------------------------------|--|--|--|
| <p>2014 (GNR 324)</p> | | <p>metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a Maintenance management plan. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> | <p>investigated</p> <ul style="list-style-type: none"> - "Infrastructure within existing servitudes is preferred and will be opted for, as opposed to encroaching into new areas <p>PROJECT AREA 2:</p> <p>Nelson Rd. (ERF-185 TO 201) START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E</p> <p>DRAKE RD-erf-153, 170, 171, 172) START:30°50'35.16"S;; 30°21'13.34"E END: 30°50'35.50"S; 30°21'13.13"E</p> <p>Phillip Rd-Erf 234, 201, 202 START: 30°50'30.70"S; 30°21'14.90"E END: 30°50'30.57"S; 30°21'15.26"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>BOBBY LOCKE –erf 2354 START: 30°50'56.19"S; 30°20'52.60"E END: 30°50'56.02"S; 30°20'53.26"E</p> <p>PROJECT AREA 3:</p> <p>FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>PROJECT AREA 4:</p> <p>JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> <p>EVANS RD, (ERF 0217, 0216, 0215, 0214, 0213, 0212, 0211, 0218, 0219, 0220, 0221, 0222) START: 30°50'28.56"S; 30°21'11.52"E END: 30°50'28.67"S; 30°21'11.95"E</p> |
|----------------------------------|--|--|--|

| | | | |
|--|--|--|--|
| | | | <p>HOOD RD, (ERF 0174, 0173) START: 30°50'31.74"S; 30°21'08.49"E END: 30°50'32.10"S; 30°21'08.46"E</p> <p>FISHER RD(ERF 0229, 0228, 0227, 0226, 0225, 0224, 0230, 0231, 0232, 0233, 0235, 0175, 0176, 0223) START: 30°50'29.08"S, 30°21'7.17"E END: 30°50'26.15"S, 30°21'8.23"E</p> <p>(all the above erf are developed)</p> |
| | | | |

Key Findings and recommendations

Overall, the results of the impacts assessment emerge as having a “negative low” significance after mitigation.

This BAR provides an assessment of both the benefits and potential negative impacts anticipated as a result of this proposed infrastructure project. Potential impacts were identified by professional judgement, project information, and experience of similar projects, a review of available literature, site visits, specialist input, and consultation with relevant authorities and the IAP's. Works of this nature can pose significant impacts on the environment which can include:

- *Ecological, riparian:*
- *Soil Erosion/sedimentation*
- *Surface water, stormwater management*
- *Soil compaction and disturbance*
- *alien/exotic vegetation invasion*
- *Geotechnical*
- *Topsoil/stockpiling*

Having assessed the impacts of the proposal, there is unlikely to be any significant negative environmental impacts, provided the proposed preferred layout for is maintained, and as per the recommendations of the specialist terrestrial/wetland, rehabilitation, stormwater and geotechnical assessments.

The findings preclude that there are no environmental fatal flaws that could prevent the proposed development, provided that the recommended mitigation and management measures contained within the Environmental Management Programme (EMPr) are implemented.

It is therefore the recommendation of the EAP that the environmental authorisation (EA) should be APPROVED for this proposed project, taking into consideration the findings of the specialist reports, and impact assessment.

LIST OF ABBREVIATIONS USED IN THIS REPORT

| | |
|------------------|--|
| BAR | BASIC ASSESSMENT REPORT |
| BID | BACKGROUND INFORMATION DOCUMENT |
| CA | COMPETENT AUTHORITY |
| CBA | CRITICAL BIODIVERSITY AREA |
| DAFF | DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES |
| DWS | DEPARTMENT OF WATER AND SANITATION |
| EKZNW | EZEMVELO KWAZULU-NATAL WILDLIFE |
| EAP | ENVIRONMENTAL ASSESSMENT PRACTITIONER |
| EDTEA AFFAIRS | DEPARTMENT OF ECONOMIC DEVELOPMENT TOURISM & ENVIRONMENTAL |
| EIA | ENVIRONMENTAL IMPACT ASSESSMENT |
| EMPR | ENVIRONMENTAL MANAGEMENT PROGRAMME |
| I&AP'S | INTERESTED AND AFFECTED PARTIES |
| IDP | INTEGRATED DEVELOPMENT PLAN |
| NEMA | NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO.107 OF 1998) |
| NWA | NATIONAL WATER ACT |
| NGO | NON-GOVERNMENTAL ORGANISATION |
| PES | PRESENT ECOLOGICAL STATE |
| PPP | PUBLIC PARTICIPATION PROCESS |
| SANBI | SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE |
| VELD TYPE | VEGETATION OR HABITAT FORM |

DEFINITIONS: (relevant to this project: cited from the EIA Regulations 2014, amended document)

“associated structures, infrastructure and earthworks” means any structures, infrastructure or earthworks, including borrow pits, that is necessary for the development and functioning of a facility or activity;

“canal” means an open structure, that is lined or reinforced, for the conveying of a liquid or that serves as an artificial watercourse;

“channel” means an excavated hollow bed for running water or an artificial underwater depression to make a water body navigable in a natural watercourse, river or the sea;

“decommissioning” means to take out of active service permanently or dismantle partly or wholly, or closure of a facility to the extent that it cannot be readily recommissioned;

“development” means the building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity, [including any **“development footprint”** means any evidence of physical alteration as a result of the undertaking of any activity;

“development setback” means a setback line defined or adopted by the competent authority;

“indigenous vegetation” refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years;

“linear activit[ies]y” means an activity that is arranged in or extending along one or more properties and which affects the environment or any aspect of the environment along the course of the activity, and includes railways, roads, canals, channels, funiculars, pipelines, conveyor belts, cableways, power lines, fences, runways, aircraft landing strips, firebreaks and telecommunication lines;

“maintenance” means actions performed to keep a structure or system functioning or in service on the same location, capacity and footprint;

“maintenance management plan” means a management plan for maintenance purposes defined or adopted by the competent authority;

“the Act” means the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended;

“urban areas” means areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined or adopted, it refers to areas situated within the edge of built-up areas;

“watercourse” means –

- (a) a river or spring;
- (b) a natural channel in which water flows regularly or intermittently;
- (c) a wetland, pan, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the *Gazette*, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998); and

a reference to a watercourse includes, where relevant, its bed and banks; and

“wetland” means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

Table of Contents

| | |
|--|-----------|
| Environmental Requirements as per the EIA Regulations 2014 (amended 07 April 2017) and Public participation..... | vi |
| SECTION A: DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) AND SPECIALISTS | 3 |
| 1. Name, contact details and expertise of Environmental Assessment Practitioner (EAP) | 3 |
| 2. Names and Expertise of Representatives of the EAP | 3 |
| 3. Names and Expertise of Specialists (Declaration Of Interest: Appendix G)..... | 4 |
| SECTION B: ACTIVITY INFORMATION..... | 5 |
| 1. Project Title..... | 5 |
| 2. Project Description | 5 |
| 3. Activity Description..... | 10 |
| 4. Feasible and Reasonable Alternatives | 14 |
| 5. Activity Position..... | 15 |
| 6. Physical Size of the Activity..... | 19 |
| 7. Site or Route Plan (refer Appendix A)..... | 20 |
| 8. Site Photographs (Appendix B) | 21 |
| 9. Facility Illustration (Appendix C): N/A..... | 21 |
| 10. Activity Motivation | 21 |
| 11. Applicable Legislation, Policies and/or Guidelines | 28 |
| SECTION C: PUBLIC PARTICIPATION (REFER PROOF AND SUPPORTING DOCUMENTS -APPENDIX E) | 30 |
| 1. The Following Activities Were Undertaken As Part of The Public Participation Process: (Refer Appendix E for Proof)..... | 31 |
| 2. Comments and Response Report (Appendix E)..... | 32 |
| 3. Participation by District, Local and Traditional Authorities | 32 |
| 4. Consultation with Other Stakeholders | 33 |
| SECTION D: BASELINE RISK ASSESSMENT | 38 |
| 1. Current and Surrounding Land Use, Location in Landscape, Access | 38 |
| 2. Topography and Gradient of the Site | 40 |
| 3. Groundwater, Soil and Geological Stability of the Site..... | 40 |
| 5. Waste, Effluent, Air Quality, and Noise Management..... | 42 |
| 6. Surface Water and Water Use | 44 |

| | |
|---|-----------|
| 7. Energy Efficiency and Carbon Footprint..... | 45 |
| 8. Socio-Economic Character of Area and Surrounding Area..... | 45 |
| 9. Cultural/ Historical Features..... | 46 |
| 10. Safety and Security..... | 47 |
| SECTION E: IMPACT ASSESSMENT | 47 |
| 1. Issues Raised by Interested and Affected Parties..... | 47 |
| 3. IMPACTS THAT RESULT FROM THE CONSTRUCTION/OPERATIONAL PHASES: | 53 |
| 4. Cumulative Impacts: | 69 |
| The anticipated impacts resulting from the construction of the proposed project could potentially result in cumulative negative effects by considering the following: | 69 |
| 5. Environmental Impact Statement..... | 86 |
| 7. The Following is Deemed Significant for Inclusion in EMPr (Refer Appendix F): | 90 |
| 8. The Following should be Included as Conditions of the Environmental Authorisation: (As Identified By EAP/Specialists)..... | 101 |
| 9. Description of Assumptions, Uncertainties, Gaps in Knowledge Relating To Assessment and Mitigation Proposed..... | 102 |

LIST OF APPENDICES

APPENDIX A: SITE OR ROUTE PLAN:

APPENDIX B: SITE PHOTOGRAPHS

Appendix C: Facility illustration(s): N/A

APPENDIX D: SPECIALIST REPORTS

Appendix E: DETAILS OF PUBLIC PARTICIPATION PROCESS UNDERTAKEN:

- ***COPY OF BID SUBMITTED,***
- ***COPY OF CORRESPONDENCE TO/FROM AUTHORITIES/IAP'S,***
- ***COMMENTS/RESPONSES REPORT;***
- ***COPY OF ON-SITE NOTICES/PROOF,***
- ***PROOF OF ADVERTS,***
- ***I&AP REGISTER***
- ***PUBLIC MEETING DETAILS/MINUTES/PHOTOGRAPHS (IF APPLICABLE);***

APPENDIX F: DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

APPENDIX G: CV-EAP, EAP AND SPECIALIST: DECLARATION OF INTEREST

DEPARTMENTAL REFERENCE NUMBER(S)

| | |
|---|--|
| File reference number (EIA): | DC21/0013/2022 KZN/EIA/0001762/2022 |
| File reference number (Waste Management Licence): | N/A |

SECTION A: DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) AND SPECIALISTS

1. Name, contact details and expertise of Environmental Assessment Practitioner (EAP)

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

| | | | |
|-----------------------|------------------------------------|-------|---------------------|
| Business name of EAP: | EnAq Consulting cc | | |
| Physical address: | 23 Dawn Crescent, Westville | | |
| Postal address: | | | |
| Postal code: | 3629 | Cell: | 082 8753710 |
| Telephone: | (031) 262 3171 | Fax: | 031-262 2279 |
| E-mail: | urvassi@enaq.co.za | | |

Table 1: EAP QUALIFICATIONS/EXPERIENCE (CV & DECLARATION OF INTEREST: APPENDIX G)

| | Education qualifications | Professional affiliations | Experience at environmental assessments (yrs) |
|--|--------------------------|--|---|
| URVASSI HURBURUN Reg. EAP, Pr.Sci.Nat | B.Sc (hons) | <ul style="list-style-type: none"> - Registered EAP (2019/1754) - Member of SACNASP (400388/04) - Member of IAIA | 25 |
| | | | |
| | | <ul style="list-style-type: none"> - Member of SAIOSH | |

2. Names and Expertise of Representatives of the EAP

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

Table 2: NAMES/EXPERTISE: REPS OF EAP

| Name of representative of the EAP | Education qualifications | Professional affiliations | Experience at environmental assessments (yrs) |
|-----------------------------------|--------------------------|---------------------------|---|
| | | | |

| | | | |
|--------------------------|--|--|---|
| NOMANDLA NTOMBELA | B.Soc Sc – geography and Env Management | | 1 |
| SELINA NAIDOO | BSc Environmental Science BSc Honours Environmental Management, Cum Laude | | 1 |
| | | | |
| | | | |

3. Names and Expertise of Specialists (Declaration Of Interest: Appendix G)

Table 3: Names and details of the expertise of each specialist that has contributed to this report:

| Name of specialist | Education qualifications | Field of expertise | Section/ s contributed to in this basic assessment report | Title of specialist report/ s as attached in Appendix D |
|------------------------------------|---|--|--|---|
| Mahomed Desai Andrew Husted | M.Sc. in Environmental Engineering and Ph.D. in Ecological Sciences Aquatic, Wetland and Biodiversity Specialist | assessing estuarine, freshwater and terrestrial biodiversity | B, C, D and E | Margate Extension 3 and 7 Sewerage Infrastructure Expansion - Biodiversity Impact Assessment Ugu District Municipality KwaZulu-Natal |
| Mr. D.Naidoo Mr. A. Ramroop | Pr.Sci. Nat, Managing Director Geotechnical Engineering Manager | Geotechnical | B, C, D and E | Report to Dartingo Consulting Engineers (Pty) Ltd on the Results of a Geotechnical Investigation for the Proposed Gravity Sewer Mains in Margate Extension 3 & 7, Ugu District Municipality, Kwa-Zulu Natal: Geosure Pty, Ltd, April 2022 |
| Mr.P.B.Jagganath | Pr.Tech.Eng | stormwater | B, C, D and E | Margate Sanitation: Ext 3 & 7 Sewer Reticulation Stormwater Management |

SECTION B: ACTIVITY INFORMATION

1. Project Title

**PROPOSED MARGATE EXTENSION 3 & 7 SANITATION SCHEME
CONSTRUCTION OF SEWER RETICULATION, UGU DISTRICT
MUNICIPALITY**

2. Project Description

Detailed description of the project:

The proposed project will provide sewer reticulation infrastructure to approximately 489 plots in Ward 6, within the UGU District Municipality, that are currently without water-borne sanitation. The existing infrastructure is currently serviced by on-site sanitation. The proposed reticulation system will discharge into the existing Margate WWTW. *Margate is serviced by both water-borne sanitation and septic tanks, and conservancy tanks. These tanks are de-sludged once a month (sometimes twice), by vacuum tanker. Residents are billed for this service. The conservancy tanks frequently overflow, which poses serious pollution (surface water, groundwater), as well as unpleasant odours, and ultimately pose as a health hazard.*

The project is situated in Ward 6 within the Ugu District Municipality in the town of Margate, which is located on the south coast of KwaZulu Natal, approximately 20 kilometres south of Port Shepstone along the R61. As this is an urban built-up area, all proposed reticulation will follow existing infrastructure along roads and property lines, therefore alternative route options may not be possible at this stage.



The scope of works will include the following:

To provide sewer reticulation infrastructure to approximately 489 plots, that are presently without waterborne sanitation. the reticulation system will discharge into the existing Margate wastewater treatment works.

Table 4: infrastructure will comprise the following

| SCOPE OF WORK/ACTIVITY | DIMENSIONS | LN1, 2, 3- TRIGGER |
|--|---------------------------|--------------------|
| Installation of 200mm Ø Bulk Main -u PVC | 2600 m, - 200mm Ø | LN1, LN3 |
| Installation of 160mm Ø Gravity Main-uPVC | 14 455m – 160mm Ø | LN1, LN3 |
| Internal House Connections: 110mm Ø uPVC | 489 connections – 110mm Ø | LN1, LN3 |
| Steel pipes for the exposed pipe (river crossings etc) 200mm Ø | 250 m - 200mm Ø | LN1, LN3 |
| | | |

(PLEASE REFER DETAILS OF TRIGGERED ACTIVITIES AS PER table 7).

Table 5: coordinates for the proposed PREFERRED site (as per Layout Plan, Refer Appendix A).

| Local Municipality | Ward | Catchments | Co-ordinates (approximate centre of project areas) | |
|--------------------|--------|-------------|---|---------------|
| | | | Longitude | Latitude |
| RAY NKONYENI | Ward 6 | Catchment-1 | 30°21'25.50"E | 30°51'37.41"S |
| | | Catchment-2 | 30°21'19.47"E | 30°50'46.00"S |
| | | Catchment-3 | 30°22'0.33"E | 30°50'35.92"S |
| | | Catchment-4 | 30°22'2.41"E | 30°50'48.69"S |

The catchments identified for the provision of the water borne sewage system are given in the table below which shows the 4 catchment areas with the breakdown of the zoning that will be served by this scheme

Table 6:

| Catchment | Zoning | | | No of Erfs |
|--------------|-----------------------------|--------------------------------|--------------------------|------------|
| | Special Residential 2 (No.) | Intermediate Residential (No.) | Limited Commercial (No.) | |
| Catchment-1 | 5 | - | - | 5 |
| Catchment-2 | 274 | - | 6 | 280 |
| Catchment-3 | 138 | - | - | 138 |
| Catchment-4 | 65 | 1 | - | 66 |
| Total | 482 | 1 | 6 | 489 |

Wastewater flows from Catchment 1 will gravitate to Pumpstation 3A, via the existing network, while flows from Catchments 2, 3 and 4 will gravitate to Pumpstation 4A. The existing bulk sewer reticulation which will convey the new waste water flows is deemed sufficient to cater for the additional flows from these project areas.

Alternatives:

As this is an urban built-up area, all proposed reticulation will follow existing infrastructure along roads and property lines, therefore alternative route options may not be possible. As per biodiversity report: During the field survey period, two flora SCC and nine protected flora species were recorded, which were limited to the grassland habitat. These species are unlikely to be affected by the proposed development if the grassland habitat is avoided. All infrastructure must be located within low sensitive areas. If absolutely necessary, infrastructure in 'High' SEI areas must be limited to the existing road network or immediately adjacent to the road. In consideration of this requirement: All infrastructure will be located within low sensitive areas. For areas denoted as High' SEI, infrastructure will be limited to the existing road network or immediately adjacent to the road. NO INFRASTRUCTURE will be located within the watercourses or wetland areas.

❖ **As per Storm Water Management –(Dartingo Consulting Engineers, April 2022)**

During construction, the Contractor shall take necessary measures, to the approval of the

Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas.

As per BIODIVERSITY REPORT ('Biodiversity Impact Assessment Margate Ext 3 and 7 Sewerage Infrastructure: the Biodiversity company, February 2022')

During the field survey period, two flora SCC and nine protected flora species were recorded, which were limited to the grassland habitat. These species are unlikely to be affected by the proposed development if the grassland habitat is avoided. All infrastructure must be located within low sensitive areas. If absolutely necessary, infrastructure in 'High' SEI areas must be limited to the existing road network or immediately adjacent to the road. The main impacts expected from the proposed development are the degradation and further fragmentation of surrounding natural habitats, the direct mortality of fauna species and the emigration of fauna due to disturbance.

THE development is adjacent to the Solomon Gijima Dindikazi Nature Reserve, a nationally designated protected area (Figure 3-3). Potential impacts to the protected area arising from the proposed development during the construction phase include disturbance to fauna due to noise and vibration and vegetation degradation due to dust pollution. Potential operational phase impacts to the protected area include encroachment of Invasive Alien Plants (IAPs) due to increased spread into, and from, disturbed areas. The proposed development is not located within any focus area for the National Protected Area Expansion Strategy (NPAES) nor is there one in the surrounding landscape.

The proposed development intersects with an area categorised as an Irreplaceable CBA. Considering the above-mentioned information, the proposed development may result in the degradation of intact and functional habitats. However, the likelihood of this is reduced if the appropriate mitigation measures are implemented. It is the opinion of the specialist that the proposed development is favourable, only if all mitigation measures provided within this report are implemented.

As per WETLAND REPORT: (Wetland Baseline and Impact Assessment for the Margate Sewer Expansion the Biodiversity company, February 2022')

Eight (8) HGM units were identified within the 500 m regulated area, including various hillslope seeps, Unchanneled Valley Bottom (UVB) wetlands as well as Channeled Valley Bottom (CVB) wetlands. Additionally, some dams and artificial impoundments were identified within the 500 m regulated area. The ecosystem service scores range from "Low" to "High". The average ecosystem services contributing to these scores include flood attenuation, streamflow regulation, sediment trapping, phosphate assimilation, nitrate assimilation, toxicant assimilation, erosion control, and provision of cultivated foods (subsistence farming).

The delineated wetland systems have been scored overall present ecological state ratings ranging from largely natural (class B) to seriously modified (class E). The ecological importance and sensitivity of the delineated wetlands range from "High" to "Low". A 23 m buffer zone has been calculated and recommended for the proposed sewer pipelines. Owing to the fact that this project will include the installation of sewerage services to accommodate the proposed development, a water use license will be required. Furthermore, it is the specialist's opinion that the proposed development can proceed on the condition that all of the recommendations made within this report as well as the prescribed mitigation measures be adhered to. The following way forward has been recommended by the specialist;

- In the event the proposed areas are to be developed, these are expected to result in an unacceptable loss of wetland area. This loss would need to be compensated for, and this can comprise the following options:
 - Compilation of a wetland offset strategy to compensate for the overall loss of wetland area.

As per WETLAND REHABILITATION PLAN (the Biodiversity company, May 2022)

Regular monitoring and maintenance (such as removing AIP/weeds and encroachment) are required for successful revegetation/rehabilitation projects.

As per GEOTECHNICAL REPORT: Report to Dartingo Consulting Engineers (Pty) Ltd on the Results of a Geotechnical Investigation for the Proposed Gravity Sewer Mains in Margate Extension 3 & 7, Ugu District Municipality, Kwa-Zulu Natal: Geosure Pty, Ltd, April 2022

Based on the results of the fieldwork undertaken during this investigation, it is considered that this site is generally stable and suitable for development, provided that the recommendations given in this report are adhered to.

No signs of instability were observed during the fieldwork. Nonetheless, the geotechnical professional should be engaged during the earthworks phase to ensure that there are no unfavourable conditions exposed during this phase that could lead to instability.

A significant need for the Project is evident from the following:

With effect from 1 July 2003, Ugu took responsibility for all existing sanitation assets in their area of jurisdiction, and became responsible for their operation and maintenance, and for upgrading and/or extending them where and when necessary. Some of those assets were in need of repair and some were operating close to, or in excess of, their rated capacities when they were taken over by Ugu.

Ugu acquired a significant amount of sanitation infrastructure, all of which had been operating under financial constraints, where little or no consideration had been given to the planning or construction of waterborne sanitation schemes in many areas as their initial capital requirements were high and therefore unaffordable. Above which, routine and preventative maintenance was not implemented at a sustainable level resulting in the backlog experienced in the provision of adequate sanitation services, and their subsequent increase.

The Margate Sanitation Scheme is included in the Ugu District Sanitation Services Scheme (November 2005), and aims to meet requirements of basic waterborne sanitation by providing adequate sewer reticulation to Margate Extension 7 and Extension 3.

Margate is serviced by both water-borne sanitation and septic tanks, and conservancy tanks. These tanks are de-sludged once a month (sometimes twice), by vacuum tanker. Residents are billed for this service. The conservancy tanks frequently overflow, which poses serious pollution (surface water, groundwater), as well as unpleasant odours, and ultimately pose as a health hazard.

BENEFITS:

- ◆ Reduce backlogs in provision of basic water and sanitation services in Ugu District Municipality.
- ◆ Provision of adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3.
- ◆ To ensure sanitation, health and hygiene promotion
- ◆ There will be a significant requirement for unskilled labor from the community for the excavation and backfilling of pipeline trenches.
- ◆ It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors.
- ◆ It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation.

- ◆ This project supports the employment of women. The labour force will consist of approximately 100 local labour.
- ◆ To ensure cost recovery for the sanitation service delivery

The project requires a Basic assessment process and environmental authorisation is required from the competent authority being the Department of Economic Development, Tourism and Environmental Affairs (EDTEA). EnAq Consulting cc has been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the Basic assessment process for this proposed project.

3. Activity Description

Describe each listed activity as per Listing Notice 1 (GNR 983, 4 December 2014), Listing Notice 2 (GNR 984, 4 December 2014) or Listing Notice 3 (GNR 985, 4 December 2014).

Table 7

| <i>Legislation</i> | <i>Listed Activity Reference</i> | <i>Description as per Regulation</i> | <i>Relevance/Applicability to this Project</i> |
|----------------------|----------------------------------|--|--|
| LN1 OF 2014: GNR 327 | 19i | The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from A watercourse. | <p>As per WETLAND REP, wet areas within project areas 2, 3 and 4 more than 5m3 of soil could be excavated.</p> <p>PROJECT AREA 2: (drake rd-erf-153, 170, 171, 172) START: 30°50'35.16"S;; 30°21'13.34"E END: 30°50'35.50"S; 30°21'13.13"E</p> <p>Phillip Rd-Erf 234, 201, 202 START: 30°50'30.70"S; 30°21'14.90"E END: 30°50'30.57"S; 30°21'15.26"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>BOBBY LOCKE –erf 2354 START: 30°50'56.19"S; 30°20'52.60"E END: 30°50'56.02"S; 30°20'53.26"E</p> <p>PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>PROJECT AREA 4:</p> |

| | | | |
|------------------------------------|----------------------|---|---|
| | | | <p>JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> <p>ALTERNATIVE OPTIONS WILL BE ASSESSED FURTHER. (all the above erf are developed)</p> |
| LN1 OF 2014: GNR 327 | 31 | The decommissioning of existing facilities, structures or infrastructure for— any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014 | The existing conservancy structures will be decommissioned. (The structures will NOT be removed or demolished) |
| Listing Notice 3 of 2014 (GNR 324) | 14(ii)(c)(d)(xi)(aa) | The development of- (xii) infrastructure or structure with a physical footprint of 10 square meters or more. Where such development occurs- (c) if no development setback has been adopted, within 32m's of a watercourse, measured from the edge of a watercourse, (xi) in urban areas- (aa) Areas zoned for use as public open space. | <p>The reticulation will have a footprint of more than 10 square meters and this could be within 32m of the stream/ wetland area, within the open space area (within existing developed erfs at Nelson Rd). Alternative options will be investigated.</p> <p>PROJECT AREA 2 Nelson Rd. (ERF-185 TO 201) START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E</p> <p>PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> |
| | 14(ii)(a)(d)(xi)(aa) | The development of- (xii) infrastructure or structure with a physical footprint of 10 square meters or more. Where such development occurs- (a) within a watercourse, | <p>The reticulation will have a footprint of more than 10 square meters and this could be within the wet area, within the open space area Alternative options will be investigated.</p> <p>PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717)</p> |

| | | | |
|--|-------------------|---|--|
| | | (xi) in urban areas- (aa) Areas zoned for use as public open space. | <p>START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>(all the above erf are developed)</p> |
| <p>Listing Notice 3 of 2014 (GNR 324)</p> | 14(ii)(c)(d)(vii) | <p>The development of- Infrastructure or structures with a physical footprint of 10 square metres or more; Where such development occurs- if no development setback has been adopted, within 32m's of a watercourse, measured from the edge of a watercourse</p> <ul style="list-style-type: none"> - Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; | <p>The reticulation will have a footprint of more than 10 square meters and this may be within 32m of watercourse/wet areas, within CBA areas. Alternative options will be investigated. The proposed development intersects with an area categorised as an Irreplaceable CBA</p> <p>PROJECT AREA 2: Nelson Rd. (ERF-185 TO 201) START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E</p> <p>DRAKE RD (drake rd-erf-153, ERF 154 170, 171, 172 AND above ERF: 166, 167, 168, 169, AND ERF: 166, 167, 168, 169) (ERF 201 TO 204, AND ERF 217) START: 30°50'39.59"S; 30°21'20.58"E END: 30°50'39.67"S; 30°21'21.70"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>POUND RD (ERF 70, 3655) START: 30°50'51.62"S; 30°21'37.94"E END: 30°50'52.10"S ; 30°21'37.54"E</p> <p>(all the above erf are developed)</p> <p>PROJECT AREA 3:</p> <p>FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> |
| | 14(ii)(a)(d)(vii) | <p>The development of- Infrastructure or structures with a physical footprint of 10 square metres or more;</p> | <p>The reticulation will have a footprint of more than 10 square meters and this may be within a watercourse/wet areas, within CBA areas. Alternative options will be investigated. The proposed development intersects with an area categorised as an Irreplaceable CBA</p> <p>PROJECT AREA 4: JASMIN AVE: (ERF 2814, 2815, 2772,</p> |

| | | | |
|--|-----------------|---|--|
| | | <p>Where such development occurs within a watercourse Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> | <p>2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> <p>(all the above erf are developed)</p> |
| <p>Listing Notice 3 of 2014 (GNR 324)</p> | <p>12(d)(v)</p> | <p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a Maintenance management plan. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> | <p>Some indigenous grasses MAY need to be removed. Alternative options will be investigated</p> <ul style="list-style-type: none"> - "Infrastructure within existing servitudes is preferred and will be opted for, as opposed to encroaching into new areas <p>PROJECT AREA 2:</p> <p>Nelson Rd. (ERF-185 TO 201) START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E</p> <p>DRAKE RD-erf-153, 170, 171, 172) START:30°50'35.16"S;; 30°21'13.34"E END: 30°50'35.50"S; 30°21'13.13"E</p> <p>Phillip Rd-Erf 234, 201, 202 START: 30°50'30.70"S; 30°21'14.90"E END: 30°50'30.57"S; 30°21'15.26"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>BOBBY LOCKE –erf 2354 START: 30°50'56.19"S; 30°20'52.60"E END: 30°50'56.02"S; 30°20'53.26"E</p> <p>PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> |

| | | | |
|--|--|--|--|
| | | | <p>PROJECT AREA 4:</p> <p>JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> <p>EVANS RD, (ERF 0217, 0216, 0215, 0214, 0213, 0212, 0211, 0218, 0219, 0220, 0221, 0222) START: 30°50'28.56"S; 30°21'11.52"E END: 30°50'28.67"S; 30°21'11.95"E</p> <p>HOOD RD, (ERF 0174, 0173) START: 30°50'31.74"S; 30°21'08.49"E END: 30°50'32.10"S; 30°21'08.46"E</p> <p>FISHER RD(ERF 0229, 0228, 0227, 0226, 0225, 0224, 0230, 0231, 0232, 0233, 0235, 0175, 0176, 0223) START: 30°50'29.08"S, 30°21'7.17"E END: 30°50'26.15"S, 30°21'8.23"E</p> <p>(all the above erf are developed)</p> |
| | | | |

4. Feasible and Reasonable Alternatives

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

- (a) **the property** on which or location where it is proposed to undertake the activity;
- (b) **the type of activity** to be undertaken;
- (c) **the design or layout** of the activity;
- (d) **the technology** to be used in the activity;
- (e) **the operational aspects** of the activity; and
- (f) **the option of not implementing the activity.**

Alternatives that were considered are included in this report. Alternatives include a consideration of all possible means by which the purpose and need of the proposed activity can be accomplished in the specific instance taking account of the interest of the proponent/applicant in the activity. The no-go alternative has also been included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

5. Activity Position

The position of the activity is as per latitude and longitude. The co-ordinates are recorded in degrees, minutes and seconds.

Table 8: Details of the relevant property details affected by this proposed reticulation are detailed as below

| DESCRIPTION-FARM TOWN | 21 DIGIT SURVEYOR GENERAL CODE: |
|-----------------------|---------------------------------|
| SEA SLOPES 6923/266 | N0ET01990000230100000 |
| | N0ET01990000279500000 |
| | N0ET01990000271800000 |
| | N0ET01990000268600000 |

- **Process followed to reach the proposed PREFERRED ALTERNATIVE WITHIN THE SITE: i.e. site, layout, process etc.**

To consider layout/reticulation options, these were considered on a desktop level during the planning phase, as well as after site inspections in consultation with the Engineers. The sensitive environments/CBA areas as per biodiversity report and the wetland areas and buffers as per the wetland reports were also taken into consideration for the revision of the layout plan.

SITE ALTERNATIVES: N/A

| THE SEWER RETICULATION CAN ONLY TAKE PLACE AT THE LOCATIONS AS PER THE LAYOUT PLAN, <u>NO OTHER SITES</u> CAN THEREFORE BE CONSIDERED. | | |
|--|--|--|
| | | |
| | | |
| | | |
| | | |
| | | |

In the case of linear activities:**Alternative:**

Alternative S1 (preferred or only route alternative):

Table 9:

| Crossing Description | Start Coordinate | | End Coordinate | |
|------------------------------|-------------------------|---------------|-----------------------|---------------|
| <u>PROJECT AREA 2</u> | | | | |
| Bobby Locke Avenue | 30°50'56.19"S | 30°20'52.60"E | 30°50'56.02"S | 30°20'53.26"E |
| Katherine Street | 30°50'56.41"S | 30°20'56.76"E | 30°50'56.44"S | 30°20'57.15"E |
| Iris Street | 30°50'56.76"S | 30°21'00.66"E | 30°50'56.73"S | 30°21'01.09"E |
| Hathorn Street | 30°50'57.17"S | 30°21'04.88"E | 30°50'57.17"S | 30°21'05.61"E |
| Irene Road | 30°50'53.30"S | 30°20'57.34"E | 30°50'53.31"S | 30°20'57.65"E |
| Blake Road | 30°50'28.20"S | 30°21'02.91"E | 30°50'28.08"S | 30°21'03.35"E |
| Byrd Road | 30°50'29.31"S | 30°21'06.68"E | 30°50'29.58"S | 30°21'06.57"E |
| Hood Road | 30°50'31.74"S | 30°21'08.49"E | 30°50'32.10"S | 30°21'08.46"E |
| Evans Road | 30°50'28.56"S | 30°21'11.52"E | 30°50'28.67"S | 30°21'11.95"E |
| Philip Road 1 | 30°50'30.70"S | 30°21'14.90"E | 30°50'30.57"S | 30°21'15.26"E |
| Philip Road 2 | 30°50'35.63"S | 30°21'13.46"E | 30°50'35.72"S | 30°21'13.93"E |
| Philip Road 3 | 30°50'40.34"S | 30°21'20.36"E | 30°50'39.66"S | 30°21'20.35"E |
| Drake Road 1 | 30°50'35.16"S | 30°21'13.34"E | 30°50'35.50"S | 30°21'13.13"E |
| Drake Road 2 | 30°50'39.59"S | 30°21'20.58"E | 30°50'39.67"S | 30°21'21.70"E |
| Drake Road 3 | 30°50'43.36"S | 30°21'22.30"E | 30°50'42.46"S | 30°21'22.61"E |
| Raleigh Road | 30°50'45.93"S | 30°21'26.05"E | 30°50'45.92"S | 30°21'26.68"E |
| Jellicoe Road | 30°50'45.73"S | 30°21'29.31"E | 30°50'45.64"S | 30°21'30.49"E |
| Beatty Road | 30°50'45.68"S | 30°21'30.93"E | 30°50'45.67"S | 30°21'31.44"E |
| Alexander Avenue | 30°50'44.45"S | 30°21'33.88"E | 30°50'44.67"S | 30°21'34.59"E |
| Pound Road | 30°50'51.62"S | 30°21'37.94"E | 30°50'52.10"S | 30°21'37.54"E |
| Smith Street | 30°50'54.35"S | 30°21'41.44"E | 30°50'54.63"S | 30°21'41.95"E |
| <u>PROJECT AREA 3</u> | | | | |
| Magnolia Avenue | 30°50'48.99"S | 30°21'49.36"E | 30°50'48.59"S | 30°21'49.81"E |
| Gardinia Avenue | 30°50'44.39"S | 30°21'51.18"E | 30°50'43.87"S | 30°21'51.27"E |
| Wattle Road | 30°50'46.42"S | 30°21'53.31"E | 30°50'46.12"S | 30°21'53.67"E |
| Flamboyant Avenue | 30°50'42.23"S | 30°21'51.35"E | 30°50'41.89"S | 30°21'51.89"E |
| Fir Avenue 1 | 30°50'34.28"S | 30°21'55.56"E | 30°50'33.90"S | 30°21'55.89"E |
| Fir Avenue 2 | 30°50'40.36"S | 30°22'01.22"E | 30°50'39.90"S | 30°22'01.71"E |
| Azalea Avenue | 30°50'31.66"S | 30°22'01.17"E | 30°50'31.76"S | 30°22'01.83"E |
| Bauhinia Avenue 1 | 30°50'38.15"S | 30°21'59.99"E | 30°50'38.42"S | 30°22'00.47"E |
| Bauhinia Avenue 2 | 30°50'26.68"S | 30°22'07.48"E | 30°50'26.85"S | 30°22'08.13"E |
| Wingate Avenue | 30°50'26.34"S | 30°22'07.61"E | 30°50'25.83"S | 30°22'08.18"E |
| <u>PROJECT AREA 4</u> | | | | |
| Pine Avenue 1 | 30°50'48.67"S | 30°21'59.65"E | 30°50'48.44"S | 30°22'00.03"E |
| Pine Avenue 2 | 30°50'49.02"S | 30°22'00.17"E | 30°50'48.78"S | 30°22'00.48"E |
| Pine Avenue 3 | 30°50'50.35"S | 30°22'03.45"E | 30°50'49.96"S | 30°22'03.71"E |
| Protea Avenue 1 | 30°50'53.14"S | 30°21'55.51"E | 30°50'53.35"S | 30°21'55.79"E |

| | | | | |
|-----------------|---------------|---------------|---------------|---------------|
| Protea Avenue 2 | 30°50'44.60"S | 30°22'04.97"E | 30°50'44.24"S | 30°22'05.55"E |
| Protea Avenue 3 | 30°50'45.31"S | 30°22'05.56"E | 30°50'44.93"S | 30°22'06.14"E |
| Jasmin Avenue | 30°50'55.56"S | 30°21'54.96"E | 30°50'55.25"S | 30°21'55.54"E |
| Arden Road | 30°50'43.82"S | 30°22'08.71"E | 30°50'43.58"S | 30°22'09.04"E |
| Bromley Avenue | 30°50'40.23"S | 30°22'16.91"E | 30°50'40.59"S | 30°22'17.22"E |

AREA 1

AREA 2

- Starting point of the activity
- Middle point of the activity
- End point of the activity

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
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AREA 3

- Starting point of the activity
- Middle point of the activity
- End point of the activity

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| | | | | | |
| | | | | | |
| | | | | | |

AREA 4

- Starting point of the activity
- Middle point of the activity
- End point of the activity

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| | | | | | |
| | | | | | |

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

| 2. PREFERRED DESIGN alternatives for the proposed project | | |
|---|-------------------|--------------------|
| Description and reasons for being the "preferred option" | Latitude (DDMMSS) | Longitude (DDMMSS) |
| Preferred layout as per Layout plan (Appendix A). This option makes optimum use of the space, and receiving bio-physical environment. The sewer reticulation will follow the road servitudes and mid-blocks. | As per Table 9 | |

| | |
|---|--|
| <p>Alternative A1: No design/layout options were considered, due to the fact that the reticulation needs to be within the road servitudes and mid block areas. Sensitive areas, and protected wetland areas were avoided. No practical or feasible options TO CONSIDER FURTHER (based on technical, biophysical and socio-economic aspects).</p> | |
|---|--|

c) Technology alternatives

| |
|--|
| <ul style="list-style-type: none"> Alternative T1 (preferred alternative): All pipes shall be uPvc and concrete. |
| <p>Alternative T2: n/a technology to be used is already considered as the most appropriate technology</p> |

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives): N/A

| |
|--|
| Alternative 1 (preferred alternative) |
| Alternative 2 |
| Alternative 3 |

e) No-go alternative

| |
|--|
| <p>The Objectives of the Project Are:</p> <ul style="list-style-type: none"> ◆ <i>Reduce backlogs in provision of basic water and sanitation services in Ugu District Municipality.</i> ◆ <i>Provision of adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3.</i> ◆ <i>To ensure sanitation, health and hygiene promotion</i> ◆ <i>There will be a significant requirement for unskilled labor from the community for the excavation and backfilling of pipeline trenches.</i> ◆ <i>It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors.</i> ◆ <i>It will also be a requirement that more experienced and established contractors</i> |
|--|

train and mentor labor and emerging subcontractors, during implementation.

- ◆ *This project supports the employment of women. The labour force will consist of approximately 100 local labour.*

SHOULD THIS PROJECT NOT BE AUTHORISED THEN THE FOLLOWING WILL BE INEVITABLE:

- ❖ *Sewage reticulation to ext 3 and 7 will not be possible*
- ❖ *There will be backlogs in provision of basic water and sanitation services in the areas.*
- ❖ *Provision of proper, adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3, will not be a reality.*
- ❖ *Health and environmental pollution issues could arise as the use of septic/conservancy tanks will still be in operation.*
- ❖ *Local employment during the construction of the works will not materialise.*
- ❖ *Employment of women and Mentoring of subcontractors will not be possible*

Paragraphs 3 – 13 below should be completed for each alternative.

6. Physical Size of the Activity

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

Alternative:

(preferred activity alternative):

Alternative A2 (if any)N/A

Alternative A3 (if any)N/A

or, for linear activities:

Alternative:

Preferred activity alternative:

Alternative A1 (if any): **N/A**

Size of the activity:

| |
|--|
| |
| |
| |

Length of the activity:

| |
|--------------------------|
| 2600 m, - 200mm Ø |
| 14 455m – 160mm Ø |
| 489 connections– 110mm Ø |
| 250 m - 200mm Ø |

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

| | | |
|--|--|------------------------------------|
| Preferred activity Alternative: | | Size of the site/servitude: |
| | | |
| Alternative A1 (if any): | | N/A |

Alternative: N/A

Length of the activity:

| | |
|--|---|
| | m |
| | m |

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

Size of the site/servitude:

| | |
|--|----------------|
| | m ² |
| | m ² |

7. Site or Route Plan (refer Appendix A)

A detailed site or route plan(s) has been prepared for each **alternative site** or alternative activity where applicable.

The site or route plans indicates the following:

- 1.1. the scale of the plan is;
- 1.2. the property boundaries and numbers/ erf/ farm numbers of all adjoining properties of the site;
- 1.3. the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 1.4. the exact position of each element of the application as well as any other structures on the site;
- 1.5. the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 1.6. walls and fencing including details of the height and construction material;
- 1.7. servitudes indicating the purpose of the servitude;
- 1.8. sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers, streams, drainage lines or wetlands;
 - the 1:100 year flood line (where available or where it is required by DWA);

- ridges;
 - cultural and historical features;
 - areas with indigenous vegetation including protected plant species (even if it is degraded or infested with alien species);
- 1.9. for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 1.10. Positions from where photographs of the site were taken.

8. Site Photographs (Appendix B)

Colour photographs from the centre of the site were taken in the eight major compass directions and includes a description. Photographs have been attached under Appendix B to this report. Additional photographs of relevant features on the site, have also been included.

9. Facility Illustration (Appendix C): N/A

A detailed illustration of the facility must be provided at a scale of 1:200 where applicable. The illustrations must be to scale and must represent a realistic image of the planned activity/ies.

10. Activity Motivation

10.1 Socio-economic value of the activity

What is the expected capital value of the activity on completion?
 What is the expected yearly income that will be generated by or as a result of the activity?

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

How many new employment opportunities will be created in the development phase of the activity?

What is the expected value of the employment opportunities during the development phase?

What percentage of this will accrue to previously disadvantaged individuals?

How many permanent new employment opportunities will be created during the operational phase of the activity?

What is the expected current value of the employment opportunities during the first 10 years?

What percentage of this will accrue to previously disadvantaged individuals?

| | |
|----------------------------------|------|
| R55 000 000 | |
| N/A | |
| YES ✓ | NO |
| YES | NO ✓ |
| APPROX 30+ | |
| Approximately R 510 400 | |
| 100% | |
| APPROX 5 | |
| Approximately R 510 400 + | |
| 100% | |

10.2 NEED AND DESIRABILITY OF THE ACTIVITY, MOTIVATION FOR

PREFERRED SITE/RETICULATION

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

A significant need for the Project is evident from the following:
 Ugu acquired a significant amount of sanitation infrastructure, all of which had been operating under financial constraints, where little or no consideration had been given to the planning or construction of waterborne sanitation schemes in many areas as their initial capital requirements were high and therefore unaffordable. Above which, routine and preventative maintenance was not implemented at a sustainable level resulting in the backlog experienced in the provision of adequate sanitation services, and their subsequent increase.

The Margate Sanitation Scheme is included in the Ugu District Sanitation Services Scheme (November 2005), and aims to meet requirements of basic waterborne sanitation by providing adequate sewer reticulation to Margate Extension 7 and Extension 3.

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

BENEFITS:

- Reduce backlogs in provision of basic water and sanitation services in Ugu District Municipality.
- Provision of adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3.
- To ensure sanitation, health and hygiene promotion
- There will be a significant requirement for unskilled labor from the community for the excavation and backfilling of pipeline trenches.
- It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors.
- It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation.
- This project supports the employment of women. The labour force will consist of approximately 100 local labour.
- To ensure cost recovery for the sanitation service delivery

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

Improvement of the quality of life for residents in the area

- *Margate is serviced by both water-borne sanitation and septic tanks, and conservancy tanks. These tanks are de-sludged once a month (sometimes twice), by vacuum tanker. Residents are billed for this service. The conservancy tanks frequently overflow, which poses serious pollution (surface water, groundwater), as well as unpleasant odours, and ultimately pose as a health hazard.*

| | | | |
|---|------------|--------------------------|-----------------------|
| Is the activity permitted in terms of the property's existing land use rights? | YES | <input type="checkbox"/> | Please explain |
| This is existing residential areas. Some of which have waterborne sanitation. | | | |

| Will the activity be in line with the following? | | | |
|--|-----|-------------------------------------|----------------|
| (a) Provincial Spatial Development Framework (PSDF) | YES | <input checked="" type="checkbox"/> | Please explain |
| <ul style="list-style-type: none"> AS per the KZN spatial development framework 2021, one of the goals is 'strategic infrastructure'. The PROPOSED PROJECT is in line with these and will lead to improved amenities and infrastructure, economic opportunities and an improved quality of life for its beneficiaries. The project is also subject to an environmental assessment process, and the measures as per the EMPr will ensure mitigation of negative social, economic and environmental impacts. | | | |
| (b) Urban edge / Edge of Built environment for the area | YES | <input checked="" type="checkbox"/> | Please explain |
| the project lies within a urban area | | | |
| (c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?). | YES | <input checked="" type="checkbox"/> | Please explain |
| The integrity of the IDP/SDF will not be compromised. THE PROPOSED PROJECT HAS BEEN INCLUDED IN THE LIST "PRIORITY PROJECTS" for that WARD | | | |
| (d) Approved Structure Plan of the Municipality | YES | <input checked="" type="checkbox"/> | Please explain |
| The proposed project is sanitation scheme and is in line, so it is in line with the approved structure plan for Ugu District Municipality. | | | |
| (e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?) | YES | <input checked="" type="checkbox"/> | Please explain |
| It would not compromise existing env. Management priorities, as this is a justified and much needed upgrade. | | | |
| (f) Any other Plans (e.g. Guide Plan) n/a | YES | <input checked="" type="checkbox"/> | Please explain |
| THE PROPOSED project is in line with the IDP. IT is assumed that it will in effect be in line with all other relevant plans. | | | |

| | | | |
|--|------------|---------------------------------|-----------------------|
| <p>Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p> | <p>YES</p> | <p><input type="checkbox"/></p> | <p>Please explain</p> |
| <p>Yes: UGU DISTRICT MUNICIPALITY - core mandate is to provide access to services infrastructure. The project has been considered a priority by the municipality. The project is included in the IDP.</p> | | | |
| <p>Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p> | <p>YES</p> | <p><input type="checkbox"/></p> | <p>Please explain</p> |
| <p>- Margate is serviced by both water-borne sanitation and septic tanks, and conservancy tanks. These tanks are de-sludged once a month (sometimes twice), by vacuum tanker. Residents are billed for this service. The conservancy tanks frequently overflow, which poses serious pollution (surface water, groundwater), as well as unpleasant odours, and ultimately pose as a health hazard.</p> <p>Therefore, IT IS A SOCIETAL priority.</p> | | | |
| <p>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?</p> | <p>YES</p> | <p><input type="checkbox"/></p> | <p>Please explain</p> |
| <p>ADDITIONAL capacity in the form of waterborne sanitation is to be provided. The project was provided for in the municipality infrastructure planning. The project was prioritized, the budget was allocated and approved.</p> | | | |
| <p>Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p> | <p>YES</p> | <p><input type="checkbox"/></p> | <p>Please explain</p> |
| <p>The project was provided for in the municipality infrastructure planning. The project was prioritized, the budget was allocated and approved.</p> | | | |
| <p>Is this project part of a national programme to address an issue of national concern or importance?</p> | <p>YES</p> | <p><input type="checkbox"/></p> | <p>Please explain</p> |
| <p>The national development plan 2030 identifies 'expanding infrastructure' as a priority.</p> | | | |

| | | | |
|--|--------------------------|--------------------------|----------------|
| Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.) | YES | <input type="checkbox"/> | Please explain |
| Advantages of the proposed location: <ul style="list-style-type: none"> <i>The sites in question will be within existing road reserves and omnibus servitudes, within a residential built up area.</i> <i>There is existing access, as most of the area is urban built-up.</i> <i>Sensitive biodiversity areas/CBA, and wetland areas will be avoided.</i> | | | |
| Is the development the best practicable environmental option for this land/site? | YES | <input type="checkbox"/> | Please explain |
| <ul style="list-style-type: none"> <i>Margate is serviced by both water-borne sanitation and septic tanks, and conservancy tanks. These tanks are de-sludged once a month (sometimes twice), by vacuum tanker. Residents are billed for this service. The conservancy tanks frequently overflow, which poses serious pollution (surface water, groundwater), as well as unpleasant odours, and ultimately pose as a health hazard.</i> | | | |
| Will the benefits of the proposed land use/development outweigh the negative impacts of it? | YES | <input type="checkbox"/> | Please explain |
| <ul style="list-style-type: none"> Reduce backlogs in provision of basic water and sanitation services in Ugu District Municipality. Provision of adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3. To ensure sanitation, health and hygiene promotion There will be a significant requirement for unskilled labor from the community for the excavation and backfilling of pipeline trenches. It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors. It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation. This project supports the employment of women. The labour force will consist of approximately 100 local labour. To ensure cost recovery for the sanitation service delivery | | | |
| Will the proposed land use/development set a precedent for similar activities in the area (local municipality)? | YES | <input type="checkbox"/> | Please explain |
| <p>It will set a precedent, as the upgrade will be in line with the EIA regulations 2014, and all applicable specialist studies will be undertaken. An EMPr will be drawn up, which will guide the, construction and post-construction phases. a rehabilitation programme will, also be utilised for the post-construction phase rehab.</p> | | | |
| Will any person's rights be negatively affected by the proposed activity/ies? | <input type="checkbox"/> | NO | Please explain |
| <p>The project is an improvement to the existing and will BENEFIT all residents within the area.(environmental, health)</p> | | | |

| | | | |
|---|--------------------------|--------------------------|-----------------------|
| Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality? | <input type="checkbox"/> | NO | Please explain |
| THE urban edge will not be compromised. The proposed project is within an urban area. | | | |
| Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPs)? | YES | <input type="checkbox"/> | Please explain |
| <p>The South African Government adopted the National Infrastructure Plan (NIP) in 2012. It seeks to transform the national economic landscape through the maximization of job creation and improved basic service delivery. The central premise includes upgrading existing and building new infrastructure. It calls for investments in: healthcare and education facilities; housing and electrification; sanitation facilities; road and railway infrastructure; construction of dams and ports.</p> <p>The plan is furnished with 18 Strategic Integrated Projects (SIPs) to help guide such investments. These catalytic projects align development and growth with cross-cutting areas. Some of these projects are relevant to Umdoni Municipality, which the municipality takes cognizance of and seeks to align its development goals accordingly.</p> <p>THE PROJECT WILL CONTRIBUTE TO :</p> <p><i>SIP 18 : This will help serve social needs through efficient basic service delivery. It prioritizes on improving the management, rehabilitation and upgrading of existing infrastructure, the provision of new infrastructure</i></p> | | | |
| What will the benefits be to society in general and to the local communities? | Please explain | | |
| <ul style="list-style-type: none"> • Reduce backlogs in provision of basic water and sanitation services in Ugu District Municipality. • Provision of adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3. • To ensure sanitation, health and hygiene promotion • There will be a significant requirement for unskilled labor from the community for the excavation and backfilling of pipeline trenches. • It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors. • It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation. • This project supports the employment of women. The labour force will consist of approximately 100 local labour. • To ensure cost recovery for the sanitation service delivery | | | |
| Any other need and desirability considerations related to the proposed activity? | Please explain | | |
| <ul style="list-style-type: none"> ◆ <i>It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation.</i> ◆ <i>This project supports the employment of women.</i> | | | |

| How does the project fit into the National Development Plan for 2030? | Please explain |
|---|--|
| | <p>The National Planning Commission was established in 2009 under the leadership of former Minister Trevor Manuel. After extensive research and consultation with a wide range of stakeholders, a National Development Plan (NDP) commonly referred to as Vision 2030 has been drafted. It is quite evident that government places a high priority on the implementation of the plan and it can be expected that the NDP will be the compass by which the national government is going to steer the development path of South Africa into the future. The broad goal of this plan is to reduce unemployment, alleviate poverty and reduce inequality by 2030.</p> <p>The Plan identifies the improvement of the quality of public services as critical to achieving transformation. This requires provinces to focus on identifying and overcoming the obstacles to achieving improved outcomes, including the need to strengthen the ability of local government to fulfil its developmental role.</p> <p>The proposed project aims to provide more resilient facilities, and in so doing improve the lives of the beneficiaries.</p> |
| <p>Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.</p> | |
| <ul style="list-style-type: none"> - The potential impact of the proposed development and the alternatives to lessen the impact on the environment has been investigated. - The potential impact on the environment, socio-economic conditions and cultural heritage has been taken into account during the planning phase as well as construction phase. - Identification, prediction and evaluation of actual and potential impacts and the risks, consequences and alternatives for mitigation of activities have been included in the BAR. - Public participation was adequately undertaken as per BAR. | |
| <p>Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.</p> | |
| <p>Of the NEMA principles, the following are of particular relevance to these guidelines:</p> <ul style="list-style-type: none"> - Development must be socially, environmentally, and economically sustainable. - That the negative impacts on the environment and on people’s environmental rights be anticipated and prevented, and where they cannot be altogether prevented are minimized and remedied. - Equitable access to environmental resources benefits and services to meet basic human needs and to ensure human well-being must be pursued. - Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated. - The participation of all interested and affected parties must be promoted. - That negative impacts on the environment and on peoples environmental rights be anticipated and prevented and where they cannot be altogether avoided, is minimized and remedied - Decisions must be taken in an open and transparent manner, and access to information must be discharged in the national interest. | |

Have any site alternatives been considered?: **NO SITE ALTERNATIVES, AS THE SANITATION PROVISION IS REQUIRED AT THE CURRENT LOCATIONS**

| | |
|-----|----|
| YES | NO |
|-----|----|

If "NO", alternatives, including alternative locations for the activity were investigated, motivate for not considering such

- **No alternative locations were considered as a result.**

11. Applicable Legislation, Policies and/or Guidelines

Below is a List all legislation, policies and/or guidelines of any sphere of government that are relevant to the application as contemplated in the EIA regulations 2014, where applicable:

Table 10: List of relevant Legislation /guidelines

| Title of legislation, policy, plans or guideline, spatial tools, municipal development frameworks | Administering authority, and date: | How proposed activity complies with/responds to legislation & policy/plan/guidelines/tools/frameworks |
|---|-------------------------------------|---|
| South Africa's Constitution (No. 108 of 1996) | SA Government | <p>Chapter 2 of the Constitution contains the Bill of Rights and this includes an environmental right viz:</p> <ul style="list-style-type: none"> o Everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that <ul style="list-style-type: none"> i. prevent pollution and ecological degradation; ii. promote conservation; and iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. <p><i>The proposed reticulation will be guided by the EMPr (legal document) during the construction phase so as to ensure that pollution and environmental degradation is avoided, thereby promoting conservation and ensuring the development will be ecologically, socially and environmentally sustainable.</i></p> |
| National Environmental Management Act (107 of 1998) Environmental Impact | Department of Environmental Affairs | The project triggers LN3 of the EIA regulations 2014. RELEVANCE OF THE listed activities was clarified in the report as per Table 7. |

| | | |
|---|---|--|
| assessment Regulations, 2014 (Amended 07 April 2017) | | |
| National Environmental Management Act (107 of 1998) | Department of Environmental Affairs | The National Environmental Management Act (NEMA) reinforces the constitutional imperative to protect, promote and fulfil the environmental right in the Bill of Rights. Section 24(1) of the act states that any proposed activity which requires authorisation or permission by law and which may significantly affect the environment must be considered, investigated and assessed before implementation. |
| Biodiversity Act (10 of 2004): | Department of Environmental Affairs | As per the biodiversity assessment report: the project area is within a near threatened ecosystem , Intersects an Irreplaceable CBA |
| Protected Areas Act (57 of 2003, amended No. 31 of 2004) | Department of Environmental Affairs | As per the biodiversity assessment report: the project area is adjacent to a protected area (Solomon Gijima Dindikazi Nature Reserve) |
| Integrated Coastal Management Bill (2008) | Department of Environmental Affairs | N/A |
| Air Quality Act (39 of 2004) | Department of Environmental Affairs | N/A |
| Waste Act (59 of 2008): | Department of Environmental Affairs | N/A |
| National Water Act (36 of 1998) | Department of Water and Sanitation | 8 HGM units were identified within the 500 m regulated area, including various hillslope seeps (HGMs 1 - 3), Channelled Valley Bottom (CVB; HGMs 4 - 6) wetlands as well as Unchanneled Valley Bottom (UCVB; HGMs 7 and 8). Additionally, some dams and artificial impoundments were identified within the 500 m regulated area. |
| National Forests Act (84 of 1998) | Department of Agriculture Forestry and Fisheries | N/A |
| Marine Living Resources Act (18 of 1998) | Department of Agriculture Forestry and Fisheries | N/A |
| Mineral and Petroleum Resources Development Act (28 of 2002) | Department of Mineral Resources | N/A |
| Environment Conservation Act (73 of 1989) | Department of Environmental Affairs | N/A |
| Conservation of Agricultural Resources Act (43 of 1983) (CARA) | <i>Department of Agriculture Forestry and Fisheries</i> | N/A |
| Sea-shore Act (21 of 1935) | Department of Environmental Affairs | N/A |
| Hazardous Substances Act (15 of 1973) | Department of Mineral Resources | N/A |

| | | |
|--|--|---|
| Mountain Catchment Areas Act (63 of 1970) | Department of Agriculture Forestry and Fisheries | N/A |
| Fertilizers, Farm Feeds, Agricultural Remedies Act (36 of 1947) | <i>Dept of Agriculture, Forestry and Fisheries</i> | N/A |
| Agricultural Pests Act (36 of 1983) | Department of Agriculture Forestry and Fisheries | N/A |
| Development Facilitation Act (67 of 1995) | Department of Rural Development and Land Reform | The Development Facilitation Act, contains provisions and general principles relating to land development and Land Development Objectives (LDOs). |
| Genetically Modified Organisms Act (15 of 1997) | Department of Agriculture Forestry and Fisheries | N/A |
| Mine Health and Safety Act (29 of 1996, amended 1997) | Department of Mineral Resources | N/A |
| National Heritage Resources Act (25 of 1999) | Department of Arts and Culture | Online application via SAHRIS |
| National Parks Act | South African National Biodiversity Institute | N/A |
| National Veld and Forest Fire Act (101 of 1998) | Department of Agriculture Forestry and Fisheries | N/A |
| Nuclear Energy Act (46 of 1999) | Department of Energy | N/A |
| Water Services Act (108 of 1997) | Department of Water and Sanitation | |

SECTION C: PUBLIC PARTICIPATION (REFER PROOF AND SUPPORTING DOCUMENTS - APPENDIX E)

Public participation process has been undertaken as per section 41 of the EIA Regulations 2014, and has taken into account any guidelines applicable to public participation as contemplated in section 24J of the Act.

Cognisance was taken of the following:

- *all information containing the relevant facts in respect of the application or proposed application was made available to potential interested and affected parties; and*
- *Participation by potential or registered interested and affected parties was facilitated such that all potential or registered interested and affected parties were provided with a reasonable opportunity to comment on the application or proposed application.*

- Special attention was given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate.

1. The Following Activities Were Undertaken As Part of The Public Participation Process: (Refer Appendix E for Proof)

BID: An information package containing a description of the project and planned scope of work was compiled and distributed to relevant Authorities and Interested and affected Parties that were identified at the project outset and occupiers of land adjacent to the reticulation. The background information document contained a description of the proposed project, proposed development options, explained the aims and objectives of the environmental assessment, etc and invited comment on the proposed development. This BID was submitted on **28 January 2022**.

Linear activity: give written notice to all occupiers of the land (registered mail or hand deliver with proof: On-site notices were placed along all affected streets for the project areas: 12 Notices were put up at:

- Irene Rd
- Raleigh Rd
- Jellico Rd
- Links Rd
- Tedder Ave
- Drake Rd
- Azalea Ave
- Flamboyant Ave
- Bavhinia Ave
- Protea Ave
- Ugu District Municipality, Notice Board
- Ray Nkonyeni Local Municipality Notice Board

ADVERTISEMENT/S :

Newspaper title and date of placement: *PLACED IN THE SOUTH COAST HERALD ON THE: 22 APRIL 2022*

NOTICE BOARD/ON-SITE NOTICES: (Nb: notices must also be placed at the ALTERNATIVE SITES where applicable): *on-site notices were put up on the 28 MARCH 2022 at the ffg relevant locations*

- Irene Rd
- Raleigh Rd
- Jellico Rd
- Links Rd
- Tedder Ave
- Drake Rd
- Azalea Ave
- Flamboyant Ave
- Bavhinia Ave
- Protea Ave
- Ugu District Municipality, Notice Board
- Ray Nkonyeni Local Municipality Notice Board

| |
|---|
| |
| 12 Notices were put up AT the above locations on the 28/03/2022, THE notices were in English. |
| <p>Pre Application meeting: The competent authority which is the KZN EDTEA is required to provide an environmental authorisation (EA) (be it positive or negative) for the proposed project.</p> <p>Pre-application meeting: A site meeting was then held on the 15 February 2022, on site, with Mr. N. Ndokweni.</p> <ul style="list-style-type: none"> - The draft BAR was also submitted to EDTEA ON the 09 JUNE 2022 |
| |
| <p>DRAFT BAR:</p> <ul style="list-style-type: none"> - THE DRAFT BAR has been submitted to relevant AUTHORITIES and registered IAPS on 09 JUNE 2022 |
| |
| <p>FINAL BAR:</p> <ul style="list-style-type: none"> - N/A: will be submitted after the DRAFT BAR has been amended (to include comments from registered IAP's and relevant authorities up to the period ending 11 JULY 2022. |
| |

Were any reasonable alternative methods utilised or required? (In those instances where a person is desirous of but unable to participate in the process) due to-

- (i) illiteracy;
- (ii) disability; or
- (iii) any other disadvantage.

2. Comments and Response Report (Appendix E)

All comments and responses during the public participation process have been included as per table below. . REFER REGISTER OF IAP'S (AS PER APPENDIX E).

3. Participation by District, Local and Traditional Authorities

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

Has any comment been received from the district municipality?

YES NO

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

The District Municipality is the applicant

Has any comment been received from the local municipality?

YES NO

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

NO COMMENTS RECEIVED

Has any comment been received from a traditional authority?

YES NO

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

NO

4. Consultation with Other Stakeholders

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

Has any comment been received from stakeholders?

YES NO

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

| COMMENTS ON BID | | |
|---------------------------|---|---|
| STAKEHOLDER | COMMENTS ON BID | ENQA RESPONSE |
| <p>DFFE (Ms. T. Xulu)</p> | <p>With reference to the above-mentioned project received on 28th January 2022, the applicant proposes a sanitation scheme construction of sewer reticulation. Upon review of the document, this project triggers <i>the clearance of an area of 300 square metres or more of indigenous vegetation...</i> therefore it is brought to your attention that DFFE's concern pertain to the potential of the project impacting upon existing natural forest(s) as well as protected tree species in terms of NFA. The proposed project site has a range of vegetation, which are grouped within three biomes.</p> <p>DFFE (through the sub-directorate Forestry Regulations and Support) requests that an ecological study be conducted. This study should include the condition and the type of vegetation and species found on the site as well as the extent to which these will be impacted upon. The department further requests that the study addresses the potential impacts of the proposed project on natural forest(s) and or protected trees occurring within or in close proximity to the proposed project site. Furthermore, this ecological assessment should investigate alternative options that will allow for minimal vegetation disturbance. Substantial comments will be issued upon receipt and review of Basic Assessment Report inclusive of the ecological study.</p> | <ul style="list-style-type: none"> - A biodiversity assessment was undertaken in Feb 2022. The report addresses all your requirements. Refer annexure E?). |
| <p>EnAq cc</p> | <p>06/2022</p> | <p>Page 35</p> |
| | | |
| | | |

| STAKEHOLDER | COMMENTS ON BID | ENQA RESPONSE |
|--|--|--|
| <p>Dept of Agriculture, Land Reform and Rural Development (Mr.R.Baca)</p> | <p>With reference to the above-mentioned application and requested preliminary comments, this office would like the final BAR/EMPr document to address the following issues:</p> <ul style="list-style-type: none"> • The current land use for the site that will be directly affected by the proposed development, as well as the anticipated impacts and mitigation measures. • The total extent of the proposed activity or total area to be directly affected by the proposed development. • The impact that the proposed development will have on the available or surrounding wetlands or/and rivers or streams; and how will it be mitigated. • The impact that the proposed activity will have on any nearby agricultural lands and the relevant mitigation measures. • The handling of the top soil for later use during the rehabilitation stage. • Soil Erosion and its mitigation measures. • Construction of storm water drains impact and relevant mitigation measures. • Information on fauna and flora for the areas that will be affected by the proposed development. • Alien plant control plan that will be implemented on a continuous basis. • Provide information on the availability of alternative sites and their suitability versus the preferred site. | <ul style="list-style-type: none"> - All of the mentioned issues will be addressed in the BAR, Which will be made available for your comment. |
| | | |

| COMMENTS ON DBAR | | |
|------------------|-----------------|---------------|
| STAKEHOLDER | COMMENTS ON BID | ENQA RESPONSE |
| | | - |
| | | |

SECTION D: BASELINE RISK ASSESSMENT

(INCLUDE ALTERNATIVE SITES where applicable):

Important notes:

For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment.

Collection of baseline information was undertaken during site inspections conducted in order to establish the sensitivity of the environment to potential project impacts and to determine restrictions the environment may have on the project. Information on the biophysical and socio-economic parameters was gathered during the site inspections and desktop study. Information was also obtained from existing reports, aerial photography and the 1:50 000 topographical maps for the area.

1. Current and Surrounding Land Use, Location in Landscape, Access

Location and access:

The project is situated within Ward 6 within the Ugu District Municipality in the town of Margate, which is located along the south coast of KwaZulu Natal, approximately 20 kilometres south of Port Shepstone along the N2 National Route. The municipality is bordered in the north by Ethekewini Municipality, in the west by UMgungundlovu and Harry Gwala District Municipalities and on the southern side shares its borders with the Eastern Cape Province. The municipality is accessed via the N2 and R102 from Ethekewini on the north.

CURRENT AND SURROUNDING LANDUSE:

There is a number of strategic features that embrace this location- notably, that it is highly accessible by the N2 and R61 which connects the area with a number of towns within KwaZulu- Natal as well as Eastern Cape and beyond; It is situated within a highly admired coastal strip which is affectionately referred to as the South Coast by the tourists, residents and general travellers.

The main urban centers within this municipal area are Port Shepstone, Hibberdene, Scottburgh, Margate, Port Edward and Harding Town. These serve as the main towns for the municipal area with the highest agglomeration of commercial activities

Margate is a developing urban area, dominated by predominantly residential and limited commercial areas. Located south of Uvongo and North of Ramsgate, Margate is seen as a major tourist destination in Ugu District Municipality, providing holiday accommodation and dominated by small businesses from restaurants, to craft shops.

ACCESS: THERE IS ACCESS TO THE SITES VIA EXISTING FORMAL ROADS.

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:

Table 11: Land uses within 500 m of site:

| Land use character | | | Description |
|--|-----|----|--|
| Natural area | YES | NO | some open spaces present within project area 2 and 3 |
| Low density residential | YES | NO | |
| Medium density residential | YES | NO | |
| High density residential | YES | NO | There are residential units as per the project areas |
| Informal residential | YES | NO | |
| Retail commercial & warehousing | YES | NO | There are some local shops/craft within the areas |
| Light industrial | YES | NO | |
| Medium industrial | YES | NO | |
| Heavy industrial | YES | NO | |
| Power station | YES | NO | |
| Office/consulting room | YES | NO | There are some consulting offices within the areas, and municipal offices |
| Military or police base/station/compound | YES | NO | |
| Spoil heap or slimes dam | YES | NO | |
| Quarry, sand or borrow pit | YES | NO | |
| Dam or reservoir | YES | NO | |
| Hospital/medical centre | YES | NO | Netcare Margate hospital |
| School/ crèche | YES | NO | There are primary schools |
| Tertiary education facility | YES | NO | |
| Church | YES | NO | Margate central SDA Church, new life ministries, Margate assemblies of God, etc |
| Old age home | YES | NO | Margate retirement village |
| Sewage treatment plant | YES | NO | Margate WWTW |
| Train station or shunting yard | YES | NO | |
| Railway line | YES | NO | |
| Major road (4 lanes or more) | YES | NO | |
| Airport | YES | NO | Margate airport |
| Harbour | YES | NO | |
| Sport facilities | YES | NO | |
| Golf course | YES | NO | Margate Golf course and country club |
| Polo fields | YES | NO | |
| Filling station | YES | NO | Engen |
| Landfill or waste treatment site | YES | NO | |
| Plantation | YES | NO | |
| Agriculture | YES | NO | Fiddlewood farm |
| River, stream or wetland | YES | NO | 8 HGM units were identified within the 500 m regulated area, including various hillslope seeps (HGMs 1 - 3), Channelled Valley Bottom (CVB; HGMs 4 - 6) wetlands as well as Unchanneled Valley Bottom (UCVB; HGMs 7 and 8) wetlands Additionally, some dams and artificial impoundments were identified within the 500 m regulated area. |
| Nature conservation area | YES | NO | River valley nature reserve and THE development is adjacent to the Solomon Gijima Dindikazi Nature Reserve |
| Mountain, hill or ridge | YES | NO | |

| | | | |
|----------------------------|-----|----|------------------------------|
| Museum | YES | NO | Margate municipal art museum |
| Historical building | YES | NO | |
| Protected Area | YES | NO | |
| Graveyard | YES | NO | |
| Archaeological site | YES | NO | |
| Other land uses (describe) | YES | NO | |

SITE ACCESS

Does ready access to the site exist?

There is existing access to the site via FORMAL roads.

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

| | |
|-------|----|
| ✓ YES | NO |
| m | |

| |
|-----|
| N/A |
|-----|

Local/site description:

The project is situated in Ward 6 within the Ugu District Municipality in the town of Margate, which is located on the south coast of KwaZulu Natal. The area is an urban built up area and there are approximately 489 plots that will be provided with the sewer reticulation.

2. Topography and Gradient of the Site

Indicate the general gradient of the site:

The topography ranges from gently to moderately sloping with areas of steep gradients. Various low-lying drainage areas either run through or bound the project area.

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

3. Groundwater, Soil and Geological Stability of the Site

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

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

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| | | | | | | |
|------------------------------|------------------|----|-----|----|-----|----|
| An area sensitive to erosion | YES X | NO | YES | NO | YES | NO |
|------------------------------|------------------|----|-----|----|-----|----|

The proposed site falls within the Palaeozoic age and is characterized by the Natal Metamorphic Province (1000 Ma) comprising of Granite and Gneiss and the Natal Group (49 Ma) comprising of sandstone.

4. Fauna, Vegetation and Groundcover

| Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites? | YES ✓ | NO | | | | | | | | | | | | | | | | | | |
|---|---|----------------------|-------------------------|-------------------------|----------------------------|-------------------------|---------------------|----------------------------|----------------------------|------|-----------|-----------|--------|------|-------------------------|--------|------|--------|----------|------|
| If YES, specify and explain: | Cape Vulture, Crane, Grey Crowned Thrush, Spotted Ground Southern Tree Hyrax WERE recorded within the Project Area of Influence (PAOI) During the field survey period, two flora SCC and nine protected flora species were recorded, which were limited to the grassland habitat. These species are unlikely to be affected by the proposed development if the grassland habitat is avoided. | | | | | | | | | | | | | | | | | | | |
| Are there any special or sensitive habitats or other natural features present on any of the alternative sites? | ✓YES | NO | | | | | | | | | | | | | | | | | | |
| If YES, specify and explain: | <table border="1"> <thead> <tr> <th>Habitat (Area [ha])</th> <th>Conservation Importance</th> <th>Functional Integrity</th> <th>Biodiversity Importance</th> <th>Receptor Resilience</th> <th>Site Ecological Importance</th> </tr> </thead> <tbody> <tr> <td>Degraded Grassland (9.743)</td> <td>High</td> <td>Very High</td> <td>Very High</td> <td>Medium</td> <td>High</td> </tr> <tr> <td>Riparian Forest (4.783)</td> <td>Medium</td> <td>High</td> <td>Medium</td> <td>Very Low</td> <td>High</td> </tr> </tbody> </table> | | Habitat (Area [ha]) | Conservation Importance | Functional Integrity | Biodiversity Importance | Receptor Resilience | Site Ecological Importance | Degraded Grassland (9.743) | High | Very High | Very High | Medium | High | Riparian Forest (4.783) | Medium | High | Medium | Very Low | High |
| Habitat (Area [ha]) | Conservation Importance | Functional Integrity | Biodiversity Importance | Receptor Resilience | Site Ecological Importance | | | | | | | | | | | | | | | |
| Degraded Grassland (9.743) | High | Very High | Very High | Medium | High | | | | | | | | | | | | | | | |
| Riparian Forest (4.783) | Medium | High | Medium | Very Low | High | | | | | | | | | | | | | | | |
| Are any further specialist studies recommended by the specialist? | YES | NO ✓ | | | | | | | | | | | | | | | | | | |
| If YES, specify: | N/A | | | | | | | | | | | | | | | | | | | |

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

The proposed project area is situated within the Indian Ocean Coastal Belt (IOCB) and Forest Biome. On a fine-scale vegetation type, the assessment area overlaps with a single vegetation type, the Pondoland-Ugu Sandstone Coastal Sourveld. Based on the IUCN Red List Spatial Data and FrogMAP, 29 amphibian species are expected to occur within the PAOI . A single species is regarded as being of

conservation concern. *Afrixalus spinifrons* (Natal Leaf-folding Frog) is endemic to South Africa and globally listed as LC (SA-FRoG, 2016) but locally listed as VU. The SABAP2 data for the selected pentads indicate that 213 species of indigenous avifauna are expected to occur within the landscape. Of these expected species, seven are regarded as threatened. A total of 67 species, representing 40 families of indigenous flora species were recorded within the PAOI, with 15 (22%) of these species' endemic to South Africa. Two of the expected flora SCC were recorded within the PAOI during the survey period. Invasive Alien Plants were present within the area due to the disturbance from anthropogenic influences. Thirteen (13) IAP species were recorded within the PAOI and 10 are listed as Category 1b. No amphibian species was recorded during the survey period. This was because no night survey was undertaken. No reptile species were recorded during the survey period. Forty-six (46) species of avifauna were recorded within the PAOI and proximal landscape during the survey period, with none of the species regarded as being of conservation concern.

Three (3) different habitat types were delineated within the assessment area. The Degraded Grassland habitat was limited to the north-eastern portion of the PAOI. It possessed flora species typical of Sandstone Sourveld Grassland but exhibited impacts from anthropogenic activities and encroachment by IAPs, especially *Pinus elliotii*. Transformed habitat included houses, roads and road verges and areas of severe degradation.

The SEI of the habitat types delineated are illustrated below.

| Habitat (Area [ha]) | Conservation Importance | Functional Integrity | Biodiversity Importance | Receptor Resilience | Site Ecological Importance |
|----------------------------|-------------------------|----------------------|-------------------------|---------------------|----------------------------|
| Degraded Grassland (9.743) | High | Very High | Very High | Medium | High |
| Riparian Forest (4.783) | Medium | High | Medium | Very Low | High |
| Transformed (69.533) | Very Low | Very Low | Very Low | Very High | Very Low |

Summary of habitat types delineated within the Project Area of Influence (PAOI)

Visual Aspects

The proposed area is an urban built up area, with predominantly residential and limited commercial areas. Located south of Uvongo and North of Ramsgate, Margate is seen as a major tourist destination in Ugu District Municipality, providing holiday accommodation and dominated by small businesses from restaurants, to craft shops.

5. Waste, Effluent, Air Quality, and Noise Management

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

| | |
|-------------------------------|----|
| YES✓ | NO |
| Approximately 10m3 | |

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

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

Registered disposal services will be used to dispose of solid construction waste safely and appropriately. By the municipality waste disposal system

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

Municipal official will advise on the most suitable licensed landfill

Will the activity produce solid waste during its operational

| | |
|-----|-----|
| YES | NO✓ |
|-----|-----|

| | |
|---|-----|
| phase? | |
| If yes, what estimated quantity will be produced per month? | N/A |
| How will the solid waste be disposed of? (provide details of landfill site) | |

Municipal official will advise on the most suitable licensed landfill

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

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

| | |
|-----|------|
| YES | NO ✓ |
|-----|------|

Is the activity that is being applied for a solid waste handling or treatment facility?

| | |
|-----|------|
| YES | NO ✓ |
|-----|------|

Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

| | |
|-----|------|
| YES | 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? YES

| | |
|-------|----|
| Yes ✓ | NO |
|-------|----|

Will the activity produce effluent that will be treated and/or disposed of at another facility?

| | |
|-----|------|
| YES | 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:

N/A

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

| | |
|-----|------|
| YES | ✓ NO |
|-----|------|

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

| | |
|-----|----|
| YES | NO |
|-----|----|

N/A

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

The nature of the Emissions will be from machinery and construction vehicles. In terms of air quality, generation of dust during construction activities could occur. Increased dust pollution could arise during construction as a result of trench excavations. The levels of dust pollution generated by grading vehicles/machinery on the stripped areas would return to current levels once construction was complete. Should dust pollution become a problem during the construction phase, dust amelioration measures will have to be put in place to control dust generation. Mitigation measures stipulated in the EMPr to be adhered to

Generation of noise

Noise levels around the project site are mainly as a result of the traffic and hive of activity around the site. The main source of noise in the area arises from general traffic within the affected residential areas and some of the commercial areas.

Will the activity generate noise?

| | |
|-------|-----|
| ✓ YES | NO |
| YES | NO✓ |

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

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

The predicted risk (qualitative) based on online screening tool indicates that noise will be low-medium. The usage of machinery will generate noise.

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. **N/A**

6. Surface Water and Water Use

The table below indicates the source(s) of water that will be used for the activity:

| | | | | | |
|------------|-------------|-------------|----------------------------|-------|---------------------------------|
| municipalX | water board | groundwater | river, stream, dam or lake | other | the activity will not use water |
|------------|-------------|-------------|----------------------------|-------|---------------------------------|

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

| | |
|-----|----|
| N/A | |
| YES | NO |

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

If YES, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this report. [The application has been submitted with ref: WU24131.](#)

Eight (8) HGM units were identified within the 500 m regulated area, including various hillslope seeps (HGMs 1 - 3), Channelled Valley Bottom (CVB; HGMs 4 - 6) wetlands as well as Unchanneled Valley Bottom (UCVB; HGMs 7 and 8) wetlands (see Figure 5-1, Figure 5-2, Figure 5-3, & Figure 5-4). Additionally, some dams and artificial impoundments were identified within the 500 m regulated area. These systems differ significantly from one HGM unit to the other in regard to ecological importance and sensitivity, modification, the general setting etc. HGM1 is located within an area that is predominantly natural grassland, with little to no infrastructure in close proximity. These seeps are impacted by grazing of cattle and informal jeep tracks. HGM2 is located below the Margate Airport, and is partially fed by the surface runoff from the hardened surfaces associated with the airport. HGM3 is located within a grassy area

below the N2 Highway, which is likely to received runoff from the road surface and seepage from the northern side of the highway.

The CVB wetlands (HGM4) located within the grassland are associated with the seeps within the same system. These wetlands are impacted by road crossings, and contaminated runoff from the surrounding area. HGM5 is associated with riverine forest, and is largely fed by stormwater from the surrounding roads and residential areas. HGM6 are CVB wetlands located in areas that have been disturbed by agriculture or residential development. These systems are of a poor condition.

The UCVB wetlands (HGMs 7 and 8) are relatively small, and are linked to stormwater drainage areas. HGM7 is linked to a riverine forest, while HGM8 is located within a residential garden.

7. Energy Efficiency and Carbon Footprint

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

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

Some aspects that will be taken into consideration will include resource efficiency, energy efficiency, water conservation and affordability. This is discussed further in the Environmental Management Programme Report.(EMPr)

The use of biodegradable products wherever possible shall be encouraged.

Reduce the amount of solid waste from the proposed development by buying in bulk; buying products with less packaging, using a minimum of throw away products. When buying building materials, try to source products made from natural materials. When looking for building materials, buying locally instead of ordering from afar has many advantages for the local community and the environment, this will be contributing to lowering carbon emission levels and saving resources by reducing the carbon km involved in transporting the goods and this should also save on packaging.

Waste paper and cardboard products used in the proposed development should be stored

separately and taken to a waste paper depot where it will be recycled to form new paper products resulting in large savings in raw materials.

8. Socio-Economic Character of Area and Surrounding Area

The key income generator for the Margate area is the tourism sector. According to KZN landcover 20m 2008, Margate predominantly consists of built up dense settlements, a significant amount is dedicated to the hospitality sector for providing products and services to the mostly upcountry domestic tourists

In terms of the educational profile of the Ugu District Municipality the Stats SA Census, 2011 shows that the literacy rate has grown by 5% from 73% in 2001 to 78% in 2016. There has been a gradual increase of the percentage of people with grade 12 / Std 10 from 7% in 2001 to 17% in 2016 as illustrated in figure 3.12.1.1. There has also been a slight

increase in the number of people who completed higher education even though the numbers are still relatively low. Based on these stats it is evident that the Ugu District Municipality has a low skills base

According to Census 2011 data, 73% of households within Ugu District Municipality fall within the low-income classification (R0 - R 38 400 income p/a), whereas 18% of households fall within the middle-income classification (R 38 401 - R153 600 p/a) and as little as 3% of the households are high income earners (R153 601 and above p/a).

The youth is highly unemployed and this remains a huge problem that the municipality is facing. A large number of young people are either dropouts, and very few have higher education qualification.

9. Cultural/ Historical Features

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

| | |
|-----|--|
| YES | <input checked="" 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:

| |
|--|
| |
|--|

Will any building or structure older than 60 years be affected in any way?

| | |
|-----|--|
| YES | <input checked="" type="checkbox"/> NO |
|-----|--|

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

| | |
|-----|--|
| YES | <input checked="" type="checkbox"/> NO |
|-----|--|

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

It is unlikely the project will infringe on any cultural or heritage sites. An application on the SAHRA website will be made; AMAFA and SAHRA were the relative heritage authorities notified on the application. --No comments or response have been received as yet.

The archaeological sites which have been identified within the Ugu District Municipality include:

- ❖ Higharces Farm
- ❖ Bazley
- ❖ Ifafa Beach, Beach Station and North bank
- ❖ Kelso Beach Estate Office and Station North
- ❖ King's Dale
- ❖ Mnamfu River North Bank
- ❖ Mtwalume
- ❖ Mzimayi River
- ❖ Paddy's Caravan Park
- ❖ Pennington Beach and Pennington Road
- ❖ Renishaw Station

- ❖ Scottburgh and Scottburgh North
- ❖ Sezela Beach and Sezela Road
- ❖ Sezela and the new reservoir water tanks
- ❖ TC Robertson Nature Reserve
- ❖ Umbilibili
- ❖ Umdoni Park
- ❖ Umtwalumi River and North Bank
- ❖ Umzimaari River North Bank

10. Safety and Security

General:

The proposed project is located within Ugu District Municipality. There are relatively low crime levels within the municipality (for the period 2008/2009 to 2018/2019 overall crime has decreased at an average annual rate of 2.91% within the Ugu District Municipality).

Some communities have converted the Community Policing Forums into Safety and Security Committee. There was also a safety and security strategy that was developed by the Department of Community Safety and Liaison in 2009, which is due to be reviewed and it is at the same level where the District Safety and Security Forum will be established.

Site Specific:

Construction phase activities could result in activities that pose some risk to workers or the public; through equipment/building material and construction activities on site. A safety officer will be employed to handle all safety issues.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts is as per the requirements in the EIA Regulations, 2014, and has also taken applicable official guidelines into account. The issues raised by interested and affected parties have also been addressed and included in the assessment of impacts where applicable. Recommendations as per the relevant specialist studies have also been included where applicable and relevant.

1. Issues Raised by Interested and Affected Parties

The main issues raised by interested and affected parties have been included below.

Comments on BID:

DFFE: (Department of Forestry, fisheries and the environment): Ms. T.Xulu

With reference to the above-mentioned project received on 28th January 2022, the applicant proposes a sanitation scheme construction of sewer reticulation. Upon review of the document, this project triggers *"the clearance of an area of 300 square metres or more of indigenous vegetation..."* therefore it is brought to your attention that DFFE's concern pertain to the potential of the project impacting upon existing natural forest(s) as well as protected tree species in terms of NFA. The proposed project site has a range of vegetation, which are grouped within three biomes.

DFFE (through the sub-directorate Forestry Regulations and Support) requests that an ecological study be conducted. This study should include the condition and the type of vegetation and species found on the site as well as the extent to which these will be impacted upon. The department further requests that the study addresses the potential impacts of the proposed project on natural forest(s) and or protected trees occurring within or in close proximity to the proposed project site. Furthermore, this ecological assessment should investigate alternative options that will allow for minimal vegetation disturbance. Substantial comments will be issued upon receipt and review of Basic Assessment Report inclusive of the ecological study.

Dept of Agriculture and land reform:

With reference to the above-mentioned application and requested preliminary comments, this office would like the final BAR/EMPr document to address the following issues:

- The current land use for the site that will be directly affected by the proposed development, as well as the anticipated impacts and mitigation measures.
- The total extent of the proposed activity or total area to be directly affected by the proposed development.
- The impact that the proposed development will have on the available or surrounding wetlands or/and rivers or streams; and how will it be mitigated.
- The impact that the proposed activity will have on any nearby agricultural lands and the relevant mitigation measures.
- The handling of the top soil for later use during the rehabilitation stage.
- Soil Erosion and its mitigation measures.
- Construction of storm water drains impact and relevant mitigation measures.
- Information on fauna and flora for the areas that will be affected by the proposed development.
- Alien plant control plan that will be implemented on a continuous basis.
- Provide information on the availability of alternative sites and their suitability versus the preferred site.

Indication of the manner in which the issues were incorporated, or the reasons for not including them in the IMPACT ASSESSMENT

The issues and comments from DFFE and Dept Agriculture were taken into consideration FOR THE TERRESTRIAL BIODIVERSITY STUDY, AND THE DRAFT BAR.

Response from the practitioner to the issues raised by the interested and affected parties

A full response has been included as per SECTION C-4 'Comments and Response Report'.

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

The environmental impact assessment is focused on the following phases of the project viz: **Construction, and operational**. As the project entails upgrades and development of new infrastructure which will be permanent, decommissioning is not applicable to this project.

A) METHODOLOGY USED IN DETERMINING AND RANKING THE NATURE, SIGNIFICANCE, CONSEQUENCES, EXTENT, DURATION AND PROBABILITY OF POTENTIAL ENVIRONMENTAL IMPACTS AND RISKS ASSOCIATED WITH THE ALTERNATIVES

An impact assessment methodology as indicated below will be utilised. It has been adapted and modified from the "DEAT (2004) Cumulative effects Assessment, Integrated Environmental Management, Information Series 7, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

A combined quantitative and qualitative methodology was used to describe impacts for each of the assessment criteria. A summary of each of the qualitative descriptors along with the equivalent quantitative rating scale for each of the aforementioned criteria is given below:

TABLE 12: IMPACT ASSESSMENT METHODOLOGY

| SIGNIFICANCE, magnitude and nature: refers to importance of impact | rating | description |
|--|--------------|---|
| | 0- No impact | NO IMPACT |
| | 1- VERY LOW | Impact is negligible within the bounds of impacts which could occur. In the case of adverse impacts, almost no mitigation and/or remedial activity is needed, and any minor steps which might be needed are easy, cheap, and simple. In the case of beneficial impacts, |

| | | |
|---------------|-----------------------------------|---|
| | | alternative means are almost all likely to be better, in one or a number of ways, than this means of achieving the benefit. Three additional categories must also be used where relevant. They are in addition to the category represented on the scale, and if used, will replace the scale. |
| | 2- Low | Impact is of a low order and likely to have little real effect. In the case of adverse impacts: mitigation and/or remedial activity is either easily achieved or little will be required, or both. In the case of beneficial impacts, alternative means for achieving this benefit are likely to be easier, cheaper, more effective, less time consuming, or some combination of these. |
| | 3- MODERATE | Impact is real but not substantial in relation to other impacts, which might take effect within the bounds of those which could occur. In the case of adverse impacts: mitigation and/or remedial activity are both feasible and fairly easily possible. In the case of beneficial impacts: other means of achieving this benefit are about equal in time, cost, effort, etc. |
| | 4- HIGH | Impact is of substantial order within the bounds of impacts, which could occur. In the case of adverse impacts: mitigation and/or remedial activity is feasible but difficult, expensive, time-consuming or some combination of these. In the case of beneficial impacts, other means of achieving this benefit are feasible but they are more difficult, expensive, time-consuming or some combination of these. |
| | 5- VERY HIGH | Of the highest order possible within the bounds of impacts which could occur. In the case of adverse impacts: there is no possible mitigation and/or remedial activity which could offset the impact. In the case of beneficial impacts, there is no real alternative to achieving this benefit. |
| Extent | 1- Isolated Sites / proposed site | The impact will affect an area no bigger than the footprint. |
| | 2- Study Area | The impact will affect an area not exceeding boundary of site |
| | 3- Local | The impact will affect an area up to 5 |

| | | |
|--|---|---|
| | | km from the proposed site |
| | 4- Regional/Provincial | The impact will occur at regional/provincial level |
| | 5- Global/National | The maximum extent of any impact. |
| Probability of potential environmental impacts | 1- Practically impossible | |
| | 2- Unlikely | |
| | 3- Could happen | |
| | 4- Very Likely | |
| | 5- It's going to happen / has occurred | |
| DURATION OF IMPACTS: REFERS to impact timeframe. Reversibility is directly related to duration i.e permanent impacts are irreversible | 1- Incidental: immediately reversible | The impact will be limited to isolated incidences that are expected to occur very sporadically. |
| | 2- Short-term: quickly reversible | environmental impact identified will operate for the duration of the construction phase or a period of less than 5 years, whichever is the greater. |
| | 3- Medium term: reversible over time | The environmental impact identified will operate for the duration of life of the project. |
| | 4- Long term: reversible over the long term | The environmental impact identified will operate beyond the life of project. |
| | 5- Permanent: irreversible | The environmental impact will be permanent. |
| Degree to which the impact can cause irreplaceable loss of resources: (refers to intensity or severity of an impact) | low | Disturbance of degraded areas, with little conservation value, minor change in species occurrence |
| | medium | Disturbance of areas that have potential conservation value. Complete change in species occurrence |
| | high | Disturbance of pristine areas having high conservation value, destruction of rare/endangered species |
| Degree to which the impact can be avoided, managed or mitigated | low | Little or no mechanism to mitigate |
| | medium | Potential to mitigate negative impacts |
| | high | High potential to mitigate negative impacts to the level of insignificant effects |
| Degree of certainty | Definite | More than 90% sure of a particular fact. |
| | probable | Between 70 and 90% sure of a particular fact, or of the likelihood of that impact occurring. |
| | Possible | Between 40 and 70% sure of a particular fact or of the likelihood of an impact occurring. |
| | Unsure | Less than 40% sure of a particular fact or the likelihood of an impact occurring. |
| | Can't know | The consultant cant make an assessment given available information |

QUANTITATIVE DESCRIPTION OF IMPACTS:

A rating scale of between 1 and 5 has been used for each of the assessment criteria. In terms of the quantitative impact, the value is in terms of function of significance, spatial and duration scale as below:

$$\text{Impact Risk} = \frac{(\text{SIGNIFICANCE} + \text{Spatial} + \text{duration}) \times \text{Probability}}{3 \times 5}$$

AN EXAMPLE OF HOW THIS CAN BE APPLIED:

| IMPACT | SIGNIFICANCE | SPATIAL SCALE | TEMPORAL SCALE | PROBABILITY | RATING |
|-----------------------|--------------|---------------|--------------------|---------------------|--------|
| | LOW | <i>Local</i> | <u>Medium Term</u> | <i>Could Happen</i> | |
| Impact to Air quality | 2 | 3 | 3 | 3 | 1.6 |

Note: The significance, spatial and temporal scales are added to give a total of 8, that is divided by 3 to give a criteria rating of 2.67.

The probability (3) is divided by 5 to give a probability rating of 0.6. The criteria rating of 2.67 is then multiplied by the probability rating (0.6) to give the final rating of 1.6.

The impact risk is classified according to 5 classes as described in the table below.

TABLE 7-8: IMPACT RISK Classes

| RATING | IMPACT CLASS | DESCRIPTION |
|-----------|--------------|-------------|
| 0.1 – 1.0 | 1 | Very Low |
| 1.1 – 2.0 | 2 | Low |
| 2.1 – 3.0 | 3 | Moderate |
| 3.1 – 4.0 | 4 | High |
| 4.1 – 5.0 | 5 | Very High |

Therefore with reference to the example used for air quality above, an impact rating of 1.6 will fall in the Impact Class 2, which will be considered to be a low impact.

B) FULL DESCRIPTION OF PROCESS UNDERTAKEN TO IDENTIFY, ASSESS, AND RANK THE IMPACTS THE ACTIVITY WILL IMPOSE ON THE PREFERRED LOCATION THROUGH THE LIFE OF THE ACTIVITY:

Potential impacts were identified by professional judgement, project information, experience of similar projects, a review of available literature, site visits, review of specialist reports and consultation with authorities and the public.

C) ALL ENVIRONMENTAL ISSUES, AND RISKS that were identified during the EIA process, and significance of each issue and risk and indication of the extent to which the issue/risk could be avoided or addressed by adoption of mitigation measures is included in the tables to follow as per the relevant phase of the project.

3. IMPACTS THAT RESULT FROM THE CONSTRUCTION/OPERATIONAL PHASES:

CONSTRUCTION PHASE

| PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME: PREFERRED SEWER RETICULATION : PROJECT AREA 2, 3, 4 | | | | | | | | |
|---|---------------------|--|---|-------------------------------------|---------------------|-------------|---------------------------------|-----------------------|
| BIOPHYSICAL IMPACTS | | | | | | | | |
| Impacts: | Mitigation status | Extent(rating) | Intensity (rating)- Degree to which the impact can cause irreplaceable loss | Duration (rating) (- reversibility) | Consequence(rating) | probability | Significance(status i.e + or -) | Risk rating and class |
| - Degradation, destruction and fragmentation of very surrounding sensitive habitats(, if construction work / waste material penetrates these habitats | Without mitigation | 3 | high (3) | 5 | high (11) | 5 | 5 (-) | 4 |
| - Direct mortality of fauna | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 1 | 2 (-) | 0.3 |
| - Spilling of hazardous chemicals into the receiving environment and penetrating into | Mitigation measures | Specialist mitigation <ul style="list-style-type: none"> - The areas to be developed must be specifically demarcated to prevent movement into surrounding environments, especially 'High' SEI habitats. Only areas identified as possessing a low sensitivity must be impacted upon. If absolutely necessary, infrastructure in 'High' SEI areas must be limited to the existing road network or immediately adjacent to the road. - Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should under no circumstances be fragmented or disturbed further. Clearing of vegetation should be minimized and avoided where possible. | | | | | | |

| | | |
|---------------------------|--|---|
| <p>sensitive habitats</p> | | <ul style="list-style-type: none"> - Where possible, existing access routes and walking paths must be made use of, and the development of new routes limited. - All laydown, chemical toilets etc. should be restricted to low sensitivity areas. No storage of vehicles or equipment will be allowed outside of the designated project area - Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species. Topsoil must also be utilised, and any disturbed area must be re-vegetated with plant species which naturally occur within the area - A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use. No servicing of equipment on site unless necessary. All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers. Appropriately - contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them leaking and entering the environment. - Any topsoil that is removed during construction must be appropriately removed and stored according to the national and provincial guidelines. This includes on-going maintenance of such topsoil piles so that they can be utilised during decommissioning phases and re-vegetation. All removed soil and material must not be stockpiled within sensitive habitats and buffers delineated as part of the Wetland Impact Assessment. Stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds - A fire management plan needs to be compiled and implemented to restrict the impact fire surrounding areas. This is especially pertaining to stochastic events such discarding of lit cigarette butts. - The areas to be developed must be specifically demarcated to prevent movement of staff or any individual into surrounding areas. Signs must be put up to enforce this. - No construction is to occur at night to avoid all possible disturbances to amphibian species and nocturnal mammals - No trapping, killing, or poisoning of any wildlife is to be allowed. Signs must be put up to enforce this. - The duration of the construction should be minimized to as short term as possible, to reduce the period of disturbance on fauna. <p>General mitigation</p> <p>-</p> |
|---------------------------|--|---|

**PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME:
PREFERRED SEWER RETICULATION : PROJECT AREA 2, 3, 4**

BIOPHYSICAL IMPACTS

| Impacts: - Excavation/ trenching activity: soil loss and erosion - Backfill and Erosion Aspects - Trench Stability | Mitigation status | Extent(rating) | Intensity (rating)- <i>Degree to which the impact can cause irreplaceable loss</i> | Duration (rating) (- reversibility) | Consequence(rating) | probability | Significance(status i.e + or -) | Risk rating and class |
|--|----------------------------|--|--|-------------------------------------|---------------------|-------------|---------------------------------|-----------------------|
| | Without mitigation | 2 | Medium (2) | 2 | medium (6) | 3 | 2 (-) | 1.2 (Class 2) |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 2 | 1 (-) | 0.4 (Class 1) |
| | Mitigation measures | Specialist mitigation <ul style="list-style-type: none"> - Any topsoil that is removed during construction must be appropriately removed and stored according to the national and provincial guidelines. This includes on-going maintenance of such topsoil piles so that they can be utilised during decommissioning phases and re-vegetation. All removed soil and material must not be stockpiled within sensitive habitats and buffers delineated as part of the Wetland Impact Assessment. Stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds. - Based on the results of the fieldwork, soft and intermediate excavation classifications in terms of SANS 1200 are anticipated. Nonetheless, contingencies for hard excavation should be allowed for. - It is considered that trenches excavated in thick sandy fill and colluvial (>1.0m) soils will require lateral support, as will trenches excavated in areas with groundwater seepage (refer to Table 2). | | | | | | |

| | | | | | | | | |
|---|-------------------|---|-----------------------------------|-----------------------------|----------------------------|--------------------|-----------------------------------|--------------------|
| | | <ul style="list-style-type: none"> - Temporary batter slopes during construction are the contractor’s responsibility - Trenches deeper than 1.5m should be shored, particularly if left open indefinitely and if steeper gradients than that given above are required. - It is recommended that excavations be carried out in the dry season. It is recommended that lateral support be used in all situations where groundwater is encountered. - Regular inspections of the trenches should be carried out by Geosure in order to detect potentially unstable sidewall conditions. - Areas underlain by sandy fill, colluvial residual soils are generally extremely conducive to erosion. The pipe trench line can also become a route for continued erosive activity, and with time could develop into a donga feature with resultant failure of the proposed pipeline. Where the proposed pipeline is running perpendicular to contours, over gradients steeper than about 1 vertical to 6 horizontal, it is recommended that every 3 to 5 metre intervals a section of the backfill be stabilised with cement or lime (about 4% by mass). The section of stabilised soil should be about 1 to 2 in length. It is recommended that grass cover be reinstated as soon as possible over the trench in order to prevent erosion. - Compaction of the general backfill soils in trenches over the bedding layer should be carried out in layers of maximum loose thickness 200mm and compacted to minimum 93% MAASHTO density. This is critical to ensure that settlement over pipes and within trench outlines is limited. <p>General mitigation</p> <ul style="list-style-type: none"> - It is recommended that excavations be carried out in the dry season as far as possible and backfilled with the minimum of delay. - The time that’s stripped areas are left open to exposure should be minimized wherever possible. Care should be taken to ensure that these times are not excessive. - Wind screening and storm water control should be undertaken to prevent soil loss from the site. - All embankments shall be protected by a cut-off drain to prevent water from cascading down the face and causing soil erosion. - Areas with potential of soil erosion must be rehabilitated with indigenous vegetation to minimize future impacts of soil erosion and other human activities. - Following instatement of the bank weekly review of the site should be undertaken to consider aspects such as erosion or weed invasion. Redress of erosion should be immediate, using silt fences and in some cases reinstatement of topsoil | | | | | | |
| <p>Impacts:</p> <ul style="list-style-type: none"> - Vegetation | <p>Mitigation</p> | <p>Extent(rating)</p> | <p>Intensity (rating)- Degree</p> | <p>Duration (rating) (-</p> | <p>Consequence(rating)</p> | <p>probability</p> | <p>Significance(status i.e. +</p> | <p>Risk rating</p> |

| Removal and alien vegetation infestation | status | | <i>to which the impact can cause irreplaceable loss</i> | <i>reversibility)</i> | | | or -) | and class |
|--|----------------------------|--|---|-----------------------|--------------|---|-------|-------------------|
| | Without mitigation | 2 | Medium (2) | 2 | Medium (6) | 3 | 3 (-) | 1.4 (Class 2) |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 2 | 2 (-) | 0.53 (Class 1) |
| | Mitigation measures | <p>Specialist mitigation</p> <ul style="list-style-type: none"> - IAP species be controlled by implementing an Invasive Alien Plant Management Programme in compliance of section 75 of the Act as stated above if granted authorisation. The IAP Management Programme must implement the following monitoring framework must be implemented to ensure that IAPs are continually monitored, and progress pertaining to their control is recorded. <p>General mitigation</p> <ul style="list-style-type: none"> - Disturbed areas should be rehabilitated and monitored to ensure successful reestablishment of natural/desirable vegetation. - It is to be noted that no protected tree or plant, as well as other indigenous vegetation, is to be removed without prior permission from the authorities. - Disturbed areas should be rehabilitated and monitored to ensure successful re-establishment of natural/desirable vegetation. - No open fires are permitted under any tree. - Utilise the method of mechanical de-bushing rather than chemical. - Wherever possible, store removed indigenous vegetation in a nursery for replanting during rehabilitation. - All sites disturbed by construction activities must be monitored for colonisation of exotics or invasive plants and control these as they emerge. - All sites disturbed by construction activities must be monitored for colonisation of exotics or invasive plants and control these they emerge. - Follow manufacturer’s instructions when using chemical methods, especially in terms of quantities, time of application etc. - Ensure that only properly trained people handle and make use of chemicals. - Dispose of the eradicated plant material at an approved solid waste disposal site. - Immediate re-vegetation of stripped areas and the removal of alien plant species by regular weeding must take place. This | | | | | | |

| | | | | | | | | |
|---|---|---|---|-------------------------------------|---------------------|-------------|----------------------------------|-----------------------|
| | | <p>significantly reduces the amount of time and money that must be spent on alien plant management during rehabilitation.</p> <ul style="list-style-type: none"> - Care must be taken to avoid the introduction of alien plant species onto the site and surrounding areas. Particular attention must be paid to imported material. - Topsoil that is suspected to be contaminated with the seed of alien vegetation should not be used. Alternatively, the soil is to be sprayed with specified herbicides. - All sites disturbed by construction activities must be monitored for colonisation of exotics or invasive plants and control these as they emerge. | | | | | | |
| No-go alternative | <p>This is a construction –related activity and should the development not occur then these impacts will not occur: should the development not be approved then the ffg will also <u>not</u> be possible:</p> <ul style="list-style-type: none"> ✓ Sewage reticulation to ext 3 and 7 will not be possible ✓ There will be backlogs in provision of basic water and sanitation services in the areas. ✓ Provision of proper, adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3, will not be a reality. ✓ Health and environmental pollution issues could arise as the use of septic/conservancy tanks will still be in operation. ✓ Local employment during the construction of the works will not materialise. ✓ Employment of women and Mentoring of subcontractors will not be possible | | | | | | | |
| <p>PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME: PREFERRED SEWER RETICULATION : PROJECT AREA 2, 3, 4</p> <p>BIOPHYSICAL IMPACTS</p> | | | | | | | | |
| Impacts: | Mitigation status | Extent(rating) | Intensity (rating)- Degree to which the impact can cause irreplaceable loss | Duration (rating) (- reversibility) | Consequence(rating) | probability | Significance(status i.e. + or -) | Risk rating and class |
| - Stormwater | Without | 2 | Medium (2) | 3 | medium (7) | 3 | 3 (-) | 3.2 |

| | | | | | | | | |
|--|----------------------------|--|---------|---|--------------|---|-------|------------------|
| | mitigation | | | | | | | (Class 3) |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 2 | 1 (-) | 0.4 (Class 1) |
| | Mitigation measures | <p>Specialist mitigation</p> <ul style="list-style-type: none"> - During construction, the Contractor shall take necessary measures, to the approval of the Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas. - Surface stormwater shall, where possible, not be allowed to be concentrated and flow down cut or fill slopes or along the pipeline route without erosion protection measures being place. Where stormwater is likely to be channelled along pipeline trenches, the length of open trenches shall be reduced to minimise the quantity of stormwater concentrated in such a manner. The Contractor shall provide a suitable escape route for any stormwater collecting in the trench. - During pipe laying operations the bedding and selected fill shall be protected from stormwater damage through the placement of temporary across trench bolsters (sandbags) at suitable intervals to prevent scouring of the bedding / fill material. - Where material excavated from trenches is likely to create high concentrations of stormwater, suitable escape routes shall be provided to allow stormwater to be channelled into the nearest natural stormwater flow path. - Where a pipeline crosses a drainage way, the drainage path shall not be fully obstructed during construction, i.e. a suitable flow path for stormwater shall be provided during the construction process. At no point shall drainage ways be allowed to drain into open trenches. - At no point shall stormwater from the construction site be allowed to drain into private residential or commercial properties. All stormwater shall be directed to the nearest suitable drainage way, be it the municipal stormwater system, other natural water course or wetlands. - Overflow and/or scour channels must be lined with stone pitching along their length and at their points of discharge to prevent soil erosion These channels shall not discharge straight down the contours but shall be aligned at such an angle to the contours that they have the least possible gradient - Stormwater deflection berms or stone pitched channels will be constructed at regular intervals diagonally across the pipeline servitude on slopes, as directed by the Engineer or Environmental Officer. | | | | | | |

| | | |
|--|--|--|
| | | <ul style="list-style-type: none"> - Where pipelines cross a steep embankment, a stormwater diversion berm will be constructed at the top of the embankment to divert water away from the pipeline. The existing land profile will be reconstructed, and the embankment replaced with topsoil and seeded as per specifications. - Where a pipeline crosses minor drainage ways or erosion gulley's, a gabion basket or reno-mattress will be placed upstream from the crossing at the same level as the pipeline. Stone will be packed continuously from the gabion across the pipeline to a point where erosion will no longer occur. - Where moderate to steep sloping land causes a water runoff erosion hazard, stone contour berms will be constructed at approximately 15 m intervals along the length of the pipeline trench to divert water away from the pipeline trench. - Where a high erosion hazard exists due to fluvial erosion at the bottom of stream channels or dongas, the pipeline shall be encased in concrete to a level not exceeding the natural bed level and over a distance of at least twice the width of the pipeline trench. - Temporary cut off drains and berms will be required to capture stormwater and promote infiltration. For high ground water conditions, sub-soil drainage will be designed for stormwater / ground water, using Gabions and reno mattresses to reduce flow velocity and avoid soil erosion. |
|--|--|--|

**PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME:
PREFERRED SEWER RETICULATION : PROJECT AREA 2, 3, 4**

SOCIOECONOMIC IMPACTS

| Impacts: | Mitigation status | Extent(rating) | Intensity (rating)- <i>Degree to which the impact can cause irreplaceable loss</i> | Duration (rating) <i>(- reversibility)</i> | Consequence(rating) | probability | Significance(status i.e. + or -) | Risk rating and class |
|--|-------------------|----------------|---|---|---------------------|-------------|----------------------------------|-----------------------|
| Dust Creation due to excavation activity and trenching as well as activity of construction | Without | 3 | Medium (2) | 3 | Medium(6) | 3 | 3(-) | 1.8 |

| | | | | | | | | |
|---|----------------------------|--|------------|---|--------------|---|-------|----------------|
| vehicles | mitigation | | | | | | | Class 2 |
| Disruption/alteration of species activities (breeding, migration, feeding) due to noise, vibration and dust | With mitigation | 2 | Low (1) | 2 | Low (5) | 2 | 2 (-) | 0.8 Class 1 |
| | Mitigation measures | <p>General mitigation</p> <ul style="list-style-type: none"> - Dust amelioration methods need to be considered and implemented, where significant quantities of dust are anticipated, methods may be wetting of surfaces or wind screening and residents may need to be notified. - The stockpiles may be protected via use of a covering, such as Hessian mats. - Construction vehicles traveling along the access road must adhere to speed limits to avoid creating excessive dust, especially during dry and windy conditions. - Where dust nuisance is unavoidable, screening to be provided. - Stripping of vegetation and existing material will be limited to necessary working areas. | | | | | | |
| | | | | | | | | |
| Impacts: Generating of Noise from construction activity | Without mitigation | 2 | Medium (2) | 2 | Low (6) | 2 | 2 (-) | 0.8 Class 1 |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 1 | 1 (-) | 0.2 Class 1 |
| | Mitigation measures | <p>General mitigation</p> <ul style="list-style-type: none"> - Restriction of noisy activity as per Project Specifications or General Conditions of Contract, and notification of residents of the activities. - Equipping construction vehicles and machinery with silencers and ensuring their maintenance and that the construction vehicles adhere to speed limits at all times. - Make use of noise mufflers as required during removal of concreted surfaces. In any instance - Noise levels are not to exceed SABS 0130 specified noise thresholds. - Construction vehicles to adhere to speed limits, fitted with silencers if need be. - Equipment that is fitted with noise reduction facilities (e.g. Side flaps, silencers etc.) will be used as per operating instructions and maintained properly during site operations. | | | | | | |

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| <p>Impacts:</p> <p>Anticipated influx of migrant labour</p> | | <ul style="list-style-type: none"> - There will be a significant requirement for unskilled labor from the community for the excavation and backfilling of pipeline trenches. - It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors. - It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation. - This project supports the employment of women. The labour force will consist of approximately 100 local labour. |
| <p>No-go alternative</p> | <p>This is a construction –related activity and should the development not occur then these impacts will not occur: should the development not be approved then the ffg will also <u>not</u> be possible:</p> <ul style="list-style-type: none"> ✓ Sewage reticulation to ext 3 and 7 will not be possible ✓ There will be backlogs in provision of basic water and sanitation services in the areas. ✓ Provision of proper, adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3, will not be a reality. ✓ Health and environmental pollution issues could arise as the use of septic/conservancy tanks will still be in operation. ✓ Local employment during the construction of the works will not materialise. ✓ Employment of women and Mentoring of subcontractors will not be possible | |

OPERATIONAL PHASE

**PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME:
PREFERRED SEWER RETICULATION : PROJECT AREA 2, 3, 4**

BIOPHYSICAL IMPACTS

| Impacts: IAP encroachment into disturbed areas arising from construction activity Loss of surrounding sensitive habitats if development structures are located within them | Mitigation status | Extent(rating) | Intensity (rating)- <i>Degree to which the impact can cause irreplaceable loss</i> | Duration (rating) (- reversibility) | Consequence(rating) | probability | Significance(status i.e. + or -) | Risk rating and class |
|---|----------------------------|--|--|-------------------------------------|---------------------|-------------|----------------------------------|-----------------------|
| Emigration of fauna due to altered habitat conditions | Without mitigation | 3 | high (3) | 5 | high (11) | 4 | 5 (-) | 3.4 (Class 4) |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 2 | 1 (-) | 0.4 (Class 1) |
| | Mitigation measures | Specialist mitigation <ul style="list-style-type: none"> - Sewage leakages that may occur during the operational phase must be rectified as quickly as possible. Impacts to the receiving environment must be ascertained, especially within the context of aquatic ecosystems. An aquatic specialist must be contracted to determine the initial impact and the monitoring requirements to monitor recovery. - | | | | | | |

BIOPHYSICAL IMPACTS

**PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME:
PREFERRED SEWER RETICULATION : PROJECT AREA 2, 3, 4**

| Impacts: Increased erosion due to potentially leaking pipeline | Mitigation status | Extent(rating) | Intensity (rating)- <i>Degree to which the impact can cause irreplaceable loss</i> | Duration (rating) (- <i>reversibility</i>) | Consequence(rating) | probability | Significance(status i.e. + or -) | Risk rating and class |
|---|----------------------------|---|---|--|---------------------|-------------|----------------------------------|-----------------------|
| | Without mitigation | 2 | Medium (2) | 2 | medium (6) | 3 | 2 | 1.2 Class 2 |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 2 | 1 | 0.4 Class 1 |
| | Mitigation measures | <p>General mitigation</p> <ul style="list-style-type: none"> - <p>Specialist mitigation</p> <ul style="list-style-type: none"> - Sewage leakages that may occur during the operational phase must be rectified as quickly as possible. Impacts to the receiving environment must be ascertained, especially within the context of aquatic ecosystems. An aquatic specialist must be contracted to determine the initial impact and the monitoring requirements to monitor recovery. - Any leakages that occur during the operational phase must be repaired as rapidly as possible. Areas that have been eroded due to | | | | | | |

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| | | spilling sewage must be rehabilitated using indigenous pioneer flora species. A biodiversity specialist must be contacted for a list of appropriate species when required. | | | | | | |
| Weed control | Mitigation status | Extent(rating) | Intensity (rating)- <i>Degree to which the impact can cause irreplaceable loss</i> | Duration (rating) (- <i>reversibility</i>) | Consequence(rating) | probability | Significance(status i.e. + or -) | Risk rating and class |
| | Without mitigation | 3 | Medium (2) | 2 | medium(7) | 3 | 2 | 1.4 Class 2 |
| | With mitigation | 2 | Low (1) | 1 | Very Low (4) | 2 | 1 | 0.53 Class 1 |
| | Mitigation measures | <p>General mitigation</p> <ul style="list-style-type: none"> - Disturbed areas should be rehabilitated and monitored to ensure successful reestablishment of natural/desirable vegetation. - Control exotics and invasive plants to be eradicated. Control involves killing the plants present, killing the seedlings which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion. - All sites disturbed by construction activities must be monitored for colonisation of exotics or invasive plants and control these as they emerge. - Follow manufacturer's instructions when using chemical methods, especially in terms of quantities, time of application etc. - Ensure that only properly trained people handle and make use of chemicals. - Dispose of the eradicated plant material at an approved solid waste disposal site. - Immediate re-vegetation of stripped areas and the removal of alien plant species by regular weeding must take place. This significantly reduces the amount of time and money that must be spent on alien plant management during rehabilitation. - Care must be taken to avoid the introduction of alien plant species onto the site and surrounding areas. Particular attention must be paid | | | | | | |

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| | | <p>to imported material.</p> <p>Specialist mitigation</p> <ul style="list-style-type: none"> - Invasive Alien Plant species must be controlled by implementation of an IAP Control Programme - Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species. Topsoil must also be utilised, and any disturbed area must be re-vegetated with plant species which naturally occur within the area. - It is recommended that all invasive species located within wetlands (or within 10 m from wetlands) affected by the proposed activities be controlled/removed. This is to improve the conditions of the wetland as well as to, most importantly, decrease competition between the revegetated <i>Typha capensis/Cyperus spp.</i> and alien invasive species |
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| Impacts: | Mitigation status | Extent(rating) | Intensity (rating)- <i>Degree to which the impact can cause irreplaceable loss</i> | Duration (rating) (- reversibility) | Consequence(rating) | probability | Significance(status i.e. + or -) | Risk rating and class |
|-----------------|----------------------------|---|---|-------------------------------------|---------------------|-------------|----------------------------------|-----------------------|
| Erosion control | Without mitigation | 2 | Medium (2) | 2 | medium (6) | 3 | 2 | 1.2 Class 2 |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 2 | 1 | 0.4 Class 1 |
| | Mitigation measures | <p>Specialist mitigation</p> <ul style="list-style-type: none"> - Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species. Topsoil must also be utilised, and any disturbed area must be | | | | | | |

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| | | <p>re-vegetated with plant species which naturally occur within the area.</p> <p>General mitigation</p> <ul style="list-style-type: none"> - Topsoil removed must be placed carefully aside and must be used for rehabilitation purposes. - Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and Work Areas. - All natural trees, shrubbery and grass species should be retained wherever possible. - Do not permit vehicular or pedestrian access into natural areas beyond the demarcated boundary/buffer of the construction area. - Utilise only light equipment for access and deliveries into areas of unstable soils and in areas where erosion is evident. - Do not allow erosion to develop on a large scale before effecting repairs. When in doubt. - Repair all erosion damage as soon as possible and in any case not later than six months before the termination of the Maintenance Period to allow for sufficient rehabilitation growth. - Excavations should - be undertaken carefully incorporating appropriate drainage. - For significant trees trenching must be 3m away from the stem. - Excavate and backfill trenches on a progressive basis. - Ensure that no trench longer than 1000m is exposed at any one time. - As far as possible, excavations should not be allowed to stand for longer than 2 days where at all possible. - Programme excavations to take place once the required materials are on site. This facilitates the immediate laying of services and / or construction of subsurface infrastructure and minimises open trench time. - Excavation activities must be limited to areas of immediate work to prevent soil erosion. | | | | | | |
| Impacts: | | | | | | | | |
| Rehabilitation | Mitigation status | Extent(rating) | Intensity (rating)- <i>Degree to which the impact can cause irreplaceable</i> | Duration (rating) <i>(- reversibility)</i> | Consequence(rating) | probability | Significance(status i.e. + or -) | Risk rating and class |

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| | | | <i>loss</i> | | | | | |
| Without mitigation | 3 | Medium (2) | 2 | Medium(7) | 3 | 2 | 1.6 Class 2 | |
| With mitigation | 2 | Low (1) | 1 | Very Low (4) | 2 | 1 | 0.53 Class 1 | |
| Mitigation measures | <p>Specialist mitigation</p> <ul style="list-style-type: none"> – Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species. Topsoil must also be utilised, and any disturbed area must be re-vegetated with plant species which naturally occur within the area. – It is recommended that all invasive species located within wetlands (or within 10 m from wetlands) affected by the proposed activities be controlled/removed. This is to improve the conditions of the wetland as well as to, most importantly, decrease competition between the revegetated <i>Typha capensis/Cyperus spp.</i> and alien invasive species <p>General mitigation</p> <ul style="list-style-type: none"> – Ensure that the surrounding natural environment is free from leftover material, etc., and that all waste is removed completely. – Removal of all pollution containment structures. – Ensure that any indigenous vegetation removed has been replanted or that areas have been re-grassed. – Any disturbance that has taken place around the footprint of the installation must be rehabilitated. – Exposed land must be rehabilitated immediately after construction is complete. – Disturbed soil around crossings and diversions must be stabilised immediately after construction. – Top soiling must be carried out prior to the rainy season and or to any expected wet weather conditions. – No vehicles must be allowed access onto top soiled areas. – Areas where soil has been compacted must be ripped and landscaped if necessary to approximate a natural gradient. – After topsoil placement is complete, cleared and stockpiled vegetation must be spread over the top soiled area. – Monitoring should ensure successful re-establishment of natural/desirable vegetation. – Rehabilitation and long term monitoring to ensure re-establishment of natural vegetation, and ongoing removal of alien vegetation and weeds. – Ensure that all surfaces are restored to a condition no worse that it was prior to construction/upgrade of the pipeline. | | | | | | | |
| No-go alternative | ✓ <i>Youth involvement in drugs, alcohol, etc. due to them not having a means of recreation i.e. sportsground.</i> | | | | | | | |

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| | <ul style="list-style-type: none">✓ <i>Local employment during the construction of the works will not materialize.</i>✓ <i>Socio-economic gains will be forgone.</i> |
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4. **Cumulative Impacts:**

The anticipated impacts resulting from the construction of the proposed project could potentially result in cumulative negative effects by considering the following:

Alien invasive plants

There is presently some alien infestation within the residential areas. There could result increased levels of exotic plant invasion in and around the site, as a consequence of disturbance. It is recommended that all invasive species located within wetlands (or within 10 m from wetlands) affected by the proposed activities be controlled/removed. This is to improve the conditions of the wetland as well as to, most importantly, decrease competition between the revegetated *Typha capensis*/*Cyperus* spp. and alien invasive species.

Stormwater management

The scope of works entails the construction of internal sewer reticulation and all associated works. It must be noted that the infrastructure will be an underground service, with only manholes being exposed.

- During construction, the Contractor shall take necessary measures, to the approval of the Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas
- At no point shall stormwater from the construction site be allowed to drain into private residential or commercial properties
- Temporary cut off drains and berms will be required to capture stormwater and promote infiltration

- **Should the mitigation as per the EMPR be implemented then the significance of these impacts will be low.**
- Adherence to and application of recommendations as per terrestrial biodiversity/wetland reports, rehabilitation plan Geotechnical Report and stormwater management reports.

- **SPECIALIST REPORTS:** Table below indicates a summary of findings and impact management measures as per the specialist rep/s (complying to Appendix 6 of the EIA Regulations 2014) and how the findings/recommendations were included in final report.

TABLE 13: specialist reports: summary of findings

| Specialist report | Summary of findings | Impact management measures | How findings/recommendations have been included in FINAL rep |
|--|---|---|---|
| <p>Margate Extension 3 and 7 Sewerage Infrastructure Expansion - Biodiversity Impact Assessment</p> | <ul style="list-style-type: none"> - Degradation, destruction and fragmentation of very surrounding sensitive habitats, if construction work or waste material is allowed to penetrate these habitats - Disruption/alteration of species activities (breeding, migration, feeding) due to noise, vibration and dust - Direct mortality of fauna - Spilling of hazardous chemicals into the receiving environment and penetrating into sensitive habitats - IAP encroachment into disturbed areas arising from construction activity - Loss of surrounding sensitive habitats if | <ul style="list-style-type: none"> - The areas to be developed must be specifically demarcated to prevent movement into surrounding environments, especially 'High' SEI habitats. Only areas identified as possessing a low sensitivity must be impacted upon. If absolutely necessary, infrastructure in 'High' SEI areas must be limited to the existing road network or immediately adjacent to the road. - Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should under no circumstances be fragmented or disturbed further. Clearing of vegetation should be minimized | <p>The findings have been included in this DRAFT BAR as per the impact assessment where applicable.</p> |

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| | <p>development structures are located within them</p> <ul style="list-style-type: none"> - Emigration of fauna due to altered habitat conditions - Increased erosion due to potentially leaking pipeline | <p>and avoided where possible.</p> <ul style="list-style-type: none"> - Where possible, existing access routes and walking paths must be made use of, and the development of new routes limited. - All laydown, chemical toilets etc. should be restricted to low sensitivity areas. No storage of vehicles or equipment will be allowed outside of the designated project area - Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species. Topsoil must also be utilised, and any disturbed area must be re-vegetated with plant species which naturally occur within the area - A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be | |
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| | | <p>complete and available on site. Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use. No servicing of equipment on site unless necessary. All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers. Appropriately</p> <ul style="list-style-type: none"> - contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them leaking and entering the environment. - Any topsoil that is removed during construction must be appropriately removed and stored according to the national and provincial guidelines. This includes on-going maintenance of such topsoil piles so that they can be utilised during decommissioning phases and re-vegetation. All removed soil and material must not be stockpiled within sensitive habitats and buffers delineated as part of the | |
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| | | <p>Wetland Impact Assessment. Stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds</p> <ul style="list-style-type: none"> - A fire management plan needs to be compiled and implemented to restrict the impact fire surrounding areas. This is especially pertaining to stochastic events such as discarding of lit cigarette butts. - The areas to be developed must be specifically demarcated to prevent movement of staff or any individual into surrounding areas. Signs must be put up to enforce this. - No construction is to occur at night to avoid all possible disturbances to amphibian species and nocturnal mammals - No trapping, killing, or poisoning of any wildlife is to be allowed. Signs must be put up to enforce this. - The duration of the construction should be minimized to as short term as possible, to reduce the period of disturbance on fauna. | |
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| <p>Wetland Baseline and Impact Assessment for the Margate Sewer Expansion</p> | <ul style="list-style-type: none"> - Clearing of vegetation to facilitate the sewer pipeline installation - Stripping and stockpiling topsoil - Operation of heavy machinery and equipment in close proximity to the watercourse - Installation of pipelines - Excavations - Ablution facilities - Stripping and stockpiling of soil - Domestic and industrial waste - Storage of chemicals, mixes and fuel - Maintenance of pipelines - Alteration of sub-surface flows | <ul style="list-style-type: none"> - The contractors used for the construction should have spill kits available prior to construction to ensure that any fuel, oil or hazardous substance spills are cleaned-up and discarded correctly; - All construction activities must be restricted to the development footprint area. This includes laydown and storage areas, ablutions, offices etc.; - During construction activities, all rubble generated must be removed from the site; - Construction vehicles and machinery must make use of existing access routes; - All chemicals and toxicants to be used for the construction must be stored in a bunded area; - All machinery and equipment should be inspected regularly for faults and possible leaks, these should be serviced off-site; | <ul style="list-style-type: none"> - The findings have been included in this DRAFT BAR as per the impact assessment where applicable. |
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| | | <ul style="list-style-type: none">- All contractors and employees should undergo induction which is to include a component of environmental awareness. The induction is to include aspects such as the need to avoid littering, the reporting and cleaning of spills and leaks and general good “housekeeping”;- Adequate sanitary facilities and ablutions on the servitude must be provided for all personnel throughout the project area. Use of these facilities must be enforced (these facilities must be kept clean so that they are a desired alternative to the surrounding vegetation);- All removed soil and material stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds;- Any exposed earth should be rehabilitated promptly by planting suitable vegetation (vigorous indigenous grasses) to protect the exposed soil; | |
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| | | <ul style="list-style-type: none"> - No dumping of construction material on site may take place; and - All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be support <p>Stripping and Stockpiling Topsoil</p> <ul style="list-style-type: none"> - The first 300 mm of soil must be stockpiled separate from the soil excavated deeper than 300 mm; and - The proposed pipeline system must be divided up into 100 m intervals. Each interval's soil must be stockpiled and filled back up (in the correct order) to avoid long periods of stockpiling. <p>Operation of Heavy Machinery</p> <ul style="list-style-type: none"> - No heavy machinery must be allowed within the delineated wetland. All excavations must be carried out via manual labour instead of heavy machinery/vehicles; and - Lighter vehicles (small trucks and other vehicles) required for | |
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| | | <p>the proposed activities should only be allowed to use existing roads (including dirt roads).</p> | |
| <p>Report to Dartingo Consulting Engineers (Pty) Ltd on the Results of a Geotechnical Investigation for the Proposed Gravity Sewer Mains in Margate Extension 3 & 7, Ugu District Municipality, Kwa-Zulu Natal: Geosure Pty, Ltd, April 2022.04.07</p> | <ul style="list-style-type: none"> - Based on the results of the fieldwork undertaken during this investigation, it is considered that this site is generally stable and suitable for development, provided that the recommendations given in this report are adhered to. - No signs of instability were observed during the fieldwork. Nonetheless, the geotechnical professional should be engaged during the earthworks phase to ensure that there are no unfavourable conditions exposed during this phase that could lead to instability | <ul style="list-style-type: none"> - The observations on site confirmed the above. The site was overlain by a mantle of either fill or colluvial soils overlying residual soils that graded with depth into weathered sandstone rock. - Groundwater seepage was encountered in several inspection pits. It is considered that a shallow perched or intermittent groundwater condition may develop during and after periods of rainfall. - Numerous drainage courses were observed on site and groundwater seepage is likely to be encountered in the vicinity of these. - Based on the results of the fieldwork undertaken during this investigation, it is considered that this site is generally stable and suitable for development, provided that the recommendations given in this report are adhered to. - The trenchability assessment of | <p>The findings have been included in this DRAFT BAR as per the impact assessment where applicable.</p> |

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| | | <p>the soils and rock material carried out has been inferred from the exposure profiles, inspection pits and DCP tests carried out.</p> <ul style="list-style-type: none">- Exposure profiling confirmed the presence of predominantly very soft to soft sandstone rock across Project Areas 1, 2 and 4 within the proposed invert levels.- Based on the results of the fieldwork, soft and intermediate excavation classifications in terms of SANS 1200 are anticipated. Nonetheless, contingencies for hard excavation should be allowed for.- It is considered that trenches excavated in thick sandy fill and colluvial (>1,0m) soils will require lateral support, as will trenches excavated in areas with groundwater seepage.- Temporary batter slopes during construction are the contractor's responsibility- Trenches deeper than 1.5m should be shored, particularly if left open indefinitely and if steeper gradients than that given above are required. | |
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| | | <ul style="list-style-type: none"> - Regular inspections of the trenches should be carried out by Geosure in order to detect potentially unstable sidewall conditions. - The following conclusion can be made regarding the suitability of the in-situ materials for use in the construction of the bedding layers of the pipeline: <ul style="list-style-type: none"> a. <i>None of the materials is expected to meet the grading requirements for “Selected Granular Material”. Bedding material meeting these requirements would need to be imported to the site.</i> b. <i>The sandy colluvial soils, residual soils and highly weathered sandstone bedrock will be suitable for “Selected Fill” purposes.</i> c. <i>The clayey residual sandstone and dolerite soils will not meet the “Selected Fill” requirements as they will generally have a plasticity index in excess of 6. The materials, however, will meet the general backfill requirements.</i> - Areas underlain by sandy fill, | |
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| <p>MARGATE SANITATION: EXT. 3 & 7 SEWER RETICULATION STORM WATER MANAGEMENT: Dartingo Consulting Engineers</p> | <p>The scope of works entails the construction of internal sewer reticulation and all associated works. It must be noted that the infrastructure will be an underground service, with only manholes being exposed</p> <p>Pre-construction-Stormwater flows on natural ground, infiltrating the soil as it makes its way to a natural watercourse / wetland or a piped storm water network.</p> <p>Construction-During construction, the Contractor shall take necessary measures, to the approval of the Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas.</p> <p>Post-Construction: Existing ground will be re-instated to its natural / existing or best suited grade to allow the stormwater to flow naturally as it was prior to construction. Stormwater will flow towards the natural water course and/or infiltrate the ground.</p> | <p>colluvial residual soils are generally extremely conducive to erosion. The pipe trench line can also become a route for continued erosive activity, and with time could develop into a donga feature with resultant failure of the proposed pipeline.</p> <ul style="list-style-type: none"> - During construction, the Contractor shall take necessary measures, to the approval of the Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas. - Surface stormwater shall, where possible, not be allowed to be concentrated and flow down cut or fill slopes or along the pipeline route without erosion protection measures being place. Where stormwater is likely to be channelled along pipeline trenches, the length of open trenches shall be reduced to minimise the quantity of | |
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| | | <p>stormwater concentrated in such a manner. The Contractor shall provide a suitable escape route for any stormwater collecting in the trench.</p> <ul style="list-style-type: none">- During pipe laying operations the bedding and selected fill shall be protected from stormwater damage through the placement of temporary across trench bolsters (sandbags) at suitable intervals to prevent scouring of the bedding / fill material.- Where material excavated from trenches is likely to create high concentrations of stormwater, suitable escape routes shall be provided to allow stormwater to be channelled into the nearest natural stormwater flow path.- Where a pipeline crosses a drainage way, the drainage path shall not be fully obstructed during construction, i.e. a suitable flow path for stormwater shall be provided during the construction process. At no point shall drainage ways be allowed to drain into open trenches. | |
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| | | <ul style="list-style-type: none">- At no point shall stormwater from the construction site be allowed to drain into private residential or commercial properties. All stormwater shall be directed to the nearest suitable drainage way, be it the municipal stormwater system, other natural water course or wetlands. These channels shall not discharge straight down the contours but shall be aligned at such an angle to the contours that they have the least possible gradient.- Stormwater deflection berms or stone pitched channels will be constructed at regular intervals diagonally across the pipeline servitude on slopes, as directed by the Engineer or Environmental Officer.- Where pipelines cross a steep embankment, a stormwater diversion berm will be constructed at the top of the embankment to divert water away from the pipeline. The existing land profile will be reconstructed, and the | |
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| | | <p>embankment replaced with topsoil and seeded as per specifications.</p> <ul style="list-style-type: none">- Where a pipeline crosses minor drainage ways or erosion gulley's, a gabion basket or reno-mattress will be placed upstream from the crossing at the same level as the pipeline. Stone will be packed continuously from the gabion across the pipeline to a point where erosion will no longer occur.- Where moderate to steep sloping land causes a water runoff erosion hazard, stone contour berms will be constructed at approximately 15 m intervals along the length of the pipeline trench to divert water away from the pipeline trench.- Where a high erosion hazard exists due to fluvial erosion at the bottom of stream channels or dongas, the pipeline shall be encased in concrete to a level not exceeding the natural bed | |
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| | | <p>level and over a distance of at least twice the width of the pipeline trench.</p> <ul style="list-style-type: none">- Temporary cut off drains and berms will be required to capture stormwater and promote infiltration. For high ground water conditions, sub-soil drainage will be designed for stormwater / ground water, using Gabions and reno mattresses to reduce flow velocity and avoid soil erosion. | |
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| <p>WETLAND REHABILITATION PLAN FOR THE MARGATE SEWER EXPANSION (The Biodiversity Company, April 2022)</p> | <p>Regular monitoring and maintenance (such as removing AIP/weeds and encroachment) are required for successful revegetation/rehabilitation projects.</p> | <ul style="list-style-type: none"> - Backfill the excavated area with topsoil - Restore Vegetation Cover - Ripping all Compacted Areas - Revegetate Degraded Areas - Remove all Invasive Plant Species | <p>The findings have been included in this DRAFT BAR as per the impact assessment where applicable.</p> |
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5. Environmental Impact Statement

- ❖ Taking the assessment of potential impacts into account, an environmental impact statement has been provided that summarises the impact that the proposed activity and its alternatives, may have on the receiving socio-economic and biophysical environment, after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.
- ❖ Positive and negative impacts and risks of the proposed activity and alternatives have also been taken into consideration and included where applicable.
- ❖ Impact management measures from the specialist reports have also been included, where applicable.
- ❖ Map has been included which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers.

PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME: PREFERRED SEWER RETICULATION: PROJECT AREA 2, 3, 4

In line with the National Environmental Management Act (No. 107 of 1998), the development must be socially, economically and environmentally sustainable with the implications that:

- Pollution and degradation of the receiving environment are avoided.
- Waste is avoided/minimised and re-used or re-cycled where possible.
- Hazardous substances are handled and installed with extreme care and caution.
- Only the utilisation of indigenous plant species in the landscaping and rehabilitation of site be permitted.
- Environmental Negligence by construction staff is avoided wherever possible.
- Construction vehicles and machinery are in good working order meeting manufactures specifications for anthropogenic and environmental safety.
- Rehabilitation of all disturbed and buffer areas.

Potential impacts were identified by professional judgement, project information, experience of similar projects, a review of available literature, site visits and consultation with Specialists Engineers, relevant authorities and the registered IAP's. Works of this nature can pose significant impacts on the environment as identified below:

Impacts of significance for the proposed site are as follows:

| PROPOSED CONSTRUCTION OF MARGATE EXTENSION 3&7 SANITATION SCHEME: PREFERRED SEWER RETICULATION : PROJECT AREA 2, 3, 4 | | | | | | | | |
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| BIOPHYSICAL IMPACTS | | | | | | | | |
| Impacts: - Degradation, destruction and fragmentation of very surrounding sensitive habitats(, if construction work / waste material penetrates these habitats - Direct mortality of fauna - Spilling of hazardous chemicals into the receiving environment and penetrating into sensitive habitats | Mitigation status | Extent(rating) | Intensity (rating)- Degree to which the impact can cause irreplaceable loss | Duration (rating) (-reversibility) | Consequence(rating) | probability | Significance(status i.e + or -) | Risk rating and class |
| | Without mitigation | 3 | high (3) | 5 | high (11) | 5 | 5 (-) | 4 |
| | With mitigation | 1 | Low (1) | 1 | Very Low (3) | 1 | 2 (-) | 0.3 |
| | Mitigation measures | Specialist mitigation <ul style="list-style-type: none"> - The areas to be developed must be specifically demarcated to prevent movement into surrounding environments, especially 'High' SEI habitats. Only areas identified as possessing a low sensitivity must be impacted upon. If absolutely necessary, infrastructure in 'High' SEI areas must be limited to the existing road network or immediately adjacent to the road. - Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should under no circumstances be fragmented or disturbed further. Clearing of vegetation should be minimized and avoided where possible. - Where possible, existing access routes and walking paths must be made use of, and the development of new routes limited. - All laydown, chemical toilets etc. should be restricted to low sensitivity areas. No storage of vehicles or equipment will be allowed outside of the designated project area - Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species. Topsoil must also be utilised, and any disturbed area must be re-vegetated with plant species which naturally occur within the area | | | | | | |

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| | | <ul style="list-style-type: none"> - A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use. No servicing of equipment on site unless necessary. All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers. Appropriately - contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them leaking and entering the environment. - Any topsoil that is removed during construction must be appropriately removed and stored according to the national and provincial guidelines. This includes on-going maintenance of such topsoil piles so that they can be utilised during decommissioning phases and re-vegetation. All removed soil and material must not be stockpiled within sensitive habitats and buffers delineated as part of the Wetland Impact Assessment. Stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds - A fire management plan needs to be compiled and implemented to restrict the impact fire surrounding areas. This is especially pertaining to stochastic events such discarding of lit cigarette butts. - The areas to be developed must be specifically demarcated to prevent movement of staff or any individual into surrounding areas. Signs must be put up to enforce this. - No construction is to occur at night to avoid all possible disturbances to amphibian species and nocturnal mammals - No trapping, killing, or poisoning of any wildlife is to be allowed. Signs must be put up to enforce this. - The duration of the construction should be minimized to as short term as possible, to reduce the period of disturbance on fauna. |
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7. The Following is Deemed Significant for Inclusion in EMPr
 (Refer Appendix F):

TABLE 14: ITEMS FOR INCLUSION IN EMPr

| SPECIALIST REPORT TITLE | IMPACT MANAGEMENT OBJECTIVES | IMPACTS TO BE MANAGED | IMPACT MANAGEMENT OUTCOMES/MITIGATION |
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| <p>Margate Extension 3 and 7 Sewerage Infrastructure Expansion - Biodiversity Impact Assessment</p> | <ul style="list-style-type: none"> - Surrounding sensitive habitats - Alteration of species activities - Spillage of hazardous chemicals - IAP encroachment | <ul style="list-style-type: none"> - Degradation, destruction and fragmentation of very surrounding sensitive habitats, if construction work or waste material is allowed to penetrate these habitats - Disruption/alteration of species activities (breeding, migration, feeding) due to noise, vibration and dust - Direct mortality of fauna - Spilling of hazardous chemicals into the receiving environment and penetrating into sensitive habitats - IAP encroachment into disturbed areas arising from construction activity | <ul style="list-style-type: none"> - The areas to be developed must be specifically demarcated to prevent movement into surrounding environments, especially 'High' SEI habitats. Only areas identified as possessing a low sensitivity must be impacted upon. If absolutely necessary, infrastructure in 'High' SEI areas must be limited to the existing road network or immediately adjacent to the road. - Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should under no circumstances be fragmented or disturbed further. Clearing of vegetation should be minimized and avoided where possible. - Where possible, existing access routes and walking paths must be made use of, and the development of new routes limited. |

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| | | | <ul style="list-style-type: none"> - All laydown, chemical toilets etc. should be restricted to low sensitivity areas. No storage of vehicles or equipment will be allowed outside of the designated project area - Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion. This will also reduce the likelihood of encroachment by alien invasive plant species. Topsoil must also be utilised, and any disturbed area must be re-vegetated with plant species which naturally occur within the area - A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. Drip trays or any form of oil absorbent material must be placed |
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| | | | <p>underneath vehicles/machinery and equipment when not in use. No servicing of equipment on site unless necessary. All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers.</p> <p>Appropriately</p> <ul style="list-style-type: none"> - contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them leaking and entering the environment. - Any topsoil that is removed during construction must be appropriately removed and stored according to the national and provincial guidelines. This includes on-going maintenance of such topsoil piles so that they can be utilised during decommissioning phases and re-vegetation. All removed soil and material must not be stockpiled within sensitive habitats and buffers delineated as part of the Wetland Impact Assessment. Stockpiles must be |
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| | | | <p>protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds</p> <ul style="list-style-type: none"> - A fire management plan needs to be complied and implemented to restrict the impact fire surrounding areas. This is especially pertaining to stochastic events such discarding of lit cigarette butts. - The areas to be developed must be specifically demarcated to prevent movement of staff or any individual into surrounding areas. Signs must be put up to enforce this. - No construction is to occur at night to avoid all possible disturbances to amphibian species and nocturnal mammals - No trapping, killing, or poisoning of any wildlife is to be allowed. Signs must be put up to enforce this. - The duration of the construction should be minimized to as short term as possible, to reduce the period of disturbance on fauna. |
| Wetland Baseline and | - Vegetation clearing | - Clearing of vegetation to | - The contractors |

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| <p>Impact Assessment for the Margate Sewer Expansion</p> | <ul style="list-style-type: none"> - Topsoil stripping - Heavy machinery - Pipelines installation, excavations | <p>facilitate the sewer pipeline installation</p> <ul style="list-style-type: none"> - Stripping and stockpiling topsoil - Operation of heavy machinery and equipment in close proximity to the watercourse - Installation of pipelines - Excavations | <p>used for the construction should have spill kits available prior to construction to ensure that any fuel, oil or hazardous substance spills are cleaned-up and discarded correctly;</p> <ul style="list-style-type: none"> - All construction activities must be restricted to the development footprint area. This includes laydown and storage areas, ablutions, offices etc.; - All removed soil and material stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds; - Any exposed earth should be rehabilitated promptly by planting suitable vegetation (vigorous indigenous grasses) to protect the exposed soil; |
| <p>Report to Dartingo Consulting Engineers (Pty) Ltd on the Results of a Geotechnical Investigation for the Proposed Gravity Sewer Mains in</p> | <ul style="list-style-type: none"> - General Stability of the Site - Trenchability Assessment - Trench Stability | <ul style="list-style-type: none"> - Signs of instability, and assessment of Trenchability - Evaluation of materials and pipe bedding, and | <ul style="list-style-type: none"> - It is considered that trenches excavated in thick sandy fill and colluvial (>1,0m) |

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| <p>Margate Extension 3 & 7, Ugu District Municipality, Kwa-Zulu Natal: Geosure Pty, Ltd, April 2022.04.07</p> | <ul style="list-style-type: none"> - Materials Evaluation and Pipe Bedding - Backfill and Erosion Aspects | <p>erosion aspects</p> | <p>soils will require lateral support, as will trenches excavated in areas with groundwater seepage.</p> <ul style="list-style-type: none"> - Temporary batter slopes during construction are the contractor's responsibility - Trenches deeper than 1.5m should be shored, particularly if left open indefinitely and if steeper gradients than that given above are required. - Regular inspections of the trenches should be carried out by Geosure in order to detect potentially unstable sidewall conditions. - The following conclusion can be made regarding the suitability of the in-situ materials for use in the construction of the bedding layers of the pipeline: <ul style="list-style-type: none"> a. <i>None of the materials is expected to meet the grading requirements for "Selected Granular Material". Bedding material meeting these requirements would need to be imported to the site.</i> b. <i>The sandy colluvial soils, residual soils and</i> |
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| | | | <p>highly weathered sandstone bedrock will be suitable for "Selected Fill" purposes.</p> <p>c. The clayey residual sandstone and dolerite soils will not meet the "Selected Fill" requirements as they will generally have a plasticity index in excess of 6. The materials, however, will meet the general backfill requirements.</p> <ul style="list-style-type: none"> - Areas underlain by sandy fill, colluvial residual soils are generally extremely conducive to erosion. The pipe trench line can also become a route for continued erosive activity, and with time could develop into a donga feature with resultant failure of the proposed pipeline. |
| <p>MARGATE SANITATION: EXT. 3 & 7 SEWER RETICULATION STORM WATER MANAGEMENT: Dartingo Consulting Engineers</p> | <ul style="list-style-type: none"> - STORMWATER MANAGEMENT | <ul style="list-style-type: none"> - Cut/fill slopes - Pipeline trenches - Pipe laying - Deflection berms - Steep embankment | <ul style="list-style-type: none"> - During construction, the Contractor shall take necessary measures, to the approval of the Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside |

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| | | | <p>and outside the construction camp and Works areas.</p> <ul style="list-style-type: none"> - Surface stormwater shall, where possible, not be allowed to be concentrated and flow down cut or fill slopes or along the pipeline route without erosion protection measures being place. Where stormwater is likely to be channelled along pipeline trenches, the length of open trenches shall be reduced to minimise the quantity of stormwater concentrated in such a manner. The Contractor shall provide a suitable escape route for any stormwater collecting in the trench. - During pipe laying operations the bedding and selected fill shall be protected from stormwater damage through the placement of temporary across trench bolsters (sandbags) at suitable intervals to prevent scouring of the bedding / fill material. - Where material excavated from |
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| | | | <p>trenches is likely to create high concentrations of stormwater, suitable escape routes shall be provided to allow stormwater to be channelled into the nearest natural stormwater flow path.</p> <ul style="list-style-type: none"> - Where a pipeline crosses a drainage way, the drainage path shall not be fully obstructed during construction, i.e. a suitable flow path for stormwater shall be provided during the construction process. At no point shall drainage ways be allowed to drain into open trenches. - At no point shall stormwater from the construction site be allowed to drain into private residential or commercial properties. All stormwater shall be directed to the nearest suitable drainage way, be it the municipal stormwater system, other natural water course or wetlands. These channels shall not discharge straight down the contours but shall be aligned at such an |
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| | | | <p>angle to the contours that they have the least possible gradient.</p> <ul style="list-style-type: none"> - Stormwater deflection berms or stone pitched channels will be constructed at regular intervals diagonally across the pipeline servitude on slopes, as directed by the Engineer or Environmental Officer. - Where pipelines cross a steep embankment, a stormwater diversion berm will be constructed at the top of the embankment to divert water away from the pipeline. The existing land profile will be reconstructed, and the embankment replaced with topsoil and seeded as per specifications. - Where a pipeline crosses minor drainage ways or erosion gulley's, a gabion basket or reno-mattress will be placed upstream from the crossing at the same level as the pipeline. Stone will be packed continuously from the gabion across the pipeline to a point where |
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| | | | <p>erosion will no longer occur.</p> <ul style="list-style-type: none"> - Where moderate to steep sloping land causes a water runoff erosion hazard, stone contour berms will be constructed at approximately 15 m intervals along the length of the pipeline trench to divert water away from the pipeline trench. - Where a high erosion hazard exists due to fluvial erosion at the bottom of stream channels or dongas, the pipeline shall be encased in concrete to a level not exceeding the natural bed level and over a distance of at least twice the width of the pipeline trench. - Temporary cut off drains and berms will be required to capture stormwater and promote infiltration. For high ground water conditions, sub-soil drainage will be designed for stormwater / ground water, using Gabions and reno mattresses to |
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| | | | reduce flow velocity and avoid soil erosion. |
| Wetland Rehabilitation Plan (The Biodiversity Company, May 2022) | - aim of the rehabilitation plan is to prescribe measures to prevent further deterioration/loss of ecological integrity and functioning of the systems | <ul style="list-style-type: none"> - Allow for the trapping of sediment caused by adjacent deposition - To create diffuse streamflow across the wetland, ensuring prolonged saturation levels; - The assimilation of toxicants, nitrates and phosphates; and - Improve the ability of the systems to support biodiversity - | <ul style="list-style-type: none"> - Backfill the excavated area with topsoil - Restore Vegetation Cover - Ripping all Compacted Areas - Revegetate Degraded Areas - Remove all Invasive Plant Species |

8. The Following should be Included as Conditions of the Environmental Authorisation: (As Identified By EAP/Specialists)

- ✓ The EMPr (final) and conditions thereto must be adhered to;
- ✓ An independent Environmental Control Officer (ECO) must be appointed (frequency to be determined by CA) and all Contractor staff to be inducted on the EMPr requirements prior to commencement of activities; and any new staff to also be inducted.
- ✓ A preconstruction audit as well as 2 post-construction audits should be undertaken
- ✓ A final audit of each site shall be undertaken 14 days prior to closure of site.
- ✓ The findings of the site audit shall be relayed to the ECO who shall correct any issues identified during audit procedure prior to close out. The environmental control officer shall advise the Municipality of compliance by contractor in respect of this rehabilitation programme

9. Description of Assumptions, Uncertainties, Gaps in Knowledge Relating To Assessment and Mitigation Proposed

The basic assessment report and process thus far, followed the legislated process as per the EIA Regulations of 2014(amended 07 April 2017). Inevitably, when undertaking specific scientific specialist studies and reporting's, challenges and limitations will be encountered. For this specific BAR, the following challenges were encountered:

The assessment of impacts and the mitigation thereof was informed by the specialist reports and also based on the EAPS knowledge and experience from working with projects of a similar nature and environmental setting.

GEOTECHNICAL REPORT:

The excavatability class given above is inferred based on the inferred site geology and experience from working with a similar geology elsewhere. It is therefore, quite possible that conditions at variance with those given in this report could be encountered on site. It is therefore important that Geosure be appointed to carry out a detailed geotechnical fieldwork to verify the assumption made in this report.

10. REASONS FOR AUTHORISING OR NOT:

It is advised that the application be assessed thoroughly and holistically, taking into consideration the study area and the fact that the proposed project is a **priority**.

The project, in the EAP's opinion, does NOT pose a detrimental negative impact on the receiving biophysical and socio-economic environments and we are confident that all identified negative impacts can be mitigated effectively with the proper cited mitigation.

It is of the opinion that the preferred layout AND TRIGGERED ACTIVITIES for the PROPOSED PROJECT BE AUTHORISED, AS PER LAYOUT PLAN AND AS PER TRIGGERED ACTIVITIES DETAILED BELOW:

| <i>Legislation</i> | <i>Listed Activity Reference</i> | <i>Description as per Regulation</i> | <i>Relevance/Applicability to this Project</i> |
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| LN1 OF 2014: GNR 327 | 19i | The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from A watercourse. | <p>As per WETLAND REP, wet areas within project areas 2, 3 and 4 more than 5m3 of soil could be excavated.</p> <p>PROJECT AREA 2: (drake rd-erf-153, 170, 171, 172) START: 30°50'35.16"S;; 30°21'13.34"E END: 30°50'35.50"S; 30°21'13.13"E</p> <p>Phillip Rd-Erf 234, 201, 202 START: 30°50'30.70"S; 30°21'14.90"E END: 30°50'30.57"S; 30°21'15.26"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>BOBBY LOCKE –erf 2354 START: 30°50'56.19"S; 30°20'52.60"E END: 30°50'56.02"S; 30°20'53.26"E</p> <p>PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>PROJECT AREA 4: JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> |

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| | | | ALTERNATIVE OPTIONS WILL BE ASSESSED FURTHER. (all the above erf are developed) |
| LN1 OF 2014: GNR 327 | 31 | The decommissioning of existing facilities, structures or infrastructure for— any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014 | The existing conservancy structures will be decommissioned. (The structures will NOT be removed or demolished) |
| Listing Notice 3 of 2014 (GNR 324) | 14(ii)(c)(d)(xi)(aa) | The development of- (xii) infrastructure or structure with a physical footprint of 10 square meters or more. Where such development occurs- (c) if no development setback has been adopted, within 32m's of a watercourse, measured from the edge of a watercourse, (xi) in urban areas- (aa) Areas zoned for use as public open space. | The reticulation will have a footprint of more than 10 square meters and this could be within 32m of the stream/wetland area, within the open space area (within existing developed erf's at Nelson Rd). Alternative options will be investigated. PROJECT AREA 2 Nelson Rd. (ERF-185 TO 201) START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E |
| | 14(ii)(a)(d)(xi)(aa) | The development of- (xii) infrastructure or structure with a physical footprint of 10 square meters or more. Where such development occurs- (a) within a watercourse, (xi) in urban areas- (aa) Areas zoned for use as public open space. | The reticulation will have a footprint of more than 10 square meters and this could be within the wet area, within the open space area Alternative options will be investigated. PROJECT AREA 3: FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E (all the above erf are developed) |
| Listing Notice 3 of 2014 (GNR 324) | 14(ii)(c)(d)(vii) | The development of- Infrastructure or structures with a physical | The reticulation will have a footprint of more than 10 square meters and this may be within 32m of watercourse/wet areas, within CBA areas. Alternative options will |

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| | <p>14(ii)(a)(d)(vii)</p> | <p>footprint of 10 square metres or more; Where such development occurs- if no development setback has been adopted, within 32m's of a watercourse, measured from the edge of a watercourse</p> <ul style="list-style-type: none"> - Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; <p>The development of- Infrastructure or structures with a physical footprint of 10 square metres or more; Where such development occurs- within a watercourse Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the</p> | <p>be investigated. The proposed development intersects with an area categorised as an Irreplaceable CBA</p> <p>PROJECT AREA 2: Nelson Rd. (ERF-185 TO 201) START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E</p> <p>DRAKE RD (drake rd-erf-153, ERF 154 170, 171, 172 AND above ERF: 166, 167, 168, 169, AND ERF: 166, 167, 168, 169) (ERF 201 TO 204, AND ERF 217) START: 30°50'39.59"S; 30°21'20.58"E END: 30°50'39.67"S; 30°21'21.70"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>POUND RD (ERF 70, 3655) START: 30°50'51.62"S; 30°21'37.94"E END: 30°50'52.10"S ; 30°21'37.54"E (all the above erf are developed)</p> <p>PROJECT AREA 3:</p> <p>FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>The reticulation will have a footprint of more than 10 square meters and this may be within a watercourse/wet areas, within CBA areas. Alternative options will be investigated. The proposed development intersects with an area categorised as an Irreplaceable CBA</p> <p>PROJECT AREA 4: JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E (all the above erf are developed)</p> |
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| | | competent authority or in bioregional plans; | |
| Listing Notice 3 of 2014 (GNR 324) | 12(d)(v) | The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; | <p>Some indigenous grasses MAY need to be removed. Alternative options will be investigated</p> <ul style="list-style-type: none"> - "Infrastructure within existing servitudes is preferred and will be opted for, as opposed to encroaching into new areas" <p>PROJECT AREA 2:</p> <p>Nelson Rd. (ERF-185 TO 201) START: 30°50'30.42"S, 30°21'14.71"E END: 30°50'21.31"S, 30°21'0.41"E</p> <p>DRAKE RD-erf-153, 170, 171, 172) START:30°50'35.16"S;; 30°21'13.34"E END: 30°50'35.50"S; 30°21'13.13"E</p> <p>Phillip Rd-Erf 234, 201, 202 START: 30°50'30.70"S; 30°21'14.90"E END: 30°50'30.57"S; 30°21'15.26"E</p> <p>IRENE RD (ERF 2348, 2352, 2374, 2382, 2383, 2384) START: 30°50'53.30"S; 30°20'57.34"E END: 30°50'53.31"S; 30°20'57.65"E</p> <p>BOBBY LOCKE –erf 2354 START: 30°50'56.19"S; 30°20'52.60"E END: 30°50'56.02"S; 30°20'53.26"E</p> <p>PROJECT AREA 3:</p> <p>FLAMBOYANT AVE (ERF 2716, 2717) START: 30°50'42.23"S; 30°21'51.35"E END: 30°50'41.89"S; 30°21'51.89"E</p> <p>PROJECT AREA 4:</p> <p>JASMIN AVE: (ERF 2814, 2815, 2772, 2773, 2774) START: 30°50'55.56"S; 30°21'54.96"E END: 30°50'55.25"S; 30°21'55.54"E</p> <p>PROTEA AVE (ERF 2819, 2820, 2821) START: 30°50'53.14"S; 30°21'55.51"E END: 30°50'53.35"S; 30°21'55.79"E</p> |

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| | | | <p>EVANS RD, (ERF 0217, 0216, 0215, 0214, 0213, 0212, 0211, 0218, 0219, 0220, 0221, 0222) START: 30°50'28.56"S; 30°21'11.52"E END: 30°50'28.67"S; 30°21'11.95"E</p> <p>HOOD RD, (ERF 0174, 0173) START: 30°50'31.74"S; 30°21'08.49"E END: 30°50'32.10"S; 30°21'08.46"E</p> <p>FISHER RD(ERF 0229, 0228, 0227, 0226, 0225, 0224, 0230, 0231, 0232, 0233, 0235, 0175, 0176, 0223) START: 30°50'29.08"S, 30°21'7.17"E END: 30°50'26.15"S, 30°21'8.23"E</p> <p>(all the above erf are developed)</p> |
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❖ **As per Storm Water Management –(Dartingo Consulting Engineers, April 2022)**

During construction, the Contractor shall take necessary measures, to the approval of the Engineer or the Environmental Officer, to ensure that there is no undue stormwater damage and soil erosion resulting from the construction activities inside and outside the construction camp and Works areas.

As per BIODIVERSITY REPORT (‘Biodiversity Impact Assessment Margate Ext 3 and 7 Sewerage Infrastructure: the Biodiversity company, February 2022’)

During the field survey period, two flora SCC and nine protected flora species were recorded, which were limited to the grassland habitat. These species are unlikely to be affected by the proposed development if the grassland habitat is avoided. All infrastructure must be located within low sensitive areas. If absolutely necessary, infrastructure in ‘High’ SEI areas must be limited to the existing road network or immediately adjacent to the road. The main impacts expected from the proposed development are the degradation and further fragmentation of surrounding natural habitats, the direct mortality of fauna species and the emigration of fauna due to disturbance.

THE development is adjacent to the Solomon Gijima Dindikazi Nature Reserve, a nationally designated protected area (Figure 3-3). Potential impacts to the protected area arising from the proposed development during the construction phase include disturbance to fauna due to noise and vibration and vegetation degradation due to dust pollution. Potential operational phase impacts to the protected area include encroachment of Invasive Alien Plants (IAPs) due to increased spread into, and from, disturbed areas. The proposed development is not located within any focus area for the National Protected Area Expansion Strategy (NPAES) nor is there one in the surrounding landscape.

The proposed development intersects with an area categorised as an Irreplaceable CBA Considering the above-mentioned information, the proposed development may result in the degradation of intact and functional habitats. However, the likelihood of this is reduced if the appropriate mitigation measures are implemented. It is the opinion of the specialist that the proposed development is favourable, only if all mitigation measures provided within this report are implemented

As per WETLAND REPORT: (Wetland Baseline and Impact Assessment for the Margate Sewer Expansion the Biodiversity company, February 2022’)

Eight (8) HGM units were identified within the 500 m regulated area, including various hillslope seeps, Unchanneled Valley Bottom (UVB) wetlands as well as Channeled Valley Bottom (CVB) wetlands. Additionally, some dams and artificial impoundments were identified within the 500 m regulated area. The ecosystem service scores range from “Low” to “High”. The average ecosystem services contributing to these scores include flood attenuation, streamflow regulation, sediment trapping, phosphate assimilation, nitrate assimilation, toxicant assimilation, erosion control, and provision of cultivated foods (subsistence farming).

The delineated wetland systems have been scored overall present ecological state ratings ranging from largely natural (class B) to seriously modified (class E). The ecological importance and sensitivity of the delineated wetlands range from “High” to “Low”. A 23 m buffer zone has been calculated and recommended for the proposed sewer pipelines. Owing to the fact that this project will include the installation of sewerage services to accommodate the proposed development, a water use license will be required. Furthermore, it is the specialist’s opinion that the proposed development can proceed on the condition that all of the recommendations made within this report as well as the prescribed mitigation measures be adhered to. The following way forward has been recommended by the specialist;

- In the event the proposed areas are to be developed, these are expected to result in an unacceptable loss of wetland area. This loss would need to be compensated for, and this can comprise the following options:
 - o Compilation of a wetland offset strategy to compensate for the overall loss of wetland area.

As per WETLAND REHABILITATION PLAN (*the Biodiversity company, May 2022*)

Regular monitoring and maintenance (such as removing AIP/weeds and encroachment) are required for successful revegetation/rehabilitation projects.

As per GEOTECHNICAL REPORT: Report to Dartingo Consulting Engineers (Pty) Ltd on the Results of a Geotechnical Investigation for the Proposed Gravity Sewer Mains in Margate Extension 3 & 7, Ugu District Municipality, Kwa-Zulu Natal: Geosure Pty, Ltd, April 2022

Based on the results of the fieldwork undertaken during this investigation, it is considered that this site is generally stable and suitable for development, provided that the recommendations given in this report are adhered to.

No signs of instability were observed during the fieldwork. Nonetheless, the geotechnical professional should be engaged during the earthworks phase to ensure that there are no unfavourable conditions exposed during this phase that could lead to instability.

The Benefits of the Project Are:

- ◆ Reduce backlogs in provision of basic water and sanitation services in Ugu District Municipality.
- ◆ Provision of adequate, reliable and safe sanitation system to Margate Ext 7 & Extension 3.
- ◆ To ensure sanitation, health and hygiene promotion
- ◆ There will be a significant requirement for unskilled labor from the community for the excavation and backfilling of pipeline trenches.
- ◆ It is a requirement in the contract documents that maximum use be made of local labor and sub-contractors.
- ◆ It will also be a requirement that more experienced and established contractors train and mentor labor and emerging subcontractors, during implementation.
- ◆ This project supports the employment of women. The labour force will consist of approximately 100

local labour.

- ◆ To ensure cost recovery for the sanitation service delivery

11. If no OPERATIONAL ASPECTS, PERIOD FOR WHICH EA is required, date on which activity will conclude and post-construction monitoring requirements finalised: **WILL BE INCLUDED AS PER FINAL BAR.**

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12. THE FOLLOWING IS HEREBY an affirmation by the EAP for inclusion in the DRAFT BAR:

- ✓ *the correctness of the information provided in the reports;*
- ✓ *the inclusion of all comments and inputs from stakeholders and REGISTERED I&APs;*
- ✓ *the inclusion of all inputs and recommendations from the specialist reports where relevant; and*
- ✓ *Any information provided by the EAP to registered I&APs and any responses by the EAP to comments or issues of concern noted by registered IAP's.*

13. Details of financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts.

Will be included as per final BAR

14. Any matters required ito S24(4)(a) and (b) of the Act: N/A