

**PRE-APPLICATION BASIC ASSESSMENT REPORT
IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107
OF 1998) AND ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS
AMENDED)**

October 2017

PROJECT TITLE

Mixed-Use Development on Remaining Extent of Erf 513, Napier

REPORT TYPE CATEGORY	REPORT REFERENCE NUMBER	DATE OF REPORT
Pre-Application Basic Assessment Report (if applicable) ¹	16/3/3/6/7/1/E1/10/1004/18	18 June 2018
Draft Basic Assessment Report ²	-	
Final Basic Assessment Report ³ or, if applicable Revised Basic Assessment Report ⁴ (strikethrough what is not applicable)	-	

Notes:

- In terms of Regulation 40(3) potential or registered interested and affected parties, including the Competent Authority, may be provided with an opportunity to comment on the Basic Assessment Report prior to submission of the application but must again be provided an opportunity to comment on such reports once an application has been submitted to the Competent Authority. The Basic Assessment Report released for comment prior to submission of the application is referred to as the "Pre-Application Basic Assessment Report". The Basic Assessment Report made available for comment after submission of the application is referred to as the "Draft Basic Assessment Report". The Basic Assessment Report together with all the comments received on the report which is submitted to the Competent Authority for decision-making is referred to as the "Final Basic Assessment Report".
- In terms of Regulation 19(1)(b) if significant changes have been made or significant new information has been added to the Draft Basic Assessment Report, which changes or information was not contained in the Draft Basic Assessment Report consulted on during the initial public participation process, then a Final Basic Assessment Report will not be submitted, but rather a "Revised Basic Assessment Report", which must be subjected to another public participation process of at least 30 days, must be submitted to the Competent Authority together with all the comments received.

DEPARTMENTAL REFERENCE NUMBER(S)

Pre-application reference number:	16/3/3/6/7/1/E1/10/1004/18
File reference number (EIA):	
NEAS reference number (EIA):	
File reference number (Waste):	
NEAS reference number (Waste):	
File reference number (Air Quality):	
NEAS reference number (Air Quality):	
File reference number (Other):	
NEAS reference number (Other):	

CONTENT AND GENERAL REQUIREMENTS

Note that:

1. The content of the Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), any subsequent Circulars, and guidelines must be taken into account when completing this Basic Assessment Report Form.
2. This Basic Assessment Report is the standard report format which, in terms of Regulation 16(3) of the EIA Regulations, 2014 (as amended) must be used in all instances when preparing a Basic Assessment Report for Basic Assessment applications for an environmental authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the EIA Regulations, 2014 (as amended) and/or a waste management licence in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) ("NEM:WA"), and/or an atmospheric emission licence in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA") when the Western Cape Government: Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority/Licensing Authority.
3. This report form is current as of October 2017. It is the responsibility of the Applicant/ Environmental Assessment Practitioner ("EAP") to ascertain whether subsequent versions of the report form have been released by the Department. Visit the Department's website at <http://www.westerncape.gov.za/eadp> to check for the latest version of this checklist.
4. The required information must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The tables may be expanded where necessary.
5. The use of "not applicable" in the report must be done with circumspection. All applicable sections of this report form must be completed. Where "not applicable" is used, this may result in the refusal of the application.
6. While the different sections of the report form only provide space for provision of information related to one alternative, if more than one feasible and reasonable alternative is considered, the relevant section must be copied and completed for each alternative.
7. Unless protected by law, all information contained in, and attached to this report, will become public information on receipt by the competent authority. If information is not submitted with this report due to such information being protected by law, the applicant and/or EAP must declare such non-disclosure and provide the reasons for believing that the information is protected.
8. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this report must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.
9. This Report must be submitted to the Department and the contact details for doing so are provided below.
10. Where this Department is also identified as the Licencing Authority to decide applications under NEM:WA or NEM:AQA, the submission of the Report must also be made as follows, for-
 - Waste management licence applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (tel: 021-483-2756 and fax: 021-483-4425) at the same postal address as the Cape Town Office.
 - Atmospheric emissions licence applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (tel: 021 483 2798 and fax: 021 483 3254) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS

CAPE TOWN OFFICE		GEORGE REGIONAL OFFICE
REGION 1 (City of Cape Town & West Coast District)	REGION 2 (Cape Winelands District & Overberg District)	REGION 3 (Central Karoo District & Eden District)
Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000 Registry Office 1 st Floor Utilitas Building 1 Dorp Street, Cape Town Queries should be directed to the Directorate: Development Management (Region 1) at: Tel.: (021) 483-5829 Fax: (021) 483-4372	Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 2) Private Bag X 9086 Cape Town, 8000 Registry Office 1 st Floor Utilitas Building 1 Dorp Street, Cape Town Queries should be directed to the Directorate: Development Management (Region 2) at: Tel.: (021) 483-5842 Fax: (021) 483-3633	Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530 Registry Office 4 th Floor, York Park Building 93 York Street George Queries should be directed to the Directorate: Development Management (Region 3) at: Tel.: (044) 805-8600 Fax: (044) 805 8650

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ACRONYMS USED IN THIS BASIC ASSESSMENT REPORT AND APPENDICES:

BAR	Basic Assessment Report
CBA	Critical Biodiversity Area
DEA	National Department of Environmental Affairs
DEA&DP	Western Cape Government: Environmental Affairs and Development Planning
DWS	National Department of Water and Sanitation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESA	Ecological Support Area
HWC	Heritage Western Cape
I&APs	Interested and Affected Parties
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEM:AQA	National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)
NEM:ICMA	National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008)
NEM:WA	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
PPP	Public Participation Process

DETAILS OF THE APPLICANT

Applicant / Organisation / Organ of State:	Cape Agulhas Municipality		
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DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

Name of the EAP organisation:	Eco Impact Legal Consulting (Pty) Ltd		
Person who compiled this Report:	Johmandie Pienaar		
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EAP Qualifications:	<p>EAP for Eco Impact Legal Consulting since March 2009</p> <p>Johmandie Pienaar (Giliomee) holds a Baccalaureus Technologiae Degree (Cum Laude) in Nature Conservation from the Cape Peninsula University of Technology and has also completed the following short courses at the Centre for Environmental Management:</p> <ul style="list-style-type: none"> • Implementing Environmental Management Systems (ISO 14001) (2009); • Occupational Health and Safety Law for Managers (2010); • Implementing an OHS Management System based on OHSAS 18001 (2010) and; • Occupational Health and Safety Management System OHSAS 18001 Audit: A Lead Auditor Course Based on ISO 19011 and ISO 17021 (2011). <p>Short course presented by Executive Coaching & Facilitation:</p> <ul style="list-style-type: none"> • Conduct Outcome Based Assessments (May 2015). 		

Please provide details of the lead EAP, including details on the expertise of the lead EAP responsible for the Basic Assessment process. Also attach his/her Curriculum Vitae to this BAR.

Refer to Appendix K1: EAP CV

EXECUTIVE SUMMARY OF THE PRE-APPLICATION BASIC ASSESSMENT REPORT:

Proposed Project and Site Description:

Project – The Cape Agulhas Municipality ("CAM") proposes to establish the following mixed-use development on RE/513 in Napier:

- 349 IRDP Row Houses - approximate unit size 40-45m² (Each unit is double storey and has a private internal staircase accessing the upper floor. Each unit is located on a private erf. Units are positioned in groups of 4 and are positioned around shared parking courts.)
- 28 GAP Houses – approximate unit size 45-50m² (Single storey semi-detached units.)
- A church and community hall – building area 980m²
- Creche and library – building area 615m²
- Open spaces, roads and services infrastructure – total area 37 600m²

Footprint:

The development footprint for the proposed development is estimated to be approximately ±6ha of the 7.8ha site as surveyed.

Site – The proposed development site is located east of the existing Nuwerus low-cost housing residential area and adjacent to Short Street in Napier. The study site is gradually undulating with the highest point being approximately in the middle of the site and then sloping down to the north and south. The whole site has been completely transformed mainly due to previous cultivation (date when the area was last cultivated/ploughed is unknown but it is expected to be more than 10 year ago) and thereafter due to ongoing urban development and ongoing human impact. Numerous formal and informal gravel footpaths and vehicle roads exist throughout the site and waste (especially garden waste) is dumped on site. Transformed non-perennial drainage lines are present along the northern and southern borders of the site. The site is bordered by high to medium density residential development to the north, east and west; and cultivated agricultural land to the south. The indigenous vegetation type originally occurring on the site and surrounds is *Critically Endangered* Elim Ferricrete Fynbos. Minimal (less than 0.5ha in total) remaining non-viable indigenous vegetation species populations were recorded on site and no species of conservation concern were recorded nor are expected to occur on the site. It is expected that the proposed development will lead to the clearance of a maximum of 0.5ha of scattered indigenous vegetation species remaining on site of which none is of conservation concern nor of viable numbers. No development is expected to occur within 32m from the drainage line to the south, but potential stormwater infrastructure may be required to be placed within or along the channelled and completely transformed drainage line to the north.

Summary of Specialist/s Conclusions and Recommendations:

Ecological Baseline Assessment, November 2017, Eco Impact:

Concluding Remarks and Summary of Impact Mitigation and Rehabilitation Measures Proposed before, during and after the Proposed Activities

The botanical sensitivity allocated to the site is low, as well as the overall conservation value of the site except for the non-perennial drainage line and its associated ESA2 buffer area south of the site which has been allocated a high conservation value and recommended not to be developed upon. If the recommendations as provided in this report are incorporated into the proposed development layout and implemented during the associated construction-, operational-, and decommissioning phases it will have an overall low negative ecological impact.

It was concluded that from an ecological impact point of view that the proposed development should not have an unacceptable significant negative impact on environmental features of the site and surrounds if specialist recommendations are taken into consideration and effectively implemented.

Summary of recommendations as listed in the report and additional recommendations to be implemented are listed below:

Planning considerations and constraints-

- The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated Ecological Support Area 2: Restore buffer area has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development occur within this drainage line or its associated ESA2: Restore buffer area, which will prevent any potential impacts on the condition and functioning of this drainage line.
- The completely transformed and channelled non-perennial drainage line within the northern parts of the site has been transformed to such an extent that it is not possible to neither determine the original extent nor flow path location. At certain sections within this drainage line it has been completely filled to create a vehicle or footpath crossing and the average width of the channel within the study area is approximately 1m wide. It is recommended that this drainage line be formalised to prevent potential future flooding of surrounding developments and ensure ongoing free flow within the drainage line when it is flowing. The 1:100 year flow must

be calculated and then used to determine the most suitable storm water structures that must be established within this drainage line to accommodate this flow. If financially possible it is recommended that "landscape friendly" engineering structures are incorporated into the formalisation of this drainage line so that this drainage line can become an important and attractive aesthetic feature as part of the proposed development.

Construction, Operational and Rehabilitation phases -

The project implementation process should be subject to standard Environmental Management Programme (EMP) prescripts and conditions and only proceed under supervision of a competent and diligent Environmental Control Officer, both during the construction, operational and decommission/rehabilitation phases.

Undertake development activities only in identified and specifically demarcated areas as proposed.

- Demarcate no-go areas before any land clearing occurs under the supervision of an ECO. Demarcation must be clearly visible and effective and no-go area must remain demarcated throughout construction phase.
- Personnel should be restricted to the construction camp site and immediate construction areas only.
- Remove and conserve topsoil layer and overburden material for rehabilitation after construction activities have ceased
- Implement site specific erosion and storm water runoff management measures as according to EMP requirements to prevent (or if prevention is not possible limit) any erosion from occurring on the development footprint area and surrounds.
- Proper waste bins to be provided during construction and operation and all waste to be regularly (at least once a week) removed to municipal landfill site.
- If any fuel or hazardous materials is spilled on site it must be treated as according to EMP requirements.
- The cement mixing area must be at least 32m away from the edge of the watercourses and is only to take place within demarcated cement mixing area that is impermeable and has a berm so that no cement mix runoff water escapes from cement mixing area.
- The landowner/s must adhere to his/her legal obligations to actively eradicate and manage alien tree infestations present on the applicable and surrounding properties.
- Site specific construction and operational phase storm water management plan must be compiled and implemented to prevent any erosion or significant increase in storm water runoff from occurring and artificially recharging the remaining drainage lines.
- Should any signs of erosion or artificial recharge be observed the municipality must implement rectification and preventions measures immediately and consult with the appointed ECO before implementing these measures.
- Only use vegetation indigenous to the area to rehabilitate impacted/decommissioned areas and implement ongoing monitoring of the rehabilitated areas until successful rehabilitation has taken place.
- After topsoil has been replaced ongoing monitoring and removal of alien vegetation regrowth must be conducted to ensure effective rehabilitation of indigenous vegetation.
- Decommissioned areas must be rehabilitated and planted with indigenous vegetation immediately after built structures have been removed.
- Engineered contour structures reinstated and maintained.
- Monitor rehabilitation of areas impacted outside of the proposed development areas or decommissioned areas on a 6 monthly basis until effective/successful rehabilitation has been obtained.
- If erosion is detected during or after rehabilitation implement erosion rectification and preventions measures as guided by an ECO

Eco Impact is of the opinion, and based on the survey and desk study done, that the proposed development activities; if designed and implemented according to the recommendations as provided in this report, will not have an unacceptable significantly negative impact on the environmental aspects of the site and surrounds as assessed in this report.

Phase 1 Geotechnical Site Investigation for Erven 513 & 1719, Napier, Core Geotechnical Nov 2017:

Foundation recommendations and solutions

Recommendations for foundation design applicable to the site geotechnical conditions and site classification (S/H1/R, are discussed below:-

a) Found using conventional pad or strip footings.

- Found within medium dense to dense transported soils at approximately 0.5 m bgl. Total movement, including settlement and heave, should be within acceptable levels (<10 mm) with a maximum allowable bearing pressure of 100 kPa.
- Bearing pressure could be increased to 250 kPa if founded on rock. This will also limit the amount of settlement and potential heave expected for clayey soils above the rock layer.

b) Found using stiffened concrete raft foundations

- Compact from surface to at least 95 % Mod AASHTO maximum dry density, using a heavy vibratory roller, before founding.
- Bearing pressures should be limited to 70 kPa

The following should be noted with regards to the above mentioned founding options:-

- Surface beds can be founded conventionally on in-situ transported soils once this material has been compacted to at least 93% Mod. AASHTO maximum dry density. Reinforcement of the surface beds and isolating them from walls to accommodate possible movements will minimize the risk of cracking. Alternatively surface beds may be designed as suspended slabs, in which case in-situ soils can be left in place (as is) and used only as a back-shutter.
- Structures will require modified normal construction techniques to be applied to cater for some minor settlement (due to the presence of soft spots in the profile) and heave movement (totalling approximately 5-10mm). Suitable measures would include additional reinforcement in brickwork in plinth walls and above doors and windows, reinforcement of surface beds, articulation of brick panels using construction joints and effective water management as outlined in Section 9 (refer also to NHBRC Home Building Manual).

Drainage

A perched water table was only encountered in TP10 at a depth of 2.0 m bgl. Groundwater is not expected to influence the remainder of the site. Site drainage is however required to minimize ingress of water into soils below foundations and therefore minimize risks of any associated differential movements.

All drainage and storm water services should be designed in accordance with sound engineering practice.

Special precautionary measures

Apart from those outlined above, no special precautionary measures are expected to be required. The required Phase 2 geotechnical site investigation would need to confirm site ground conditions, as described herein, and also confirm the design precautions necessary for structures and roads.

Normally the Phase 2 investigation would involve the inspection of service trenches across the site as a minimum, with an Addendum report to be attached to the Phase 1 geotechnical report.

Conclusions

This Phase 1 geotechnical site investigation indicates that the site is broadly suitable for project linked subsidy housing development, provided that aspects of concern relating to the geotechnical character of the site are addressed. These aspects are highlighted in the report.

Summary of Need and Desirability

Napier has a current housing backlog of 550 opportunities. The development of RE/Erf 513 was included as a project identified within the First Generation Housing Pipeline that needs to address the backlog. The permanent population of Napier is 4 232. With a growth rate of 1.96%, the population at the end of 2024 will be 5 239, which means the population has grown by 1 007. The population growth includes 513 individuals who will qualify for subsidised housing which means 103 additional subsidised housing opportunities will be required (at an average household size of 5); in addition to the current backlog of 550 houses. This is a total of 653 houses. Considering the existing

housing backlog and abovementioned future growth in housing demand, it is evident that all proposed housing projects must provide opportunities optimally and utilise land that is available for development to its full potential. Also refer to Appendix K2: The Napier Nuwerus Node – Urban Design Framework

Summary of Alternatives Assessed during Draft Scoping Phase:

Location alternatives – As manifested in the current municipal SDF the proposed development site on RE/513 is the only reasonable and feasible available municipal owned land as located within the current urban edge and built environment within Napier to provide a suitable opportunity for the provision of subsidised housing.

Activity alternatives- The establishment of residential erven and construction of subsidized housing units with associated service infrastructure are the only reasonable and feasible activity alternatives assessed as determined by the need and desirability and housing investigations conducted for Napier.

Layout alternatives – Two layout alternatives have been assessed thus far.

Layout Alternative 1 – High density development option:

- 349 IRDP Row Houses - approximate unit size 40-45m² (Each unit is double storey and has a private internal staircase accessing the upper floor. Each unit is located on a private erf. Units are positioned in groups of 4 and are positioned around shared parking courts.)
- 28 GAP Houses – approximate unit size 45-50m² (Single storey semi-detached units.)
- A church and community hall – building area 980m²
- Creche and library – building area 615m²
- Open spaces, roads and services infrastructure – total area 37 600m²

Development Constraints for Layout Alternative 1:

- Does not take specialists recommendations into consideration i.e. southern watercourse ESA buffer area not incorporated into the layout.
- Currently Eskom power grid only has additional available capacity for 200 residential erven.
- “Small and dense” erven does not provide expansion opportunities for homeowners.

Layout Alternative 2 – Lower density development option:

- 130 RDP Erven - ± 150m² erven
- 25 Row Housing - ± 75m² erven
- 45 GAP Houses – ± 250m² erven
- Crèche and community hall erven
- Open spaces, roads and services infrastructure

Development Constraints for Layout Alternative 2:

- Does not take specialists recommendations into consideration i.e. southern watercourse ESA buffer area not incorporated into the layout.

Technology alternatives – the following energy/resources saving methods must be incorporated into the design of the units where funding allows:

1. All units to be provided with energy saving compact fluorescent lamps (CLF's).
2. All electric geysers should be insulated with geyser blankets.
3. All electric geyser thermostats should be set at the most optimal temperature.
4. All fitted appliances should have an energy rating and the most efficient models must be considered.
5. Energy efficient streetlight technology should be used as far as possible to reduce the energy requirements of the streetlight network.
6. Rain water harvesting from roofs and gutters must be considered to collect and store rainwater runoff. This can be used to provide supplementary water which can be used for washing and watering gardens.
7. Shower installations must be fitted with low-flow shower heads, where the water pressure is suitable.
8. Geysers should be installed vertically to save electricity.

9. Ensure that the maximum flow rate from hand wash basin tops does not exceed 6L per minute.
10. Indoor traps must be fitted with aerators to increase the efficiency by redirecting the flow and amount of water used.
11. Flush toilets must be fitted with dual or multi flush mechanisms to ensure that the amount of water required is controlled by the user.

Operational alternatives – No operational alternatives were considered as the proposed activity is for the construction of residential erven and related infrastructure to be maintained by the owners and municipality after construction completion. Once operational, the only activities that will be undertaken are related to maintenance and upkeep of the development and associated infrastructure.

The No-Development Option- The No-Development option will result in the site remaining as it is, transformed vacant municipal land as located within the current built environment and urban edge of Napier adjacent to existing services infrastructure associated with existing low income residential areas. A look at the Napier Nuwerus Node – Urban Design Framework housing study conducted will indicate support for both the concept and place as manifested in the IDP and Human Settlement Plan for the Cape Agulhas Municipality.

Summary of Impact Assessment during Pre-Application Basic Assessment Phase:

LAYOUT ALTERNATIVE 1

CONSTRUCTION PHASE- LAYOUT ALTERNATIVE 1

- Disturbance to subsurface geological layers (medium negative impact before mitigation and low negative impact with mitigation measures);
- Soil erosion (medium negative impact before mitigation and low negative impact with mitigation measures);
- Compaction of soil (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in and accumulation of storm water runoff (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on identified aquatic NFEPA and/or ESA (medium negative impact before mitigation and low negative impact with mitigation measures);
- Disturbance to southern transformed and channelled non-perennial drainage line (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of construction work on river hydrology/flow (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on surface- and groundwater resources including aquatic NFEPAs and/or Ecological Support Areas ("ESA") (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed activities on indigenous vegetation and associated fauna and avifauna habitat (high negative impact before mitigation and low negative impact with mitigation measures)
- Introduction of alien and weed plant species (medium negative impact before mitigation and low negative impact with mitigation measures)
- Agricultural impacts (high negative impact before mitigation and low negative impact with mitigation measures)
- Increased temporary construction jobs (medium positive impact)
- Increased traffic due to the construction activities requiring various vehicles to come onto and leave the site. (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of construction workers on local community safety and security (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of litter or waste from the construction site on the surrounding communities (medium

- negative impact before mitigation and low negative impact with mitigation measures)
- Dust and emissions pollution arising from ground clearing and other construction activities (medium negative impact before mitigation and low negative impact with mitigation measures)
- The potential impact of the proposed development on archaeological, paleontological and heritage remains (high negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to construction machinery (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of construction of proposed serviced erven (medium negative impact before mitigation and low negative impact with mitigation measures)

OPERATIONAL PHASE- LAYOUT ALTERNATIVE 1

- Increase in storm water runoff due to hardening of surfaces which may lead to erosion of surrounding areas (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in storm water runoff leading to altered flow in lower lying drainage lines (medium negative impact before mitigation and low negative impact with mitigation measures);
- Impact on hydrology/flow due to impedance within drainage lines (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of operational and maintenance activities of proposed development on remaining riparian habitat and associated instream water quality (high negative impact before mitigation and low negative impact with mitigation measures);
- Increase in low income housing for the town of Napier (high positive significance);
- Increased traffic due to proposed residential serviced erven development (medium negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Additional load on existing municipal services infrastructure such as electricity, water, sewage and waste handling (high negative impact before mitigation and medium negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of proposed housing development (medium negative impact before mitigation and low negative impact with mitigation measures)

DECOMMISSIONING AND CLOSURE PHASE- LAYOUT ALTERNATIVE 1

- The decommissioning of the developments are not anticipated in the near future. Impacts during this phase will however be similar to that of the construction phase. Mitigation and management measures will be related to the technology of the day and needs to be discussed at such time as decommissioning will occur. All structures must be removed and the area rehabilitated to the state as before construction had commenced (dependent upon the end land use agreement). Waste, where possible must be recycled. All concrete introduced must be removed off site to a licensed waste facility.

LAYOUT ALTERNATIVE 2

CONSTRUCTION PHASE- LAYOUT ALTERNATIVE 2

- Disturbance to subsurface geological layers (medium negative impact before mitigation and low negative impact with mitigation measures);
- Soil erosion (medium negative impact before mitigation and low negative impact with mitigation measures);
- Compaction of soil (medium negative impact before mitigation and low negative impact

with mitigation measures);

- Increase in and accumulation of storm water runoff (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on identified aquatic NFEPA and/or ESA (medium negative impact before mitigation and low negative impact with mitigation measures);
- Disturbance to southern transformed and channelled non-perennial drainage line (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of construction work on river hydrology/flow (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on surface- and groundwater resources including aquatic NFEPAs and/or Ecological Support Areas ("ESA") (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed activities on indigenous vegetation and associated fauna and avifauna habitat (high negative impact before mitigation and low negative impact with mitigation measures)
- Introduction of alien and weed plant species (medium negative impact before mitigation and low negative impact with mitigation measures)
- Agricultural impacts (high negative impact before mitigation and low negative impact with mitigation measures)
- Increased temporary construction jobs (medium positive impact)
- Increased traffic due to the construction activities requiring various vehicles to come onto and leave the site. (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of construction workers on local community safety and security (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of litter or waste from the construction site on the surrounding communities (medium negative impact before mitigation and low negative impact with mitigation measures)
- Dust and emissions pollution arising from ground clearing and other construction activities (medium negative impact before mitigation and low negative impact with mitigation measures)
- The potential impact of the proposed development on archaeological, paleontological and heritage remains (high negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to construction machinery (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of construction of proposed serviced erven (medium negative impact before mitigation and low negative impact with mitigation measures)

OPERATIONAL PHASE- LAYOUT ALTERNATIVE 2

- Increase in storm water runoff due to hardening of surfaces which may lead to erosion of surrounding areas (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in storm water runoff leading to altered flow in lower lying drainage lines (medium negative impact before mitigation and low negative impact with mitigation measures);
- Impact on hydrology/flow due to impedance within drainage lines (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of operational and maintenance activities of proposed development on remaining riparian habitat and associated instream water quality (high negative impact before mitigation and low negative impact with mitigation measures);
- Increase in low income housing for the town of Napier (high positive significance);
- Increased traffic due to proposed residential serviced erven development (medium negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low

- negative impact with mitigation measures)
- Additional load on existing municipal services infrastructure such as electricity, water, sewage and waste handling (high negative impact before mitigation and medium negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of proposed housing development (medium negative impact before mitigation and low negative impact with mitigation measures)

DECOMMISSIONING AND CLOSURE PHASE- LAYOUT ALTERNATIVE 2

- The decommissioning of the developments is not anticipated in the near future. Impacts during this phase will however be similar to that of the construction phase. Mitigation and management measures will be related to the technology of the day and needs to be discussed at such time as decommissioning will occur. All structures must be removed and the area rehabilitated to the state as before construction had commenced (dependent upon the end land use agreement). Waste, where possible must be recycled. All concrete introduced must be removed off site to a licensed waste facility.

NO-GO/NO-DEVELOPMENT ALTERNATIVE

CONSTRUCTION PHASE- NO-GO/NO-DEVELOPMENT ALTERNATIVE

- No increase in temporary construction job opportunities (medium negative impact as no temporary construction jobs will be created)

OPERATIONAL PHASE- NO-GO/NO-DEVELOPMENT ALTERNATIVE

- No provision of low income housing development to the town of Napier (high negative significance)

SECTION A: PROJECT INFORMATION

1. ACTIVITY LOCATION

Location of all proposed sites:	The proposed 7.8ha development site is located east of the existing Nuwerus low-cost housing residential area and adjacent to Short Street in Napier
Farm / Erf name(s) and number(s) (including Portions thereof) for each proposed site:	Remaining Extent of Erf513
Property size(s) in m ² for each proposed site:	14055233.9m ²
Development footprint size(s) in m ² :	7.8ha
Surveyor General (SG) 21-digit code for each proposed site:	C01100050000051300000

2. PROJECT DESCRIPTION

(a) Is the project a new development? If "NO", explain:

YES

NO

NA

(b) Provide a detailed description of the scope of the proposed development (project).

Project – The Cape Agulhas Municipality ("CAM") proposes to establish the following mixed-use development on RE/513 in Napier:

- 349 IRDP Row Houses - approximate unit size 40-45m² (Each unit is double storey and has a private internal staircase accessing the upper floor. Each unit is located on a private erf. Units are positioned in groups of 4 and are positioned around shared parking courts.)

- 28 GAP Houses – approximate unit size 45-50m² (Single storey semi-detached units.)
- A church and community hall – building area 980m²
- Creche and library – building area 615m²
- Open spaces, roads and services infrastructure – total area 37 600m²

Footprint:

The development footprint for the proposed development is estimated to be approximately ±6ha of the 7.8ha site as surveyed.

Site – The proposed development site is located east of the existing Nuwerus low-cost housing residential area and adjacent to Short Street in Napier. The study site is gradually undulating with the highest point being approximately in the middle of the site and then sloping down to the north and south. The whole site has been completely transformed mainly due to previous cultivation (date when the area was last cultivated/ploughed is unknown but it is expected to be more than 10 year ago) and thereafter due to ongoing urban development and ongoing human impact. Numerous formal and informal gravel footpaths and vehicle roads exist throughout the site and waste (especially garden waste) is dumped on site. Transformed non-perennial drainage lines are present along the northern and southern borders of the site. The site is bordered by high to medium density residential development to the north, east and west; and cultivated agricultural land to the south. The indigenous vegetation type originally occurring on the site and surrounds is *Critically Endangered* Elim Ferricrete Fynbos. Minimal (less than 0.5ha in total) remaining non-viable indigenous vegetation species populations were recorded on site and no species of conservation concern were recorded nor are expected to occur on the site. It is expected that the proposed development will lead to the clearance of a maximum of 0.5ha of scattered indigenous vegetation species remaining on site of which none is of conservation concern nor of viable numbers. No development is expected to occur within 32m from the drainage line to the south, but potential stormwater infrastructure may be required to be placed within or along the channelled and completely transformed drainage line to the north.

Please note: This description must relate to the listed and specified activities in paragraph (d) below.

(c) Please indicate the following periods that are recommended for inclusion in the environmental authorisation:

(i)	the period within which commencement must occur,	Within 5 years of obtaining Environmental Authorisation
(ii)	the period for which the environmental authorisation should be granted and the date by which the activity must have been concluded, where the environmental authorisation does not include operational aspects;	Within 10 years of obtaining Environmental Authorisation
(iii)	the period that should be granted for the non-operational aspects of the environmental authorisation; and	Within 10 years of obtaining Environmental Authorisation
(iv)	the period that should be granted for the operational aspects of the environmental authorisation.	Ongoing maintenance of infrastructure and implementation of EMP until decommissioning.

Please note: The Department must specify the abovementioned periods, where applicable, in an environmental authorisation. In terms of the period within which commencement must occur, the period must not exceed 10 years and must not be extended beyond such 10 year period, unless the process to amend the environmental authorisation contemplated in regulation 32 is followed.

(d) List all the listed activities triggered and being applied for.

Please note: The onus is on the applicant to ensure that all the applicable listed activities are applied for and assessed as part of the EIA process. Please refer to paragraph (b) above.

EIA Regulations Listing Notices 1 and 3 of 2014 (as amended):

Listed Activity No(s):	Describe the relevant Basic Assessment Activity(ies) in writing as per Listing Notice 1	Describe the portion of the development that relates to the applicable listed activity as per the	Identify if the activity is development / development and operational / decommissioning /
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	(GN No. R. 983)	project description.	expansion / expansion and operational.
19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from (i) a watercourse;	Strom water infrastructure within the northern transformed channelled drainage line	Development
27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation	Although it is expected that not more than 0.5ha of actual indigenous vegetation species will be cleared during the proposed development, the site has been ploughed/cultivated more than 10 years ago therefore according to the NEMA definition for "indigenous vegetation" the proposed development will lead to the clearance of ±6ha of "indigenous vegetation".	Development
28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares	Proposed residential development of ±6ha within an urban area on land previously used for agricultural cultivation.	Development
Listed Activity No(s):	Describe the relevant Basic Assessment Activity(ies) in writing as per Listing Notice 3 (GN No. R. 985)	Describe the portion of the development that relates to the applicable listed activity as per the project description.	Identify if the activity is development / development and operational / decommissioning / expansion / expansion and operational.
12	The clearance of an area of 300 square metres or more of indigenous vegetation i. Western Cape i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;	The indigenous vegetation type originally occurring on the site and surrounds is <i>Critically Endangered</i> Elim Ferricrete Fynbos. Minimal (less than 0.5ha in total) remaining non-viable indigenous vegetation species populations were recorded on site and no species of conservation concern were recorded nor are expected to occur on the site. It is expected that the proposed development	Development

		will lead to the clearance of a maximum of 0.5ha of scattered indigenous vegetation species remaining on site of which none is of conservation concern nor of viable numbers	
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Waste management activities in terms of the NEM: WA (GN No. 921):

Category A Listed Activity No(s):	Describe the relevant Category A waste management activity in writing as per GN No. 921	Describe the portion of the development that relates to the applicable listed activity as per the project description
NA		

Note: If any waste management activities are applicable, the **Listed Waste Management Activities Additional Information Annexure** must be completed and attached to this Basic Assessment Report as **Appendix I**.

Atmospheric emission activities in terms of the NEM: AQA (GN No. 893):

Listed Activity No(s):	Describe the relevant atmospheric emission activity in writing as per GN No. 893	Describe the portion of the development that relates to the applicable listed activity as per the project description.
NA		

(e) Provide details of all components (including associated structures and infrastructure) of the proposed development and attach diagrams (e.g., architectural drawings or perspectives, engineering drawings, process flowcharts, etc.).

Buildings Provide brief description below:	YES	NO
Different types of IRDP housing units are proposed i.e. single detached, single/double storey semi-detached, rowhouses and GAP housing which is usually semi-detached single story units.		
Infrastructure (e.g., roads, power and water supply/ storage) Provide brief description below:	YES	NO
Standard services infrastructure as associated with a new residential development i.e. stormwater, sewer, water, roads, electricity etc. (Engineers services report still to be provided).		
Processing activities (e.g., manufacturing, storage, distribution) Provide brief description below:	YES	NO
NA		
Storage facilities for raw materials and products (e.g., volume and substances to be stored) Provide brief description below:	YES	NO
NA		
Storage and treatment facilities for effluent, wastewater or sewage: Provide brief description below:	YES	NO
NA		
Storage and treatment of solid waste Provide brief description below:	YES	NO
NA		
Facilities associated with the release of emissions or pollution. Provide brief description below:	YES	NO
NA		
Other activities (e.g., water abstraction activities, crop planting activities) – Provide brief description below:	YES	NO
NA		

3. PHYSICAL SIZE OF THE PROPOSED DEVELOPMENT

(a) Property size(s): Indicate the size of all the properties (cadastral units) on which the development proposal is to be undertaken	14055233.9	m ²
(b) Size of the facility: Indicate the size of the facility where the development proposal is to be undertaken	NA	m ²
(c) Development footprint: Indicate the area that will be physically altered as a result of undertaking any development proposal (i.e., the physical size of the development together with all its associated structures and infrastructure)	6ha	

(d) Size of the activity: Indicate the physical size (footprint) of the development proposal	6ha	
(e) For linear development proposals: Indicate the length (L) and width (W) of the development proposal	(L) NA	km
	(W) NA	m
(f) For storage facilities: Indicate the volume of the storage facility	NA	m ³
(g) For sewage/effluent treatment facilities: Indicate the volume of the facility (Note: the maximum design capacity must be indicated)	NA	m ³

4. SITE ACCESS

(a) Is there an existing access road?	YES	NO
(b) If no, what is the distance in (m) over which a new access road will be built?		m
(c) Describe the type of access road planned:		
NA		

Please note: The position of the proposed access road must be indicated on the site plan.

5. DESCRIPTION OF THE PROPERTY(IES) ON WHICH THE LISTED ACTIVITY(IES) ARE TO BE UNDERTAKEN AND THE LOCATION OF THE LISTED ACTIVITY(IES) ON THE PROPERTY

- 5.1 Provide a description of the property on which the listed activity(ies) is/are to be undertaken and the location of the listed activity(ies) on the property, as well as of all alternative properties and locations (duplicate section below as required).

An area of 7.8ha on RE/153 as located in-between Short Street and the Nuwerus low-cost housing residential areas were assessed for the proposed development. The northern section of the site is crossed by a transformed channelled non-perennial drainage line and also includes a low water table area, therefore this section has been proposed to be excluded from the proposed development areas except for potential formalisation of stormwater infrastructure within and along the non-perennial drainage line (details still to be confirmed by the engineers). Development is therefore only proposed on ±6ha of the site. The whole site has been completely transformed mainly due to previous cultivation and thereafter due to ongoing urban development and ongoing human impact. Numerous formal and informal gravel footpaths and vehicle roads exist throughout the site and waste (especially garden waste) is dumped on site. Transformed non-perennial drainage lines are present along the northern and southern borders of the site. The site is bordered by high to medium density residential development to the north, east and west; and cultivated agricultural land to the south. The vegetation on the site is completely dominated by grass species, weeds and weedy herbs associated with cultivated lands. A row of planted *Pinus pinaster* trees is located along the south-eastern edge of the site. Scattered *Acacia saligna* trees are present throughout the site although the only dense stand is located within the northern part of the site. Scattered Eucalyptus trees are also present along the completely transformed and channelled non-perennial drainage line located within the northern part of the site. The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated "Ecological Support Area 2: Restore buffer area" has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development occurs within this drainage line nor its associated ESA2: Restore buffer area.

Coordinates of all the proposed activities on the property or properties (sites):	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec.)		
		34 °	28 '	37.71"	19 °	53'
	34°	28 '	26.00"	19 °	53'	36.62"
	34°	28 '	27.34"	19 °	53'	39.85"
	34°	28 '	29.44"	19 °	53'	38.33"
	34 °	28 '	30.57"	19 °	53'	41.30"
	34°	28 '	37.84"	19 °	53'	32.70"

Note: For land where the property has not been defined, the coordinates of the area within which the development is proposed must be provided in an addendum to this report.

- 5.2 Provide a description of the area where the aquatic or ocean-based activity(ies) is/are to be undertaken and the location of the activity(ies) and alternative sites (if applicable).

The northern section of the site is crossed by a transformed channelled non-perennial drainage line and also includes a low water table area, therefore this section has been proposed to be excluded from the proposed development areas except for potential formalisation of stormwater infrastructure within and along the non-perennial drainage line (details still to be confirmed by the engineers).

Coordinates of the boundary /perimeter of all proposed aquatic or ocean-based activities (sites) (if applicable): (Engineer still to confirm potential stormwater infrastructure within and/or formalisation of transformed drainage line)	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec)		
	°	'	"	°	'	"
	°	'	"	°	'	"
	°	'	"	°	'	"

5.3 For a linear development proposal, please provide a description and coordinates of the corridor in which the proposed development will be undertaken (if applicable).

NA

For linear activities:	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec)		
• Starting point of the activity	°	'	"	°	'	"
• Middle point of the activity	°	'	"	°	'	"
• End point of the activity	°	'	"	°	'	"

Note: For linear development proposals longer than 1000m, please provide an addendum with co-ordinates taken every 250m along the route. All important waypoints must be indicated and the GIS shape file provided digitally.

5.4 Provide a location map (see below) as **Appendix A** to this report that shows the location of the proposed development and associated structures and infrastructure on the property; as well as a detailed site development plan / site map (see below) as **Appendix B** to this report; and if applicable, all alternative properties and locations. The GIS shape files (.shp) for maps / site development plans must be included in the electronic copy of the report submitted to the competent authority.

Locality Map:	<p>The scale of the locality map must be at least 1:50 000. For linear development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following:</p> <ul style="list-style-type: none"> • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; • a linear scale; • the prevailing wind direction (during November to April and during May to October); and • GPS co-ordinates (to indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection). <p>For an ocean-based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken.</p> <p>Coordinates must be provided in degrees, minutes and seconds using the Hartebeesthoek94; WGS84 co-ordinate system.</p>
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Site Plan:	<p>Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following:</p> <ul style="list-style-type: none"> • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be indicated on the site plan. • The position of each element of the application as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of
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	<p>the development <u>must</u> be indicated on the site plan.</p> <ul style="list-style-type: none"> • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): <ul style="list-style-type: none"> ○ Watercourses / Rivers / Wetlands - including the 32 meter set back line from the edge of the bank of a river/stream/wetland; ○ Flood lines (i.e., 1:100 year, 1:50 year and 1:10 year where applicable); ○ Ridges; ○ Cultural and historical features; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow <p>A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.</p> <p>The GIS shape file for the site development plan(s) must be submitted digitally.</p>
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6. SITE PHOTOGRAPHS

Colour photographs of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached as **Appendix C** to this report. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.

SECTION B: DESCRIPTION OF THE RECEIVING ENVIRONMENT

Site/Area Description

For linear development proposals (pipelines, etc.) as well as development proposals that cover very large sites, it may be necessary to complete copies of this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area that is covered by each copy on the Site Plan.

1. GRADIENT OF THE SITE

Indicate the general gradient of the sites (highlight the appropriate box).

Flat	Flatter than 1:10	1:10 – 1:4	Steeper than 1:4
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2. LOCATION IN LANDSCAPE

(a) Indicate the landform(s) that best describes the site (highlight the appropriate box(es)).

Ridgeline	Plateau	Side slope of hill / mountain	Closed valley	Open valley	Plain	Undulating plain/low hills/inland dunes	Dune	Sea-front
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(b) Provide a description of the location in the landscape.

RE/513 in Napier are approximately 7.8 Ha in total area, and are located on the southern side of the town's urban area. Access to the site is gained via Short Street that also forms the eastern boundary of the site. Existing housing is located to the north and east and open agricultural land adjoins the southern side of the site. Topographically, the broader area is fairly flat-lying, with a slight to moderate fall towards the south, north and north-west.

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

(a) Is the site(s) located on or near any of the following (highlight the appropriate boxes)?

Shallow water table (less than 1.5m deep)	YES	NO	UNSURE
Seasonally wet soils (often close to water bodies)	YES	NO	UNSURE
Unstable rocky slopes or steep slopes with loose soil	YES	NO	UNSURE
Dispersive soils (soils that dissolve in water)	YES	NO	UNSURE
Soils with high clay content	YES	NO	UNSURE
Any other unstable soil or geological feature	YES	NO	UNSURE
An area sensitive to erosion	YES	NO	UNSURE
An area adjacent to or above an aquifer.	YES	NO	UNSURE
An area within 100m of a source of surface water	YES	NO	UNSURE
An area within 500m of a wetland	YES	NO	UNSURE
An area within the 1:50 year flood zone	YES	NO	UNSURE
A water source subject to tidal influence	YES	NO	UNSURE

(b) If any of the answers to the above is "YES" or "UNSURE", specialist input may be requested by the Department. (Information in respect of the above will often be available at the planning sections of local authorities. The 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

(c) Indicate the type of geological formation underlying the site.

Granite	Shale	Sandstone	Quartzite	Dolomite	Dolerite	Other (describe)
Provide a description.						
Regionally the area is underlain by unconsolidated colluvial gravels and sands of Recent (transported) origin. Geological maps indicate that the Recent origin soils are underlain by shale, siltstone and poorly defined sandstone of the Bokkeveld Group.						
The entire site is underlain by transported soils, comprising gravelly silty sand, sandy clayey silt and silty clay. The thickness of the transported soils is somewhat variable and is encountered to depths of 0.20 – 1.20 m below ground level (bgl).						
Very soft rock to medium hard rock shale and siltstone underlie the transported soils, and were encountered to depths in excess of 2.0 m bgl. Discontinuous pedogenic ferricrete and cemented lenses also occur within some parts of the site, directly overlying the weathered shale. These cemented layers are however inconsistent (discontinuous) and vary in thickness and degree of cementation.						
Detailed descriptions of the soils underlying the site and encountered in test pits, may be found in the recorded soil profiles.						
Also refer to Appendix G2 - Geotechnical Report						

4. SURFACE WATER

(a) Indicate the surface water present on and or adjacent to the site and alternative sites (highlight the appropriate boxes)?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoon	YES	NO	UNSURE

(b) Provide a description.

Transformed non-perennial drainage lines are present along the northern and southern borders of the site.
The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an

associated "Ecological Support Area 2: Restore buffer area" has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development occurs within this drainage line nor its associated ESA2: Restore buffer area.

The completely transformed and channelled non-perennial drainage line within the northern part of the site has been transformed to such an extent that it is not possible to determine the original extent or the flow path location. At certain sections within this drainage line it has been completely filled to create a vehicle or footpath crossing and the average width of the channel within the study area is approximately 1m wide.

Also refer to Appendix G1: Ecological Baseline Assessment report.

5. THE SEAFRONT / SEA

(a) Is the site(s) located within any of the following areas? (highlight the appropriate boxes).

If the site or alternative site is closer than 100m to such an area, please provide the approximate distance in (m).

AREA	YES	NO	UNSURE	If "YES": Distance to nearest area (m)
An area within 100m of the high water mark of the sea	YES	NO	UNSURE	
An area within 100m of the high water mark of an estuary/lagoon	YES	NO	UNSURE	
An area within the littoral active zone	YES	NO	UNSURE	
An area in the coastal public property	YES	NO	UNSURE	
Major anthropogenic structures	YES	NO	UNSURE	
An area within a Coastal Protection Zone	YES	NO	UNSURE	
An area seaward of the coastal management line	YES	NO	UNSURE	
An area within the high risk zone (20 years)	YES	NO	UNSURE	
An area within the medium risk zone (50 years)	YES	NO	UNSURE	
An area within the low risk zone (100 years)	YES	NO	UNSURE	
An area below the 5m contour	YES	NO	UNSURE	
An area within 1km from the high water mark of the sea	YES	NO	UNSURE	
A rocky beach	YES	NO	UNSURE	
A sandy beach	YES	NO	UNSURE	

(b) If any of the answers to the above is "YES" or "UNSURE", specialist input may be requested by the Department. (The 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

6. BIODIVERSITY

Note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed development. To assist with the identification of the biodiversity occurring on site and the ecosystem status, consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc ("cd") from the Biodiversity-GIS Unit, Tel.: (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) must be provided as an overlay map on the property/site plan as **Appendix D** to this report.

(a) Highlight the applicable biodiversity planning categories of all areas on preferred and alternative sites and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category. Also describe the prevailing level of protection of the Critical Biodiversity Area ("CBA") and Ecological Support Area ("ESA") (how many hectares / what percentages are formally protected).

Systematic Biodiversity Planning Category	CBA	ESA	Other Natural Area ("ONA")	No Natural Area Remaining ("NNR")
If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan and the conservation management objectives	The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated "Ecological Support Area 2: Restore buffer area" has been mapped for the drainage line			

	and a section thereof falls within the southern part of the site. Even though this section is an annually cultivated agricultural land It is recommended that no development occurs within the drainage line nor within the 1:100 year flood area, 32m from the edge of the drainage line and its associated ESA2: Restore buffer area.
Describe the site's CBA/ESA quantitative values (hectares/percentage) in relation to the prevailing level of protection of CBA and ESA (how many hectares / what percentages are formally protected locally and in the province)	If development is restricted to the area outside of the mapped ESA2 area it will have no impact on any mapped CBAs or ESAs

(b) Highlight and describe the habitat condition on site.

Habitat Condition	Percentage of habitat condition class (adding up to 100%) and area of each in square metre (m ²)		Description and additional comments and observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes, etc.)
Natural	0%	m ²	
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	m ²	
Degraded (includes areas heavily invaded by alien plants)	0%	0m ²	The whole site has been completely transformed mainly due to previous cultivation and thereafter due to ongoing urban development and ongoing human impact. Numerous formal and informal gravel footpaths and vehicle roads exist throughout the site and waste (especially garden waste) is dumped on site. Transformed non-perennial drainage lines are present along the northern and southern borders of the site. The site is bordered by high to medium density residential development to the north, east and west; and cultivated agricultural land to the south.
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	100%	0ha	The vegetation on the site is completely dominated by grass species, weeds and weedy herbs associated with cultivated lands. A row of planted <i>Pinus pinaster</i> trees is located along the south-eastern edge of the site. Scattered <i>Acacia saligna</i> trees are present throughout the site although the only dense stand is located within the northern part of the site. Scattered Eucalyptus trees are also present along the completely transformed and channelled non-perennial drainage line located within the northern part of the site.

(c) Complete the table to indicate:

- (i) the type of vegetation present on the site, including its ecosystem status; and
- (ii) whether an aquatic ecosystem is present on/or adjacent to the site.

Terrestrial Ecosystems		Description of Ecosystem, Vegetation Type, Original Extent, Threshold (ha, %), Ecosystem Status
Ecosystem threat status as per the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Critically	The indigenous vegetation type originally occurring on the site and surrounds is <i>Critically Endangered</i> Elim Ferricrete Fynbos. According to the 2017 Western Cape Biodiversity Spatial Plan no remaining terrestrial or aquatic Critical Biodiversity Areas (CBAs) are mapped on the site. Minimal (less than 0.5ha in total)
	Endangered	

		remaining non-viable indigenous vegetation species populations were recorded on site and no species of conservation concern were recorded nor are expected to occur on the site.
	Vulnerable	NA
	Least Threatened	NA

Aquatic Ecosystems						
Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
YES	NO	UNSURE	YES	NO	YES	NO

- (d) Provide a description of the vegetation type and/or aquatic ecosystem present on the site, including any important biodiversity features/information identified on the site (e.g. threatened species and special habitats). Clearly describe the biodiversity targets and management objectives in this regard.

The study site is gradually undulating with the highest point being approximately in the middle of the site and then sloping down to the north and south. The whole site has been completely transformed mainly due to previous cultivation and thereafter due to ongoing urban development and ongoing human impact. Numerous formal and informal gravel footpaths and vehicle roads exist throughout the site and waste (especially garden waste) is dumped on site. Transformed non-perennial drainage lines are present along the northern and southern borders of the site. The site is bordered by high to medium density residential development to the north, east and west; and cultivated agricultural land to the south.

The indigenous vegetation type originally occurring on the site and surrounds is *Critically Endangered* Elim Ferricrete Fynbos. According to the 2017 Western Cape Biodiversity Spatial Plan no remaining terrestrial or aquatic Critical Biodiversity Areas (CBAs) are mapped on the site. Minimal (less than 0.5ha in total) remaining non-viable indigenous vegetation species populations were recorded on site and no species of conservation concern were recorded nor are expected to occur on the site.

The vegetation on the site is completely dominated by grass species, weeds and weedy herbs associated with cultivated lands. A row of planted *Pinus pinaster* trees is located along the south-eastern edge of the site. Scattered *Acacia saligna* trees are present throughout the site although the only dense stand is located within the northern part of the site. Scattered Eucalyptus trees are also present along the completely transformed and channelled non-perennial drainage line located within the northern part of the site.

The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated "Ecological Support Area 2: Restore buffer area" has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development occurs within this drainage line nor its associated ESA2:Restore buffer area.

The completely transformed and channelled non-perennial drainage line within the northern part of the site has been transformed to such an extent that it is not possible to determine the original extent or the flow path location. At certain sections within this drainage line it has been completely filled to create a vehicle or footpath crossing and the average width of the channel within the study area is approximately 1m wide. It is recommended that this drainage line be formalised to prevent potential future flooding of surrounding developments and to ensure ongoing free flow within the drainage line when it is flowing. The 1:100 year flow must be calculated and then used to determine the most suitable storm water structures that must be established within this drainage line to accommodate this flow. If financially possible, it is recommended that "landscape friendly" engineering structures are incorporated into the formalisation of this drainage line so that this drainage line can become an important and attractive aesthetic feature as part of the proposed development.

The botanical sensitivity allocated to the site is low, as well as the overall conservation value of the site except for the non-perennial drainage line and its associated ESA2 buffer area south of the site which has been allocated a high conservation value and not recommended for development. If the recommendations as provided in this report are incorporated into the proposed development layout and implemented during the associated construction-, operational-, and decommissioning phases it will have an overall low negative ecological impact.

Refer to Appendix G1: Ecological Baseline Assessment for further details on current state of the site.

7. LAND USE OF THE SITE

Note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed development.

Untransformed area	Low density residential	Medium density residential	High density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism and Hospitality facility
Open-cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical centre	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes and more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):	Transformed vacant land previously (more than 10 years ago) used for agricultural cultivation and most likely livestock grazing.			

(a) Provide a description.

The whole site has been completely transformed mainly due to previous cultivation and thereafter due to ongoing urban development and ongoing human impact. Numerous formal and informal gravel footpaths and vehicle roads exist throughout the site and waste (especially garden waste) is dumped on site. Transformed non-perennial drainage lines are present along the northern and southern borders of the site. The site is bordered by high to medium density residential development to the north, east and west; and cultivated agricultural land to the south.

8. LAND USE CHARACTER OF THE SURROUNDING AREA

(a) Highlight the current land uses and/or prominent features that occur within +/- 500m radius of the site and neighbouring properties if these are located beyond 500m of the site.

Note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed development.

Untransformed area	Low density residential	Medium density residential	High density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism and Hospitality facility
Open-cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical centre	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes and more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station

Landfill or waste treatment site	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):	NA			

(b) Provide a description, including the distance and direction to the nearest residential area, industrial area, agri-industrial area.

The site is immediately bordered by high to medium density residential development to the north, east and west; and cultivated agricultural land to the south. Other land uses that also occurs within 500m of the proposed site is the local police station, a clinic, church, community centre, informal settlement etc.

9. SOCIO-ECONOMIC ASPECTS

a) Describe the existing social and economic characteristics of the community in the vicinity of the proposed site, in order to provide baseline information (for example, population characteristics/demographics, level of education, the level of employment and unemployment in the area, available work force, seasonal migration patterns, major economic activities in the local municipality, gender aspects that might be of relevance to this project, etc.).

As according to the Cape Agulhas Municipality Integrated Development Plan 1st Review 2018/19 the following housing needs exists within Napier:

Housing is a concurrent National and Provincial competence. It is included as there is a direct correlation between the provision of basic services and housing. The following table shows the number of people on the housing waiting list at Napier, the number over the age of 35 and the number of houses in the informal settlements.

INCOME			AGE				YEARS ON DATABASE		SOCIAL PROFILE		
Total sum of ≤ R3500	Total sum of ≥R3501- R15000≤	Total sum of ≥R15001	Total sum of ≤34	Total sum of ≥35- 59≤	Total Sum of 60≥	Totals	Less than 3	More than 3	Farm Residents	Informal Settlements	Backyard Dwellers
705	4	1	263	398	43	709	79	630	23	60	626

10. HISTORICAL AND CULTURAL ASPECTS

(a) Please be advised that if section 38 of the NHRA is applicable to your proposed development, you are requested to furnish this Department with written comment from Heritage Western Cape as part of your public participation process. Heritage Western Cape must be given an opportunity, together with the rest of the I&APs, to comment on any Pre-application BAR, a Draft BAR, and Revised BAR.

Section 38 of the NHRA states the following:

"38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

- the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- the construction of a bridge or similar structure exceeding 50m in length;
- any development or other activity which will change the character of a site-
 - exceeding 5 000m² in extent; or
 - involving three or more existing erven or subdivisions thereof; or
 - involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- the re-zoning of a site exceeding 10 000m² in extent; or
- any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,

must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development".

(b) The impact on any national estate referred to in section 3(2), excluding the national estate contemplated in section 3(2)(i)(vi) and (vii), of the NHRA, must also be investigated, assessed and evaluated. Section 3(2) states the following: "3(2) Without limiting the generality of subsection (1), the national estate may include—

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;

- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including—
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the Gazette;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including—
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)".

Is Section 38 of the NHRA applicable to the proposed development?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	<p>A Notice of Intent to Develop was submitted to the HWC and the following record of decision was received – <i>You are hereby notified that, since there is no reason to believe that the proposed mixed use development on an area of approximately 7.8ha that will consist of 349 low cost housing, 28 Gap houses, a church, creche & library, open spaces, roads and services infrastructure, will not impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.</i></p> <p><i>However should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately and HWC must be notified without delay.</i></p>			
Will the development impact on any national estate referred to in Section 3(2) of the NHRA?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	NA			
Will any building or structure older than 60 years be affected in any way?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	NA			
Are there any signs of culturally or historically significant elements, as defined in section 2 of the NHRA, including Archaeological or paleontological sites, on or close (within 20m) to the site?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	NA			

Note: If uncertain, the Department may request that specialist input be provided **and** Heritage Western Cape must provide comment on this aspect of the proposal. (Please note that a copy of the comments obtained from the Heritage Resources Authority must be appended to this report as Appendix E1).

11. APPLICABLE LEGISLATION, POLICIES, CIRCULARS AND/OR GUIDELINES

(a) Identify all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to the development proposal and associated listed activity(ies) being applied for and that have been considered in the preparation of the BAR.

LEGISLATION, POLICIES, PLANS, GUIDELINES, SPATIAL TOOLS, MUNICIPAL DEVELOPMENT PLANNING FRAMEWORKS, AND INSTRUMENTS	ADMINISTERING AUTHORITY and how it is relevant to this application	TYPE Permit/license/authorisation/comment / relevant consideration (e.g. rezoning or consent use, building plan approval, Water Use License and/or General Authorisation, License in terms of the SAHRA and CARA, coastal discharge permit, etc.)	DATE (if already obtained):
Western Cape Land Use Planning Act, 2014 ("LUPA")	Cape Agulhas Municipality	Rezoning from Undetermined to Residential	NA
National Water Act, 1998 (Act No. 36 of 1998) [NWA] and relevant regulations	Department of Water And Sanitation	Water Use Application	Application to be submitted
National Environmental Management Act, 1998 (Act No. 107 of 1998) [NEMA] and relevant regulations	Western Cape Department of Environmental Affairs and Development Planning	Environmental Authorisation Application	Application to be submitted
National Heritage Resources Act 25 of 1999 [NHRA]	Heritage Western Cape South African Heritage Resource Agency	NID Submission of a Heritage Impact Assessment	Final Comment Received – No HIA to be conducted
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) [NEMWA] and relevant regulations	Western Cape Department of Environmental Affairs and Development Planning	NA	NA
National Environmental Management: Biodiversity Act 10 of 2004 [NEMBA]	Western Cape Department of Environmental Affairs and Development Planning and Cape Nature	Comments to be obtained concerning expected biodiversity impacts	Comments still to be obtained
National Environmental Management: Air Quality Act, 39 Of 2004 [NEMAQA] and Relevant Regulations	Western Cape Department of Environmental Affairs and Development Planning	NA	NA
Conservation of Agricultural Resources Act, 43 Of 1983 [CARA]	National Department of Agriculture, forestry and Fisheries Western Cape Department of Agriculture	NA	NA
National Health Act, 61 of 2003 [NHA]	Department of Health	NA	NA
Constitution of the Republic of South Africa, 1996		General application to individual rights of all on and adjacent to the sites.	Public Participation Process to be conducted
Fencing Act, 31 of 1963		NA	NA
National Building Regulations and Building Standards Act 103 of 1977 [NBRBSA] and relevant regulations		NA	NA

National Veld and Forest Fire Act 101 of 1998 [NVFFA]		NA	NA
Fertilizers, Farm Feeds, Agricultural Remedies And Stock Remedies Act, 36 Of 1947 [FFFARSRA] and Relevant Regulations	National Department of Agriculture, forestry and Fisheries Western Cape Department of Agriculture	NA	NA
Cape Agulhas Municipality Spatial Development Framework	Cape Agulhas Municipality	Proposed development already included in planned developments in local SDF	NA
Cape Agulhas Municipality 2017-2018 Service Delivery Implementation Plan	Cape Agulhas Municipality	Proposed development already included in planned developments in local SDF	NA
Cape Agulhas Municipality Integrated Development Plan 2018/19	Cape Agulhas Municipality	Proposed development already included in planned developments in local SDF	NA

POLICY/ GUIDELINES/BY-LAWS	ADMINISTERING AUTHORITY
Guideline on Public Participation	Western Cape Department of Environmental Affairs and Development Planning
Guidelines on Alternatives	Western Cape Department of Environmental Affairs and Development Planning
Guideline on Need and desirability	Western Cape Department of Environmental Affairs and Development Planning
Guideline for Environmental Management Plans (EMP's)	Western Cape Department of Environmental Affairs and Development Planning
Guideline of Specialist Reports	Western Cape Department of Environmental Affairs and Development Planning

(b) Describe how the proposed development **complies with and responds** to the legislation and policy context, plans, guidelines, spatial tools, municipal development planning frameworks and instruments.

LEGISLATION, POLICIES, PLANS, GUIDELINES, SPATIAL TOOLS, MUNICIPAL DEVELOPMENT PLANNING FRAMEWORKS, AND INSTRUMENTS	Describe how the proposed development complies with and responds to:
NEMA	Basic Assessment Process conducted to assess potential environmental impacts and apply for Environmental Authorisation
NEMWA	If applicable all waste management activities to be conducted during the proposed development to adhere to the NEMWA requirements
NEMBA	If applicable potential impacts on biodiversity features of the site and surrounds to be assessed and mitigation measures proposed during the basic assessment process.
NEMAQA	If applicable potential impacts on air quality on site and surrounds to be assessed and mitigation measures proposed during the basic assessment process.
NWA	If applicable potential impacts on ground- and surface water resources assessed during basic assessment process and if required a water use authorisation under section 21 will be applied for.
CARA	If applicable the landowner/applicant is reminded of his/her responsibility to manage and eradicated certain weed and alien plant vegetation on his/her property and requirements are incorporated into the EMP.
National Health Act	If applicable potential impacts on the health and wellbeing of human population on the site and surrounds are assessed and mitigation measure are proposed during the basic assessment process.
Constitution of the RSA	General application to individual rights of all on and adjacent to the sites.

LEGISLATION, POLICIES, PLANS, GUIDELINES, SPATIAL TOOLS, MUNICIPAL DEVELOPMENT PLANNING FRAMEWORKS, AND INSTRUMENTS	Describe how the proposed development complies with and responds to:
Fencing Act	If applicable potential impacts and requirements concerning fencing of the site and surrounds to be assessed and mitigation measures proposed during the basic assessment process.
National Building Regulations and Building Standards Act	If applicable potential impacts and requirements concerning erection of building on the site and surrounds to be assessed and mitigation measures proposed during the basic assessment process.
NHRA	If applicable potential impacts on graves and burial sites and any structures older than 60 years are assessed and mitigation measures proposed during the basic assessment process.
NVFFA	If applicable any activities that could result in the start of veld fires are assessed and mitigated during the basic assessment process.
FFFARSRA	If applicable any potential impacts of activities associated with pest control, the use of agricultural remedies and with providing / manufacturing fertiliser are assessed and mitigated during the basic assessment process.
Guideline on Public Participation	The public participation guideline is used to determine the requirements in terms of implementing the public participation process during the basic assessment process to be conducted. The guideline was also used to determine the most effective communication strategies for public participation.
Guidelines on Alternatives	The guidelines for alternatives assessment was used to develop a methodology for alternatives assessment. This methodology was applied to determine and assess the most viable alternatives to the project. The assessment was undertaken against the baseline environment (i.e. the no-go option).
Guideline on Need and desirability	The guideline was taken into account to determine whether the project complied according to the concept of Best Practicable Environmental Option as well as environmental and social sustainability.
Guideline for EMP's	The guideline for EMP's was taken into account to determine the most effective minimize, mitigation and management measures to minimise or prevent the potential environmental impacts identified during the basic assessment process

Note: Copies of any comments, permit(s) or licences received from any other Organ of State must be attached to this report as **Appendix E**.

Section C: PUBLIC PARTICIPATION

The PPP must fulfil the requirements outlined in the NEMA, the EIA Regulations, 2014 (as amended) and if applicable, the NEM: WA and/or the NEM: AQA. This Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must also be taken into account.

- Please highlight the appropriate box to indicate whether the specific requirement was undertaken or whether there was an exemption applied for.

In terms of Regulation 41 of the EIA Regulations, 2014 (as amended) -			
(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of -			
(i) the site where the activity to which the application relates, is or is to be undertaken; and	YES	EXEMPTION	
(ii) any alternative site	YES	EXEMPTION	N/A
(b) giving written notice, in any manner provided for in Section 47D of the NEMA, to -			
(i) the occupiers of the site and, if the applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	YES	EXEMPTION	N/A

(ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	YES	EXEMPTION	
(iii) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	YES	EXEMPTION	
(iv) the municipality (Local and District Municipality) which has jurisdiction in the area;	YES	EXEMPTION	
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	YES	EXEMPTION	
(vi) any other party as required by the Department;	YES	EXEMPTION	N/A
(c) placing an advertisement in -			
(i) one local newspaper; or	YES	EXEMPTION	
(ii) any official Gazeffe that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	YES	EXEMPTION	N/A
(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken	YES	EXEMPTION	N/A
(e) using reasonable alternative methods, as agreed to by the Department, 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.	YES	EXEMPTION	N/A
If you have indicated that "EXEMPTION" is applicable to any of the above, proof of the exemption decision must be appended to this report.			
Please note that for the NEM: WA and NEM: AQA, a notice must be placed in at least two newspapers circulating in the area where the activity applied for is proposed.			
If applicable, has/will an advertisement be placed in at least two newspapers?	YES		NO
If "NO", then proof of the exemption decision must be appended to this report.			

2. Provide a list of all the State Departments and Organs of State that were consulted:

State Department / Organ of State	Date request was sent:	Date comment received:	Support / not in support
Cape Nature	Still to be sent	-	-
DEA&DP: Development Management	Still to be sent	-	-
DEA&DP: Waste Management	Still to be sent	-	-
DEA&DP: Pollution and Chemicals Management	Still to be sent	-	-
Breede Gouritz Catchment Management Agency (on behalf of Department of Water and Sanitatio)	Still to be sent	-	-
Heritage Western Cape	Notice of Intent to Develop submitted 17/11/2017	04/12/2017	Record of Decision states that, "..., no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required
Overberg District Municipality	Still to be sent	-	-
Department of Agriculture, Western Cape (Provincial)	Still to be sent	-	-
Department of Agriculture, Fisheries and Forestry (National)	Still to be sent	-	-
Cape Agulhas Local Municipality	Still to be sent	-	-
Department of Human Settlements	Still to be sent	-	-

3. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated, or the reasons for not including them.

(The detailed outcomes of this process, including copies of the supporting documents and inputs must be included in a Comments and Response Report to be attached to the BAR (see note below) as **Appendix F**).

None as of yet. A copy of this report is still to be circulated.

4. Provide a summary of any conditional aspects identified / highlighted by any Organs of State, which have jurisdiction in respect of any aspect of the relevant activity.

None as of yet. A copy of this report is still to be circulated.

Note:

Even if pre-application public participation is undertaken as allowed for by Regulation 40(3), it must be undertaken in accordance with the requirements set out in Regulations 3(3), 3(4), 3(8), 7(2), 7(5), 19, 40, 41, 42, 43 and 44.

If the "exemption" option is selected above and no proof of the exemption decision is attached to this BAR, the application will be refused.

A list of all the potential I&APs, including the Organs of State, notified and a list of all the registered I&APs must be submitted with the BAR. The list of registered I&APs must be opened, maintained and made available to any person requesting access to the register in writing.

The BAR must be submitted to the Department when being made available to I&APs, including the relevant Organs of State and State Departments which have jurisdiction with regard to any aspect of the activity, for a commenting period of at least 30 days. Unless agreement to the contrary has been reached between the Competent Authority and the EAP, the EAP will be responsible for the consultation with the relevant State Departments in terms of Section 24O and Regulation 7(2) – which consultation must happen simultaneously with the consultation with the I&APs and other Organs of State.

All the comments received from I&APs on the BAR must be recorded, responded to and included in the Comments and Responses Report included as **Appendix F** of the BAR. If necessary, any amendments made in response to comments received must be effected in the BAR itself. The Comments and Responses Report must also include a description of the PPP followed.

The minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded, must also be submitted as part of the public participation information to be attached to the final BAR as **Appendix F**.

Proof of all the notices given as indicated, as well as notice to I&APs of the availability of the Pre-Application BAR (if applicable), Draft BAR, and Revised BAR (if applicable) must be submitted as part of the public participation information to be attached to the BAR as **Appendix F**. In terms of the required "proof" the following must be submitted to the Department:

- a site map showing where the site notice was displayed, a dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
 - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
 - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
 - if a facsimile was sent, a copy of the facsimile report;
 - if an electronic mail was sent, a copy of the electronic mail sent; and
 - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION D: NEED AND DESIRABILITY

Note: Before completing this section, first consult this Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, 2014 (as amended), any subsequent Circulars, and guidelines available on the Department's website: <http://www.westerncape.gov.za/eadp>. In this regard, it must be noted that the *Guideline on Need and Desirability in terms of the Environmental Impact Assessment (EIA) Regulations, 2010* published by the national Department of Environmental Affairs on 20 October 2014 (GN No. 891 on Government Gazette No. 38108 refers) (available at: http://www.gov.za/sites/www.gov.za/files/38108_891.pdf) also applied to EIAs in terms of the EIA Regulations, 2014 (as amended).

1. Is the development permitted in terms of the property's existing land use rights?	NO	-	Please explain
Land use to be rezoned from Undetermined to Residential			
2. Will the development be in line with the following?			
(a) Provincial Spatial Development Framework ("PSDF").	YES	NO	Please explain
The Western Cape Provincial Spatial Development Framework (PSDF) is a broad scale, provincial policy document. The PSDF promotes provision of low income housing where a need exists.			
(b) Urban edge / edge of built environment for the area.	YES	NO	Please explain

The activity is located within the built environment.			
(c) Integrated Development Plan and Spatial Development Framework 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	NO	Please explain
The municipality identified the need and desirability of the activities as proposed at the specific site.			
(d) An Environmental Management Framework (" EMF ") adopted by this 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	NO	Please explain
No EMF adopted by the Department for the applicable area.			
(e) Any other Plans (e.g., Integrated Waste Management Plan (for waste management activities), etc.)).	YES	NO	Please explain
NA			
3. Is the land use (associated with the project being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (in other words, is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	NO	Please explain
The municipality identified the need and desirability of the activities as proposed at the specific site.			
4. Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur on the proposed site at this point in time?	YES	NO	Please explain
The proposed development site is ideally situated within the built environment on vacant transformed municipal land adjacent to existing amenities and low income housing development.			
5. Does the community/area need the project 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.)	YES	NO	Please explain
Napier has a current housing backlog of 550 opportunities. The development of RE/Erf 513 was included as a project identified within the First Generation Housing Pipeline that needs to address the backlog. The permanent population of Napier is 4 232. With a growth rate of 1.96%, the population at the end of 2024 will be 5 239, which means the population has grown by 1 007. The population growth includes 513 individuals who will qualify for subsidised housing which means 103 additional subsidised housing opportunities will be required (at an average household size of 5); in addition to the current backlog of 550 houses. This is a total of 653 houses. Considering the existing housing backlog and abovementioned future growth in housing demand, it is evident that all proposed housing projects must provide opportunities optimally and utilise land that is available for development to its full potential. Also refer to Appendix K2: The Napier Nuwerus Node – Urban Design Framework.			
6. Are the necessary services available together with adequate unallocated municipal capacity (at the time of application), or must additional capacity be created to cater for the project? (Confirmation by the relevant municipality in this regard must be attached to the BAR as Appendix E .)	YES	NO	Please explain
Currently the Eskom electricity grid available at the proposed development site can only accommodate an additional 200 residential erven, therefore should any additional erven be proposed confirmation of required upgrades must be obtained. Services confirmation still to be provided by the municipality.			
7. Is this project 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 BAR as Appendix E .)	YES	NO	Please explain
Engineer services report and associated municipal services confirmation still to be provided.			
8. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
Housing provision is of a national concern.			
9. Do location factors favour this land use (associated with the development proposal and associated listed activity(ies) applied for) at this place? (This relates to the contextualisation of the proposed land use on the proposed site within its broader context.)	YES	NO	Please explain
The proposed development site is ideally situated within the built environment on vacant transformed municipal land adjacent to existing amenities and low income housing development.			
10. Will the development proposal or the land use associated with the development proposal applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	YES	NO	Please explain
The proposed development will not impact on any sensitive natural or cultural areas.			
11. Will the development impact on people's health and well-being (e.g., in terms of noise, odours, visual character and 'sense of place', etc.)?	YES	NO	Please explain

Construction of the proposed development will lead to temporary construction noise impacts and permanent additional noise and visual impacts, but it is not expected that any of these impacts will be significant to such an extent that it is unacceptable as it will be in-line with the existing residential noise and visual characteristics of the Nuwerus low income housing area.			
12. Will the proposed development or the land use associated with the proposed development applied for, result in unacceptable opportunity costs?	YES	NO	Please explain
-			
13. What will the cumulative impacts (positive and negative) of the proposed land use associated with the development proposal and associated listed activity(ies) applied for, be?			
Cumulative potential negative impacts relate to demand on natural and social resources such as sensitive indigenous vegetation areas, drainage lines, water, waste generation and electricity usage.			
Cumulative potential positive impacts relate to provision of housing to the local community i.e. backyard dwellers.			
Potential cumulative impacts on the biodiversity and socio-economic environments will be mitigated by implementing the Environmental Management Programme.			
Refer to Section G and Appendix J of this report for the detailed impact assessment.			
14. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
As per the findings of the ecological baseline assessment and urban design framework/housing investigation conducted the sensitive natural features remaining on the site have been transformed and degraded to such an extent that the proposed development will have an overall low negative ecological impact significance if mitigated. The location factors of the site in terms of connectivity value to existing services infrastructure and low income housing development also favours the proposed development location.			
15. What will the benefits be to society in general and to the local communities?			Please explain
Definite Positive Cumulative Impacts:			
<ul style="list-style-type: none"> • Temporary employment opportunities (construction) • Low income housing provision 			
16. Any other need and desirability considerations related to the proposed development?			Please explain
NA			
17. Describe how the general objectives of Integrated Environmental Management as set out in Section 23 of the NEMA have been taken into account:			
<ul style="list-style-type: none"> • All involved in the planning and design identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage. The risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in Section 23 were taken in consideration and used in the assessments, mitigations and recommendations throughout this report. 			
INTEGRATED ENVIRONMENTAL MANAGEMENT			
23. General objectives			
(1) The purpose of this Chapter is to promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities.			
(2) The general objective of integrated environmental management is to			
(a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment; <i>Refer to point 18 below.</i>			
(b) identify, predict and evaluate the actual and potential impact on the environment, socioeconomic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2; <i>The potential impacts for both the construction and the operational phase have been identified and assessed in this report – this allows for the appropriate management and mitigation measures</i>			

to be identified and implemented where and when necessary to prevent (and if prevention is not possible to mitigate) environmental degradation and promote sustainability.

(c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;

All decisions during the planning and assessment by all involved for the activity promote the integration of the principles of environmental management set out in Section 2 to minimize and mitigate any significant effect on the environment. All these mitigations and management measures are proposed to be included as EA conditions and included in the EMP requirements.

(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;

Adequate and appropriate opportunity for public participation was provided and proof thereof included in Appendix F as per the guidelines and regulations in decisions that may affect the environment.

(e) ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and

All involved in the planning and design identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage. The risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in Section 2 were taken in consideration and used in the assessments, mitigations and recommendations throughout this report

(f) identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

Refer to point 18 below.

(3) The Director-General must coordinate the activities of organs of state referred to in section 24(1) and assist them in giving effect to the objectives of this section and such assistance may include training, the publication of manuals and guidelines and the co-ordination of procedures.

18 Describe how the **principles of environmental management** as set out in Section 2 of the NEMA have been taken into account:

NATIONAL ENVIRONMENTAL MANAGEMENT PRINCIPLES

2. Principles

(1) The principles set out in this section apply throughout the Republic to the actions of all organs of state that may significantly affect the environment and

(a) shall apply alongside all other appropriate and relevant considerations, including the State's responsibility to respect, protect, promote and fulfil the social and economic rights in Chapter 2 of the Constitution and in particular the basic needs of categories of persons disadvantaged by unfair discrimination;

(b) serve as the general framework within which environmental management and implementation plans must be formulated;

(c) serve as guidelines by reference to which any organ of state must exercise any function when taking any decision in terms of this Act or any statutory provision concerning the protection of the environment;

(d) serve as principles by reference to which a conciliator appointed under this Act must make recommendations; and

(e) guide the interpretation, administration and implementation of this Act, and any other law concerned with the protection or management of the environment.

(2) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. *The proposed environmental management requirements have been determined by assessing all potential impacts that the development may have on people and their needs and aims to prevent or if prevention is not possible to mitigate any potential negative impacts on the environment and people.*

(3) Development must be socially, environmentally and economically sustainable. *The proposed development has been planned, designed and assessed in such a manner as to ensure that it is socially, environmentally and economically sustainable.*

(4)

(a) Sustainable development requires the consideration of all relevant factors including the following:

(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

(iv) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;

(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

The assessment conducted aimed to identify all potential negative impacts on the environment and on people's environmental rights (as listed above and more), and where such potential negative impacts as identified and assessed could not be altogether prevented/avoided mitigation measures were recommended and incorporated into the Environmental Management Programme to minimise the significance of the potential negative impacts as far as possible. The assessment also aimed to determine whether or not the proposed development will lead to the unacceptable exploitation of renewable and non-renewable resources and associated ecosystems.

(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.

An integrated environmental assessment approach was followed acknowledging that all elements of the environment are linked and interrelated and realising that effects of decisions may have cumulative impacts on the environment and people and that the best practicable environmental option must therefore be selected.

(c) Environmental justice must be pursued so that adverse environmental impacts shall not be

distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.

Environmental justice was pursued to prevent discrimination against any person, particularly vulnerable and disadvantage persons.

(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.

Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being was pursued and special measures implemented if required ensure access.

(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.

As per the recommended EMP requirements the Applicant (as per the EA stipulations) remains responsible for the environmental health and safety consequences of the proposed activity/ies throughout its life cycle.

(f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

Adequate and appropriate opportunity for public participation was provided and proof thereof included in Appendix F as per the guidelines and regulations in decisions that may affect the environment.

(g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

All decision regarding the proposed activity/ies took into account the interests, needs and values of all potential interested and affected parties.

(h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.

Depending on the scope of the proposed activity community awareness campaigns will be conducted as and if required.

(i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.

All potential negative and positive impacts associated with the proposed development are assessed and mitigated during the assessment process.

(j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.

As per standard EMP requirements all relevant health and safety legislation must be adhered to during the implementation of the proposed activities.

(k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.

As per public participation process regulations all information relating to the proposed activities are public knowledge and available to the public for perusal and comments during the assessment process.

(l) There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.

(m) Actual or potential conflicts of interest between organs of state should be resolved through

conflict resolution procedures.

Comments from all relevant organs of state are requested, recorded and addressed during assessment process.

(n) Global and international responsibilities relating to the environment must be discharged in the national interest.

Applied as and when relevant to the proposed activities.

(o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

All potential impacts on environmental resources are assessed and mitigated to prevent unacceptable exploitation of renewable and non-renewable resources and associated ecosystems.

(p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

As per standard EMP requirements the applicant, as per the EA issued, will remain financially responsible for remedying any negative environmental and health effects cause by or due to the proposed activities.

(q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.

If applicable the role of women and youth in environmental management and development related to the proposed activities will be assessed and incorporated into EMP requirements during the assessment process.

(r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

All sensitive, vulnerable, highly dynamic or stressed ecosystems must be identified during the assessment process and the significance of any potential impacts on these systems must be determined and appropriate prevention, or if prevention is not possible mitigation measures must be incorporated into the EMP requirements.

SECTION E: DETAILS OF ALL THE ALTERNATIVES CONSIDERED

Note: Before completing this section, first consult this Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, 2014 (as amended), any subsequent Circulars, and guidelines available on the Department's website <http://www.westerncape.gov.za/eadp>.

The EIA Regulations, 2014 (as amended) defines "alternatives" as "in relation to a proposed activity, means different means of fulfilling the general purpose and requirements of the activity, which may include alternatives to the—

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

The NEMA (section 24(4)(a) and (b) of the NEMA, refers) prescribes that the procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment must, *inter alia*, with respect to every application for environmental authorisation –

- ensure that the general objectives of integrated environmental management laid down in the NEMA and the National Environmental Management Principles set out in the NEMA are taken into account; and
- include an investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity.

The general objective of integrated environmental management (section 23 of NEMA, refers) is, *inter alia*, to "identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management" set out in the NEMA.

The identification, evaluation, consideration and comparative assessment of alternatives directly relate to the management of impacts. Related to every identified impact, alternatives, modifications or changes to the activity must be identified, evaluated, considered and comparatively considered to:

- in terms of negative impacts, firstly avoid a negative impact altogether, or if avoidance is not possible alternatives to better mitigate, manage and remediate a negative impact and to compensate for/offset any impacts that remain after mitigation and remediation; and
- in terms of positive impacts, maximise impacts.

1. DETAILS OF THE IDENTIFIED AND CONSIDERED ALTERNATIVES AND INDICATE THOSE ALTERNATIVES THAT WERE FOUND TO BE FEASIBLE AND REASONABLE

Note: A full description of the investigation of alternatives must be provided and motivation if no reasonable or feasible alternatives exists.

(a) Property and **location/site** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

Location alternatives – As manifested in the current municipal SDF the proposed development site on RE/513 is the only reasonable and feasible available municipal owned land as located within the current urban edge and built environment within Napier to provide a suitable opportunity for the provision of subsidised housing.

(b) **Activity** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

Activity alternatives- The establishment of residential erven and construction of subsidized housing units with associated service infrastructure are the only reasonable and feasible activity alternatives assessed as determined by the need and desirability and housing investigations conducted for Napier.

(c) **Design or layout** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

Layout alternatives – Two layout alternatives have been assessed thus far.

Layout Alternative 1 – High density development option:

- 349 IRDP Row Houses - approximate unit size 40-45m² (Each unit is double storey and has a private internal staircase accessing the upper floor. Each unit is located on a private erf. Units are positioned in groups of 4 and are positioned around shared parking courts.)
- 28 GAP Houses – approximate unit size 45-50m² (Single storey semi-detached units.)
- A church and community hall – building area 980m²
- Creche and library – building area 615m²
- Open spaces, roads and services infrastructure – total area 37 600m²

Development Constraints for Layout Alternative 1:

- Does not take specialists recommendations into consideration i.e. southern watercourse ESA buffer area not incorporated into the layout.
- Currently Eskom power grid only has additional available capacity for 200 residential erven.
- "Small and dense" erven does not provide expansion opportunities for homeowners.

Layout Alternative 2 – Lower density development option:

- 130 RDP Erven - ± 150m² erven
- 25 Row Housing - ± 75m² erven
- 45 GAP Houses – ± 250m² erven
- Crèche and community hall erven
- Open spaces, roads and services infrastructure

Development Constraints for Layout Alternative 2:

- Does not take specialists recommendations into consideration i.e. southern watercourse ESA buffer area not incorporated into the layout.

- (d) **Technology** alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

Technology alternatives – the following energy/resources saving methods must be incorporated into the design of the units where funding allows:

1. All units to be provided with energy saving compact fluorescent lamps (CLF's).
2. All electric geysers should be insulated with geyser blankets.
3. All electric geyser thermostats should be set at the most optimal temperature.
4. All fitted appliances should have an energy rating and the most efficient models must be considered.
5. Energy efficient streetlight technology should be used as far as possible to reduce the energy requirements of the streetlight network.
6. Rain water harvesting from roofs and gutters must be considered to collect and store rainwater runoff. This can be used to provide supplementary water which can be used for washing and watering gardens.
7. Shower installations must be fitted with low-flow shower heads, where the water pressure is suitable.
8. Geysers should be installed vertically to save electricity.
9. Ensure that the maximum flow rate from hand wash basin tops does not exceed 6L per minute.
10. Indoor traps must be fitted with aerators to increase the efficiency by redirecting the flow and amount of water used.
11. Flush toilets must be fitted with dual or multi flush mechanisms to ensure that the amount of water required is controlled by the user.

- (e) **Operational** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

Operational alternatives – No operational alternatives were considered as the proposed activity is for the construction of residential erven and related infrastructure to be maintained by the owners and municipality after construction completion. Once operational, the only activities that will be undertaken are related to maintenance and upkeep of the development and associated infrastructure.

- (f) The option of **not implementing** the activity (the 'No-Go' Option):

The No-Development Option- The No-Development option will result in the site remaining as it is, transformed vacant municipal land as located within the current built environment and urban edge of Napier adjacent to existing services infrastructure associated with existing low income residential areas. A look at the Napier Nuwerus Node – Urban Design Framework housing study conducted will indicate support for both the concept and place as manifested in the IDP and Human Settlement Plan for the Cape Agulhas Municipality.

- (g) **Other** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

NA

- (h) Provide a **summary** of all alternatives investigated and the outcome of each investigation:

Location alternatives – As manifested in the current municipal SDF the proposed development site on RE/513 is the only reasonable and feasible available municipal owned land as located within the current urban edge and built environment within Napier to provide a suitable opportunity for the provision of subsidised housing.

Activity alternatives- The establishment of residential erven and construction of subsidized housing units with associated service infrastructure are the only reasonable and feasible activity alternatives assessed as determined by the need and desirability and housing investigations conducted for Napier.

Layout alternatives – Two layout alternatives have been assessed thus far.

Layout Alternative 1 – High density development option:

- 349 IRDP Row Houses - approximate unit size 40-45m² (Each unit is double storey and has a private internal staircase accessing the upper floor. Each unit is located on a private erf. Units are positioned in groups of 4 and are positioned around shared parking courts.)
- 28 GAP Houses – approximate unit size 45-50m² (Single storey semi-detached units.)
- A church and community hall – building area 980m²
- Creche and library – building area 615m²
- Open spaces, roads and services infrastructure – total area 37 600m²

Development Constraints for Layout Alternative 1:

- Does not take specialists recommendations into consideration i.e. southern watercourse ESA buffer area not incorporated into the layout.
- Currently Eskom power grid only has additional available capacity for 200 residential erven.
- “Small and dense” erven does not provide expansion opportunities for homeowners.

Layout Alternative 2 – Lower density development option:

- 130 RDP Erven - ± 150m² erven
- 25 Row Housing - ± 75m² erven
- 45 GAP Houses – ± 250m² erven
- Crèche and community hall erven
- Open spaces, roads and services infrastructure

Development Constraints for Layout Alternative 2:

- Does not take specialists recommendations into consideration i.e. southern watercourse ESA buffer area not incorporated into the layout.

Technology alternatives – the following energy/resources saving methods must be incorporated into the design of the units where funding allows:

1. All units to be provided with energy saving compact fluorescent lamps (CLF's).
2. All electric geysers should be insulated with geyser blankets.
3. All electric geyser thermostats should be set at the most optimal temperature.
4. All fitted appliances should have an energy rating and the most efficient models must be considered.
5. Energy efficient streetlight technology should be used as far as possible to reduce the energy requirements of the streetlight network.
6. Rain water harvesting from roofs and gutters must be considered to collect and store rainwater runoff. This can be used to provide supplementary water which can be used for washing and watering gardens.
7. Shower installations must be fitted with low-flow shower heads, where the water pressure is suitable.
8. Geysers should be installed vertically to save electricity.
9. Ensure that the maximum flow rate from hand wash basin tops does not exceed 6L per minute.
10. Indoor traps must be fitted with aerators to increase the efficiency by redirecting the flow and amount of water used.
11. Flush toilets must be fitted with dual or multi flush mechanisms to ensure that the amount of water required is controlled by the user.

Operational alternatives – No operational alternatives were considered as the proposed activity is for the construction of residential erven and related infrastructure to be maintained by the owners and municipality after construction completion. Once operational, the only activities that will be undertaken are related to maintenance and upkeep of the development and associated infrastructure.

The No-Development Option- The No-Development option will result in the site remaining as it is, transformed vacant municipal land as located within the current built environment and urban edge of Napier adjacent to existing services infrastructure associated with existing low income residential areas. A look at the Napier Nuwerus Node – Urban Design Framework housing study conducted will indicate support for both the concept and place as manifested in the IDP and Human Settlement

Plan for the Cape Agulhas Municipality.

- (i) Provide a detailed **motivation for not further considering** the alternatives that were found not feasible and reasonable, including a description and proof of the investigation of those alternatives:

Refer to points (a) – (f) above.

2. PREFERRED ALTERNATIVE

- (a) Provide a **concluding statement** indicating the preferred alternative(s), including preferred location, site, activity and technology for the development.

In terms of the current most preferred development alternative assessed layout alternative 2 is preferred as the current Eskom grid within Napier can only accommodate an additional 200 residential erven and the sizes of the proposed erven provides potential "expansion" opportunities to the future homeowners, however none of the current layout alternatives as presented by the municipality takes into consideration the specialist recommendation i.e. exclusion of southern drainage line Ecological Support Area buffer and therefore it is proposed that the proposed layout must be revised to take all specialist recommendations into consideration.

SECTION F: ENVIRONMENTAL ASPECTS ASSOCIATED WITH THE ALTERNATIVES

Note: The information in this section must be DUPLICATED for all the feasible and reasonable ALTERNATIVES.

1. DESCRIBE THE ENVIRONMENTAL ASPECTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT AND ITS ALTERNATIVES, FOCUSING ON THE FOLLOWING:

- (a) Geographical, geological and physical aspects:

Engineering and material characteristics:

On the basis of the geotechnical investigation, the following points relating to site geotechnical conditions and constraints, may be made:-

- a) The transported soils found at surface are generally medium dense to very dense. These transported soils are moderately compressible and will form a competent founding horizon. Design precautions will be required to cater for expected minor heave movements.
- b) The transported soils derived from residual soils and residual weathered shale and siltstone exhibit low compressibility and low to moderate plasticity. Post-compaction strength is expected to be low. Poor workability and drainage characteristics make these soils unsuitable for use in construction. These soils have a low to moderate potential for heave, and will generally be suitable for use as a load-bearing founding horizon, provided bearing pressures are limited and cognizance is taken of potential heave movements.
- c) The underling weathered shale, siltstone and sandstone horizons exhibit low compressibility and will form competent founding horizons.
- d) The transported sandy soils are plastic and are expected to have a low post-compaction strength. They would possibly be suitable only for use as a general fill. Clay and silt content however varies across the site and this may hamper compaction efforts and require cement stabilization. The coarse cobbly gravelly transported soils has a low to moderate post compaction strength and should thus be suitable for use as a general fill and selected layer quality material (possibly G9). To achieve suitable compaction levels however, the coarser cobble and gravel fractions will need to be selected out or crushed. Material for upper pavement layer works would need to be imported from an outside source.
- e) No particular excavation problems are anticipated within the transported soils and residual/completely weathered shale and siltstone. Refusal of the digger loader was however met within areas of medium hard rock shale, encountered within some parts of the site.
- f) Soils samples tested geochemically are slightly acidic in terms of pH. The soils generally have a moderate to high conductivity. No particular problems are foreseen with regard to possible deleterious effects on buried services.
- g) No sidewall collapse occurred within test pits. Excavation deeper than 1.5m will require shoring or battering for safety reasons.
- h) A perched water table was encountered in TP10 at a depth of 2.0 m bgl. TP10 is the lowest point on the site. The water table could rise slightly during the rainy season, but is not expected to reach founding depth.

Slope stability and erosion

In terms of topography the site is fairly flat lying sloping gradually and there is no risk of large scale slope failures unless large cuts are envisaged.

Slopes cut into transported soils will be unstable at gradients greater than 45o to the horizontal. Design precautions will thus be required for both temporary and permanent cut slopes.

As regards soil erosion, the transported sands immediately are susceptible to erosion under the influence of water during periods of heavy rain, especially once the vegetation covering the site is removed. Appropriate design precautions will thus be required.

Excavation classification with respect to services

Excavation within the transported and residual/ very soft rock shale, classifies as "soft to intermediate excavation" in terms of the SANS 1200 D Earthworks Specification. No "hard rock" excavation is expected within 4.0m of surface and in practice; these materials can be excavated and worked using conventional earthmoving equipment. Larger plant equipment such as a tracked excavator, possibly fitted with a rock bucket, may be required for pedogenic soils and deeper excavations

(deeper than 3.0m from surface) within less weathered soft rock shale.

Impact of the geotechnical character of the site on subsidy housing developments

The following geotechnical characteristics of the site are expected to have an impact on subsidy housing development and subsidy variations:-

- c) Difficulty of servicing land due to slopes, with the average slope generally being flatter than 1:10 but exceeds 1:20.
- d) Potentially expansive clayey soils on site that might require strengthened foundations.

Refer to Appendix G2: Phase 1 Geotechnical Report

(b) Ecological aspects:

<p>Will the proposed development and its alternatives have an impact on CBAs or ESAs? If yes, please explain: Also include a description of how the proposed development will influence the quantitative values (hectares/percentage) of the categories on the CBA/ESA map.</p>	YES	NO
<p>The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated "Ecological Support Area 2: Restore buffer area" has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development occurs within this drainage line nor its associated ESA2: Restore buffer area.</p> <p>As per the current layout alternatives proposed the development will fall within the ESA 2 area as mapped along the southern drainage line.</p>		
<p>Will the proposed development and its alternatives have an impact on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)? If yes, please explain:</p>	YES	NO
<p>The indigenous vegetation type originally occurring on the site and surrounds is <i>Critically Endangered</i> Elim Ferricrete Fynbos. According to the 2017 Western Cape Biodiversity Spatial Plan no remaining terrestrial or aquatic Critical Biodiversity Areas (CBAs) are mapped on the site. Minimal (less than 0.5ha in total) remaining non-viable indigenous vegetation species populations were recorded on site and no species of conservation concern were recorded nor are expected to occur on the site.</p> <p>The vegetation on the site is completely dominated by grass species, weeds and weedy herbs associated with cultivated lands. A row of planted <i>Pinus pinaster</i> trees is located along the south-eastern edge of the site. Scattered <i>Acacia saligna</i> trees are present throughout the site although the only dense stand is located within the northern part of the site. Scattered Eucalyptus trees are also present along the completely transformed and channelled non-perennial drainage line located within the northern part of the site.</p> <p>The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated "Ecological Support Area 2: Restore buffer area" has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development occurs within this drainage line nor its associated ESA2:Restore buffer area.</p> <p>The completely transformed and channelled non-perennial drainage line within the northern part of the site has been transformed to such an extent that it is not possible to determine the original extent or the flow path location. At certain sections within this drainage line it has been completely filled to create a vehicle or footpath crossing and the average width of the channel within the study area is approximately 1m wide. It is recommended that this drainage line be formalised to prevent potential future flooding of surrounding developments and to ensure ongoing free flow within the drainage line when it is flowing. The 1:100 year flow must be calculated and then used to determine the most suitable storm water structures that must be established within this drainage line to accommodate this flow. If financially possible, it is recommended that "landscape friendly" engineering structures are incorporated into the formalisation of this drainage line so that this drainage line can become an important and attractive aesthetic feature as part of the proposed development.</p>		
<p>The botanical sensitivity allocated to the site is low, as well as the overall conservation value of the</p>		

site except for the non-perennial drainage line and its associated ESA2 buffer area south of the site which has been allocated a high conservation value and not recommended for development. If the recommendations as provided in this report are incorporated into the proposed development layout and implemented during the associated construction-, operational-, and decommissioning phases it will have an overall low negative ecological impact.

It was concluded that, from an ecological impact point of view, the proposed development should not have an unacceptably significant negative impact on environmental features of the site and surrounds if specialist recommendations are taken into consideration and effectively implemented.

Will the proposed development and its alternatives have an impact on any populations of threatened plant or animal species, and/or on any habitat that may contain a unique signature of plant or animal species? If yes, please explain:	YES	NO
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As per the findings of the ecological baseline assessment conducted no plant, animal or their associated habitat of conservation concern has been recorded on the site and none are expected to occur within the study site or surrounds in viable numbers that will be impacted upon by the proposed development.

Describe the manner in which any other biological aspects will be impacted:

NA

Will the proposed development also trigger section 63 of the NEM: ICMA?	YES	NO
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If yes, describe the following:

- (i) the extent to which the applicant has in the past complied with similar authorisations;
- (ii) whether coastal public property, the coastal protection zone or coastal access land will be affected, and if so, the extent to which the proposed development proposal or listed activity is consistent with the purpose for establishing and protecting those areas;
- (iii) the estuarine management plans, coastal management programmes, coastal management lines and coastal management objectives applicable in the area;
- (iv) the likely socio-economic impact if the listed activity is authorised or is not authorised;
- (v) the likely impact of coastal environmental processes on the proposed development;
- (vi) whether the development proposal or listed activity—
 - (a) is situated within coastal public property and is inconsistent with the objective of conserving and enhancing coastal public property for the benefit of current and future generations;
 - (b) is situated within the coastal protection zone and is inconsistent with the purpose for which a coastal protection zone is established as set out in section 17 of NEM: ICMA;
 - (c) is situated within coastal access land and is inconsistent with the purpose for which coastal access land is designated as set out in section 18 of NEM: ICMA;
 - (d) is likely to cause irreversible or long-lasting adverse effects to any aspect of the coastal environment that cannot satisfactorily be mitigated;
 - (e) is likely to be significantly damaged or prejudiced by dynamic coastal processes;
 - (f) would substantially prejudice the achievement of any coastal management objective; or
 - (g) would be contrary to the interests of the whole community;
- (vii) whether the very nature of the proposed activity or development requires it to be located within coastal public property, the coastal protection zone or coastal access land;
- (viii) whether the proposed development will provide important services to the public when using coastal public property, the coastal protection zone, coastal access land or a coastal protected area; and
- (ix) the objects of NEM: ICMA, where applicable.

NA

(c) Social and Economic aspects:

What is the expected capital value of the project on completion?	Unknown
What is the expected yearly income or contribution to the economy that will be generated by or as a result of the project?	R0
Will the project contribute to service infrastructure?	YES NO
Is the project a public amenity?	YES NO
How many new employment opportunities will be created during the development phase?	Unknown
What is the expected value of the employment opportunities during the development phase?	Unknown
What percentage of this will accrue to previously disadvantaged individuals?	As much as possible
How will this be ensured and monitored (please explain):	
Employment opportunities to be allocated as according to municipal policy/guidelines which promote the employment and appointment of previously disadvantaged individuals.	
How many permanent new employment opportunities will be created during the operational phase of the project?	Unknown
What is the expected current value of the employment opportunities during the first 10 years?	Unknown

What percentage of this will accrue to previously disadvantaged individuals?	Unknown
How will this be ensured and monitored (please explain):	
Employment opportunities to be allocated as according to municipal policy/guidelines which promote the employment and appointment of previously disadvantaged individuals.	
Any other information related to the manner in which the socio-economic aspects will be impacted:	
-	

(d) Heritage and Cultural aspects:

A Notice of Intent to Develop was submitted to the HWC and the following record of decision was received – *You are hereby notified that, since there is no reason to believe that the proposed mixed use development on an area of approximately 7.8ha that will consist of 349 low cost housing, 28 Gap houses, a church, creche & library, open spaces, roads and services infrastructure, will not impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.*

However should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately and HWC must be notified without delay.

2. WASTE AND EMISSIONS

(a) Waste (including effluent) management

Will the development proposal produce waste (including rubble) during the development phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	Unknown	
<p>Waste is mainly expected to be produced during the construction phase. Types of "construction phase waste" may include:</p> <ul style="list-style-type: none"> • Overburden material from land clearing including plant materials and sand. • Waste oils i.e. from construction machinery and vehicles. • Sewage from portable toilets. • General domestic waste i.e. food waste and packaging from construction workers. • Construction packing materials i.e. empty cement bags, plastic ties and wrapping etc. • Illegally dumped domestic waste as already present on proposed development site which will have to be removed before construction can commence. • Runoff waste water i.e. from cement mixing areas. <p>There is no reasonable or feasible method to calculate the estimated quantities that will be produced for each of these waste types due to the amount of potential variables which exists i.e. amount of total staff to be employed, amount and type of construction materials to be used etc.</p>		

Will the development proposal produce waste during its operational phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	- m ³	
<p>The engineer services report (still to be provided) will take into consideration the different types of waste to be produced by the proposed development during its operational and services availability. Expected types of waste to be produced during the operational phase are:</p> <ul style="list-style-type: none"> • Sewage • Domestic/landfill waste <p>Amounts to be produced will depend on the final proposed development alternative.</p>		

Will the development proposal require waste to be treated / disposed of on site?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type per phase of the proposed development to be treated/disposed of?	NA m ³	
NA		
If no, where and how will the waste be treated / disposed of? Please explain. Indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type per phase of the proposed development to be treated/disposed of?		
All non-hazardous and hazardous waste to be suitably and temporarily stored at the construction camp and disposed of at a licensed landfill and/or hazardous waste handling facility at least once a week. During operation all waste produced to be managed and disposed of via existing municipal waste services.		
Has the municipality or relevant authority confirmed that sufficient capacity exists for treating / disposing of the waste to be generated by the development proposal? If yes, provide written confirmation from the municipality or relevant authority.	YES	NO (Services confirmation still to be provided)
Will the development proposal produce waste that will be treated and/or disposed of at another facility other than into a municipal waste stream?	Potentially – Yes (it is the applicant's prerogative to decide whether or not he/she wants to appoint a private waste handling company who might dispose of/treat the collected waste elsewhere outside of the municipal waste stream)	
If yes, has this facility confirmed that sufficient capacity exists for treating / disposing of the waste to be generated by the development proposal? Provide written confirmation from the facility.	YES	NO
Does the facility have an operating license? (If yes, please attach a copy of the licence.)	YES	NO
Facility name:		
Contact person:		
Cell:	Postal address:	
Telephone:	Postal code:	
Fax:	E-mail:	

Describe the measures that will be taken to reduce, reuse or recycle waste:

As per standard EMP waste management requirements to reduce, reuse or recycle waste must be promoted and implemented as far as feasibly and reasonable practical and financially possible.

(b) Emissions into the atmosphere

Will the development proposal produce emissions that will be released into the atmosphere?	YES	NO
If yes, does this require approval in terms of relevant legislation?	YES	NO
If yes, what is the approximate volume(s) of emissions released into the atmosphere?	Unknown	
Describe the emissions in terms of type and concentration and how these will be avoided/managed/treated/mitigated:		
Potential construction vehicle emission to be produced during the construction phase. Amounts to be produced unknown – will depend on type, amount and condition of construction vehicles used.		

3. WATER USE

(a) Indicate the source(s) of water for the development proposal by highlighting the appropriate box(es).

Municipal	Water board	Groundwater	River, Stream, Dam or Lake	Other	The project will not use water
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Note: Provide proof of assurance of water supply (e.g. Letter of confirmation from the municipality / water user associations, yield of borehole)

(b) If water is to be extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	NA	m ³
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(c) Does the development proposal require a water use permit / license from DWS?	YES	NO
If yes, please submit the necessary application to the DWS and attach proof thereof to this application as an Appendix.		

The activity potentially involves the infill/removal of material from a watercourse i.e tributary and development within 100m from a watercourse. Thus triggering a listed activity in terms of section 21 (c) and (i) of the National Water Act. As such water use authorisation is required to continue with the proposed activity. The pre-application basic assessment report is to be submitted to the Breede Gouritz Catchment Management Agency (commenting on behalf of the Department of Water and Sanitation) to indicate the way forward and need for a Water Use application.

(d) Describe the measures that will be taken to reduce water demand, and measures to reuse or recycle water:

Implement water saving requirements as per Circular C1 of 2018 - Water Crisis Response Policy Guidelines for the Western Cape attached as Addendum 3 to the EMP.

4. POWER SUPPLY

(a) Describe the source of power e.g. municipality / Eskom / renewable energy source.

Eskom via municipal grid.

(b) If power supply is not available, where will power be sourced?

NA

5. ENERGY EFFICIENCY

(a) Describe the design measures, if any, that have been taken to ensure that the development proposal will be energy efficient:

Technology alternatives – the following energy/resources saving methods must be incorporated into the design of the units where funding allows:

1. All units to be provided with energy saving compact fluorescent lamps (CLF's).
2. All electric geysers should be insulated with geyser blankets.
3. All electric geyser thermostats should be set at the most optimal temperature.
4. All fitted appliances should have an energy rating and the most efficient models must be considered.
5. Energy efficient streetlight technology should be used as far as possible to reduce the energy requirements of the streetlight network.
6. Rain water harvesting from roofs and gutters must be considered to collect and store rainwater runoff. This can be used to provide supplementary water which can be used for washing and watering gardens.
7. Shower installations must be fitted with low-flow shower heads, where the water pressure is suitable.
8. Geysers should be installed vertically to save electricity.
9. Ensure that the maximum flow rate from hand wash basin tops does not exceed 6L per minute.
10. Indoor traps must be fitted with aerators to increase the efficiency by redirecting the flow and amount of water used.
11. Flush toilets must be fitted with dual or multi flush mechanisms to ensure that the amount of water required is controlled by the user.

(b) Describe how alternative energy sources have been taken into account or been built into the design of the project, if any:

NA

6. TRANSPORT, TRAFFIC AND ACCESS

Describe the impacts in terms of transport, traffic and access.

It is not expected that the proposed development will have an significant negative impact on current low traffic conditions of the site and surrounds. The necessary traffic management/mitigation measures must be incorporated into the layout and EMP to minimise the significance of any potential negative traffic impacts as far as possible.

7. NUISANCE FACTOR (NOISE, ODOUR, etc.)

Describe the potential nuisance factor or impacts in terms of noise and odours.

Noise

Additional noise due to construction activities and associate operational phase of the proposed development are expected to be produced, however construction noise will only be temporary and all possible mitigation measures will be implemented as per the requirements of the EMP to minimise noise production as far as possible. Noise levels produced during the construction and operational phases must not exceed the allowable maximum urban noise levels and must be regulated by the requirements of the EMP.

Odour

No odours are expected to be produced during the proposed construction and/or operational phases.

Note: Include impacts that the surrounding environment will have on the proposed development.

8. OTHER

Refer to Section G below for summary of potential positive and negative impacts as assessed.

SECTION G: IMPACT ASSESSMENT, IMPACT AVOIDANCE, MANAGEMENT, MITIGATION AND MONITORING MEASURES

1. METHODOLOGY USED IN DETERMINING AND RANKING ENVIRONMENTAL IMPACTS AND RISKS ASSOCIATED WITH THE ALTERNATIVES

- (a) Describe the **methodology** used in determining and ranking the nature, significance consequences, extent, duration and probability of potential environmental impacts and risks associated with the proposed development and alternatives.

The assessment criteria were developed based on the Department of Environmental Affairs' Integrated Environmental Management Series guideline documents.			
Criteria	Description		
Nature	a description of what causes the effect, what will be affected, and how it will be affected.		
	Type	Score	Description
Extent (E)	None (No)	1	Footprint
	Site (S)	2	On site or within 100 m of the site
	Local (L)	3	Within a 20 km radius of the centre of the site
	Regional (R)	4	Beyond a 20 km radius of the site
	National (Na)	5	Crossing provincial boundaries or on a national / land wide scale
Duration (D)	Short term (S)	1	0 – 1 years
	Short to medium (S-M)	2	2 – 5 years
	Medium term (M)	3	5 – 15 years
	Long term (L)	4	> 15 years
	Permanent(P)	5	Will not cease
Magnitude (M)	Small (S)	0	will have no effect on the environment
	Minor (Mi)	2	will not result in an impact on processes
	Low (L)	4	will cause a slight impact on processes
	Moderate (Mo)	6	processes continuing but in a modified way
	High (H)	8	processes are altered to the extent that they temporarily cease
	Very high (VH)	10	results in complete destruction of patterns and permanent cessation of processes.
Probability (P) the likelihood of the impact actually occurring. Probability is estimated on a scale, and a score assigned	Very improbable (VP)	1	probably will not happen
	Improbable (I)	2	some possibility, but low likelihood
	Probable (P)	3	distinct possibility
	Highly probable (HP)	4	most likely
	Definite (D)	5	impact will occur regardless of any prevention measures
Significance (S)	Determined through a synthesis of the characteristics described above: S = (E+D+M) x P Significance can be assessed as low, medium or high		
Low: < 30 points:	The impact would not have a direct influence on the decision to develop in the area		
Medium: 30 – 60 points:	The impact could influence the decision to develop in the area unless it is effectively mitigated		
High: > 60 points:	The impact must have an influence on the decision process to develop in the area		
No significance	When no impact will occur or the impact will not affect the environment		
Status	Positive (+)		Negative (-)
The degree to which the impact can be reversed	Completely reversible (R)	90-100%	The impact can be mostly to completely reversed with the implementation of the correct mitigation and rehabilitation measures.
	Partly reversible (PR)	6-89%	The impact can be partly reversed providing that mitigation measures as stipulated in the EMP are implemented and rehabilitation measures are undertaken
	Irreversible (IR)	0-5%	The impact cannot be reversed, regardless of the mitigation or rehabilitation measures taking place
The degree to which the impact may cause irreplaceable loss of resources	Resource will not be lost (R)	1	The resource will not be lost or destroyed provided that mitigation and rehabilitation measures as stipulated in the EMP are implemented
	Resource may be partly destroyed (PR)	2	Partial loss or destruction of the resources will occur even though all management and mitigation measures as stipulated in the EMP are implemented
	Resource cannot be replaced (IR)	3	The resource cannot be replaced no matter which management or mitigation measures are implemented.
The degree to which the impact can be mitigated	Completely mitigatable (CM)	1	The impact can be completely mitigated providing that all management and mitigation measures as stipulated in the EMP are implemented
	Partly mitigatable (PM)	2	The impact cannot be completely mitigated even though all management and mitigation measures as stipulated in the EMP are implemented. Implementation of these measures will provide

			a measure of mitigatability
	Un-mitigatable (UM)	3	The impact cannot be mitigated no matter which management or mitigation measures are implemented.

(b) Please describe any gaps in knowledge.

EAP is only knowledgeable with regards to the potential environmental and ecosystems aspects. Limited knowledge with regard to the potential services impacts at this stage as engineer services report and municipal services confirmation are still to be provided.

(c) Please describe the underlying assumptions.

In undertaking the investigation and compiling this report, the following has been assumed:

- The information provided by the client, specialists and engineers is accurate and unbiased;
- The scope of this investigation is to assess the direct and cumulative environmental impacts associated with the development; and
- Should the proposed project be authorised, the applicant will incorporate the recommendations and mitigation measures outlined in this BAR, the EMP and the EA into the detailed design and construction contract specifications and operational management system for the proposed project.

(d) Please describe the uncertainties.

None at this stage.

(e) Describe adequacy of the assessment methods used.

Based on the EAP's assessment information was provided to address the concerns and assess the impacts of the proposed development on the environment. Information as provided by the applicant, specialist, engineers and as collected by the EAP during site surveys etc. has been used to inform the current development proposal and impact assessment.

2. IDENTIFICATION, ASSESSMENT AND RANKING OF IMPACTS TO REACH THE PROPOSED ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE WITHIN THE SITE

Note: In this section the focus is on the identified issues, impacts and risks that influenced the identification of the alternatives. This includes how aspects of the receiving environment have influenced the selection.

(a) List the identified impacts and risks for each alternative.

Alternative 1:	<p><u>LAYOUT ALTERNATIVE 1</u></p> <p><u>CONSTRUCTION PHASE- LAYOUT ALTERNATIVE 1</u></p> <ul style="list-style-type: none"> • Disturbance to subsurface geological layers (medium negative impact before mitigation and low negative impact with mitigation measures); • Soil erosion (medium negative impact before mitigation and low negative impact with mitigation measures); • Compaction of soil (medium negative impact before mitigation and low negative impact with mitigation measures); • Increase in and accumulation of storm water runoff (high negative impact before mitigation and low negative impact with mitigation measures); • Impact of proposed development activities on identified aquatic NFEPA and/or ESA (medium negative impact before mitigation and low negative impact with mitigation measures); • Disturbance to southern transformed and channelled non-perennial drainage line (high negative impact before mitigation and low negative impact with mitigation measures); • Impact of construction work on river hydrology/flow (high negative impact before mitigation and low negative impact with mitigation measures); • Impact of proposed development activities on surface- and groundwater resources including aquatic NFEPAs and/or Ecological Support Areas
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("ESA") (high negative impact before mitigation and low negative impact with mitigation measures);

- Impact of proposed activities on indigenous vegetation and associated fauna and avifauna habitat (high negative impact before mitigation and low negative impact with mitigation measures)
- Introduction of alien and weed plant species (medium negative impact before mitigation and low negative impact with mitigation measures)
- Agricultural impacts (high negative impact before mitigation and low negative impact with mitigation measures)
- Increased temporary construction jobs (medium positive impact)
- Increased traffic due to the construction activities requiring various vehicles to come onto and leave the site. (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of construction workers on local community safety and security (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of litter or waste from the construction site on the surrounding communities (medium negative impact before mitigation and low negative impact with mitigation measures)
- Dust and emissions pollution arising from ground clearing and other construction activities (medium negative impact before mitigation and low negative impact with mitigation measures)
- The potential impact of the proposed development on archaeological, paleontological and heritage remains (high negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to construction machinery (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of construction of proposed serviced erven (medium negative impact before mitigation and low negative impact with mitigation measures)

OPERATIONAL PHASE- LAYOUT ALTERNATIVE 1

- Increase in storm water runoff due to hardening of surfaces which may lead to erosion of surrounding areas (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in storm water runoff leading to altered flow in lower lying drainage lines (medium negative impact before mitigation and low negative impact with mitigation measures);
- Impact on hydrology/flow due to impedance within drainage lines (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of operational and maintenance activities of proposed development on remaining riparian habitat and associated instream water quality (high negative impact before mitigation and low negative impact with mitigation measures);
- Increase in low income housing for the town of Napier (high positive significance);
- Increased traffic due to proposed residential serviced erven development (medium negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Additional load on existing municipal services infrastructure such as electricity, water, sewage and waste handling (high negative impact

	<p>before mitigation and medium negative impact with mitigation measures)</p> <ul style="list-style-type: none"> • Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures) • Visual impact of proposed housing development (medium negative impact before mitigation and low negative impact with mitigation measures) <p><u>DECOMMISSIONING AND CLOSURE PHASE- LAYOUT ALTERNATIVE 1</u></p> <ul style="list-style-type: none"> • The decommissioning of the developments are not anticipated in the near future. Impacts during this phase will however be similar to that of the construction phase. Mitigation and management measures will be related to the technology of the day and needs to be discussed at such time as decommissioning will occur. All structures must be removed and the area rehabilitated to the state as before construction had commenced (dependent upon the end land use agreement). Waste, where possible must be recycled. All concrete introduced must be removed off site to a licensed waste facility.
Alternative 2:	<p><u>LAYOUT ALTERNATIVE 2</u></p> <p><u>CONSTRUCTION PHASE- LAYOUT ALTERNATIVE 2</u></p> <ul style="list-style-type: none"> • Disturbance to subsurface geological layers (medium negative impact before mitigation and low negative impact with mitigation measures); • Soil erosion (medium negative impact before mitigation and low negative impact with mitigation measures); • Compaction of soil (medium negative impact before mitigation and low negative impact with mitigation measures); • Increase in and accumulation of storm water runoff (high negative impact before mitigation and low negative impact with mitigation measures); • Impact of proposed development activities on identified aquatic NFEPA and/or ESA (medium negative impact before mitigation and low negative impact with mitigation measures); • Disturbance to southern transformed and channelled non-perennial drainage line (high negative impact before mitigation and low negative impact with mitigation measures); • Impact of construction work on river hydrology/flow (high negative impact before mitigation and low negative impact with mitigation measures); • Impact of proposed development activities on surface- and groundwater resources including aquatic NFEPAs and/or Ecological Support Areas ("ESA") (high negative impact before mitigation and low negative impact with mitigation measures); • Impact of proposed activities on indigenous vegetation and associated fauna and avifauna habitat (high negative impact before mitigation and low negative impact with mitigation measures) • Introduction of alien and weed plant species (medium negative impact before mitigation and low negative impact with mitigation measures) • Agricultural impacts (high negative impact before mitigation and low negative impact with mitigation measures) • Increased temporary construction jobs (medium positive impact) • Increased traffic due to the construction activities requiring various vehicles to come onto and leave the site. (medium negative impact before mitigation and low negative impact with mitigation measures) • Impact of construction workers on local community safety and security (medium negative impact before mitigation and low negative impact with mitigation measures)

- Impact of litter or waste from the construction site on the surrounding communities (medium negative impact before mitigation and low negative impact with mitigation measures)
- Dust and emissions pollution arising from ground clearing and other construction activities (medium negative impact before mitigation and low negative impact with mitigation measures)
- The potential impact of the proposed development on archaeological, paleontological and heritage remains (high negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to construction machinery (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of construction of proposed serviced erven (medium negative impact before mitigation and low negative impact with mitigation measures)

OPERATIONAL PHASE- LAYOUT ALTERNATIVE 2

- Increase in storm water runoff due to hardening of surfaces which may lead to erosion of surrounding areas (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in storm water runoff leading to altered flow in lower lying drainage lines (medium negative impact before mitigation and low negative impact with mitigation measures);
- Impact on hydrology/flow due to impedance within drainage lines (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of operational and maintenance activities of proposed development on remaining riparian habitat and associated instream water quality (high negative impact before mitigation and low negative impact with mitigation measures);
- Increase in low income housing for the town of Napier (high positive significance);
- Increased traffic due to proposed residential serviced erven development (medium negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Additional load on existing municipal services infrastructure such as electricity, water, sewage and waste handling (high negative impact before mitigation and medium negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of proposed housing development (medium negative impact before mitigation and low negative impact with mitigation measures)

DECOMMISSIONING AND CLOSURE PHASE- LAYOUT ALTERNATIVE 2

The decommissioning of the developments is not anticipated in the near future. Impacts during this phase will however be similar to that of the construction phase. Mitigation and management measures will be related to the technology of the day and needs to be discussed at such time as decommissioning will occur. All structures must be removed and the area rehabilitated to the state as before construction had commenced (dependent upon the end land use agreement). Waste, where possible must be recycled. All concrete introduced must be

	removed off site to a licensed waste facility.
No-go Alternative:	<p><u>CONSTRUCTION PHASE- NO-GO/NO-DEVELOPMENT ALTERNATIVE</u></p> <ul style="list-style-type: none"> No increase in temporary construction job opportunities (medium negative impact as no temporary construction jobs will be created) <p><u>OPERATIONAL PHASE- NO-GO/NO-DEVELOPMENT ALTERNATIVE</u></p> <ul style="list-style-type: none"> No provision of low income housing development to the town of Napier (high negative significance)

(b) Describe the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts can be reversed; may cause irreplaceable loss of resources; and can be avoided, managed or mitigated.

The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. (The EAP has to select the relevant impacts identified in blue in the table below for each alternative and repeat the table for each impact and risk).

Note: The EAP may decide to include this section as Appendix J to the BAR.

Refer to Appendix J for Impact Assessment Tables.

(c) Provide a summary of the site selection matrix.

<p>The proposed development site on RE/513 was selected due to the following attributes:</p> <ul style="list-style-type: none"> Located within the built environment and municipal urban edge. Adjacent to existing Nuwerus low income housing project. Availability of existing services infrastructure to connect to i.e. roads, water pipelines etc. Municipal owned land The site has been previously ploughed and cultivated and is therefore degraded and transformed with no viable populations of returning indigenous vegetation. Community amenities such as clinic, church, crèche is located nearby.
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(d) Outcome of the site selection matrix.

Refer to (c) above.

3. SPECIALIST INPUTS/STUDIES, FINDINGS AND RECOMMENDATIONS

Note: Specialist inputs/studies must be attached to this report as **Appendix G** and must comply with the content requirements set out in Appendix 6 of the EIA Regulations, 2014 (as amended). Also take into account the Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, 2014, any subsequent Circulars, and guidelines available on the Department's website (<http://www.westerncape.gov.za/eadp>).

Provide a summary of the findings and impact management measures identified in any specialist report and an indication of how these findings and recommendations have been included in the BAR.

Ecological Baseline Assessment, November 2017, Eco Impact:

Ecological Impact Assessment with Associated Mitigation and Rehabilitation Measures to be implemented

Construction and Operational Phases:

Nature of potential impact:

Impact of proposed activities on indigenous vegetation and associated fauna and avifauna habitat

Discussion:

On the proposed development area of 7.8ha as assessed less than 0.5ha of scattered indigenous vegetation remains with no plant species of conservation concern, and the site is not expected to be an important breeding site or habitat for any fauna or avifauna species of conservation

concern.

Cumulative impacts:

Loss of indigenous vegetation and associated fauna and avifauna habitat.

Mitigation:

- Clearly demarcate the southern boundary in-between the proposed development footprint area and the recommended no-go/no-development area and undertake construction and operational activities (including construction camp) only in demarcated development footprint area. Demarcation method to be approved by an Environmental Control Officer (ECO).
- No construction related disturbance should be allowed within the recommended southern no-go/no-development area. This includes no dumping of fill, no roads, and all forms of temporary disturbance.
- Implement site specific erosion and storm water runoff management measures to prevent (or if prevention is not possible limit) any erosion from occurring on the development footprint area and surrounds.
- The landowner/s must adhere to his/her legal obligations to actively eradicate and manage alien vegetation infestations present on the applicable and surrounding properties.

Criteria		
	Without Mitigation	With Mitigation
Extent	2	1
Duration	5	5
Magnitude	10	2
Probability	5	2
Significance	85 - High	16 - Low
Status	High Negative Significance without Mitigation	Low Negative Significance with Mitigation
Reversibility	100% Reversible	100% Reversible
Irreplaceable loss of resources	2-Partial loss of resources but can be rehabilitated	2 – Partial loss of resources
Degree to which impact can be mitigated	2 – Partly, some loss of indigenous vegetation will occur but will be limited to less than 0.5ha indigenous vegetation	

Nature of potential impact:

Impact of proposed development activities on surface- and groundwater resources

Discussion:

Construction activities can impact negatively upon the surface and groundwater resources on and adjacent to the site.

The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated Ecological Support Area 2: Restore buffer area has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development should occur within this drainage line or its associated ESA2: Restore buffer area, which will prevent any potential impacts on the condition and functioning of this drainage line.

The completely transformed and channelled non-perennial drainage line within the northern parts of the site has been transformed to such an extent that it is not possible to neither determine the original extent nor flow path location. At certain sections within this drainage line it has been completely filled to create a vehicle or footpath crossing and the average width of the channel within the study area is approximately 1m wide. It is recommended that this drainage line be formalised to prevent potential future flooding of surrounding developments and ensure ongoing free flow within the drainage line when it is flowing. The 1:100 year flow must be calculated and then used to determine the most suitable storm water structures that must be established within this drainage line to accommodate this flow. If financially possible it is recommended that "landscape friendly" engineering structures are incorporated into the formalisation of this drainage line so that this drainage line can become an important and attractive aesthetic feature as part of the proposed development.

Possible chemicals found on site during construction as well as any hydrocarbon spillages will negatively affect the soil and surface or ground water interacting with it. Should the spills not be cleaned up and surface water infiltrate the ground, pollutants may even affect the groundwater resource.

Cumulative impacts:

Loss of fresh water habitat and pollution of surface water resources.

Mitigation:

- No development to be allowed within the ESA2 buffer area along the southern watercourse.
- The transformed northern drainage line must be formalised to accommodate the 1:100 year flood event and prevent potential future flooding of surrounding developments and ensure ongoing free flow within the drainage line when it is flowing.
- All construction activities and personnel on site to stay within demarcated construction areas.
- Proper waste bins to be provided to construction staff and all waste to be regularly removed to municipal landfill site.
- If any fuel or hazardous materials is spilled on site it must be treated as according to EMP hazardous spill management requirements.
- The cement mixing area must be at least 32m away from the edge of the watercourses and is only to take place within demarcated cement mixing area that is impermeable and has a berm so that no cement mix runoff water escapes from cement mixing area.

Criteria	Without Mitigation	With Mitigation
Extent	2	1
Duration	5	1
Magnitude	10	2
Probability	5	2
Significance	85 - High	8 - Low
Status	High Negative Significance without Mitigation	Low Negative Significance with Mitigation
Reversibility	100%	100%
Irreplaceable loss of resources	2-Partial loss of resources but can be rehabilitated	1 – Resource will not be lost
Degree to which impact can be mitigated	1- Completely	

Nature of potential impact:

Potential erosion of the site and surrounds

Discussion:

Vegetation clearance and hardening of surfaces could lead to an increase in storm water runoff and eventually lead to soil erosion which can occur due to wind (wind erosion cause dust pollution); and due to overland storm water flow should heavy rains fall.

Cumulative impacts:

Exposing soil may lead to erosion of site and surrounds if not mitigated.

Mitigation:

- Site specific construction and operational phase storm water management plan must be compiled and implemented to prevent any erosion or significant increase in storm water runoff from occurring and artificially recharging the remaining drainage lines.
- Should any signs of erosion or artificial recharge be observed the municipality must implemented rectification and preventions measures immediately and consult with the appointed ECO before implementing these measures.

Criteria	Without Mitigation	With Mitigation
Extent	3	1
Duration	5	1
Magnitude	6	2
Probability	4	2
Significance	56 - Medium	8 - Low

Status	Medium Negative Significance without Mitigation	Low Negative Significance with Mitigation
Reversibility	100%	100%
Irreplaceable loss of resources	2-Partial loss of resources but can be rehabilitated	1 – Resource will not be lost
Degree to which impact can be mitigated	1 – Can be completely mitigated	

Decommissioning/Rehabilitation Phase:

Nature of potential impact:	Potential erosion of the site and surrounds during rehabilitation phase
Discussion:	Decommissioning (i.e. demolishing developed structures) could lead to soil erosion which can occur due to wind (wind erosion cause dust pollution); and due to overland storm water flow should heavy rains fall.
Cumulative impacts:	Exposing soil may lead to erosion of site and surrounds if not mitigated.
Mitigation:	<ul style="list-style-type: none"> • Decommissioned areas must be rehabilitated and planted with indigenous vegetation immediately after built structures have been removed. • Engineered contour structures reinstated and maintained. • Monitor rehabilitation of area on a 6 monthly basis until effective/successful rehabilitation has been obtained. • If erosion is detected implement erosion rectification and preventions measures as guided by an ECO

Criteria	Without Mitigation	With Mitigation
Extent	3	1
Duration	5	1
Magnitude	6	2
Probability	4	2
Significance	56 - Medium	8 - Low
Status	Medium Negative	Low Negative (Acceptable)
Reversibility	100%	100%
Irreplaceable loss of resources	2-Partial loss of resources but can be rehabilitated	1 – Resource will not be lost
Degree to which impact can be mitigated	1 – Can be completely mitigated	

Concluding Remarks and Summary of Impact Mitigation and Rehabilitation Measures Proposed before, during and after the Proposed Activities

The botanical sensitivity allocated to the site is low, as well as the overall conservation value of the site except for the non-perennial drainage line and its associated ESA2 buffer area south of the site which has been allocated a high conservation value and recommended not to be developed upon. If the recommendations as provided in this report are incorporated into the proposed development layout and implemented during the associated construction-, operational-, and decommissioning phases it will have an overall low negative ecological impact.

It was concluded that from an ecological impact point of view that the proposed development should not have an unacceptable significant negative impact on environmental features of the site and surrounds if specialist recommendations are taken into consideration and effectively implemented.

Summary of recommendations as listed in the report and additional recommendations to be implemented are listed below:

Planning considerations and constraints-

- The non-perennial drainage line within the cultivated agricultural land along the southern border of the site falls outside the study site and has been classified as a natural NFEPA Wetland, but an associated Ecological Support Area 2: Restore buffer area has been mapped for the drainage line and a section thereof falls within the southern part of the site. It is recommended that no development occur within this drainage line or its associated ESA2: Restore buffer area, which will prevent any potential impacts on the condition and functioning of this drainage line.
- The completely transformed and channelled non-perennial drainage line within the northern parts of the site has been transformed to such an extent that it is not possible to neither determine the original extent nor flow path location. At certain sections within this drainage line it has been completely filled to create a vehicle or footpath crossing and the average width of the channel within the study area is approximately 1m wide. It is recommended that this drainage line be formalised to prevent potential future flooding of surrounding developments and ensure ongoing free flow within the drainage line when it is flowing. The 1:100 year flow must be calculated and then used to determine the most suitable storm water structures that must be established within this drainage line to accommodate this flow. If financially possible it is recommended that "landscape friendly" engineering structures are incorporated into the formalisation of this drainage line so that this drainage line can become an important and attractive aesthetic feature as part of the proposed development.

Construction, Operational and Rehabilitation phases -

- The project implementation process should be subject to standard Environmental Management Programme (EMP) prescripts and conditions and only proceed under supervision of a competent and diligent Environmental Control Officer, both during the construction, operational and decommission/rehabilitation phases.
- Undertake development activities only in identified and specifically demarcated areas as proposed.
- Demarcate no-go areas before any land clearing occurs under the supervision of an ECO. Demarcation must be clearly visible and effective and no-go area must remain demarcated throughout construction phase.
- Personnel should be restricted to the construction camp site and immediate construction areas only.
- Remove and conserve topsoil layer and overburden material for rehabilitation after construction activities have ceased
- Implement site specific erosion and storm water runoff management measures as according to EMP requirements to prevent (or if prevention is not possible limit) any erosion from occurring on the development footprint area and surrounds.
- Proper waste bins to be provided during construction and operation and all waste to be regularly (at least once a week) removed to municipal landfill site.
- If any fuel or hazardous materials is spilled on site it must be treated as according to EMP requirements.
- The cement mixing area must be at least 32m away from the edge of the watercourses and is only to take place within demarcated cement mixing area that is impermeable and has a berm so that no cement mix runoff water escapes from cement mixing area.
- The landowner/s must adhere to his/her legal obligations to actively eradicate and manage alien tree infestations present on the applicable and surrounding properties.
- Site specific construction and operational phase storm water management plan must be compiled and implemented to prevent any erosion or significant increase in storm water runoff from occurring and artificially recharging the remaining drainage lines.
- Should any signs of erosion or artificial recharge be observed the municipality must implemented rectification and preventions measures immediately and consult with the appointed ECO before implementing these measures.
- Only use vegetation indigenous to the area to rehabilitate impacted/decommissioned areas and implement ongoing monitoring of the rehabilitated areas until successful rehabilitation has taken

place.

- After topsoil has been replaced ongoing monitoring and removal of alien vegetation regrowth must be conducted to ensure effective rehabilitation of indigenous vegetation.
- Decommissioned areas must be rehabilitated and planted with indigenous vegetation immediately after built structures have been removed.
- Engineered contour structures reinstated and maintained.
- Monitor rehabilitation of areas impacted outside of the proposed development areas or decommissioned areas on a 6 monthly basis until effective/successful rehabilitation has been obtained.
- If erosion is detected during or after rehabilitation implement erosion rectification and prevention measures as guided by an ECO

Eco Impact is of the opinion, and based on the survey and desk study done, that the proposed development activities; if designed and implemented according to the recommendations as provided in this report, will not have an unacceptable significantly negative impact on the environmental aspects of the site and surrounds as assessed in this report.

Phase 1 Geotechnical Site Investigation for Erven 513 & 1719, Napier, Core Geotechnical Nov 2017:

Foundation recommendations and solutions

Recommendations for foundation design applicable to the site geotechnical conditions and site classification (S/H1/R, are discussed below:-

a) Found using conventional pad or strip footings.

- Found within medium dense to dense transported soils at approximately 0.5 m bgl. Total movement, including settlement and heave, should be within acceptable levels (<10 mm) with a maximum allowable bearing pressure of 100 kPa.
- Bearing pressure could be increased to 250 kPa if founded on rock. This will also limit the amount of settlement and potential heave expected for clayey soils above the rock layer.

b) Found using stiffened concrete raft foundations

- Compact from surface to at least 95 % Mod AASHTO maximum dry density, using a heavy vibratory roller, before founding.
- Bearing pressures should be limited to 70 kPa

The following should be noted with regards to the above mentioned founding options:-

- Surface beds can be founded conventionally on in-situ transported soils once this material has been compacted to at least 93% Mod. AASHTO maximum dry density. Reinforcement of the surface beds and isolating them from walls to accommodate possible movements will minimize the risk of cracking. Alternatively surface beds may be designed as suspended slabs, in which case in-situ soils can be left in place (as is) and used only as a back-shutter.
- Structures will require modified normal construction techniques to be applied to cater for some minor settlement (due to the presence of soft spots in the profile) and heave movement (totalling approximately 5-10mm). Suitable measures would include additional reinforcement in brickwork in plinth walls and above doors and windows, reinforcement of surface beds, articulation of brick panels using construction joints and effective water management as outlined in Section 9 (refer also to NHBRC Home Building Manual).

Drainage

A perched water table was only encountered in TP10 at a depth of 2.0 m bgl. Groundwater is not expected to influence the remainder of the site. Site drainage is however required to minimize ingress of water into soils below foundations and therefore minimize risks of any associated differential movements.

All drainage and storm water services should be designed in accordance with sound engineering practice.

Special precautionary measures

Apart from those outlined above, no special precautionary measures are expected to be required. The required Phase 2 geotechnical site investigation would need to confirm site ground conditions,

as described herein, and also confirm the design precautions necessary for structures and roads.

Normally the Phase 2 investigation would involve the inspection of service trenches across the site as a minimum, with an Addendum report to be attached to the Phase 1 geotechnical report.

Conclusions

This Phase 1 geotechnical site investigation indicates that the site is broadly suitable for project linked subsidy housing development, provided that aspects of concern relating to the geotechnical character of the site are addressed. These aspects are highlighted in the report.

4. ENVIRONMENTAL IMPACT STATEMENT

Provide an environmental impact statement of the following:

(i) A summary of the key findings of the EIA.

LAYOUT ALTERNATIVE 1

CONSTRUCTION PHASE- LAYOUT ALTERNATIVE 1

- Disturbance to subsurface geological layers (medium negative impact before mitigation and low negative impact with mitigation measures);
- Soil erosion (medium negative impact before mitigation and low negative impact with mitigation measures);
- Compaction of soil (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in and accumulation of storm water runoff (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on identified aquatic NFEPA and/or ESA (medium negative impact before mitigation and low negative impact with mitigation measures);
- Disturbance to southern transformed and channelled non-perennial drainage line (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of construction work on river hydrology/flow (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on surface- and groundwater resources including aquatic NFEPA and/or Ecological Support Areas ("ESA") (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed activities on indigenous vegetation and associated fauna and avifauna habitat (high negative impact before mitigation and low negative impact with mitigation measures)
- Introduction of alien and weed plant species (medium negative impact before mitigation and low negative impact with mitigation measures)
- Agricultural impacts (high negative impact before mitigation and low negative impact with mitigation measures)
- Increased temporary construction jobs (medium positive impact)
- Increased traffic due to the construction activities requiring various vehicles to come onto and leave the site. (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of construction workers on local community safety and security (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of litter or waste from the construction site on the surrounding communities (medium negative impact before mitigation and low negative impact with mitigation measures)
- Dust and emissions pollution arising from ground clearing and other construction activities (medium negative impact before mitigation and low negative impact with mitigation measures)
- The potential impact of the proposed development on archaeological, paleontological

and heritage remains (high negative impact before mitigation and low negative impact with mitigation measures)

- Noise due to construction machinery (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of construction of proposed serviced erven (medium negative impact before mitigation and low negative impact with mitigation measures)

OPERATIONAL PHASE- LAYOUT ALTERNATIVE 1

- Increase in storm water runoff due to hardening of surfaces which may lead to erosion of surrounding areas (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in storm water runoff leading to altered flow in lower lying drainage lines (medium negative impact before mitigation and low negative impact with mitigation measures);
- Impact on hydrology/flow due to impedence within drainage lines (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of operational and maintenance activities of proposed development on remaining riparian habitat and associated instream water quality (high negative impact before mitigation and low negative impact with mitigation measures);
- Increase in low income housing for the town of Napier (high positive significance);
- Increased traffic due to proposed residential serviced erven development (medium negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Additional load on existing municipal services infrastructure such as electricity, water, sewage and waste handling (high negative impact before mitigation and medium negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of proposed housing development (medium negative impact before mitigation and low negative impact with mitigation measures)

DECOMMISSIONING AND CLOSURE PHASE- LAYOUT ALTERNATIVE 1

- The decommissioning of the developments are not anticipated in the near future. Impacts during this phase will however be similar to that of the construction phase. Mitigation and management measures will be related to the technology of the day and needs to be discussed at such time as decommissioning will occur. All structures must be removed and the area rehabilitated to the state as before construction had commenced (dependent upon the end land use agreement). Waste, where possible must be recycled. All concrete introduced must be removed off site to a licensed waste facility.

LAYOUT ALTERNATIVE 2

CONSTRUCTION PHASE- LAYOUT ALTERNATIVE 2

- Disturbance to subsurface geological layers (medium negative impact before mitigation and low negative impact with mitigation measures);
- Soil erosion (medium negative impact before mitigation and low negative impact with mitigation measures);
- Compaction of soil (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in and accumulation of storm water runoff (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on identified aquatic NFEPA and/or ESA (medium negative impact before mitigation and low negative impact with mitigation)

measures);

- Disturbance to southern transformed and channelled non-perennial drainage line (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of construction work on river hydrology/flow (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed development activities on surface- and groundwater resources including aquatic NFEPAs and/or Ecological Support Areas ("ESA") (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of proposed activities on indigenous vegetation and associated fauna and avifauna habitat (high negative impact before mitigation and low negative impact with mitigation measures)
- Introduction of alien and weed plant species (medium negative impact before mitigation and low negative impact with mitigation measures)
- Agricultural impacts (high negative impact before mitigation and low negative impact with mitigation measures)
- Increased temporary construction jobs (medium positive impact)
- Increased traffic due to the construction activities requiring various vehicles to come onto and leave the site. (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of construction workers on local community safety and security (medium negative impact before mitigation and low negative impact with mitigation measures)
- Impact of litter or waste from the construction site on the surrounding communities (medium negative impact before mitigation and low negative impact with mitigation measures)
- Dust and emissions pollution arising from ground clearing and other construction activities (medium negative impact before mitigation and low negative impact with mitigation measures)
- The potential impact of the proposed development on archaeological, paleontological and heritage remains (high negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to construction machinery (low negative impact before mitigation and low negative impact with mitigation measures)
- Visual impact of construction of proposed serviced erven (medium negative impact before mitigation and low negative impact with mitigation measures)

OPERATIONAL PHASE- LAYOUT ALTERNATIVE 2

- Increase in storm water runoff due to hardening of surfaces which may lead to erosion of surrounding areas (medium negative impact before mitigation and low negative impact with mitigation measures);
- Increase in storm water runoff leading to altered flow in lower lying drainage lines (medium negative impact before mitigation and low negative impact with mitigation measures);
- Impact on hydrology/flow due to impedence within drainage lines (high negative impact before mitigation and low negative impact with mitigation measures);
- Impact of operational and maintenance activities of proposed development on remaining riparian habitat and associated instream water quality (high negative impact before mitigation and low negative impact with mitigation measures);
- Increase in low income housing for the town of Napier (high positive significance);
- Increased traffic due to proposed residential serviced erven development (medium negative impact before mitigation and low negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low negative impact with mitigation measures)
- Additional load on existing municipal services infrastructure such as electricity, water, sewage and waste handling (high negative impact before mitigation and medium negative impact with mitigation measures)
- Noise due to new residential development (low negative impact before mitigation and low

negative impact with mitigation measures)

- Visual impact of proposed housing development (medium negative impact before mitigation and low negative impact with mitigation measures)

DECOMMISSIONING AND CLOSURE PHASE- LAYOUT ALTERNATIVE 2

- The decommissioning of the developments is not anticipated in the near future. Impacts during this phase will however be similar to that of the construction phase. Mitigation and management measures will be related to the technology of the day and needs to be discussed at such time as decommissioning will occur. All structures must be removed and the area rehabilitated to the state as before construction had commenced (dependent upon the end land use agreement). Waste, where possible must be recycled. All concrete introduced must be removed off site to a licensed waste facility.

NO-GO/NO-DEVELOPMENT ALTERNATIVE

CONSTRUCTION PHASE- NO-GO/NO-DEVELOPMENT ALTERNATIVE

- No increase in temporary construction job opportunities (medium negative impact as no temporary construction jobs will be created)

OPERATIONAL PHASE- NO-GO/NO-DEVELOPMENT ALTERNATIVE

- No provision of low income housing development to the town of Napier (high negative significance)

The No-Development option will result in the site remaining as it is, transformed vacant municipal land as located within the current built environment and urban edge of Napier adjacent to existing services infrastructure associated with existing low income residential areas. A look at the Napier Nuwerus Node – Urban Design Framework housing study conducted will indicate support for both the concept and place as manifested in the IDP and Human Settlement Plan for the Cape Agulhas Municipality.

(ii) Has a map of appropriate scale been provided, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers?	YES	NO
(iii) A summary of the positive and negative impacts that the proposed development and alternatives will cause in the environment and community.		

Refer to Section G: 2(a) above.

5. IMPACT MANAGEMENT, MITIGATION AND MONITORING MEASURES

- (a) Based on the assessment, describe the impact management, mitigation and monitoring measures as well as the impact management objectives and impact management outcomes included in the EMPr. The EMPr must be attached to this report as Appendix H.

The key mitigation measures recommended should be impact avoidance. Where adverse impacts cannot reasonably be avoided, the activities should be managed through the effective implementation of the EMP with a strong emphasis on post-construction rehabilitation where required.

Refer to the Impact Assessment tables under Appendix J for list of mitigation measures as proposed for each potential impact assessed as well as the EMP under Appendix H in which all of the proposed mitigation measures have been incorporated.

- (b) Describe any provisions for the adherence to requirements that are prescribed in a Specific Environmental Management Act relevant to the listed activity or specified activity in question.

The proposed activities may require a water use application for Section 21 (c) and (i) activities triggered under the National Water Act which will contain additional requirements to be adhered to during the implementation of the proposed activities. These requirements will only be known once the Water Use authorisation has been issued by the Breede Gouritz Catchment Management Agency.

- (c) Describe the ability of the applicant to implement the management, mitigation and monitoring measures.

The applicant is ultimately responsible for the implementation of the EA and EMP and the financial cost related thereto. In accordance with the requirements of the EA and EMP, the applicant must ensure that any person acting on their behalf complies with the conditions / specifications contained in this EA, EMP and any other relevant permits/licences/legislation etc. related to the activities. In addition, an Environmental Control Officer must be appointed to review, monitor and report on compliance with the relevant requirements. Thus, if the applicant intends to commence with the proposed and authorised activities he/she must ensure that he/she is able to implement the required management, mitigation and monitoring measures throughout the lifespan of the project.

- (d) Provide the details of any financial provisions for the management of negative environmental impacts, rehabilitation and closure of the proposed development.

Unknown at this stage.

- (e) Describe any assumptions, uncertainties, and gaps in knowledge which relate to the impact management, mitigation and monitoring measures proposed.

EAP is only knowledgeable with regards to the potential environmental and ecosystems aspects.

Limited knowledge with regard to the potential negative impacts on municipal services capacity.

In undertaking the investigation and compiling this report, the following has been assumed:

- The information provided by the client, specialists and engineers is accurate and unbiased;
- The scope of this investigation is to assess the direct and cumulative environmental impacts associated with the development; and
- Should the proposed project be authorised, the applicant will incorporate the recommendations and mitigation measures outlined in this BAR, the EMP and the EA into the detailed design and construction contract specifications and operational management system for the proposed project.

SECTION H: RECOMMENDATIONS OF THE EAP AND SPECIALISTS

(a) In my view as the appointed EAP, the information contained in this BAR and the documentation attached hereto is sufficient to make a decision in respect of the listed activity(ies) applied for.	YES	NO
(b) If the documentation attached hereto is sufficient to make a decision, please indicate below whether, in your opinion, the listed activity(ies) should or should not be authorised:		
Listed activity(ies) should be authorised:	YES	NO
Provide reasons for your opinion		
<p>This report is only a pre-application basic assessment report and comments must still be obtained from key departments and registered I&APs during the public participation process still to be conducted.</p> <p>An engineer services report is still to be compiled and services confirmation must be obtained from the municipality.</p> <p>Therefore the pre-application basic assessment report documentation is not sufficient to make a decision.</p>		
(c) Provide a description of any aspects that were conditional to the findings of the assessment by the EAP and Specialists which are to be included as conditions of authorisation.		
Project specific aspects and recommendations to be included as conditions of the authorisation will be included here during the final basic assessment report phase.		
(d) If you are of the opinion that the activity should be authorised, please provide any conditions, including mitigation measures that should in your view be considered for inclusion in an environmental authorisation.		
Will be addressed and included within the final basic assessment report		
(e) Please indicate the recommended periods in terms of the following periods that should be specified in the environmental authorisation:		
i.	the period within which commencement must occur;	Within 5 years of obtaining Environmental Authorisation
ii.	the period for which the environmental authorisation is granted and the date on which the development proposal will have been concluded, where the environmental authorisation does not include operational aspects;	Within 10 years of obtaining Environmental Authorisation
iii.	the period for which the portion of the environmental authorisation that deals with non-operational aspects is granted; and	Within 10 years of obtaining Environmental Authorisation
iv.	the period for which the portion of the environmental authorisation that deals with operational aspects is granted.	Ongoing maintenance of infrastructure and implementation of EMP until decommissioning.

SECTION I: APPENDICES

The following appendices must be attached to this report:

APPENDIX		Confirm that Appendix is attached
Appendix A:	Locality map	Y
Appendix B:	Site development plan(s)	Y
	A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;	Y
Appendix C:	Photographs	Y
Appendix D:	Biodiversity overlay map	Y
Appendix E:	Permit(s) / license(s) from any other Organ of State, including service letters from the municipality.	
	Appendix E1: Copy of comment from HWC.	Y
Appendix F:	Public participation information: including a copy of the register of I&APs, the comments and responses report, proof of notices, advertisements and any other public participation information as is required in Section C above.	Y
Appendix G:	Specialist Report(s)	Y
Appendix H :	EMPr	Y
Appendix I:	Additional information related to listed waste management activities (if applicable)	NA
Appendix J:	If applicable, description of the impact assessment process followed to reach the proposed preferred alternative within the site.	Y
Appendix K:	Any Other (if applicable). AppendixK1: EAP CV	Y

SECTION J: DECLARATIONS

Original signed copies of the declarations to be provided with the Final Basic Assessment Report to be submitted to the Department of Environmental Affairs and Development Planning for a final decision.