

DRAFT SECTION 24 G IMPACT REPORT

NEMA Section 24 G Rectification Process for the already established Loxton Low Cost Housing Development of approximately 26.6 ha on Portions of Erven 582, 545 and 533 Loxton, Northern Cape Province

1 March 2019

Prepared for:



COGHSTA

Department of Co-operative Governance,
Human Settlements & Traditional Affairs Northern Cape

Department of Cooperative Governance, Human Settlements and Traditional Affairs

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EXECUTIVE SUMMARY

The project applicant, Ubuntu Local Municipality historically cleared an approximate 26.6 ha portion of natural vegetation for the development of low cost housing in the informal settlement directly adjacent north-west of the town of Loxton, Northern Cape Province. The necessary underground services such as water reticulation, sewage and electrical infrastructure was also installed at the time but no formal aboveground housing infrastructure development took place. No Environmental Authorisation was however initially obtained from the Northern Cape Department of Environment and Nature Conservation (DENC) as is legally required by the National Environmental Management Act (Act 107 of 1998) (NEMA). The applicant has subsequently been made aware of this legal transgression and has therefore opted to follow a Section 24G process in accordance with NEMA in order to rectify the situation.

Eco-Con Environmental (Pty) Ltd. was appointed by the Department of Co-operative Governance, Human Settlements and Traditional Affairs Northern Cape (COGHSTA) as the independent Environmental Practitioner (EAP) to conduct the NEMA Section 24 G rectification process. Eco-Con Environmental was established in May 2017. Although the formal establishment of the company took place in 2017, it is backed by more than 15 years of collective professional service and experience in the environmental field. The qualifications, expertise and experience of our professional team form the backbone of the company's continued success.

As the development has already taken place, there are no layout alternatives for the project.

- Layout



Figure 1: Locality map (see appendix D for A3 size)

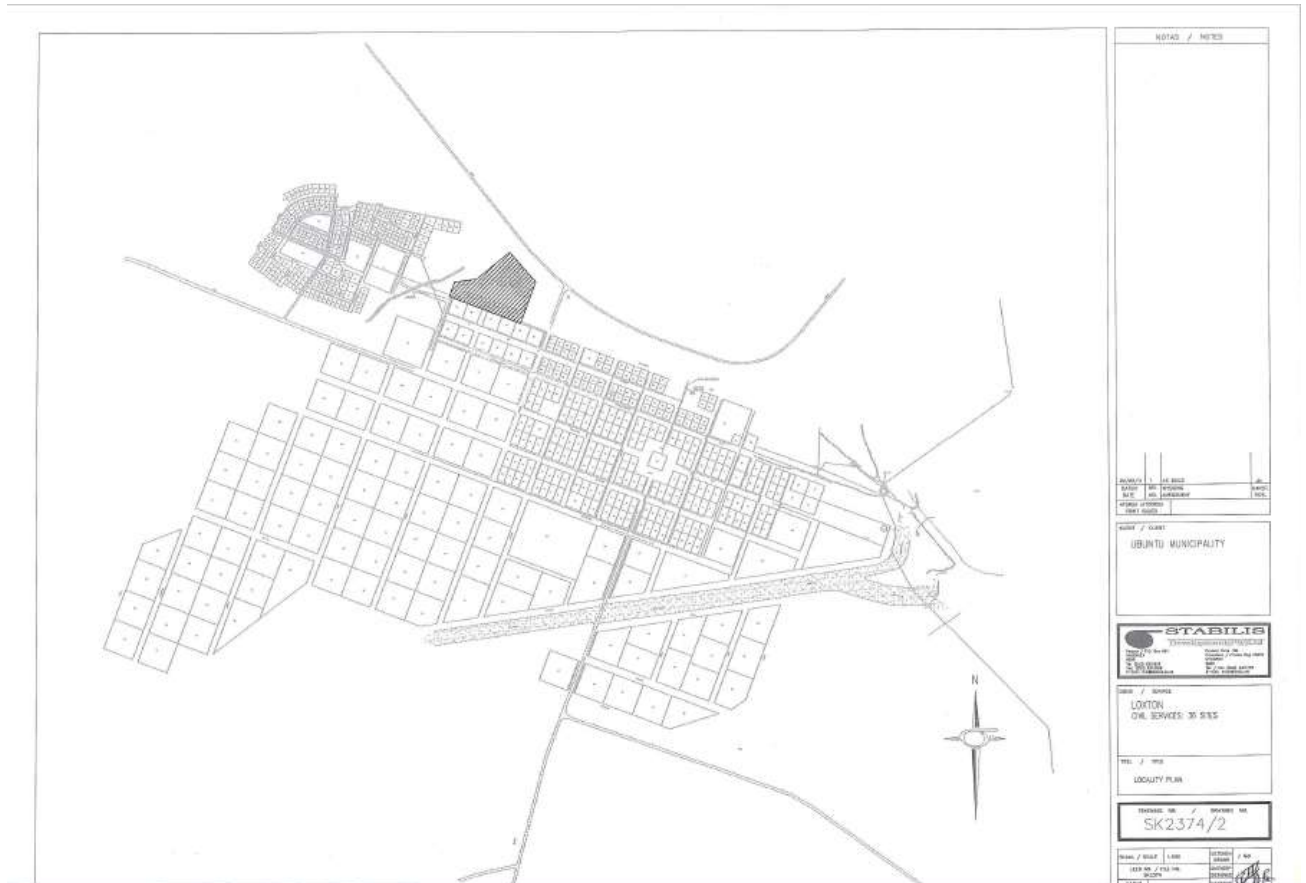


Figure 2: Locality plan (see appendix C for A3 size)

An area of 26.6 ha has been divided into 233 erven for this development. As can be seen in Figure 1, the Western and Central Part of the assessment has undergone intensive development. However, the Eastern Part has not yet been developed.

If the Eastern Part of the area is to be developed, the Engineering drawings relating to layouts and civil services would have to be extended to this area since the only drawings available are for the Western and Central Part.

- Housing

The housing specifications, providing an in detail description of all the materials used during the building process as well as the building protocol can be found under Appendix C – Facility Illustrations.

- The construction of roads

An integrated road network of between 8 m and 9 m in width was developed in between the different residential blocks. Some of these roads have already been paved whilst a few dirt roads still remain.

- The provision of electricity, water and sewage systems

The necessary underground services such as water reticulation, sewage and electrical infrastructure was installed at the time. The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk electricity, water and sewage supply.

Water will be obtained from four (4) existing boreholes. However, only two of these boreholes will be used to supply water to the development. The development will use 4500L water in total per day. The blow yield of the two (2) boreholes combined, equates to 273 600L per day. Yield tests can be found in the Geohydrological Report under Appendix J.

Power lines have already been erected to supply the development with electricity. 15 sites have already been electrified whilst the remaining 36 sites will be electrified in the 2018/2019 financial year.

Waste water from the project area is disposed of at the Loxton Waste Water Treatment Works where it is treated.

Engineering drawings of both the water supply as well as the water and sewer layout plan can be found under appendix C – Facility Illustrations.

- Zoning of properties

The current zoning of the property is as Recreational Zone I. The property will need to be rezoned to Residential.

- Waste management

The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk general waste disposal. General waste from the project area will be disposed of at the Loxton Landfill Site.

NEMA LISTED ACTIVITIES TRIGGERED BY THE PROPOSED PROJECT

The development activities in the National Environmental Management Act (Act 107 of 1998): Environmental Impact Assessment Regulations, 2014 (Government Notices R327, R325 and R324 in Government Gazette No. 38282 of 04 December 2014) (as amended in April 2017) which were triggered by the proposed project are listed in the table below:

Listed Activities	Description of project activity
<p>GN 327: Activity 24: The development of a road—</p> <p>(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;</p>	<p>An integrated road network of between 8 m and 9 m in width was developed in between the different residential blocks. Some of these roads have already been paved whilst a few dirt roads still remain.</p>
<p>GN 324: Activity 15: The clearance of an area of 20 hectares or more of indigenous vegetation, except where such clearance of indigenous vegetation is required for—</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>The project applicant, Ubuntu Local Municipality historically cleared an approximate 26.6 ha portion of natural vegetation for the development of low cost housing in Loxton, Northern Cape Province. No Environmental Authorisation was however initially obtained from the Northern Cape Department of Environment and Nature Conservation (DENC) as is legally required by the National Environmental Management Act (Act 107 of 1998) (NEMA).</p> <p>The project area currently constitutes an existing dense informal residential settlement which has completely transformed all previously existing natural surface vegetation on the project area.</p>
<p>GN 324: Activity 12: The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>g. Northern Cape</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p>	<p>The project applicant, Ubuntu Local Municipality historically cleared an approximate 266 000 ha portion of natural vegetation for the development of low cost housing in Loxton, Northern Cape Province. The Eastern Portion of this</p> <p>No Environmental Authorisation was however initially obtained from the Northern Cape Department of Environment and Nature Conservation (DENC) as is legally required by the National Environmental Management Act (Act 107 of 1998) (NEMA).</p> <p>The project area currently constitutes an existing dense informal residential settlement which has completely transformed all previously existing natural surface vegetation on the project area</p>

PROJECT LOCATION

The project area consists of a single surface footprint area of approximately 26.6 ha in size. The area is situated in the informal settlement directly adjacent north-west of the town of Loxton, Northern Cape Province. The area forms part of the Ubuntu Local Municipality which in turn, forms part of the Pixley Ka Seme District Municipality, Northern Cape Province. Access to the assessment area is obtained via the R 63 provincial road from the north.

NEEDS AND DESIRABILITY OF THE PROJECT

Various key factors must be taken into consideration as motivation/incentive for the benefits involved with the project. It is evident that formal residential and basic municipal service infrastructure development is a clear and obvious focus point within the Ubuntu Local Municipality IDP. In terms of the National Development Plan 2030, residential development for the lower income population demographic is viewed as a key national requirement in order to ensure livelihood and adequate quality of life. Operational phase job creation (local employment) and sustainable capacity building (skills, experience and resources development) by this project will further aid in immediate and continuous local community upliftment and poverty alleviation which is also a focus point within the Ubuntu Local Municipality IDP.

The Spatial Development Plan (SDF) is incorporated within the Ubuntu Local Municipality IDP. The SDF of the Pixley Ka Seme District Municipality states clearly that land with low grazing capacity should be utilised in a more sufficient manner in order to promote local economic conditions. Therefore, the project is in line with the District Municipality's Spatial Development Plan.

In accordance with the 2001 and 2011 Census data, it is evident that the population rate and number of households in the Ubuntu Local Municipality has increased and the number of formal dwellings have decreased. Although basic municipal service delivery such as sewage connection, refuse removal as well as water and electricity supply have improved, it is evident that a significant portion of the local municipality still sit without these basic necessities. Housing and basic municipal service delivery and infrastructure development are therefore viewed as important focus areas which need to be improved. The project at hand has positively contributed these requirement and subsequent housing infrastructure development will further significantly contribute in alleviating these shortcomings within the local municipality.

Operational phase job creation (local employment) and sustainable capacity building (skills, experience and resources development) by this project will further aid in immediate and continuous

Although the project area scored a moderate to low current PES values, the current Ecological Importance and Sensitivity (EIS) of the area is still classified as Class B (high) as the eastern portion of the project area and surrounding undeveloped area to the north is still viewed as being of relatively high conservational significance for ecological functionality persistence in support of the surrounding ecosystem and water catchment and drainage area associated with the CBA 1.

Although no Red Data Listed-, or nationally protected species were found to be present, a number of provincially protected species are present within the eastern portion of the project area. It is therefore assumed that the entire project area and surrounding undeveloped landscape would historically probably have housed numerous provincially protected bulbous and other forb species associated with the relevant vegetation type.

The eastern portion of the project area and surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1) in accordance with the NCSBP. The CBA 1 mainly forms part of the broader surface water catchment and drainage area towards the Brak River to the south. The ephemeral water drainage line to the west as well as the two ephemeral watercourses within the eastern portion form a significant part of the broader surface water catchment and drainage area towards the river. They should be adequately buffered out of the development. A minimum 32 m buffer is recommended around the two significant ephemeral watercourses traversing the eastern portion of the project area and no development is allowed to take place within the buffer zones.

The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the western/central portion of the project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible.

The identified significant ecological impact associated with the impeding and contamination of the drainage line to the west and the two significant ephemeral watercourses associated with the CBA 1 can be suitably managed and mitigated to prevent further significant negative impact. Adequate and unimpeded drainage and flow of surface water runoff from the project area towards the Brak River to the south is imperative for the continued ecological functionality of the CBA 1.

Development should thus be concentrated within the western and central portions of the area as restoration will not be feasible within these areas. If development is to occur in the eastern portion, a buffer is recommended around the two significant ephemeral watercourses and no development is allowed to take place within the buffer zones.

Had an Environmental Impact Assessment been done prior to the development of the residential settlement, a potential site/location alternative could have been investigated.

PUBLIC PARTICIPATION PROCESS

A continual and comprehensive Public Participation Process (PPP) will be undertaken throughout the entire NEMA Section 24 G process with all stakeholders and Interested and Affected Parties (I & AP's), including the relevant organs of state and competent authority (Northern Cape Department of Environment and Nature Conservation) as identified. The PPP will be conducted in accordance with the requirements of Regulation 41 of the EIA Regulations, 2014, as amended, and the designated Public Participation Officer will ensure that the PPP is facilitated in a manner which ensures reasonable opportunity for all stakeholders and registered I & AP's to comment and provide input on the proposed project.

ENVIRONMENTAL IMPACT ASSESSMENT

The project has identified various potential impacts which are discussed in detail in this report (below is only the summary of the impacts identified). At this preliminary stage, no "red flag" impacts were identified.

Impact Summary

Construction / Development Phase

PLANNING, DESIGN AND CONSTRUCTION PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on Flora as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Direct impact on Fauna as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact:			Activity:		

Dust nuisance generated during the development / preparation of the building of houses.				Proposed low cost housing development	
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the development / preparation of the building of houses.				Activity: Proposed low cost housing development	
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during excavation activities.				Activity: Proposed low cost housing development	
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the development / preparation of the building of houses.				Activity: Proposed low cost housing development	
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the building of houses.				Activity: Proposed low cost housing development	
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact:				Activity:	

Traffic impacts by means of additional truck and transportation to and from site during the building of houses.				Proposed low cost housing development	
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the development / preparation of the building of houses.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Medium (M)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to construction activities.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact due to increased working activities on-site.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					

Nature of impact: Increased socio-economic conditions due to job creation			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	+ Medium (M)	+ Medium-high (MH)	+ Medium (M)	+ Medium-high (MH)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)

Operational Phase

OPERATIONAL PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on Flora as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Medium High (MH)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Direct impact on Fauna as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	

Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Medium High (MH)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact: Traffic impacts by means of additional truck and transportation to and from site during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the operational phase of the project.			Activity: Proposed low cost housing development		
	Western/Central Portion		Eastern Portion		No-Go Alternative

Evaluation Component:	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Medium (M)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to operational activities.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Effect of the development on the surrounding housing market.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)
Nature of impact: Effect of the development on the tourism of the surrounding area.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative

	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	+ Low (L)	+ Low (L)	+ Low (L)	+ Low (L)	Low (L)
Cumulative impact:	+ Low (L)	+ Low (L)	+ Low (L)	+ Low (L)	Low (L)
PLEASE NOTE: THE IMPACTS EVALUATED UNDER BOTH OF THE SOCIO-ECONOMIC IMPACT CONDITIONS ARE ONLY PRELIMINARY. IF A DETAILED IMPACT EVALUATION IS REQUIRED, A SOCIO-ECONOMIC IMPACT ASSESSMENT WILL NEED TO BE COMPILED.					

Decommissioning Phase

As this development relates to a residential development, a decommissioning phase it not foreseeable and therefore impacts related to the decommissions phase have not been included. However, if the client for some other reason decide to decommission the area, an Environmental Impact study will have to be undertaken in accordance with the NEAM EIA regulations whereby the Decommissioning impact will be determined and submitted to the Relevant Decision Making department for Decision making.

SUMMARY OF SPECIALIST STUDIES

The section below outlines the main finding of all specialists involved in the NEMA Section 24 G process. More detailed insight may be gathered from the specialist report which is attached as Appendix E.

Ecological and Wetland Specialist study

The existing informal settlement within the western/central portion of the project area has virtually completely transformed all previously existing natural surface vegetation. The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing developments. An historic stone quarry was also present within this area which was subsequently decommissioned and filled up again in the past.

The historic ecology of the project area is assumed to have been comparable to that of the surrounding natural, undeveloped areas as no significant change in soil structure, landscape topography or other features is evident. The immediately surrounding landscape to the west and north of the project area is undeveloped but is in a moderately disturbed and degraded state. This degraded condition has mainly been caused by anthropogenic disturbances arising from the adjacent residential settlements in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock. The landscape is therefore not necessarily reminiscent of the natural climactic state of the relevant Eastern Upper Karoo vegetation type (NKu 4) and the area scored a moderate PES rating. The relevant vegetation type is classified as least threatened (SANBI, 2006-).

The eastern portion of the project area and surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1) in accordance with the NCSBP. The CBA 1 mainly forms part of the broader surface water catchment and drainage area towards the Brak River to the south. The ephemeral water drainage line to the west as well as the two ephemeral watercourses within the eastern portion form a significant part of the broader surface water catchment and drainage area towards the river. They should be adequately buffered out of the development. A minimum 32 m buffer is recommended around the two significant ephemeral watercourses traversing the eastern portion of the project area and no development is allowed to take place within the buffer zones.

Although the project area scored a moderate to low current PES values, the current Ecological Importance and Sensitivity (EIS) of the area is still classified as Class B (high) as the eastern portion of the project area and surrounding undeveloped area to the north is still viewed as being of relatively high conservational significance for ecological functionality persistence in support of the surrounding ecosystem and water catchment and drainage area associated with the CBA 1.

Although no Red Data Listed-, or nationally protected species were found to be present, a number of provincially protected species are present within the eastern portion of the project area. It is therefore assumed that the entire project area and surrounding undeveloped landscape would historically probably have housed numerous provincially protected bulbous and other forb species associated with the relevant vegetation type.

Due to the presence of existing residential infrastructure, the undeveloped landscape to the west and north is subjected to continued anthropogenic activity and disturbance. It is therefore not anticipated that any large or conservationally significant faunal species would utilise the area for breeding and persistence purposes. The project area and surrounding landscape does not fall within any Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important_bird_areas/iba-map) and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the area for breeding or persistence purposes.

It is the opinion of the specialist that the virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the western/central portion of the project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible. The identified significant ecological impact associated with the impeding and contamination of the drainage line to the west and the two significant ephemeral watercourses associated with the CBA 1 can be suitably managed and mitigated to prevent further significant negative impact. Adequate

and unimpeded drainage and flow of surface water runoff from the project area towards the Brak River to the south is imperative for the continued ecological functionality of the CBA 1.

As the project commenced prior to the development of the NCSBP, the project does not necessarily warrant the requirement of an offset area to be identified and assessed (due to the impact on the CBA 1) or for project operations to be completely ceased. The project operations should be allowed to continue but all recommended mitigation measures as per this ecological report must be adequately implemented and managed for the remainder of the operational phase. All necessary authorisations and permits must also be obtained as soon as reasonably and practicably possible. The project should therefore be considered by the competent authority for Environmental Authorisation and approval.

Heritage Specialist study

The site is situated on flat, degraded terrain within an existing residential area located on the northwestern outskirts of Loxton and south of the R63 provincial road. Historical evidence indicates that the site has already been developed as early as 2005. Potential for impact on palaeontological remains resulting from the existing development footprint at this stage is considered to be non-existent. However, future large-scale excavations exceeding depths of more than 1m into intact Abrahamskraal Formation sedimentary strata within the study area will require monitoring by a professional palaeontologist. Potential for impact on archaeological or historically significant remains within development footprint at this stage is considered to be non-existent. It is recommended that the planned development is exempt from a full Phase 1 Archaeological Impact Assessment.

CONCLUSION

From an ecological view point, the existing informal settlement within the western/central portion of the project area has virtually completely transformed all previously existing natural surface vegetation. The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing developments. An historic stone quarry was also present within this area which was subsequently decommissioned and filled up again in the past.

The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the western/central portion of the project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible. The identified significant ecological impact associated with the impeding and contamination of the drainage line to the west

and the two significant ephemeral watercourses associated with the CBA 1 can be suitably managed and mitigated to prevent further significant negative impact.

Historical evidence indicates that the site has already been developed as early as 2005 (**Fig. 8**). Potential for impact on palaeontological remains resulting from the existing development footprint at this stage is considered to be non-existent.

Potential for impact on archaeological or historically significant remains within development footprint at this stage is considered to be non-existent. It is recommended that the planned development is exempt from a full Phase 1 Archaeological Impact Assessment.

From the above mentioned ecological and heritage studies, it can be concluded that although development have already taken place, the impacts of this development on the surrounding environment are relatively low. However, the damage which has already occurred to the natural habit and ecosystem functionality within the western/central portion is irreversible and restoration efforts will not be feasible. In cases where environmental impacts may be significant, suitable mitigation measures will be effective in preventing further significant negative impact. Potential heritage impacts are also considered to be non-existent at this stage of the development and will only occur once large-scale excavations, exceeding depths of more than 1m, into intact Abrahamskraal Formation sedimentary strata, take place.

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Department:
Environment & Nature Conservation
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

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(For official use only)

File Reference Number:

Application Number:

Date Received:

Basic Assessment Report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report 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 report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? **NO X**
If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. ACTIVITY DESCRIPTION

a) Describe the project associated with the listed activities applied for

The project applicant, Ubuntu Local Municipality historically cleared an approximate 26.6 ha portion of natural vegetation for the development of low cost housing in the informal settlement directly adjacent north-west of the town of Loxton, Northern Cape Province. The necessary underground services such as water reticulation, sewage and electrical infrastructure was also installed at the time but no formal aboveground housing infrastructure development took place. No Environmental Authorisation was however initially obtained from the Northern Cape Department of Environment and Nature Conservation (DENC) as is legally required by the National Environmental Management Act (Act 107 of 1998) (NEMA). The applicant has subsequently been made aware of this legal transgression and has therefore opted to follow a Section 24G process in accordance with NEMA in order to rectify the situation.

Eco-Con Environmental (Pty) Ltd. was appointed by the Department of Co-operative Governance, Human Settlements and Traditional Affairs Northern Cape (COGHSTA) as the independent Environmental Practitioner (EAP) to conduct the NEMA Section 24 G rectification process. Eco-Con Environmental was established in May 2017. Although the formal establishment of the company took place in 2017, it is backed by more than 15 years of collective professional service and experience in the environmental field. The qualifications, expertise and experience of our professional team form the backbone of the company's continued success.

As the development has already taken place, there are no layout alternatives for the project.

- Layout



Figure 3: Locality map (see appendix D for A3 size)

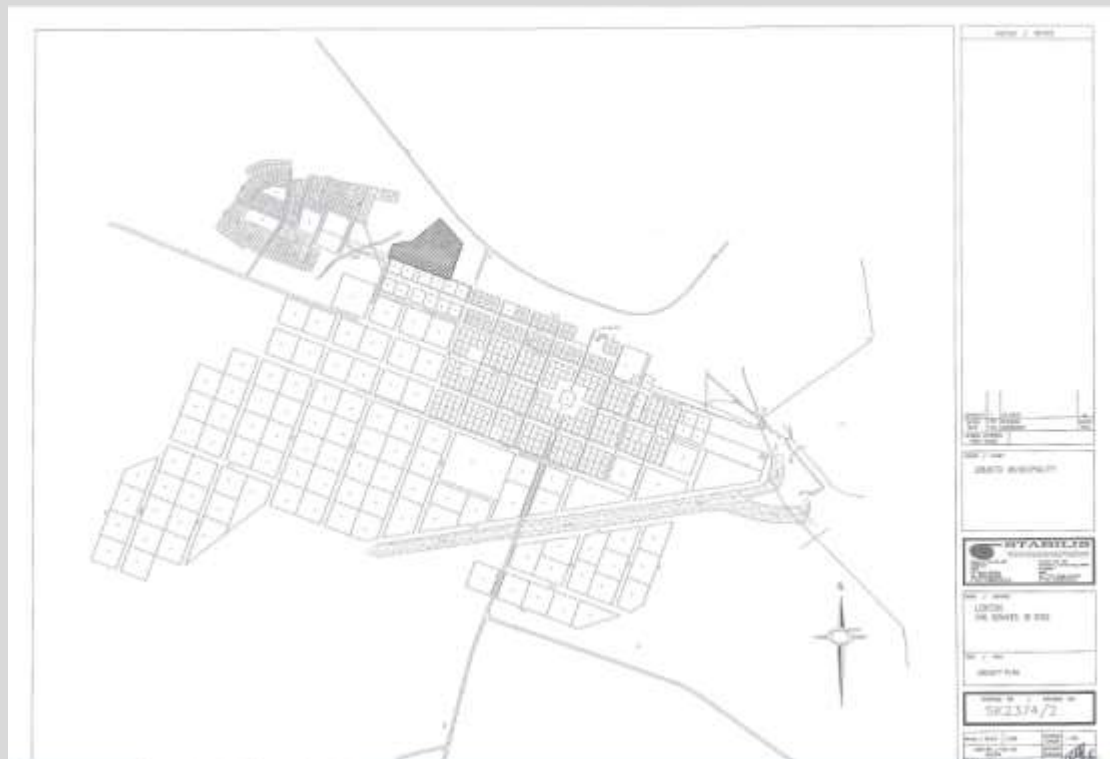


Figure 4: Locality plan (see appendix C for A3 size)

An area of 26.6 ha has been divided into 233 erven for this development. As can be seen in Figure 1, the Western and Central Part of the assessment has undergone intensive development. However, the Eastern Part has not yet been developed.

If the Eastern Part of the area is to be developed, the Engineering drawings relating to layouts and civil services would have to be extended to this area since the only drawings available are for the Western and Central Part.

- Housing

The housing specifications, providing an in detail description of all the materials used during the building process as well as the building protocol can be found under Appendix C – Facility Illustrations.

- The construction of roads

An integrated road network of between 8 m and 9 m in width was developed in between the different residential blocks. Some of these roads have already been paved whilst a few dirt roads still remain.

- The provision of electricity, water and sewage systems

The necessary underground services such as water reticulation, sewage and electrical infrastructure was installed at the time. The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk electricity, water and sewage supply.

Water will be obtained from four (4) existing boreholes. However, only two of these boreholes will be used to supply water to the development. The development will use 4500L water in total per day. The blow yield of the two (2) boreholes combined, equates to 273 600L per day. Yield tests can be found in the Geohydrological Report under Appendix J.

Power lines have already been erected to supply the development with electricity. 15 sites have already been electrified whilst the remaining 36 sites will be electrified in the 2018/2019 financial year.

Waste water from the project area is disposed of at the Loxton Waste Water Treatment Works where it is treated.

Engineering drawings of both the water supply as well as the water and sewer layout plan can be found under appendix C – Facility Illustrations.

<ul style="list-style-type: none"> • <u>Zoning of properties</u> <p>The current zoning of the property is as Recreational Zone I. The property will need to be rezoned to Residential.</p>
<ul style="list-style-type: none"> • <u>Waste management</u> <p>The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk general waste disposal. General waste from the project area will be disposed of at the Loxton Landfill Site.</p>

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN 327 and 324	Description of project activity
<p>GN 327: Activity 24: The development of a road—</p> <p>(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;</p>	<p>An integrated road network of between 8 m and 9 m in width was developed in between the different residential blocks. Some of these roads have already been paved whilst a few dirt roads still remain.</p>
<p>GN 324: Activity 15: The clearance of an area of 20 hectares or more of indigenous vegetation, except where such clearance of indigenous vegetation is required for—</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>The project applicant, Ubuntu Local Municipality historically cleared an approximate 26.6 ha portion of natural vegetation for the development of low cost housing in Loxton, Northern Cape Province. No Environmental Authorisation was however initially obtained from the Northern Cape Department of Environment and Nature Conservation (DENC) as is legally required by the National Environmental Management Act (Act 107 of 1998) (NEMA).</p> <p>The project area currently constitutes an existing dense informal residential settlement which has completely transformed all previously existing natural surface vegetation on the project area.</p>
<p>GN 324: Activity 12: The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>g. Northern Cape</p>	<p>The project applicant, Ubuntu Local Municipality historically cleared an approximate 266 000 ha portion of natural vegetation for the development of low cost housing in Loxton, Northern Cape Province. The Eastern Portion of this</p> <p>No Environmental Authorisation was however initially obtained from the Northern Cape</p>

<p>ii. Within critical biodiversity areas identified in bioregional plans;</p>	<p>Department of Environment and Nature Conservation (DENC) as is legally required by the National Environmental Management Act (Act 107 of 1998) (NEMA).</p> <p>The project area currently constitutes an existing dense informal residential settlement which has completely transformed all previously existing natural surface vegetation on the project area</p>
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2. FEASIBLE AND REASONABLE ALTERNATIVES

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

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

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

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, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
As the development already took place, no viable alternatives exist.	31° 28' 22.21"S	22° 20' 52.30"E

<p>The existing informal settlement within the western/central portion of the project area has completely transformed all previously existing natural surface vegetation. The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the Western/Central portion is irreversible. The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing</p> <p>Had an Environmental Impact Assessment been done prior to the development of the residential settlement, a potential site/location alternative could have been investigated.</p>		
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b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
See discussion above regarding site alternatives.	31° 28' 22.21"S	22° 20' 52.30"E

e) No-go alternative

<p>As the development already took place, the no-go alternative is not possible. The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within especially Western/Central portion of the project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible.</p>
--

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1 (preferred activity alternative)

Size of the activity:

26.6 ha (266 000 m ²)

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

Alternative:

Alternative A1 (preferred activity alternative)

Size of the site/servitude:

26.6 ha (266 000 m ²)

4. SITE ACCESS

Does ready access to the site exist?

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

YES	
N/A	

Describe the type of access road planned:

--

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

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as **Appendix A**. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities 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:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (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).

6. LAYOUT/ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;

- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in **Appendix A**.

8. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under **Appendix B** to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as **Appendix C** for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?		No	
The properties were zoned for Recreational Zone 1. Therefore, a re-zoning application must be submitted to the relevant municipality prior to further development.			

2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		
<p>The Northern Cape Provincial Spatial Development Framework (NCPSDF) was formulated in 2011 to meet the requirements of the Northern Cape Planning and Development Act, 1998 (Act 7 of 1998) and the Municipal Systems Act, 2000 (Act 32 of 2000). Prepared in accordance with a bioregional planning approach adapted to suit the site-specific requirements of the Northern Cape, the NCPSDF recognises that no region or area should be planned and managed as an ‘island’ in isolation from its surroundings. Together, unit areas form part of the broader environment and the mutual relationships and linkages between adjacent units must be understood and applied.</p> <p>The framework aims to act as a policy and strategy providing direction and guidance for:</p> <ul style="list-style-type: none"> • future land use, • spatial context for provincial sectoral strategies, • promoting a developmental state, • alignment of environmental management priorities, and • mobilising the overarching objective of the Northern Cape Provincial Growth and Development Strategy (PGDS) to build prosperous, sustainable and growing provincial economy to eradicate poverty and improves social development. <p>A focus for achieving sustainable development as discussed in the framework, requires four areas of capital, being environmental, human, infrastructure and monetary. The plan further stresses the need for integrative participation, positive interventions and innovative finance. The SDF makes specific reference to the importance of residential development and capacity increase in this sector in the Northern Cape Province.</p> <p>The proposed project will make a positive contribution towards various objectives of the SDF.</p>			
(b) Urban edge / Edge of Built environment for the area	YES		
<p>The project area is located within the urban edge. The area is therefore in line with the urban edge of the town of Loxton and the Ubuntu Local Municipality area.</p>			

<p>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</p>	<p>YES</p>		
<p>The following vision and mission is engrained into the Integrated Development Plan (IDP) of the Ubuntu Local Municipality</p> <p>Vision</p> <p>“ The vision of Ubuntu Municipality, to be championed by the Ubuntu Municipal Council working together with the administration shall be:</p> <p>By 2030, Ubuntu Municipality shall be the best rural municipality through relentless pursuit of excellence through focused governance, efficient administration, and effective service delivery for inclusive targeted social and economic development against all odds.</p> <p>This vision will be pursued through participative engagement of all stakeholders within Ubuntu Municipality through entrenchment of humanity, hope and heritage as espoused in the Ubuntu Municipality logo.”</p> <p>Mission</p> <p>We strive to:</p> <ul style="list-style-type: none"> • maximize the utility of the municipal resources in a sustainable, developmental and economic manner to better the life of all; • improve institutional effectiveness and efficiency; optimally develop our human, financial and natural resources; • create an enabling environment for local economic growth in order to create employment opportunities and alleviate poverty; • work with all our existing and prospective partners to establish a vibrant tourism industry; • participate in the fight to reduce the HIV/AIDS infection rate and lessen the impact thereof; • focus on youth development, women empowerment and enabling the disabled to play a meaningful role in unlocking human potential; • ensure a safe, secure and community friendly environment; and maintain sound and sustainable management of financial and fiscal affairs. <p>It is evident that formal residential and basic municipal service infrastructure development is a clear and obvious focus point within the Ubuntu Local Municipality IDP. In terms of the National Development Plan 2030, residential development for the lower income population demographic is viewed as a key national requirement in order to ensure livelihood and adequate quality of life. Operational phase job creation (local employment) and sustainable capacity building (skills, experience and resources development) by this project will further aid in immediate and continuous local community upliftment and poverty alleviation which is also a focus point within the Ubuntu Local Municipality IDP.</p> <p>The SDF of the Pixley Ka Seme District Municipality states clearly that there is a need for both economic and sub-economic housing in Loxton. Therefore, the project is in line with the Local Municipality’s Spatial Development Plan.</p>			

(d) Approved Structure Plan of the Municipality	YES		
No structure plan exists for the Local Municipality.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES		
<p>An Environmental Management Framework could not be obtained for both the Local and/or District municipality. As the development already took place, the project area currently constitutes an existing dense informal residential settlement which has completely transformed all previously existing natural surface vegetation on the project area. The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the Western/Central project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible.</p> <p>Although the project area is indicated as completely transformed in accordance with the Northern Cape Provincial Spatial Biodiversity Plan 2016 (NCSBP), the eastern portion of the assessment area and surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1).</p>			

(f) Any other Plans (e.g. Guide Plan)	YES		
<u>Northern Cape Provincial Growth and Development Strategy (NCPGDS)</u>			
<p>The Northern Cape Provincial Growth and Development Strategy (NCPGDS) (2004 – 2014) highlights the most significant growth and development challenge as the reduction of poverty, and that only through long-term sustainable economic growth and development shall this be achieved. Important areas where growth can be achieved include agriculture and agro-processing, transport and tourism. In support of such growth areas the creation of opportunities for life-long learning, improvement of labour force skills to enhance productivity and expanding access to education and knowledge shall lead to the further realisation of such growth.</p> <p>The inclusion of macro-level objectives shall mobilize these primary growth areas. Such objectives include the developing of human and social capital, improving the efficiency and effectiveness of governance and associated institutions and enhancing infrastructure for economic growth and development.</p>			
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	YES		
<p>It is evident that formal residential and basic municipal service infrastructure development is a clear and obvious focus point within the Ubuntu Local Municipality IDP. In terms of the National Development Plan 2030, residential development for the lower income population demographic is viewed as a key national requirement in order to ensure livelihood and adequate quality of life. Operational phase job creation (local employment) and sustainable capacity building (skills, experience and resources development) by this project will further aid in immediate and continuous local community upliftment and poverty alleviation which is also a focus point within the Ubuntu Local Municipality IDP.</p> <p>The SDF of the Pixley Ka Seme District Municipality states clearly that land with low grazing capacity should be utilised in a more sufficient manner in order to promote local economic conditions. Therefore, the project is in line with the District Municipality’s Spatial Development Plan.</p>			

<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES</p>		
<p>According to the Ubuntu Local Municipality IDP, this municipality has the highest percentage of people living in informal settlements compared to other informal settlements within the district municipal area.</p> <p>The IDP also mentions that there is a current housing backlog of 17 years in Loxton.</p> <p>It is evident that at the time of the development, there was a clear and obvious need for formal residential infrastructure development in order to accommodate the growth and expansion of the local community. In terms of the National Development Plan 2030, residential development for the lower income population demographic is viewed as a key national requirement in order to ensure livelihood and adequate quality of life. In terms of the Constitution of the Republic of South Africa (Act 108 of 1996), everyone has the right to have access to adequate housing.</p> <p>The available census data of 2001 and 2011 was used (obtained from Statistics South Africa). This data was obtained well after the commencement of the project.</p> <p><u>Ubuntu Local Municipality:</u></p> <p><u>Population size</u></p> <p>2001: 16 375 which 61.1 % falls within the working age.</p> <p>2011: 18 601 which 61.1 % falls within the working age.</p>			

Employment:

2001: The unemployment rate is 34.1 % with a youth unemployment rate of 41.5 %

2011: The unemployment rate is 29.1 % with a youth unemployment rate of 34.8 %

Number of households

2001: 4 163 of which formal dwellings are 93%

2011: 5 129 of which formal dwellings are 87.6%

Living conditions

Flush toilet connected to sewerage

2001: 38.4 %

2011: 64.3 %

Weekly refuse removal

2001: 63.8 %

2011: 66.6 %

Piped water inside dwelling

2001: 35 %

2011: 49.2 %

Electricity for lighting

2001: 75.7 %

2011: 84.8 %

In accordance with this data, it is evident that the population size as well as the number of households has increased and the number of formal dwellings have decreased. Although basic municipal service delivery such as sewage connection, refuse removal as well as water and electricity supply have improved, it is evident that a significant portion of the local municipality still sit without these basic necessities. Housing and basic municipal service delivery and infrastructure development are therefore viewed as important focus areas which need to be improved. The project at hand has positively contributed these requirement and subsequent housing infrastructure development will further significantly contribute in alleviating these shortcomings within the local municipality.

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Operational phase job creation (local employment) and sustainable capacity building (skills, experience and resources development) by this project will further aid in immediate and continuous local community upliftment and poverty alleviation and are therefore regarded as significant socio-economic benefits associated with the project to motivate the need and desirability.

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

As can be seen in Figure 1, the Western and Central Part of the assessment has undergone intensive development. However, the Eastern Part has not yet been developed.

If the Eastern Part of the area is to be developed, the Engineering drawings relating to layouts and civil services would have to be extended to this area since the only drawings available are for the Western and Central Part.

- The construction of roads

An integrated road network of between 8 m and 9 m in width was developed in between the different residential blocks. Some of these roads have already been paved whilst a few dirt roads still remain.

- The provision of electricity, water and sewage systems

The necessary underground services such as water reticulation, sewage and electrical infrastructure was installed at the time. The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk electricity, water and sewage supply.

Water will be obtained from four (4) existing boreholes. However, only two of these boreholes will be used to supply water to the development. The development will use 4500L water in total per day. The blow yield of the two (2) boreholes combined, equates to 273 600L per day. Yield tests can be found in the Geohydrological Report under Appendix J.

Power lines have already been erected to supply the development with electricity. 15 sites have already been electrified whilst the remaining 36 sites will be electrified in the 2018/2019 financial year.

Waste water from the project area is disposed of at the Loxton Waste Water Treatment Works where it is treated.

Engineering drawings of both the water supply as well as the water and sewer layout plan can be found under appendix C – Facility Illustrations.

- Zoning of properties

The current zoning of the property is as Recreational Zone I. The property will need to be rezoned to Residential.

<ul style="list-style-type: none"> • <u>Waste management</u> <p>The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk general waste disposal. General waste from the project area will be disposed of at the Loxton Landfill Site.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES</p>		
<p>The necessary underground services such as water reticulation, sewage and electrical infrastructure was installed at the time but no formal aboveground housing infrastructure development took place.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	<p>YES</p>		
<p>There is a clear and obvious need for formal national residential infrastructure development in order to accommodate the growth and expansion of the population. In terms of the National Development Plan 2030, residential development for the lower income population demographic is viewed as a key national requirement in order to ensure livelihood and adequate quality of life.</p> <p>This project forms part of the broader provincial housing development initiative of the Department of Co-operative Governance, Human Settlements and Traditional Affairs Northern Cape (COGHSTA).</p> <p>According to the Ubuntu Local Municipality IDP, this municipality has the highest percentage of people living in informal settlements compared to other informal settlements within the district municipal area.</p> <p>The IDP also mentions that there is a current housing backlog of 17 years in Loxton.</p> <p>Within a local context, it is evident that at the time of the development, there was a clear and obvious need for formal residential infrastructure development in order to accommodate the growth and expansion of the local community.</p>			

<p>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</p>	<p>YES</p>		
<p>As the development already took place, no viable alternatives exist.</p> <p>The existing informal settlement within the western/central portion of the project area has completely transformed all previously existing natural surface vegetation. The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the Western/Central portion is irreversible. The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing</p> <p>Had an Environmental Impact Assessment been done prior to the development of the residential settlement, a potential site/location alternative could have been investigated.</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	<p>YES</p>		
<p>As the development already took place, no viable alternatives exist.</p> <p>The existing informal settlement within the western/central portion of the project area has completely transformed all previously existing natural surface vegetation. The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the Western/Central portion is irreversible. The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing</p> <p>Had an Environmental Impact Assessment been done prior to the development of the residential settlement, a potential site/location alternative could have been investigated.</p>			

10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES		
<p>It is evident that at the time of the development, there was a clear and obvious need for formal residential infrastructure development in order to accommodate the growth and expansion of the local community. In terms of the National Development Plan 2030, residential development for the lower income population demographic is viewed as a key national requirement in order to ensure livelihood and adequate quality of life.</p> <p>Housing and basic municipal service delivery and infrastructure development are therefore viewed as important focus areas which need to be improved. The project at hand has positively contributed these requirement and subsequent housing infrastructure development will further significantly contribute in alleviating these shortcomings within the local municipality.</p> <p>Operational phase job creation (local employment) and sustainable capacity building (skills, experience and resources development) by this project will further aid in immediate and continuous local community upliftment and poverty alleviation and are therefore regarded as significant socio-economic benefits associated with the project to motivate the need and desirability.</p>			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		NO	
<p>No. This is a Municipal project to rectify and upgrade housing opportunities for local individuals. That project is funded by CoGHSTA</p>			
12. Will any person's rights be negatively affected by the proposed activity/ies?		NO	
<p>No person's rights will be negatively affected. Formal housing provided by the applicant will positively impact on the rights of the local community.</p>			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		NO	Please explain
<p>The property is located inside the urban edge of the proposed Loxton area.</p>			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		NO	
<p>N/A</p>			
15. What will the benefits be to society in general and to the local communities?	Please explain		
<p>Jobs will be created during the construction and operational phases of the project. One of the EMP conditions stipulate that local labour are to be used during the construction and operational phases. The project will also hold major positive socio-economic benefits during the construction phase mainly due to the creation of jobs and the provision of housing during the operational phase.</p>			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
<p>None</p>			

17. How does the project fit into the National Development Plan for 2030?	Please explain
<p>It will contribute towards the achievement of the following enabling milestones of the NDP 2030:</p> <ul style="list-style-type: none"> • Increase employment • Ensure that skilled, technical, professional and managerial posts better reflect the country's racial and gender and disability makeup • Broaden social cohesion and unity while redressing the inequalities of the past. 	
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.	
<p>Through the undertaking of this Assessment Process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of public participation and specialist investigations form part of the process, whilst mitigation measures and the need and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such Integrated Environmental Management were accounted for.</p>	
19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.	
<p>Through the undertaking of the Assessment process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of a public participation process and specialist investigations formed part of this basic assessment process, whilst mitigation measures and the needs and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such integrated environmental management were accounted for as follow:</p> <p><i>(2) Environmental Management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural heritage and social interests equitably.</i></p> <p>The goal of this BA is to identify and mitigate potential socio-economic impacts in order to meet the terms of Section 24 of the Constitution.</p> <p><i>(3) Development must be socially, environmentally and economically sustainable.</i></p> <p>The overall goal of this BA is to predict, identify and manage potential positive and negative impacts in the socio-economic, cultural-heritage and biophysical environments in order to meet the needs of present generations without compromising the needs of future generations which will give effect to sustainable development.</p> <p><i>(4)(a) Sustainable development requires the consideration of all relevant factors including the following:</i></p> <ul style="list-style-type: none"> <i>i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;</i> <i>ii. that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;</i> <i>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;</i> 	

- iv. *that waste is avoided, or where it cannot be altogether avoided, minimised and reused 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.*

An Environmental Management Program Report (EMPr) was compiled to mitigate and manage all activities during the planning, construction and operational phases.

(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.

All aspects, including socio-economic, cultural-heritage and biophysical was evaluated and assessed in order to minimize potential negative impacts which will give effect to Integrated Environmental Management, as set out in Chapter 5 of NEMA, 1998.

(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.

A public participation process was undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way that adherence is given to Section 24 of the Constitution.

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

The proposed project will ensure better socio-economic growth in the area.

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

The EMPr will be applicable throughout the lifecycle of the project.

(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.

A public participation process was undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way that adherence is given to Section 24 of the Constitution.

(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.

The Department of Environmental and Nature Conservation (DENC) decision making process has to be in accordance with the above.

(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.

(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.

This Impact Assessment report does give effect to Section 5 of NEMA whereby all social, economic and environmental impacts of activities were considered, assessed and evaluated.

(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.

Human rights will be taken into account during all phases of the proposed project.

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

The decision will take place in an open and fair manner and to give effect to Section 32 of the Constitution. I&AP's will be notified of the decision in terms of the requirements as set out in Section 41 of the NEMA EIA Regulations, 2014.

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

All relevant Governmental Authorities will be considered during the BA process to give their inputs on the project.

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

Actual or potential conflicts of interest between organs of state should/will be resolved through conflict resolution procedures.

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

(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.

Through the appointment of various specialists, mitigation measures have been drawn up to ensure that the proposed project does not harm the environment. Architectural plans were designed according to South African Norms and Standards.

(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.

An EMPr were compiled in order to prevent or minimize any potential negative impacts to the environment. It will be the responsibility of the Applicant and Contractor to adhere to all measures set out in the EMPr, in order to give effect to Section 28 (1) of NEMA.

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

(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.

A Sensitivity map containing all vulnerable vegetation, water courses and ecosystems were prepared in order to determine that the proposed project will have no negative impact thereon.

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorization/comment	DATE (if already obtained):
National Environmental Management Act (Act 107 of 1998) (NEMA)	Northern Cape Department of Environment and Nature Conservation (DENC)	Section 24 G Rectification Application	This Application
National Heritage Resources Act (Act 25 of 1999) (NHRA)	South African Heritage Resources Association	Section 38(1) Comment	During the Public Participation of this application

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Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
Constitution of the Republic of South Africa (Act 108 of 1996)	Section 24 of the Constitution of South Africa provides the main national legislative obligation towards sustainable environmental management and development. This section forms the foundation of all other subsequent environmental legislation and governance in South Africa.	National Department	1996
National Environmental Management Act (Act 107 of 1998) (NEMA)	NEMA is the principle/framework legislation governing EIA and subsequent EA processes under the authority of the National Department of Environmental Affairs.	National Department	1998
National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA)	NEMBA aims to provide for the management and conservation of the country's rich biodiversity within the framework of NEMA. It aids in the protection of species and ecosystems which warrant national protection and provides for the sustainable usage of the country's indigenous biological resources.	National Department	2004
National Forests Act (Act 84 of 1998) (NFA)	The aim of the NFA is to promote the sustainable usage, management and development of forests for the benefit of all in South Africa. The Act also makes special provisions for the protection of specific forests and tree species which duly require formal protection in order to ensure their prolonged existence.	National Department	1998

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<p>Conservation of Agricultural Resources Act (Act 43 of 1983) (CARA)</p>	<p>CARA aims to provide for the protection and control over utilisation of the country’s agricultural resources in order to promote conservation of soils, water and natural vegetation as well as the combatting of weeds and invader plants. Sustainable utilisation is a key objective.</p>	<p>National Department</p>	<p>1983</p>
<p>National Water Act (Act 36 of 1998) (NWA)</p>	<p>The NWA aims to ensure sustainable use of water through the protection of the quality of water resources for the benefit of all water users. Its principal focus is the rectification and equitable allocation and use of the scarce and disproportionately distributed water resources of South Africa.</p>	<p>National Department</p>	<p>1998</p>
<p>National Heritage Resources Act (Act 25 of 1999) (NHRA)</p>	<p>The NHRA aims to provide for the integrated and interactive management and conservation of the national heritage resources in South Africa so that they may be bequeathed for future generations.</p>	<p>National Department</p>	<p>1999</p>
<p>National Development Plan – 2030 (NDP)</p>	<p>The executive summary of the National Development Plan (NDP) initiates with the following paragraph, “The National Development Plan aims to eliminate poverty and reduce inequality by 2030. South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and</p>	<p>National Department</p>	<p>2030</p>

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	partnerships throughout society.”		
Northern Cape Nature Conservation Act (Act 9 of 2009)	In addition to the NFA, the Northern Cape Nature Conservation Act also makes provision for the protection and sustainable utilisation of wild animals, aquatic biota and plants on a provincial scale in the Northern Cape Province. It is therefore used in conjunction with the NFA to determine the ecological/biodiversity significance, value and subsequent management of the proposed project area.	Provincial Department	2009
Northern Cape Provincial Spatial Development Framework	Prepared in accordance with a bioregional planning approach adapted to suit the site-specific requirements of the Northern Cape, the NCPSPDF recognises that no region or area should be planned and managed as an ‘island’ in isolation from its surroundings.	Provincial Department	2011
Northern Cape Provincial Growth and Development Strategy (NCPGDS)	The Northern Cape Provincial Growth and Development Strategy (NCPGDS) (2004 – 2014) highlights the most significant growth and development challenge as the reduction of poverty, and that only through long-term sustainable economic growth and development shall this be achieved. Important areas where growth can be achieved include agriculture and agro-processing, transport and tourism.	Provincial Department	2004

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES	
3 m³	

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

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

Building waste was produced during the initial construction phase of the project. General domestic waste and sewage is continuously produced by the local community. Building waste will be produced once the formal aboveground housing infrastructure construction phase commences.

General domestic waste and sewage will continue to be produced by the local community.

The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk sewage and general waste disposal. See attached confirmation letters.

General and construction waste is disposed of at the Ubuntu Landfill site.

Waste water from the project area is disposed of at the Ubuntu Waste Water Treatment Works where it is treated.

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

General and construction waste is disposed of at the Douglas Landfill site.

Will the activity produce solid waste during its operational phase?

YES	
3 m³	

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

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

General domestic waste and sewage will continue to be produced by the local community.

The Ubuntu Local Municipality has provided written confirmation that it has sufficient capacity for bulk sewage and general waste disposal. See attached confirmation letters.

General waste is disposed of at the Ubuntu Landfill site.

Waste water from the project area is disposed of at the Ubuntu Waste Water Treatment Works where it is treated.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

General waste is disposed of at the Ubuntu Landfill site.
Waste water from the project area is disposed of at the Ubuntu Waste Water Treatment Works where it is treated.

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

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

	NO
--	-----------

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

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

	NO
--	-----------

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

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

	NO
--	-----------

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

0 m³

Will the activity produce any effluent that will be treated and/or disposed of on site?

	NO
--	-----------

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

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

YES	
------------	--

If YES, provide the particulars of the facility:

Facility name:	Loxton Waste Water Treatment Works		
Contact person:	Mr. Dibere Maposa		
Postal address:	Private Bag X329, Victoria West		
Postal code:	7070		
Telephone:	053 621 0026	Cell:	072 485 3823
E-mail:	maposa.d@gmail.com	Fax:	053 621 0368

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Waste water from the project area is disposed of at the Douglas Waste Water Treatment Works where it is treated.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES	
------------	--

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

	NO
--	-----------

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

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

Residents of the local community mostly rely on burning of wood and other fossil fuels for heat generation and cooking of food. These are general emissions and does not require approval from a licensing authority.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

	NO
--	-----------

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES	
------------	--

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

	NO
--	-----------

Describe the noise in terms of type and level:

The noise impacts associated with the project included the noise of machinery during the initial construction phase.

Due to the presence of existing residential infrastructure, the undeveloped landscape to the west is subjected to continued anthropogenic activity and noise disturbance.

Noise of machinery during the subsequent construction phase as well as continued anthropogenic activity and noise disturbance will result in further noise impact.

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

	Groundwater			
--	--------------------	--	--	--

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

135 000 L

 Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

	NO
--	-----------

 If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

14. ENERGY EFFICIENCY

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

N/A. No design measures to enhance energy efficiency have been taken into account or have been implemented.
 Recommendations will be made in the EMPr to investigate to possibility of using solar geysers.

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

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section? YES

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Northern Cape Province
District Municipality	Pixley Ka Sema district Municipality
Local Municipality	Ubuntu Local Municipality
Ward Number(s)	3
Farm name and number	Erven 533, 545 and 582 Loxton
Portion number	Erven 533, 545 and 582 Loxton
SG Code	See attached list

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Recreational Zone I

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required? YES

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat						
------	--	--	--	--	--	--

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:
Shallow water table (less than 1.5m deep)	NO
Dolomite, sinkhole or doline areas	NO
Seasonally wet soils (often close to water bodies)	NO
Unstable rocky slopes or steep slopes with loose soil	NO
Dispersive soils (soils that dissolve in water)	NO
Soils with high clay content (clay fraction more than 40%)	NO
Any other unstable soil or geological feature	NO
An area sensitive to erosion	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

It is assumed that the historic cover of the project area was as follows:

Natural veld - good condition ^E				

According to SANBI (2006-), the project area and surrounding natural, undeveloped areas form part of the Eastern Upper Karoo vegetation type (NKu 4). This vegetation type is characterised by flats and gently sloping plains dominated by microphyllous shrubs with white grasses. It is classified as least threatened as little has been transformed thus far (SANBI, 2006-).

Although the project area is indicated as completely transformed in accordance with the Northern Cape Provincial Spatial Biodiversity Plan 2016 (NCSBP), the eastern portion of the assessment area and surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1). Critical Biodiversity Areas are areas that are irreplaceable or near-irreplaceable (CBA 1), or reflect an optimum configuration (CBA 2) for reaching provincial biodiversity targets for ecosystem types, species or ecological processes (Collins, 2017). Such an area must be maintained in a natural or near-natural state in order to meet biodiversity targets (Collins, 2017).

The existing informal settlement within the western/central portion of the project area has virtually completely transformed all previously existing natural surface vegetation. The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing developments

The current cover of the project area is classified as follows:

	Few indigenous vegetation remaining			
Bare soil	Building or other structure			

The western/central portion of the project area constitutes an existing dense informal residential settlement which has completely transformed all previously existing natural surface vegetation on the project area. The sparse vegetation present within most residential properties of the western/central portion of the project area mainly consist of exotic and/or legally declared alien invasive species which serve ornamental and/or shading purposes. Such species include *Ligustrum lucidum* (Category 3), *Schinus molle* (exotic), *Melia azedarach* (Category 3), *Ricinus communis* (Category 2), *Prosopis sp.* (Category 3) & *Canna indica* (Category 1b). No Red Data Listed, provincially- or nationally protected or any other species of conservational significance were found to be present within the western/central portion of the project area.

A natural elevated ridge is present along the western and northern boundaries of this western/central portion of the project area. The immediately surrounding landscape atop the ridge is undeveloped but is in a moderately disturbed and degraded state. This degraded condition has mainly been caused by anthropogenic disturbances arising from the adjacent residential settlements in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock. Such anthropogenic activities tend to cause an ecological 'edge effect' which negatively impacts on the urban/rural interface area and increases the impact footprint. The landscape is therefore not necessarily reminiscent of the natural climactic state of the relevant vegetation type. The only significant species found to be present include *Tetragonia calycina*, *Mesembryanthemum crystallinum*, *Phyllobolus sp.*, *Malephora crocea* (all provincially protected), an unidentified bulb species (all provincially protected) & *Atriplex sp.*

Surface water drains from the topographically higher ridge areas through the informal settlement towards the south. A distinct ephemeral water drainage line is present along the western boundary of the project area. This drainage line is however significantly obstructed by existing informal housing developments and it eventually artificially dams up against the dirt road to the south of the project area. The drainage line is also significantly polluted by domestic garbage/waste dumping from the surrounding residential settlements. This drainage line forms part of the broader surface water catchment area and drainage towards the Brak River to the south and should therefore be adequately buffered out of the development. No development is allowed to take place within the buffer zone. Existing obstructions which impede the flow of the drainage line within the buffer zone should be cleared. A culvert should be constructed underneath the dirt road to the south of the project area as the artificial damming up of the water against the road is impeding the flow and integrity of the drainage line. An active community waste clean-up initiative will also have to be implemented in order to attempt to remove and adequately dispose of existing domestic garbage/waste within the drainage line.

Due to the presence of existing residential infrastructure, the surrounding undeveloped landscape atop the ridge is subjected to continued anthropogenic activity and disturbance. It is therefore not anticipated that any large or conservationally significant faunal species would utilise the area for breeding and persistence purposes. The project area and surrounding landscape does not fall within any Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important_bird_areas/iba-map) and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the area for breeding or persistence purposes.

The Present Ecological State (PES) of the western/central portion of the project area is classified as Class F as it is critically/extremely modified. Transformation has reached a critical level and the ecosystem has been completely modified with a virtually complete loss of natural habitat and biota. The basic ecosystem functionality has virtually been destroyed and the transformation is irreversible. The Present Ecological State (PES) of the surrounding undeveloped landscape atop

the ridge is classified as Class C as it is moderately modified. Moderate loss and transformation of natural habitat and biota have occurred due to continued disturbance caused by anthropogenic activities in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock, but the basic ecosystem functionality has still remained predominantly unchanged.

The western/central portion of the project area and surrounding natural, undeveloped areas fall within the Eastern Upper Karoo vegetation type (NKu 4) which is classified as least threatened (SANBI, 2006-). The surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1) in accordance with the NCSBP. The CBA 1 mainly forms part of the broader surface water catchment and drainage area towards the Brak River to the south.

The surrounding undeveloped landscape atop the ridge is in a moderately disturbed and degraded state caused by continued anthropogenic activities. Although no Red Data Listed-, or nationally protected species were found to be present, a number of provincially protected species are present. It is therefore assumed that the project area and surrounding undeveloped landscape would historically probably have housed numerous provincially protected bulbous and other forb species associated with the relevant vegetation type.

The historic Ecological Importance and Sensitivity (EIS) of the western/central portion of the project area and surrounding undeveloped landscape atop the ridge would probably have been classified as Class C (moderate) as it could have been viewed as ecologically important and sensitive on local or possibly provincial scale mainly due to it forming part of the broader surface water catchment and drainage area towards the Brak River to the south as well as the assumed presence of numerous provincially protected bulbous and other forb species. The western/central portion of the project area would therefore have been viewed as being of moderate conservational significance for habitat preservation and ecological functionality persistence in support of the surrounding ecosystem, broader vegetation type, water catchment and drainage area and CBA 1.

Although the western/central portion of the project area scored a low current PES values, the current Ecological Importance and Sensitivity (EIS) of this area is however still classified as Class C (moderate) as it still forms part of the broader surface water catchment and drainage area towards the Brak River to the south. The western/central portion of the project area and surrounding undeveloped area atop the ridge is therefore still viewed as being of moderate conservational significance for ecological functionality persistence in support of the surrounding ecosystem and water catchment and drainage area associated with the CBA 1. Adequate and unimpeded drainage and flow of surface water runoff from the western/central portion of the project area towards the river is therefore imperative.

The eastern portion of the project area houses a degree of natural vegetation associated with the relevant vegetation type but it is in a relatively disturbed condition due to the sporadic presence of informal housing developments. Anthropogenic disturbances in the form of domestic garbage/waste dumping, vegetation clearance is evident throughout the area. In accordance with the information received from the applicant, an historic stone quarry was also present within this area which was subsequently decommissioned and filled up again in the past.

The immediately surrounding landscape to the north is undeveloped but is in a moderately disturbed and degraded state. This degraded condition has mainly been caused by anthropogenic disturbances arising from the adjacent residential settlements in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock. The landscape is therefore not necessarily reminiscent of the natural climactic state of the relevant vegetation type. The same significant species as found atop the ridge were found to be present within and

surrounding the eastern portion of the project area namely *Tetragonia calycina*, *Mesembryanthemum crystallinum*, *Phyllobolus sp.*, *Malephora crocea* (all provincially protected), an unidentified bulb species (all provincially protected) & *Atriplex sp.*

Two significant ephemeral watercourses enter and traverse the eastern portion of the project area from the north and east respectively and then subsequently join up in the southern portion of the project area. Although these watercourses are not significantly obstructed by any of the existing sporadic informal housing developments, a culvert at their joining point which channels the water through under a dirt road, does not seem to provide adequate through flow capacity. It is therefore anticipated that significant damming up and push back of water would occur at this joining point during intense rainfall events (also confirmed by members of the local community). The watercourses are also significantly polluted by domestic garbage/waste dumping from the surrounding residential settlements. These watercourses form a significant part of the broader surface water catchment and drainage area towards the Brak River to the south and should therefore be adequately buffered out of the development. A minimum 32 m buffer is recommended and no development is allowed to take place within the buffer zone. Existing obstructions within the buffer zone should be cleared. The existing culvert which impedes the flow of the watercourses should be redesigned and enlarged in order to allow for optimal flow at all times. An active community waste clean-up initiative will also have to be implemented in order to attempt to remove and adequately dispose of existing domestic garbage/waste within the watercourses.

The entire eastern portion of the project area forms part of a small localised surface water catchment and drainage area south of the R 63 provincial road which feeds into the two ephemeral watercourses. Numerous small drainage lines are therefore scattered throughout the eastern portion of the project area. The drainage of this broader surface area is however moderately impeded by the sporadic presence of existing informal housing developments. Adequate stormwater management and channelling infrastructure should therefore be implemented within the eastern portion of the project area in order to sufficiently manage surface water runoff and ensure adequate and unimpeded drainage and flow of the two watercourses towards the Brak River to the south.

Due to the presence of existing residential infrastructure, the eastern portion of the project area and surrounding undeveloped landscape to the north is subjected to continued anthropogenic activity and disturbance. It is therefore not anticipated that any large or conservationally significant faunal species would utilise the area for breeding and persistence purposes. The project area and surrounding landscape does not fall within any Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important_bird_areas/iba-map) and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the area for breeding or persistence purposes.

The Present Ecological State (PES) of the eastern portion of the project area is classified as Class C as it is moderately modified. Moderate loss and transformation of natural habitat and biota have occurred due to sporadic establishment of informal housing developments, but the basic ecosystem functionality and flow regime of the watercourses has still remained predominantly unchanged. The Present Ecological State (PES) of the surrounding undeveloped landscape to the north is also classified as Class C as it is moderately modified. Moderate loss and transformation of natural habitat and biota have occurred due to continued disturbance caused by anthropogenic activities in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock, but the basic ecosystem functionality has still remained predominantly unchanged.

The eastern portion of the project area and surrounding natural, undeveloped areas fall within the Eastern Upper Karoo vegetation type (NKu 4) which is classified as least threatened (SANBI, 2006-). It also falls within a Critical Biodiversity Area one (CBA 1) in accordance with the NCSBP. The CBA 1 mainly forms part of the broader surface water catchment and drainage area towards the Brak River to the south.

The surrounding undeveloped landscape to the north is in a moderately disturbed and degraded state caused by continued anthropogenic activities. Although no Red Data Listed-, or nationally protected species were found to be present, a number of provincially protected species are present. It is therefore assumed that the project area and surrounding undeveloped landscape would historically probably have housed numerous provincially protected bulbous and other forb species associated with the relevant vegetation type.

The historic Ecological Importance and Sensitivity (EIS) of the eastern portion of the project area and surrounding undeveloped landscape to the north would probably have been classified as Class B (high) as it could have been viewed as ecologically important and sensitive on provincial scale mainly due to the presence of the two ephemeral watercourses which form a significant part of the broader surface water catchment and drainage area towards the Brak River to the south as well as the assumed presence of numerous provincially protected bulbous and other forb species. The eastern portion of the project area would therefore have been viewed as being of relatively high conservational significance for habitat preservation and ecological functionality persistence in support of the surrounding ecosystem, broader vegetation type and water catchment and drainage area associated with the CBA 1.

Although the eastern portion of the project area scored a moderate current PES values, the current Ecological Importance and Sensitivity (EIS) of this area is however still classified as Class B (high) as the two ephemeral watercourses still form a significant part of the broader surface water catchment and drainage area towards the Brak River to the south. The eastern portion of the project area and surrounding undeveloped area to the north is therefore still viewed as being of relatively high conservational significance for ecological functionality persistence in support of the surrounding ecosystem and water catchment and drainage area associated with the CBA 1. Adequate and unimpeded drainage and flow of surface water runoff from the eastern portion of the project area towards the river is therefore imperative for the continued ecological functionality of the CBA 1.

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River		NO	
Non-Perennial River		NO	
Permanent Wetland		NO	
Seasonal Wetland		NO	
Artificial Wetland		NO	

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Estuarine / Lagoonal wetland		NO	
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If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

N/A

6. LAND USE CHARACTER OF SURROUNDING AREA

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

Transformed area		
Informal residential^A		

If any of the boxes marked with an "N" are ticked, how this impact will / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	
Core area of a protected area?		NO
Buffer area of a protected area?		NO
Planned expansion area of an existing protected area?		NO
Existing offset area associated with a previous Environmental Authorisation?		NO
Buffer area of the SKA?		NO
Although the project area is indicated as completely transformed in accordance with the Northern Cape Provincial Spatial Biodiversity Plan 2016 (NCSBP), the eastern portion of the assessment area and surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1). Critical Biodiversity Areas are areas that are irreplaceable or near-irreplaceable (CBA 1), or reflect an optimum configuration (CBA 2) for reaching provincial biodiversity targets for ecosystem types, species or ecological processes (Collins, 2017). Such an area must be maintained in a natural or near-natural state in order to meet biodiversity targets (Collins, 2017).		

If the answer to any of these questions was YES, a map indicating the affected area must be included in **Appendix A**.

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:		NO

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

The site is situated on flat, degraded terrain within an existing residential area located on the northwestern outskirts of Loxton and south of the R63 provincial road (**Fig. 7**). Historical evidence indicates that the site has already been developed as early as 2005 (**Fig. 8**). Potential for impact on palaeontological remains resulting from the existing development footprint at this stage is considered to be non-existent. However, future large-scale excavations exceeding depths of more than 1m into intact Abrahamskraal Formation sedimentary strata within the study area will require monitoring by a professional palaeontologist. Potential for impact on archaeological or historically significant remains within development footprint at this stage is considered to be non-existent. It is recommended that the planned development is exempt from a full Phase 1 Archaeological Impact Assessment.

Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		NO

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

The available census data of 2001 and 2011 was used (obtained from Statistics South Africa). This data was obtained well after the commencement of the project.

Ubuntu Local Municipality:

Population size

2001: 16 375 which 61.1 % falls within the working age.

2011: 18 601 which 61.1 % falls within the working age.

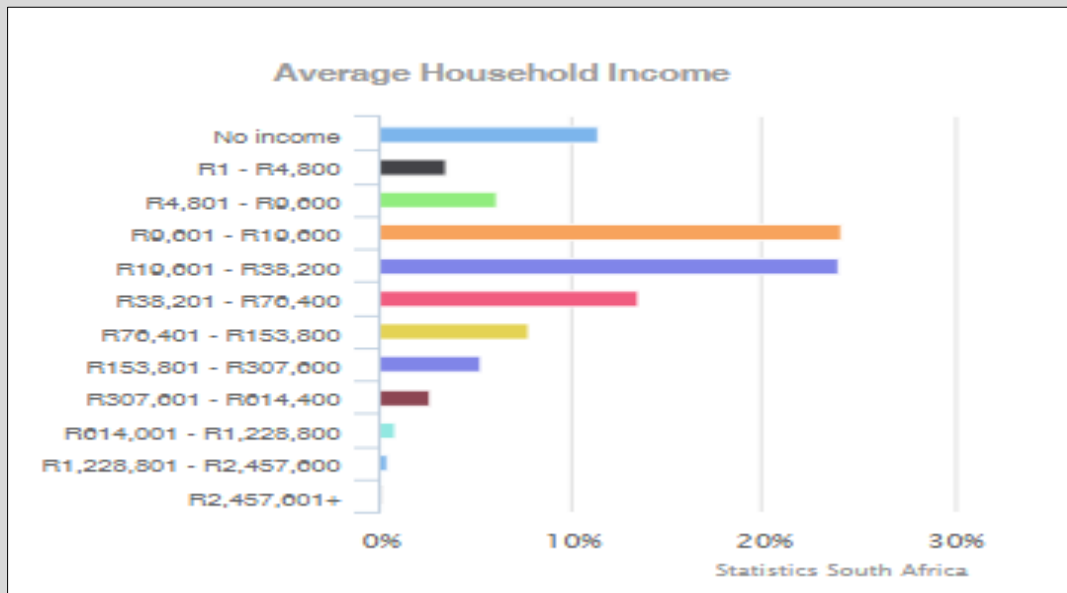
Employment:

2001: The unemployment rate is 34.1 % with a youth unemployment rate of 41.5 %

2011: hou

Economic profile of local municipality:

The Economic Profile of the Ubuntu Local Municipality is summarized below. It is clear that the fourth highest percentage of people have no income. This project will contribute by providing new working opportunities during the construction/preparations phase and operational phases.

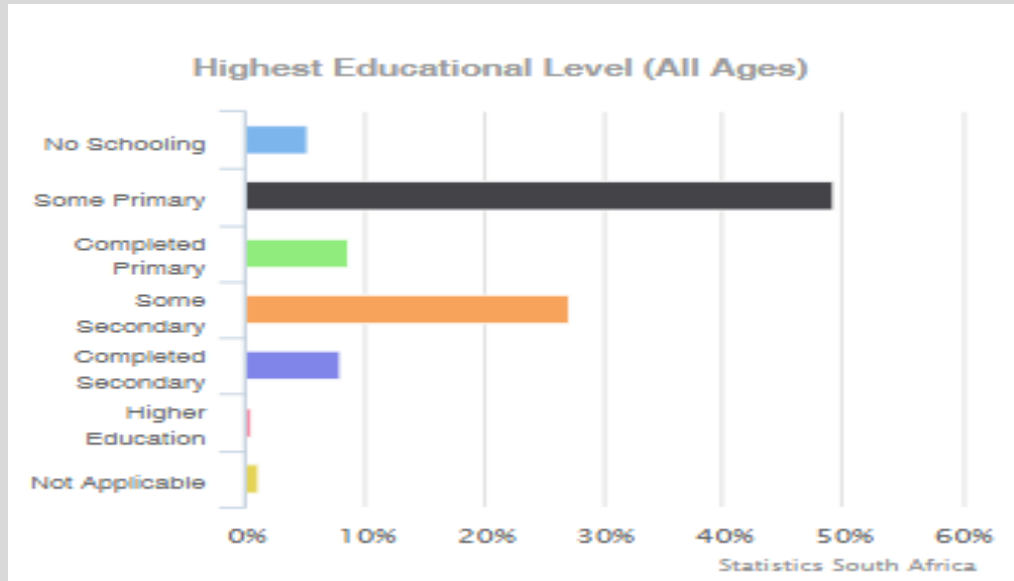


Statistics South Africa

Level of education:

According to the Census, Ubuntu Local Municipality has a total population of 18 601 people. The majority of the population in the municipality are coloured at 69.8; % 21.3% are black African; 7.6% are White; 0.5% are Indian/Asian, with the other population groups making up the remaining. 0.8%.

Of those aged 20 years and older 8.7% have completed primary school, 27.1% have some secondary education, 8% have completed matric and 0.4% have some form of higher education. Of the mentioned age group, 5.3% have no form of schooling.



Statistics South Africa

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?
 What is the expected yearly income that will be generated by or as a result of the activity?
 Will the activity contribute to service infrastructure?
 Is the activity a public amenity?
 How many new employment opportunities will be created in the development and construction phase of the activity/ies?
 What is the expected value of the employment opportunities during the development and construction phase?
 What percentage of this will accrue to previously disadvantaged individuals?
 How many permanent new employment opportunities will be created during the operational phase of the activity?
 What is the expected current value of the employment opportunities during the first 10 years?
 What percentage of this will accrue to previously disadvantaged individuals?

R 9 000 000.00	
R 350 000.00	
YES	
YES	
45	
R 912 000.00	
80%	
15	
R 12 000 000.00	
80%	

9. BIODIVERSITY

Please 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 activity/ies. 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, Ph (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) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) **Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)**

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)			No Natural Area Remaining (NNR)	Although the project area is indicated as completely transformed in accordance with the Northern Cape Provincial Spatial Biodiversity Plan 2016 (NCSBP), the eastern portion of the assessment area and surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1). Critical Biodiversity Areas are areas that are irreplaceable or near-irreplaceable (CBA 1), or reflect an optimum configuration (CBA 2) for reaching provincial biodiversity targets for ecosystem types, species or ecological processes (Collins, 2017). Such an area must be maintained in a natural or near-natural state in order to meet biodiversity targets (Collins, 2017).

b) **Indicate and describe the habitat condition on site**

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	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		
Near Natural (includes areas with low to moderate level of alien invasive plants)		
Degraded (includes areas heavily invaded by alien plants)	75 %	The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing developments.

Transformed (includes cultivation, dams, urban, plantation, roads, etc)	25 %	The existing informal settlement within the western/central portion of the project area has virtually completely transformed all previously existing natural surface vegetation
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c) Complete the table to indicate:

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

Terrestrial Ecosystems		Aquatic Ecosystems						
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)		Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Least Threatened	NO				NO		NO

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The western/central portion of the project area constitutes an existing dense informal residential settlement which has completely transformed all previously existing natural surface vegetation on the project area. The sparse vegetation present within most residential properties of the western/central portion of the project area mainly consist of exotic and/or legally declared alien invasive species which serve ornamental and/or shading purposes. Such species include *Ligustrum lucidum* (Category 3), *Schinus molle* (exotic), *Melia azedarach* (Category 3), *Ricinus communis* (Category 2), *Prosopis sp.* (Category 3) & *Canna indica* (Category 1b). No Red Data Listed, provincially- or nationally protected or any other species of conservational significance were found to be present within the western/central portion of the project area.

A natural elevated ridge is present along the western and northern boundaries of this western/central portion of the project area. The immediately surrounding landscape atop the ridge is undeveloped but is in a moderately disturbed and degraded state. This degraded condition has mainly been caused by anthropogenic disturbances arising from the adjacent residential settlements in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock. Such anthropogenic activities tend to cause an ecological 'edge effect' which negatively impacts on the urban/rural interface area and increases the impact footprint. The landscape is therefore not necessarily reminiscent of the natural climactic state of the relevant vegetation type. The only significant species found to be present include *Tetragonia calycina*, *Mesembryanthemum crystallinum*, *Phyllobolus sp.*, *Malephora crocea* (all provincially protected), an unidentified bulb species (all provincially protected) & *Atriplex sp.*

Surface water drains from the topographically higher ridge areas through the informal settlement towards the south. A distinct ephemeral water drainage line is present along the western boundary of the project area. This drainage line is however significantly obstructed by existing informal housing developments and it eventually artificially dams up against the dirt road to the south of the project area. The drainage line is also significantly polluted by domestic garbage/waste dumping from the surrounding residential settlements. This drainage line forms part of the broader surface

water catchment area and drainage towards the Brak River to the south and should therefore be adequately buffered out of the development. No development is allowed to take place within the buffer zone. Existing obstructions which impede the flow of the drainage line within the buffer zone should be cleared. A culvert should be constructed underneath the dirt road to the south of the project area as the artificial damming up of the water against the road is impeding the flow and integrity of the drainage line. An active community waste clean-up initiative will also have to be implemented in order to attempt to remove and adequately dispose of existing domestic garbage/waste within the drainage line.

Due to the presence of existing residential infrastructure, the surrounding undeveloped landscape atop the ridge is subjected to continued anthropogenic activity and disturbance. It is therefore not anticipated that any large or conservationally significant faunal species would utilise the area for breeding and persistence purposes. The project area and surrounding landscape does not fall within any Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important_bird_areas/iba-map) and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the area for breeding or persistence purposes.

The Present Ecological State (PES) of the western/central portion of the project area is classified as Class F as it is critically/extremely modified. Transformation has reached a critical level and the ecosystem has been completely modified with a virtually complete loss of natural habitat and biota. The basic ecosystem functionality has virtually been destroyed and the transformation is irreversible. The Present Ecological State (PES) of the surrounding undeveloped landscape atop the ridge is classified as Class C as it is moderately modified. Moderate loss and transformation of natural habitat and biota have occurred due to continued disturbance caused by anthropogenic activities in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock, but the basic ecosystem functionality has still remained predominantly unchanged.

The western/central portion of the project area and surrounding natural, undeveloped areas fall within the Eastern Upper Karoo vegetation type (NKu 4) which is classified as least threatened (SANBI, 2006-). The surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1) in accordance with the NCSBP. The CBA 1 mainly forms part of the broader surface water catchment and drainage area towards the Brak River to the south.

The surrounding undeveloped landscape atop the ridge is in a moderately disturbed and degraded state caused by continued anthropogenic activities. Although no Red Data Listed-, or nationally protected species were found to be present, a number of provincially protected species are present. It is therefore assumed that the project area and surrounding undeveloped landscape would historically probably have housed numerous provincially protected bulbous and other forb species associated with the relevant vegetation type.

The historic Ecological Importance and Sensitivity (EIS) of the western/central portion of the project area and surrounding undeveloped landscape atop the ridge would probably have been classified as Class C (moderate) as it could have been viewed as ecologically important and sensitive on local or possibly provincial scale mainly due to it forming part of the broader surface water catchment and drainage area towards the Brak River to the south as well as the assumed presence of numerous provincially protected bulbous and other forb species. The western/central portion of the project area would therefore have been viewed as being of moderate conservational significance for habitat preservation and ecological functionality persistence in support of the surrounding ecosystem, broader vegetation type, water catchment and drainage area and CBA 1.

Although the western/central portion of the project area scored a low current PES values, the current Ecological Importance and Sensitivity (EIS) of this area is however still classified as Class C (moderate) as it still forms part of the broader surface water catchment and drainage area towards the Brak River to the south. The western/central portion of the project area and surrounding undeveloped area atop the ridge is therefore still viewed as being of moderate conservational significance for ecological functionality persistence in support of the surrounding ecosystem and water catchment and drainage area associated with the CBA 1. Adequate and unimpeded drainage and flow of surface water runoff from the western/central portion of the project area towards the river is therefore imperative.

The eastern portion of the project area houses a degree of natural vegetation associated with the relevant vegetation type but it is in a relatively disturbed condition due to the sporadic presence of informal housing developments. Anthropogenic disturbances in the form of domestic garbage/waste dumping, vegetation clearance is evident throughout the area. In accordance with the information received from the applicant, an historic stone quarry was also present within this area which was subsequently decommissioned and filled up again in the past.

The immediately surrounding landscape to the north is undeveloped but is in a moderately disturbed and degraded state. This degraded condition has mainly been caused by anthropogenic disturbances arising from the adjacent residential settlements in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock. The landscape is therefore not necessarily reminiscent of the natural climactic state of the relevant vegetation type. The same significant species as found atop the ridge were found to be present within and surrounding the eastern portion of the project area namely *Tetragonia calycina*, *Mesembryanthemum crystallinum*, *Phyllobolus sp.*, *Malephora crocea* (all provincially protected), an unidentified bulb species (all provincially protected) & *Atriplex sp.*

Two significant ephemeral watercourses enter and traverse the eastern portion of the project area from the north and east respectively and then subsequently join up in the southern portion of the project area. Although these watercourses are not significantly obstructed by any of the existing sporadic informal housing developments, a culvert at their joining point which channels the water through under a dirt road, does not seem to provide adequate through flow capacity. It is therefore anticipated that significant damming up and push back of water would occur at this joining point during intense rainfall events (also confirmed by members of the local community). The watercourses are also significantly polluted by domestic garbage/waste dumping from the surrounding residential settlements. These watercourses form a significant part of the broader surface water catchment and drainage area towards the Brak River to the south and should therefore be adequately buffered out of the development. A minimum 32 m buffer is recommended and no development is allowed to take place within the buffer zone. Existing obstructions within the buffer zone should be cleared. The existing culvert which impedes the flow of the watercourses should be redesigned and enlarged in order to allow for optimal flow at all times. An active community waste clean-up initiative will also have to be implemented in order to attempt to remove and adequately dispose of existing domestic garbage/waste within the watercourses.

The entire eastern portion of the project area forms part of a small localised surface water catchment and drainage area south of the R 63 provincial road which feeds into the two ephemeral watercourses. Numerous small drainage lines are therefore scattered throughout the eastern portion of the project area. The drainage of this broader surface area is however moderately impeded by the sporadic presence of existing informal housing developments. Adequate stormwater management and channelling infrastructure should therefore be implemented within the eastern portion of the project area in order to sufficiently manage surface water runoff and

ensure adequate and unimpeded drainage and flow of the two watercourses towards the Brak River to the south.

Due to the presence of existing residential infrastructure, the eastern portion of the project area and surrounding undeveloped landscape to the north is subjected to continued anthropogenic activity and disturbance. It is therefore not anticipated that any large or conservationally significant faunal species would utilise the area for breeding and persistence purposes. The project area and surrounding landscape does not fall within any Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important_bird_areas/iba-map) and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the area for breeding or persistence purposes.

The Present Ecological State (PES) of the eastern portion of the project area is classified as Class C as it is moderately modified. Moderate loss and transformation of natural habitat and biota have occurred due to sporadic establishment of informal housing developments, but the basic ecosystem functionality and flow regime of the watercourses has still remained predominantly unchanged. The Present Ecological State (PES) of the surrounding undeveloped landscape to the north is also classified as Class C as it is moderately modified. Moderate loss and transformation of natural habitat and biota have occurred due to continued disturbance caused by anthropogenic activities in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock, but the basic ecosystem functionality has still remained predominantly unchanged.

The eastern portion of the project area and surrounding natural, undeveloped areas fall within the Eastern Upper Karoo vegetation type (NKu 4) which is classified as least threatened (SANBI, 2006-). It also falls within a Critical Biodiversity Area one (CBA 1) in accordance with the NCSBP. The CBA 1 mainly forms part of the broader surface water catchment and drainage area towards the Brak River to the south.

The surrounding undeveloped landscape to the north is in a moderately disturbed and degraded state caused by continued anthropogenic activities. Although no Red Data Listed-, or nationally protected species were found to be present, a number of provincially protected species are present. It is therefore assumed that the project area and surrounding undeveloped landscape would historically probably have housed numerous provincially protected bulbous and other forb species associated with the relevant vegetation type.

The historic Ecological Importance and Sensitivity (EIS) of the eastern portion of the project area and surrounding undeveloped landscape to the north would probably have been classified as Class B (high) as it could have been viewed as ecologically important and sensitive on provincial scale mainly due to the presence of the two ephemeral watercourses which form a significant part of the broader surface water catchment and drainage area towards the Brak River to the south as well as the assumed presence of numerous provincially protected bulbous and other forb species. The eastern portion of the project area would therefore have been viewed as being of relatively high conservational significance for habitat preservation and ecological functionality persistence in support of the surrounding ecosystem, broader vegetation type and water catchment and drainage area associated with the CBA 1.

Although the eastern portion of the project area scored a moderate current PES values, the current Ecological Importance and Sensitivity (EIS) of this area is however still classified as Class B (high) as the two ephemeral watercourses still form a significant part of the broader surface water catchment and drainage area towards the Brak River to the south. The eastern portion of the project area and surrounding undeveloped area to the north is therefore still viewed as being of relatively high

conservational significance for ecological functionality persistence in support of the surrounding ecosystem and water catchment and drainage area associated with the CBA 1. Adequate and unimpeded drainage and flow of surface water runoff from the eastern portion of the project area towards the river is therefore imperative for the continued ecological functionality of the CBA 1.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	NEMA Section 24G Rectification Process for the already established Loxton 26.6ha Low Cost Housing Development	
Date published	27 February 2019	
Site notice position	Latitude	Longitude
Notice 1	31°28'22.42"S	22°20'43.71"E
Notice 2	31°28'13.28"S	22°20'42.64"E
Notice 3	31°28'17.58"S	22°20'53.04"E
Notice 4	31°28'23.25"S	22°20'27.47"E
In town Notice (Municipality)	Victoria West – Ubuntu Local Municipality 31°24'13.32"S	23°06'37.35"E
Date placed	27 February 2019	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733

Title, Name and Surname	Affiliation/ status	key stakeholder	Contact details (tel number or e-mail address)
To be completed once I&AP's Register			

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
To be complete at end of 30 day PPP	

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	e-mail
Ubuntu Local Municipality - Municipal Manager	Mr. Dibere Maposa	053 621 0026	maposa.d@gmail.com
Ubuntu Local Municipality - Environmental Department	Ms. Zandile Seloane	053 621 0026	zartora25@gmail.com
Ubuntu Local Municipality - Ward (3) Ward Councillor	Mr. Hugo Vorster	084 504 4152	hugovorster63@gmail.com
Ubuntu Local Municipality - Ward (3) Ward Councillor	Mrs. Cheryl Jantjies	083 997 8030	cheryljantjies09@gmail.com
Pixley Ka Seme District Municipality - Municipal Manager	Mr. Rodney Pieterse	053 631 0891	mm@pksgdm.gov.za
Pixley Ka Seme District Municipality - Environmental Department	Mr. S. Nkondeshe	053 631 0891	pixley@telkomsa.net
Department of Environment and Nature Conservation - Environmental Impact Assessment Department	Mr. Thulani Mthombeni	(053) 807 7430 or Cell: 071 673 7525	tmthombeni@ncpg.gov.za
Northern Cape Department of Water and	Mr. Khutjo Sekwaila	053 836 7609	sekwailak@dws.gov.za

Sanitation - Commenting Authority for the region			
Northern Cape Department of Water and Sanitation - Commenting Authority for the region	Ms. Refilwe Damane	053 836 7609	damaner@dws.gov.za
South African Heritage Recourses Agency (SAHRA)	Ms. Natasha Higgitt	021 462 4502	nhiggitt@sahra.org.za
Department of Cooperative Governance, Human Settlements and Traditional Affairs (CoGHSTA)	Ms. Livhuwani Tshilate	053 830 9514	Itshilate@ncpg.gov.za

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

a) Planning, Design and Construction Phase

PLANNING, DESIGN AND CONSTRUCTION PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on Flora as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Direct impact on Fauna as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the development / building of houses.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)

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Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the development / building of houses.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during excavation activities.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the development / building of houses.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the building of houses.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact: Traffic impacts by means of additional truck and transportation to and from site during the building of houses.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)

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Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the development / preparation of houses.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Medium (M)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to construction activities.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Medium (M)	Medium (M)	Medium (M)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact due to increased working activities on-site.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Increased socio-economic conditions due to job creation			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	+ Medium (M)	+ Medium-high (MH)	+ Medium (M)	+ Medium-high (MH)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)

b) Operational Phase

OPERATIONAL PHASE					
Potential Flora Impacts:					
Nature of impact: Direct impact on Flora as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Medium High (MH)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Fauna Impacts:					
Nature of impact: Direct impact on Fauna as a result of vegetation clearance.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Dust Impacts:					
Nature of impact: Dust nuisance generated during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Noise Impacts:					
Nature of impact: Noise nuisance generated during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Cultural and Heritage Impacts:					
Nature of impact: Damage and destruction of vertebrate fossils during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)

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Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Surface and Groundwater Contamination Impacts:					
Nature of impact: Surface and Groundwater Contamination during the during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Medium High (MH)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Waste Management Impacts:					
Nature of impact: Waste impacts by means of waste storage and littering during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Cumulative impact:	Medium (M)	Low (L)	Medium (M)	Low (L)	Low (L)
Potential Traffic Impacts:					
Nature of impact: Traffic impacts by means of additional truck and transportation to and from site during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Fire Risk Impacts:					
Nature of impact: Increase risk of fires during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Medium (M)
Potential Soil Contamination Impacts:					
Nature of impact: Increased Soil contamination by means of hazardous substances.			Activity: Proposed low cost housing development		
	Western/Central Portion		Eastern Portion		No-Go Alternative

S24G RECTIFICATION REPORT

Evaluation Component:	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Soil Erosion Impacts:					
Nature of impact: Increased Soil erosion due to operational activities.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Medium (M)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Visual Impacts:					
Nature of impact: Increased visual impact during the operational phase of the project.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Cumulative impact:	Low (L)	Low (L)	Low (L)	Low (L)	Low (L)
Potential Socio-Economic Impacts:					
Nature of impact: Effect of the development on the surrounding housing market.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)
Cumulative impact:	+ Medium (M)	+ Medium (M)	+ Medium (M)	+ Medium (M)	Medium (M)
Nature of impact: Effect of the development on the tourism of the surrounding area.			Activity: Proposed low cost housing development		
Evaluation Component:	Western/Central Portion		Eastern Portion		No-Go Alternative
	Before Mitigation	After Mitigation	Before Mitigation	After Mitigation	
Significance rating:	+ Low (L)	+ Low (L)	+ Low (L)	+ Low (L)	Low (L)
Cumulative impact:	+ Low (L)	+ Low (L)	+ Low (L)	+ Low (L)	Low (L)
PLEASE NOTE: THE IMPACTS EVALUATED UNDER BOTH OF THE SOCIO-ECONOMIC IMPACT CONDITIONS ARE ONLY PRELIMINARY. IF A DETAILED IMPACT EVALUATION IS REQUIRED, A SOCIO-ECONOMIC IMPACT ASSESSMENT WILL NEED TO BE COMPILED.					

c) Decommissioning Phase

As this development relates to a residential development, a decommissioning phase it not foreseeable and therefore impacts related to the decommissions phase have not been included. However, if the client for some other reason decide to decommission the area, an Environmental Impact study will have to be undertaken in accordance with the NEAM EIA regulations whereby the Decommissioning impact will be determined and submitted to the Relevant Decision Making department for Decision making.

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

The project applicant, Ubuntu Local Municipality historically cleared an approximate 26.6 ha portion of natural vegetation for the development of low cost housing in Loxton, Northern Cape Province. The necessary underground services such as water reticulation, sewage and electrical infrastructure was also installed at the time but no formal aboveground housing infrastructure development took place. No Environmental Authorisation was however initially obtained from the Northern Cape Department of Environment and Nature Conservation (DENC) as is legally required by the National Environmental Management Act (Act 107 of 1998) (NEMA). The applicant has subsequently been made aware of this legal transgression and has therefore opted to follow a Section 24G process in accordance with NEMA in order to rectify the situation.

The existing informal settlement within the western/central portion of the project area has virtually completely transformed all previously existing natural surface vegetation. The eastern portion still houses a degree of natural vegetation but it is in a relatively disturbed condition due to the sporadic presence of informal housing developments. A historic stone quarry was also present within this area which was subsequently decommissioned and filled up again in the past.

The historic ecology of the project area is assumed to have been comparable to that of the surrounding natural, undeveloped areas as no significant change in soil structure, landscape topography or other features is evident. The immediately surrounding landscape to the west and north of the project area is undeveloped but is in a moderately disturbed and degraded state. This degraded condition has mainly been caused by anthropogenic disturbances arising from the

adjacent residential settlements in the form of domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock. The landscape is therefore not necessarily reminiscent of the natural climactic state of the relevant Eastern Upper Karoo vegetation type (NKu 4) and the area scored a moderate PES rating. The relevant vegetation type is classified as least threatened (SANBI, 2006-).

The eastern portion of the project area and surrounding natural, undeveloped areas fall within a Critical Biodiversity Area one (CBA 1) in accordance with the NCSBP. The CBA 1 mainly forms part of the broader surface water catchment and drainage area towards the Brak River to the south. The ephemeral water drainage line to the west as well as the two ephemeral watercourses within the eastern portion form a significant part of the broader surface water catchment and drainage area towards the river. They should be adequately buffered out of the development. A minimum 32 m buffer is recommended around the two significant ephemeral watercourses traversing the eastern portion of the project area and no development is allowed to take place within the buffer zones.

Although the project area scored a moderate to low current PES values, the current Ecological Importance and Sensitivity (EIS) of the area is still classified as Class B (high) as the eastern portion of the project area and surrounding undeveloped area to the north is still viewed as being of relatively high conservational significance for ecological functionality persistence in support of the surrounding ecosystem and water catchment and drainage area associated with the CBA 1.

Although no Red Data Listed-, or nationally protected species were found to be present, a number of provincially protected species are present within the eastern portion of the project area. It is therefore assumed that the entire project area and surrounding undeveloped landscape would historically probably have housed numerous provincially protected bulbous and other forb species associated with the relevant vegetation type.

Due to the presence of existing residential infrastructure, the undeveloped landscape to the west and north is subjected to continued anthropogenic activity and disturbance. It is therefore not anticipated that any large or conservationally significant faunal species would utilise the area for breeding and persistence purposes. The project area and surrounding landscape does not fall within any Important Bird Area (IBA) as per the latest IBA map obtained from the Birdlife SA website (www.birdlife.org.za/conservation/important_bird_areas/iba-map) and no important bird species, unique or specialised bird habitats were observed or are expected to utilise the area for breeding or persistence purposes.

Potential for impact on palaeontological remains resulting from the existing development footprint at this stage is considered to be non-existent. However, future large-scale excavations exceeding depths of more than 1m into intact Abrahamskraal Formation sedimentary strata within the study area will require monitoring by a professional palaeontologist. Potential for impact on archaeological or historically significant remains within development footprint at this stage is considered to be non-existent.

It is the opinion of the EAP that the virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the western/central portion of the project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible. The identified significant ecological impact associated with the impeding and contamination of the drainage line to the west and the two significant ephemeral watercourses associated with the CBA 1 can be suitably managed and mitigated to prevent further significant negative impact. Adequate and unimpeded drainage and flow of surface water runoff from the project area towards the Brak River to the south is imperative for the continued ecological functionality of the CBA 1. There will also be no significant Heritage impacts as the potential for impact on both the palaeontological and archaeological remains were found to be non-existent.

The socio-economic impact is positive with regards to municipal service provision and infrastructure development, job creation and sustainable capacity building (skills, experience and resources development) for the future in the local community. The project operations should be allowed to continue but all recommended mitigations measures must be adequately implemented and managed for the remainder of the operational phase. All necessary authorisations and permits must also be obtained as soon as reasonably and practicably possible. The project should therefore be considered by the competent authority for Environmental Authorisation and approval.

No-go alternative (compulsory)

As the development already took place, the no-go alternative is not possible. The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	
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If “NO”, indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

N/A

If “YES”, please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

<p><u>Planning / Construction Phase</u></p> <p><u>Flora Impacts</u></p> <ul style="list-style-type: none"> • Any accidental fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as related to the nature of the spill. • The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place. • Existing roads must be used during construction. • Areas within and immediately surrounding the proposed project footprint must be adequately rehabilitated to prevent significant alien invasive species establishment. • Alien and invasive species need to be eradicated and controlled. <p><u>Clearing and Guiding Principles</u></p> <ul style="list-style-type: none"> • Alien control programs are long-term management projects and should include a clearing plan which includes follow up actions for rehabilitation of the cleared area; • The lighter infested areas should be cleared first to prevent seed build-up; • Pre-existing dense areas should be left for last, as they probably will not increase in density or pose a greater threat than they are currently; • All clearing actions should be monitored and documented to keep track of which are due for follow-up clearing. <p><u>Clearing Methods</u></p> <ul style="list-style-type: none"> • Different species require different control methods such as manual, chemical or biological methods or a combination of the two; • Care should be taken to ensure that the clearing methods used do not encourage further invasion. As such, regardless of the methods used, soil disturbance should be kept to a minimum. The vegetative stage of the plants should also be considered before clearing; <p><u>Use of Herbicides for Alien Control</u></p> <p>Although it is usually preferable to use manual clearing methods where possible, such methods may create additional mechanical disturbance which may stimulate alien invasion and may also be ineffective for many woody species which re-sprout. Where herbicides are to be used, the impact of the eradication program on the natural environment should be minimised by observing the following:</p>

- Area contamination must be minimised by careful, accurate application with a minimum amount of herbicide to achieve good control;
- Care must be taken to prevent contamination of water bodies. This includes special care in storage, application, cleaning equipment and disposal of containers, product and spray mixtures;
- Equipment should be washed where there is no danger of contaminating water sources and washings carefully disposed of in a suitable place;
- To avoid damage to indigenous or other desirable vegetation, herbicides that would have the least effect on the indigenous vegetation should be used;
- Droplet nozzles with a coarse spray pattern should be fitted to avoid drift of herbicides onto neighbouring vegetation; and
- The appropriate health and safety precautions should be followed regarding the storage, handling and disposal of herbicides.
- Conduct a Search and Rescue to relocate protected species in order to avoid clearance thereof.

Fauna Impacts

- The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place.
- Areas within and immediately surrounding the proposed project footprint must be adequately rehabilitated to prevent significant alien invasive species establishment.
- Alien and invasive species need to be eradicated and controlled.
- No hunting, snaring, shooting, nest raiding or egg collection by the construction staff should be allowed; care must be taken to ensure that the Riverine rabbit, which may occur in this area and is classified as a critically endangered species, is not disturbed.
- Holes and trenches should not be left open for extended periods of time and should only be dug when needed for immediate construction. Trenches that may stand open for some days should have places where the loose material has been returned to the trench to form an escape ramp present at regular intervals to allow any fauna that fall in to escape;
- Ensure that the construction area is fenced off from adjacent areas which may harbour animals;
- Do not store building materials and excess stockpiled soils within riparian zones or within areas where natural vegetation will remain following completion of the construction phase of the development;
- Avoid indiscriminate destruction of habitat through demarcation of the footprint area any fauna threatened by construction activities should be removed to safety by the ECO or other suitably qualified person.

Dust Impacts

- Dust Management measures must be implemented in order to manage and minimize undesired dust emissions.
- Access roads need to be well maintained and dust suppression need to be applied during windy days.
- Avoid working in very strong windy environments.
- Use dust masks when / and if needed during windy days.

Noise Impacts

- Limit working hours of noisy equipment to daylight hours.
- Fit silencers to equipment.

- Unless otherwise specified, normal working hours will apply (i.e. from 07:00 to 18:00 Mondays to Fridays).
- Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours.
- No loud music is permitted on site or in the camp.

Cultural and Heritage Impacts

- Should any heritage resources (including but not limited to fossils, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and or built features, rock art and rock engravings) be exposed during excavations for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority.
- Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so, has been given.
- Under no circumstances shall any heritage material be destroyed or removed from site.
- Excavations must be limited to the footprint area and be maintained in a narrow corridor.
- All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed:
 - All construction in the immediate 50 metre vicinity of the site must be ceased.
 - The heritage practitioner must be informed as soon as possible.
 - In the event of obvious human remains SAPS must be notified.
 - Mitigation measures (such as refilling) must not be attempted.
 - The area in a 50 metre radius of the find must be barricaded with visible taping.
 - Public access must be limited and the area must be placed under guard.

Surface and Groundwater Contamination Impacts

- Ensure that excavation areas have a predetermined stockpile area for excavated materials.
- Use overburden for rehabilitation.
- Any remaining overburden to be disposed of at a licensed waste site.
- Alternatively, concrete can be mixed on mixing trays only and not on exposed soil. Concrete must be mixed only in areas which have been specially demarcated for this purpose.
- Material Safety Data Sheets (MSDS) must be available on site for all chemicals and hazardous substances to be used on site, including information on their ecological impacts and how to minimise the impacts in case of any leakages.
- All spills must be cleaned as soon as they occur. A spill kit must be used and proof of clean up must be given to the ECO.
- Spillages of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site.
- Provide suitable and sufficient ablution facilities (1 for every 15 personnel on site and 1 for each gender).
- Vehicles and machinery must be regularly serviced to avoid spillages.
- Drip trays must be placed beneath all stationary construction equipment and beneath all generators present on site.

Waste Management Impacts

- An adequate number of scavenger proof litter bins are to be placed throughout the site, dumping of waste on the site is prohibited.
- Waste sorting and separation should form part of the environmental induction and awareness programme to encourage and educate personnel to recycle.
- Keep all work sites including storage areas, offices and workshops neat and tidy.
- All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site.
- Care should be taken to ensure that no waste fall off disposal vehicles on-route to the landfill site. If needed, a tarpaulin can be utilised.
- The burning and burying of solid waste on site is prohibited.
- Littering by construction workers shall not be permitted.
- General waste shall be removed from site on a weekly basis to an approved landfill site.
- Minimise waste by sorting waste into recyclable and non-recyclable materials.

Traffic Impacts

- Abnormal loads should be timed to avoid times of year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods;
- Abnormal loads should not be transported after dark when visibility is poor;
- The contractor must ensure that all damage caused to roads by the construction related activities, including the movement of heavy vehicles, is remediated prior to the completion of the construction phase. The costs associated with the repair must be borne by the contractor;
- Dust suppression on exposed soil surfaces must be undertaken by watering on a regular basis, particularly during dry periods
- Vehicles used for the transport of materials and sand must be fitted with tarpaulins to prevent the release of such material or items onto road surfaces;
- All vehicles must be road-worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle. Drivers responsible for the transportation of personnel must be specifically licensed to do so;
- Construction vehicles may not leave the designated roads and tracks, whilst U-Turns are prohibited on all roads;
- The contractor must ensure that all damage caused to local roads by the construction related activities, including heavy vehicles, is repaired before the completion of the construction phase. The costs associated with the repair must be borne by the contractor;
- Any damage to public roads is to be reported to the management authority and repaired to its original condition;
- Signage is to be placed on vehicles at all times;
- Transport of materials should be limited to the least amount of trips possible;
- Construction-related vehicles and machinery may not operate without reflective safety signage, car-top lights and reflective personnel gear;
- Stopping in narrow road shoulders or on bends without the presence of traffic calming or diversion measures should not be allowed.

Fire Risk Impacts

- Ensure the work site and the contractor's camp is equipped with adequate firefighting equipment.
- All construction equipment must have at least one firefighting extinguisher.
- Workers must be adequately trained in the handling of firefighting equipment.

- No open fires are permitted anywhere on site due to the handling of gas on site. No fires will be permitted for heating or cooking purposes on site.
- Fuel and chemicals must be stored in an area that is acceptable for the client.
- No smoking will be allowed within close vicinity of the site.

Soil Contamination Impacts

- No leaked oil or fuel tankers may contaminate soil
- All tanks and pipes containing fuel or oil must be inspected on a regular basis
- Spills outside the bund area must be treated with a spill kit
- All significant leaks must be reported to the competent authority in terms of NEMA
- UST must be fitted with leak detectors in order to alert when a leak is occurring.
- Overfill and spillages during tanker refuelling and fuel dispensing should be prevented by the installation of automatic cut off devices.
- Tanker delivery drivers must be present during delivery of fuel with the emergency cut off switch and a fire extinguisher
- A closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the USTs to prevent fugitive emissions.
- All personnel working with fuel must undergo spill kit training
- The oil/water separator must be inspected on a regular basis and the inspection report must be provided to the ECO and relevant authority.
- Following a leak or accidental spill, a remediation plan must be compiled and executed.
- Fuel stock must be monitored on a daily basis in order to identify if the tank is leaking.

Soil Erosion Impacts

- During construction, un-channelled flow must be controlled to avoid soil erosion. Where large areas of soil are left exposed, rows of straw or hay bales, or bundles of cut vegetation sourced with the ECO's knowledge and consent, should be dug into the soil in contours to slow surface wash and capture eroded soil. The method may also be used where surface run-off becomes concentrated,
- All water flow must be controlled using storm water management techniques before discharge into the existing natural drainage line,
- Temporary cut off drains may be required to capture storm water and promote infiltration,
- All storm water management features must be constructed in a manner that will ensure the continued functioning of the emergent vegetation. Construction must coincide with the dry season.

Visual Impacts

- All waste must be placed in bins during operational phase. Keeping the area litter free.
- Construction activities may only take place during normal working hours.
- Construction machinery must be stored at designated storage areas;
- Removal of vegetation must be limited;
- Top soil stockpiling may not exceed 2 meters in height and must be covered to avoid wind and water erosion,
- Un Vegetated areas must be rehabilitated after construction in the area is completed by using top soil.

Socio-Economic Impacts

- Where reasonable and practical the contractors appointed by the proponent should appoint local contractors and implement a 'locals first' policy, especially for semi and low-skilled job categories.
- Where feasible, efforts should be made to employ local contractors that are compliant with Broad Based Black Economic Empowerment (BBBEE) criteria;
- Trench bedding material (sand) should be sought locally.
- Before the construction phase commences the proponent and its contractors should meet with representatives from the Local Municipality to establish the existence of a skills database for the area. If such a database exists, it should be made available to the contractors appointed for the construction phase;
- The recruitment selection process should seek to promote gender equality and the employment of women wherever possible, particularly for less labour-intensive work such as supervision.

Operational Phase

Flora Impacts

- The virtually complete loss and transformation of natural habitat, biota and basic ecosystem functionality within the western/central portion of the project area is irreversible. Sufficient ecological restoration of the relevant vegetation type will therefore not be feasible.
- The ephemeral water drainage line traversing the western/central portion and the two significant ephemeral watercourses traversing the eastern portion of the project area should be adequately buffered out of the development. A minimum 32 m buffer is recommended around the two significant ephemeral watercourses traversing the eastern portion of the project area and no development is allowed to take place within the buffer zones.
- Adequate stormwater management and channelling infrastructure should be implemented within the entire project area in order to sufficiently manage surface water runoff and ensure adequate and unimpeded drainage and flow of the water drainage line and the two watercourses towards the Brak River to the south.
- The new project construction footprint must be kept as small as practicably possible to reduce the surface impact on surrounding vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place.
- No site construction camp to be established within the surrounding natural areas outside the project area. If site camps are required outside the project area, they must be set up in the adjacently located urban areas to the east so as not to impact on the surrounding natural vegetation to the west and north of the project area.
- Adequately fence off the construction area and ensure that no construction activities, machinery or equipment operate or impact outside the fenced off areas to the west or north.
- Existing roads and farm tracks in close proximity to the project area must be used during construction. No new roads or tracks to be constructed or implemented through any of the surrounding natural areas to the west or north of the project area.
- Continued domestic garbage/waste dumping, vegetation clearance and overgrazing by local livestock within the surrounding natural areas to the west and north of the project area must be prevented. Implement adequate waste collection and disposal management measures for the existing residential settlements in order to prevent undesired disposal/dumping into the surrounding natural areas.
- Provide training interventions for the local community on the correct management of domestic waste/garbage within the existing residential settlements.

- Areas directly adjacent west and north of the project area must be adequately rehabilitated as soon as practicably possible in order to prevent further significant increase in the extent of the ecological 'edge effect'.
- Sufficient grazing/browsing management plans and practices must be implemented for local livestock in order to prevent continued significant overgrazing of surrounding undeveloped areas to the west.
- Existing obstructions which impede the flow of the drainage line and two watercourses within the buffer zone should be cleared and rehabilitated.
- A culvert should be constructed underneath the dirt road to the south of the project area in order to prevent damming up of water and ensure unimpeded flow of the drainage line to the west.
- The existing culvert which impedes the flow of the two watercourses should be redesigned and enlarged in order to allow for optimal flow at all times.
- An active community waste clean-up initiative will also have to be implemented in order to attempt to remove and adequately dispose of existing domestic garbage/waste within the drainage line and two watercourses.
- The new project construction footprint must be kept as small as practicably possible to reduce the surface impact on surrounding vegetation and no unnecessary/unauthorised footprint expansion into the surrounding.

Fauna Impacts

- The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place.
- Natural veld situated in the project area must not be impacted upon and must be left in situ.
- Existing roads and farm tracks in close proximity to the proposed project area must be used during construction.
- Alien and invasive species need to be eradicated and controlled.
- Areas directly adjacent west and north of the project area must be adequately rehabilitated as soon as practicably possible in order to prevent further significant increase in the extent of the ecological 'edge effect'.
- Care must be taken to ensure that the Riverine rabbit, which may occur in this area and is classified as a critically endangered species, is not disturbed.

Dust Impacts

- Dust Management measures must be implemented in order to manage and minimize undesired dust emissions.
- Access roads need to be well maintained and dust suppression need to be applied during windy days.

Noise Impacts

- Limit working hours of noisy equipment to daylight hours.
- Fit silencers to equipment.
- Unless otherwise specified, normal working hours will apply (i.e. from 07:00 to 17:00 Mondays to Fridays).
- Ensure that Employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours.
- No loud music is permitted on site or in the camp.

Cultural and Heritage Impacts

- Should any heritage resources (including but not limited to fossils, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts or bone remains, structures and or built features, rock art and rock engravings) be exposed during excavations for the purpose of construction, construction in the vicinity of the finding must be stopped. A trained palaeontologist or heritage specialist must be notified to assess the finds, and this must then be reported to the applicable heritage authority.
- Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the heritage authority. A registered heritage specialist must be called to the site for inspection and removal once authority to do so, has been given.
- Under no circumstances shall any heritage material be destroyed or removed from site.
- Excavations must be limited to the footprint area and be maintained in a narrow corridor.
- All operations of excavation equipment must be made aware of the possibility of the occurrence of sub-surface heritage features and the following procedures must be followed:
 - All construction in the immediate 50 metre vicinity of the site must be ceased.
 - The heritage practitioner must be informed as soon as possible.
 - In the event of obvious human remains SAPS must be notified.
 - Mitigation measures (such as refilling) must not be attempted.
 - The area in a 50 metre radius of the find must be barricaded with visible taping.
- Public access must be limited and the area must be placed under guard.

Surface and Groundwater Contamination Impacts

- Ensure that excavation areas have a predetermined stockpile area for excavated materials.
- Use overburden for rehabilitation.
- Any remaining overburden to be disposed of at a licensed waste site.
- Alternatively, concrete can be mixed on mixing trays only and not on exposed soil. Concrete must be mixed only in areas which have been specially demarcated for this purpose.
- Material Safety Data Sheets (MSDS) must be available on site for all chemicals and hazardous substances to be used on site, including information on their ecological impacts and how to minimise the impacts in case of any leakages.
- All spills must be cleaned as soon as they occur. A spill kit must be used and proof of clean up must be given to the ECO.
- Spillages of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with vegetation seed naturally occurring on site.
- Provide suitable and sufficient ablution facilities (1 for every 15 personnel on site and 1 for each gender).
- Vehicles and machinery must be regularly serviced to avoid spillages.
- Drip trays must be placed beneath all stationary construction equipment and beneath all generators present on site.

Waste Management Impacts

- An adequate number of scavenger proof litter bins are to be placed throughout the site, dumping of waste on the site is prohibited.
- Waste sorting and separation should form part of the environmental induction and awareness programme to encourage and educate personnel to recycle.
- Keep all work sites including storage areas, offices and workshops neat and tidy.

- All domestic waste is to be removed from site and disposed of at a registered solid waste landfill site.
- Care should be taken to ensure that no waste fall off disposal vehicles on-route to the landfill site. If needed, a tarpaulin can be utilised.
- The burning and burying of solid waste on site is prohibited.
- Littering by construction workers shall not be permitted.
- General waste shall be removed from site on a weekly basis to an approved landfill site.
- Minimise waste by sorting waste into recyclable and non-recyclable materials.

Traffic Impacts

- Abnormal loads should be timed to avoid times of the year when traffic volumes are likely to be higher, as would be expected over national holidays, weekends and school holiday periods.
- All vehicles should be road worthy, be maintained to prevent fuel or oil leaks and drivers are to be licensed appropriately for the driving of their assigned vehicle.
- Any damage to public roads is to be reported to the management authority and repaired to its original condition.
- Signage is to be placed on vehicles at all times.

Fire Risk Impacts

- Ensure the work site is equipped with adequate firefighting equipment.
- All equipment must have at least one firefighting extinguisher.
- Workers must be adequately trained in the handling of firefighting equipment.
- No open fires are permitted anywhere on site.
- No fires will be permitted for heating or cooking purposes on site.
- Fuel and chemicals must be stored in an area that is acceptable for the client.
- Dedicated smoking areas are to be provided.

Soil Contamination Impacts

- No leaked oil or fuel tankers may contaminate soil
- All tanks and pipes containing fuel or oil must be inspected on a regular basis
- Spills outside the bund area must be treated with a spill kit
- All significant leaks must be reported to the competent authority in terms of NEMA
- UST must be fitted with leak detectors in order to alert when a leak is occurring.
- Overfill and spillages during tanker refuelling and fuel dispensing should be prevented by the installation of automatic cut off devices.
- Tanker delivery drivers must be present during delivery of fuel with the emergency cut off switch and a fire extinguisher
- A closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the USTs to prevent fugitive emissions.
- All personnel working with fuel must undergo spill kit training
- The oil/water separator must be inspected on a regular basis and the inspection report must be provided to the ECO and relevant authority.
- Following a leak or accidental spill, a remediation plan must be compiled and executed.
- Fuel stock must be monitored on a daily basis in order to identify if the tank is leaking.

Soil Erosion Impacts

- Un-channelled flow must be controlled to avoid soil erosion. Where large areas of soil are left exposed, rows of straw or hay bales, or bundles of cut vegetation sourced with the ECO's knowledge and consent, should be dug into the soil in contours to slow surface wash and

capture eroded soil. The method may also be used where surface run-off becomes concentrated,

- All water flow must be controlled using storm water management techniques before discharge into the existing natural drainage line,
- Temporary cut off drains may be required to capture storm water and promote infiltration,
- All storm water management features must be constructed in a manner that will ensure the continued functioning of the emergent vegetation. Construction must coincide with the dry season.

Visual Impacts

- All waste must be placed in bins during operational phase. Keeping the area litter free.

Socio-Economic Impacts

Ensure local low income households are given preference for housing opportunities.

Is an EMPr attached?

YES	
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The EMPr must be attached as **Appendix G**.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

NAME OF EAP

SIGNATURE OF EAP

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

- Appendix A1: Locality Map
- Appendix A2: Sensitivity Map
- Appendix A3: Vegetation Map

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

- Appendix D1: Ecological and Wetland Impact Assessment Report
- Appendix D2: Heritage Impact Assessment Report

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

- Appendix I1: Ecological and Wetland Specialist
- Appendix I2: Heritage Specialist

Appendix J: Additional Information

- Appendix J1: List of SG Codes
- Appendix J2: Municipal Consent Letters
- Appendix J3: Electrical Services Report
- Appendix J4: Geohydrological Report
- Appendix J5: Geotechnical Report