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SISHEN IRON ORE COMPANY (PTY) LTD

DEVELOPMENT OF AN AIRPORT NEAR POSTMASBURG, NORTHERN CAPE

ENVIRONMENTAL IMPACT ASSESSMENT

&

ENVIRONMENTAL MANAGEMENT PROGRAMME

PART A

DRAFT FOR PUBLIC COMMENT

DENC REFERENCE: NC/EIA/06/ZFM/TSA/POS1/2020

EXM Advisory Services

ENVIRONMENTAL • MINERAL RIGHTS • SOCIAL & SD

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DRAFT FOR PUBLIC COMMENT

NAME OF APPLICANT: Sishen Iron Ore Company (Pty) Ltd – Kolomela Mine

TEL NO: 053 313 9139

FAX NO: 078 560 5600

POSTAL ADDRESS: Private Bag X3003, Postmasburg, 8420

PHYSICAL ADDRESS: Kolomela Mine, Farm Strydfontein, Postmasburg

REF NUMBER: NC/EIA/06/ZFM/TSA/POS1/2020

SUBMITTED FOR AUTHORISATION IN TERMS OF:

LISTED ACTIVITIES UNDER THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT

PREPARED BY: EXM Environmental Advisory (Pty) Ltd

Date: 13 January 2021

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Name	**Designation**	**Signature**	**Date**
Trevor Hallatt	EXM Advisory Services (Pty) Ltd Senior Environmental Scientist (EAP)		2020/12/18
Divan van der Merwe	EXM Advisory Services (Pty) Ltd Director		2020/12/18
Kerry Fairley	EXM Advisory Services (Pty) Ltd Report Reviewer Pr.Sci.Nat.		2020/12/18

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ACRONYMS AND ABBREVIATIONS

	Definition
BID	Background Information Document
DENC	Northern Cape Department of
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
GNR	Government Notice Regulation
IAP	Interested and Affected Party
IWWMP	Integrated Water and Waste Management Plan
mamsl	Metres above mean sea level
NDCR	National Dust Control Regulations
NEMA	National Environmental Management Act
NEM: BA	National Environmental Management Biodiversity Act
NEM: WA	National Environmental Management Waste Act
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act
NIA	Noise Impact Assessment
SIOC	Sishen Iron Ore Company
SACNASP	South African Council for Natural & Scientific Professionals
SAHRA	South African Heritage Resource Agency
SANS	South African National Standards
SIOC	Sishen Iron Ore Company (Pty) Ltd
SLP	Social Labour Plan
TOPS	Threatened or Protected Species
TIA	Traffic Impact Assessment

1. EXECUTIVE SUMMARY

1.1 Project overview

Sishen Iron Ore Company (Pty) Ltd (SIOC) – Kolomela mine, part of Kumba Iron Ore (Kumba) proposes to develop an airport on the Farm Kalkfontein 474, located approximately 3.4 km south of the town of Postmasburg, Tsantsabane Local Municipality, in the Northern Cape Province. The airport will be used to accommodate air traffic related to passengers travelling to and from Kolomela mine, which is currently accommodated by Tommy's Airfield, situated 10 km north west of Postmasburg. Tommy's Airfield does not have sufficient capacity to convey the current air traffic, resulting in overflow passengers flying to Kathu and being shuttled over 100 km by road. The runway at Tommy's Field also does not have sufficient space to accommodate larger airplanes which enhances the capacity deficiency. Furthermore, the short runway presents a safety hazard as the existing planes in use cannot take off a full capacity on hot days. In order to address safety risks and accommodate more commuters, SIOC proposes to develop a new airport in line with the requirements of the Civil Aviation Authority.

The project will result the creation of approximately 205 temporary jobs during construction. During the operational phase, Kolomela is likely to move the labour operating Tommy's Airfield to the new airport (Approximately 23 permanent employees). Construction activities will take place over a period of 12 months. The footprint of the project will cover approximately 80 hectares and will entail the development of the following structures/infrastructure.

- A runway of approximately 2.2 km in length.
- Helipad.
- Jet fuel storage tanks and refuelling bays.
- Water supply infrastructure including borehole and water tower.
- Access road (approximately 1600 m).
- Parking area including space for hire cars.
- Waste water management system including septic tank and evapotranspiration pond.
- Terminal building and supporting facilities.
- Fire service and rescue facilities
- Waste storage area.
- Electricity supply line.
- General aviation area for private users.

The preferred option is to develop a borrow pit on site for the sourcing of fill material used in construction, subject to geotechnical investigations.

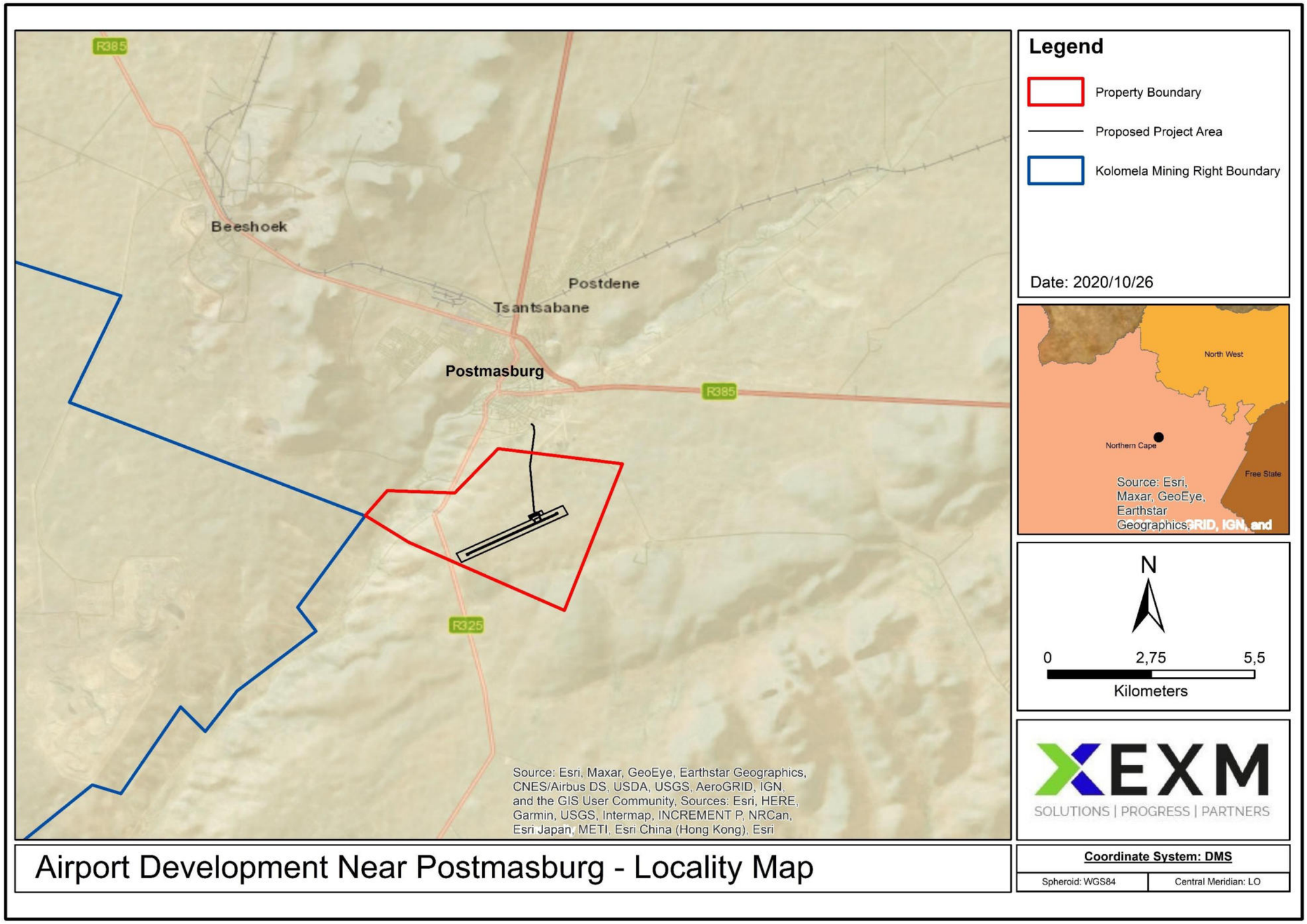


FIGURE 1-1: LOCALITY MAP SHOWING AIRPORT FACILITY

1.2 Environmental Authorisations

1.2.1 Environmental Impact Assessment Process

The proposed airport development triggers activities published in Listing Notice 1 (GN R. 327 of 2017), Listing Notice 2 (GN R. 328 of 2017) and Listing Notice 3 (GN R. 329 of 2017), promulgated in terms of the National Environmental Management Act (Act 107 of 1998). A full Environmental Impact Assessment (EIA) and Scoping process in terms of the Environmental Impact Assessment Regulations (GN R326 of 2017) must therefore be undertaken to obtain Environmental Authorisation (EA) prior to commencement. The Northern Cape Environmental Affairs and Nature Conservation (DENC) is the Competent Authority (CA) responsible for administering the EIA process.

EXM Environmental Advisory (Pty) Ltd ("EXM") has been appointed as the independent Environmental Assessment Practitioner (EAP) to facilitate the EIA as well as the supporting public consultation process. This Environmental Impact Assessment report has been developed according the requirements of the EIA regulations. The scoping phase of the EIA has been completed and the scoping report was accepted by the CA on the 7th of December 2020.

1.2.2 Water Use Licence Application

A separate Integrated Water Use Licence will be undertaken for the following activities listed in Section 21 of the National Water Act (Act No. 36 of 1998):

Water Use	Activity Description	Infrastructure/activity
Section 21 (a)	Abstraction of groundwater from a borehole.	On site borehole
Section 21 (c&i)	Infrastructure that will impact directly on water courses	Establishment of infrastructure footprint on wetland pans or within 500m of wetland pans.
	New infrastructure within 500 m regulated zone of a wetland/watercourse (specific infrastructure to include in the IWUL application will be confirmed after review of specialist findings)	
Section 21 (g)	Discharging water containing waste into a water resource and disposing of waste in a manner which may detrimentally impact on a water resource.	Septic tanks evaporation beds.

The application for the water use licence will be take place concurrent to the EIA process.

1.3 Public participation

A public participation process (PPP) is conducted in terms of the Chapter 6 of NEMA and the EIA regulations. A consolidated PPP is undertaken in support of the EIA and WUL applications. The purpose of the public participation process is to inform all the identified Interested and Affected Parties (IAPs) of the proposed development and associated application processes and allow them to raise comments/concerns. The scoping phase of the EIA has been completed and the scoping report was circulated for public comment. Comments have been incorporated into the Environmental Impact Assessment Report (EIR). The EIR is to be circulated to all IAPs for a period of 30 day for comment.

1.4 Environmental Impacts

A summary of the key environmental impacts associated with the project area provided in Table 1-1. The table shows the significant rating of the impacts without the implementation of mitigation measures. The implementation of mitigation measures will lower the significance of the impacts as indicated in the table.

TABLE 1-1: SUMMARY OF KEY POSITIVE AND NEGATIVE IMPACTS IDENTIFIED FOR THE CONSTRUCTION PHASE

IMPACT CATEGORY	ASPECT	POTENTIAL IMPACT	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	SIGNIFICANCE WITH MITIGATION
Biodiversity - Flora	Vegetation clearance Encroachment of invader plant species	Impact on floral Habitat and Diversity Impact on floral Species of Conservation Concern (SCC)	Moderate	• All areas of increased ecological sensitivity (i.e. Calcrete Outcrops, Cryptic Wetlands outside of the construction footprint, Banded Ironstone Outcrops) should be designated as No-Go areas • Vehicles should be restricted to travel only on designated existing roadways • No temporary waste storage sites should be allowed in areas with natural vegetation. • All soil compacted as a result of construction activities should be ripped, profiled and reseeded; • Any unauthorised collection or harvesting of floral species or material must be prohibited; • An invader plant control plan must be developed and implemented for the site and must include ongoing alien and invasive plant monitoring and clearing/control.	Low
Surface water – Wetland Pans	Runoff from exposed surfaces	Erosion and sedimentation of water courses	Moderate	• Develop and implement a stormwater management plan to prevent erosion and the associated sedimentation of wetlands. • Monitor all potentially affected wetlands, which are not lost during construction, for changes in vegetation structure and composition.	Low
Surface water – Wetland Pans	Construction of airport infrastructure (runway, airport building, fence etc).	Total or partial loss of wetland pans and or the associated catchments	High	• Construct airport facility according to the mitigated layout plan to avoid/minimise impacts on wetlands. • Contractor laydown areas, and material storage facilities to remain outside of the wetland pans and their associated catchments. • Refer to section related to soil pollution • The wetland pans, not impacted by the development, must be demarcated and defined as no-go areas. • Only designated personnel must be allowed to enter the areas where the fence will be constructed across the wetland pans.	Moderate

TABLE 1-2: SUMMARY OF KEY POSITIVE AND NEGATIVE IMPACTS IDENTIFIED FOR THE OPERATIONAL PHASE

IMPACT CATEGORY	ASPECT	POTENTIAL IMPACT	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	SIGNIFICANCE WITH MITIGATION
Soil and surface water resources	Increased runoff from impervious surface.	Soil erosion and loss of topsoil Sedimentation of wetland pans	Moderate	• Implement a stormwater management plan which stipulates specific measures to control runoff in order to prevent erosion.	Low
Surface water – Wetland Pans	Potential spillages of hazardous substances	Soil pollution Surface water pollution	Moderate	• Hazardous substances containers must be clearly marked and must be stored in an area with containment measures in place. • Spill response equipment must be readily available. • Safety data sheets must be available on site for all hazardous substances. • Large spills must be reported as incidents and managed accordingly. • Refuelling must be conducted in a designated area with containment measures in place. • Bulk fuel storage containers must be placed in a bunded area with capacity to contain 110% of the tank volume or 25% of the volume where multiple tanks are stored. • Runoff from the bulk fuel storage and refuelling area as well as the fire truck wash bay must be diverted to an oil separator prior to discharge into the ET ponds.	Low
Noise	Take off and landing of airplanes Increased noise levels	Nuisance conditions for receptors in the area.	High	• Construct airport according to the mitigated layout plan to reduce noise levels at sensitive receptors. • Specific mitigation measures that must be incorporated in the operational manual to minimise noise levels are included in section 6 of the EMPr. These measures relate to the optimisation of the landing and departures which specifically states how the airplanes will approach or depart from the facility in terms of the identified receptors. • Implement complaint management procedure. • Flight schedules should be communicated to nearby NSRs, especially those to the northeast and southwest of the airport. Any deviation to flight schedules must be communicated to affected parties	Low
Biodiversity - Fauna	Increased risk of vehicle collisions with fauna Potential overexploitation	Impact on faunal Habitat and Diversity	Moderate	• No hunting/trapping or collecting of faunal species is allowed. • Internal resources with appropriate training should be used for the removal of smaller, less venomous snakes. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. • Enforce a strict speed limit on access road - signs indicating the presence of animals (especially kudus) can be erected on the access road.	Low
Biodiversity – Fauna and flora	Implement sound land management on entire property	Improve status of environmental characteristics of the remaining portions of the farm Kalkfontein	Moderate positive	• Rehabilitation of identified disturbed areas within the property. • Removal of Alien and Invasive plants currently on site. • Investigate the management of bush encroachment, especially in Banded Iron Stone Outcrops. • Where practicable, rehabilitate current disturbance of cryptic wetlands. • Implement solution to prevent further discharge of sewage effluent onto the property. • Assess property for erosion problems and implement measures to remediate.	Moderate positive
Groundwater	Seepage	Pollution of groundwater	Moderate	• Engage with the municipality to discontinue with the discharge of sewage onto the property. • Investigate a solution, in collaboration with the municipality, to resolve capacity issues at the waste water treatment works. • A full analysis, including organic compounds (i.e. e-coli) must be conducted prior to commencement of water abstraction from the water supply borehole.	Low
Traffic	Increased traffic volumes through town (surfaced road).	Safety (collisions) due to the increased peak traffic volumes - proximity of the school.	Moderate	• Safety can be improved by upgrading road signs and paint markings. • Traffic calming measures are required including speed restriction.	Low

TABLE 1-3: SUMMARY OF KEY POSITIVE AND NEGATIVE IMPACTS IDENTIFIED RELATED TO SOCIO ECONOMIC CONSIDERATIONS

IMPACT CATEGORY	ASPECT	POTENTIAL IMPACT	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	SIGNIFICANCE WITH MITIGATION
Socio-economic	Impact on current economic activities by landowner	Loss of land used for farming Loss of land used for engineering works	High	• Purchase farming land to allow for re-establishment of farming elsewhere. • Engage with the landowner on the way forward with regards to people residing on the property.	Low
Socio-economic	Local contractors used in construction and operational activities	Local Procurement	Moderate positive	• Procurement plan to set aside contracts for local contractors where such contracts do not require specialised work. • Maximise expenditure within the area of influence.	Moderate positive
Socio-economic	Persons attracted to area due to increased employment opportunities	Infrastructure challenges and opportunistic occupation of land	High	• Employment practices focussed on local labour.	Low
Socio-economic	Closing of airfield required due to new CAA licence issued in close proximity	Loss of use of Postmasburg Airfield	High	• Consultation with stakeholders at aviation club. • Plan to accommodate the users of Postmasburg airfield at new airport. • Investigate opportunity for continued use of Postmasbrg Airfield as co-dependent runway.	Low

1.4.1 Opportunities for Employment, Local Procurement and Economic Development

The project will contribute to economic development in terms of the following:

- Temporary jobs (skilled, semi and unskilled) will be created during the construction phase of which a priority will be given to use of local labour, especially for unskilled and semi-skilled positions. The project will result the creation of approximately 205 temporary jobs during construction.
- During the operational phase, Kolomela is likely to move the labour operating Tommy's Airfield to the new airport (Approximately 23 permanent employees). Operational phase employment impacts are considered low. These could be enhanced by the maximisation of ancillary services (e.g. car hire, café's, conferencing facilities) offered by the airport in the future.
- The purchasing of local goods and services during construction and operations (fuel, food, cleaning services, maintenance, building material, etc.)

1.4.2 Opportunity to improve land management on remainder of property

The remainder of the farm Kalkfontein should be managed to improve the current state of the environment. This can be done by the rehabilitation of identified disturbed areas, AIP control, bush encroachment management, fence maintenance, investigating and implementing a solution for the current discharge of sewage effluent onto the property.

1.4.3 Socio-economic

1.4.3.1 Loss of agricultural land

- Current economic activities (livestock farming and small engineering operations) will discontinued and lead to income loss. The owner's family income generation ability will definitely be compromised.

1.4.3.2 In-migration of job seekers

- Although the potential for the airport project to drive in-migration and consequent land invasion is considered to be relatively low due to the limited construction job opportunities, the cumulative impact of this project together with the Kapstevel South Project at Kolomela mine, would increase the attraction to the area by job-seekers. The influx of people due to the airport project coupled by the influx caused by the Kapstevel project will put additional pressure on municipal infrastructure.

1.4.3.3 Closure of current airport

- The current Postmasburg Airfield is owned by TLM and used by the local aviation club. The club comprises of local residents who maintain and operate the landing strip and its associated infrastructure including hangars. The construction and operation of the airport by SIOC will ideally require the closure of the existing Postmasburg Airfield for safety reasons. The loss of use of the current landing strip will result in a high significance for the local aviation club. However, this impact can be mitigated through proper consultation and accommodating the users within the General Aviation Area at the new airport. Alternatively, the existing Postmasburg airstrip can be declared as a co-dependent facility to the Kolomela Airport.

1.4.4 Noise

- Noise generation during the operational phase has the potential to result in nuisance conditions for surrounding receptors. The noise will however only be for short durations during aircraft landing and departures. There will be seven flights per week, with flights five days per week
- Noise from the facility has the potential to affect the adjacent sensitive receptors including the farm to the east where lambing ewes are situated and residences and guesthouse located to the south west. The location and alignment of the runway has been adjusted as far as practicable within civil aviation constraints to minimise impacts on receptors.
- Noise mitigation must be incorporated in the operational manual to ensure that the proposed mitigation to reduce noise levels are incorporated in the facility's operations. The incorporation of the noise mitigation in the manual will automatically ensure that flights are managed in a manner which reduce impacts on the noise receptors.

1.4.5 Wetlands

- The project will entail the direct and potentially indirect disturbance of wetland pans on and adjacent to the project footprint. However, as a result of layout optimisation direct impacts on some of the wetlands have been avoided and indirect impacts will be minimised. The layout of the airport has been optimised within the limits of aviation constraints such as topography to minimise impacts on the wetland pans. The access road has also be realigned to avoid impacts on the pans' catchments.

1.4.6 Biodiversity - flora

- Site establishment and construction of the facility will entail the removal of natural vegetation. This will result in a loss of flora habitat related to the Open Calcrete Thornveld,

Lime-rich Habitat and Wetland pans. Impacts on the sensitive banded iron stone outcrop and calcrete outcrops will be avoided due to layout optimisation.

- The establishment of the project footprint may also impact on floral Species of Conservation Concern (SCC) not identified during the specialist study.

2. CONTACT PERSON AND CORRESPONDENCE ADDRESS

2.1 Details of EAP

2.1.1 The Environmental Assessment Practitioner (EAP) who prepared the report

Name of The Practitioner: EXM Environmental Advisory (Pty) Ltd

Tel No.: 010 007 3617

Fax No.: 086 527 4619

e-mail address: trevor@exm.co.za

TABLE 2-1: EXPERTISE OF THE EAP.

EAP	Qualification	Years' experience
Trevor Hallatt	BSc Geography and Zoology (NWU) BA (hons) Environmental Management (NWU) MA Environmental Management (NWU)	9 Years
	South African Council for Natural Scientific Professions (SANASP) Registration no.: 300123/15	

CV with experience is attached as Appendix A.

3. DESCRIPTION OF THE PROPERTY

Refer to Figures 3-1 for locality map.

Farm Name:	Remaining Extent of Farm Kalkfontein 474
Application area (Ha	Property size: 1 371 hectares Development footprint size: +/- 80 hectares
Magisterial district:	The Hay Magisterial District (Tsantsabane Local Municipality) ZF Mgcawu District Municipality
Distance and direction from nearest town	3 km south west of the Postmasburg CBD 80 km south of Kathu 60 km north west of Griekwastad
21-digit Surveyor General Code for each farm portion	C03100000000047400000
Locality map	Figure 3-1.

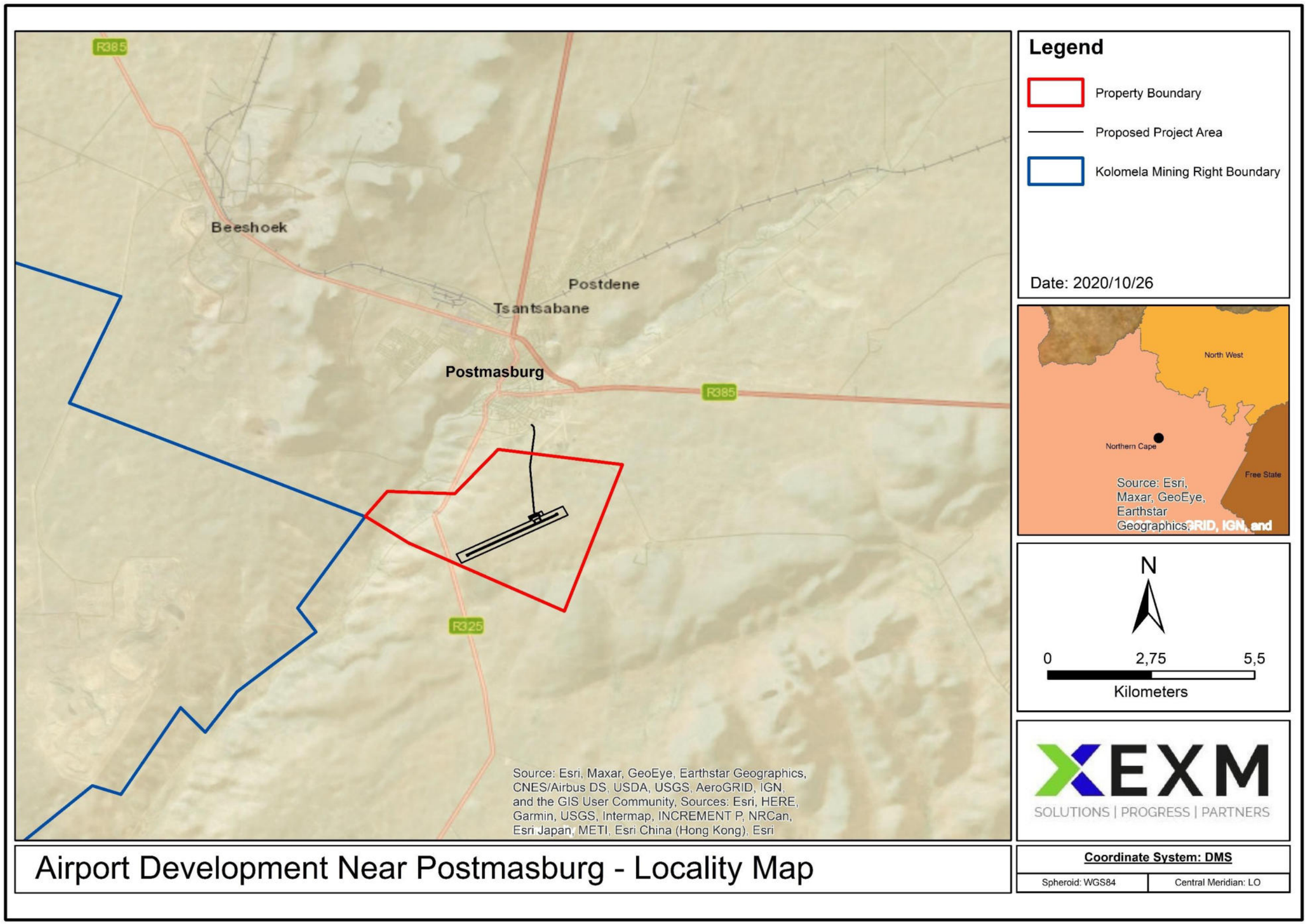


FIGURE 3-1: LOCALITY MAP

4. DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY

4.1 Listed and specified activities

Applicable Regulation		Project Infrastructure triggering the Listed Activity
Listing Notice 1 (GN R. 327 of 2017)		
Activity 12	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse	Several pans (water courses) are situated on the property which will potentially be impacted by the project footprint. A WUL application will be submitted to obtain authorisation in terms of activities listed in Section 21 of the National Water Act (No. 36 of 1998).
Activity 14	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.	The development will entail the storage of fuel that will be used in the re-fuelling of airplanes.
Activity 19	The infilling or depositing of any material of more than [5] 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than [5] 10 cubic metres from [—(i)] a watercourse; [(ii) the seashore; or i. (iii)the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or estuary, whichever distance is the greater.	Several pans (water courses) are situated on the property which will potentially be impacted by the project footprint. A WUL application will be submitted to obtain authorisation in terms of activities listed in Section 21 of the National Water Act (No. 36 of 1998)
Activity 24	The development of a road— (i) [a road] for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) [a road] with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road— (a) [roads] which [are] is identified and included in activity 27 in Listing Notice 2 of 2014; (b) [roads] where the entire road falls within an urban area; or i. (c) which is 1 kilometre or shorter.	The length of the access road that will be constructed as part of the project will be approximately 2.5 km and will be wider than 8 meters.

Applicable Regulation		Project Infrastructure triggering the Listed Activity
Activity 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	The property on which the proposed airport will be developed has been used for the purpose of game farming.
Listing Notice 2 (GN R. 328 of 2017)		
Activity 6	The development of facilities or infrastructure for any purpose or activity which a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation of release of emissions, pollution or effluent, excluding- (i) activities which are identified and included in Listing Notice 1 of 2014; (ii) activities which are in the list of waste management activities published in terms of section 19 of the National Environmental Management: Wate Act, 2008 (Act 59 of 2008) in which case the National Environmental Management: Waste Act, 2008, applies; (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (v) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will it exceed 50 cubic metres per day.	Effluent will be released from the on-site septic tanks system into evaporation ponds. The release of effluent requires a licence in terms of activities listed under Section 21 of the National Water Act (No. 36 of 1998)
Activity 8	Activity 8. The development of— (i) airports; or (ii) runways or aircraft landing strips longer than 1,4 kilometres.	The project entails the development of an airport with a runway exceeding 1,4km.
Activity 15	Activity 15. The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or	The project footprint will cover approximately 80 hectares and will entail the clearance of indigenous vegetation exceeding 20 hectares.

Applicable Regulation		Project Infrastructure triggering the Listed Activity
	(ii) maintenance purposes undertaken in accordance with a maintenance management plan.	
Listing Notice 3 (GN R. 329 of 2017)		
Activity 10	The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres. g. Northern Cape ii. Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland;	The development will entail the storage of fuel that will be used in the re-fuelling of airplanes. A portion of the property on the proposed airport will be developed is classified as a Critical Biodiversity Area according to the Northern Cape Critical Biodiversity Map. Refer to Appendix 7 for the environmental sensitivity map.

4.2 Description of activities to be undertaken

4.2.1 Background

Sishen Iron Ore Company (Pty) Ltd (SIOC) – Kolomela mine, part of Kumba Iron Ore (Kumba) is proposing the development of a new airport on the Farm Kalkfontein 474 R/E, south of Postmasburg in the Tsantsabane Local Municipal area. The purpose of the airport will be to accommodate air traffic related to passengers travelling to and from Kolomela mine.

Currently, flights carrying passengers for Kolomela are serviced by Assmang's Tommy's Airfield. SIOC makes use of SA Airlink (now called Airlink) for air travel to Postmasburg. This involves 7 flights in 29-seater ERJ41 turbo-prop aeroplanes per week. However, there is a shortage of capacity on the Kolomela flights and many passengers are forced to fly to Sishen Airport in Kathu and are subjected to a long (over 100 km) and potentially dangerous road transfer from Kathu to Postmasburg. The existing runway at Tommy's Field is too short to accommodate larger planes. The short runway also does not allow for safe departures of fully-loaded aircraft under 'hot and high' conditions and various safety incidents have been reported. Furthermore, it is probable that SA Airlink will retire the fleet of ERJ41 aircraft currently servicing Kolomela in the future. There is thus a need for a longer, safer runway to accommodate air traffic to Kolomela mine.

4.2.2 Infrastructure

The proposed new airport and associated infrastructure will cover approximately 80 hectares. A conceptual layout of the airport is given in Figure 4 -1.

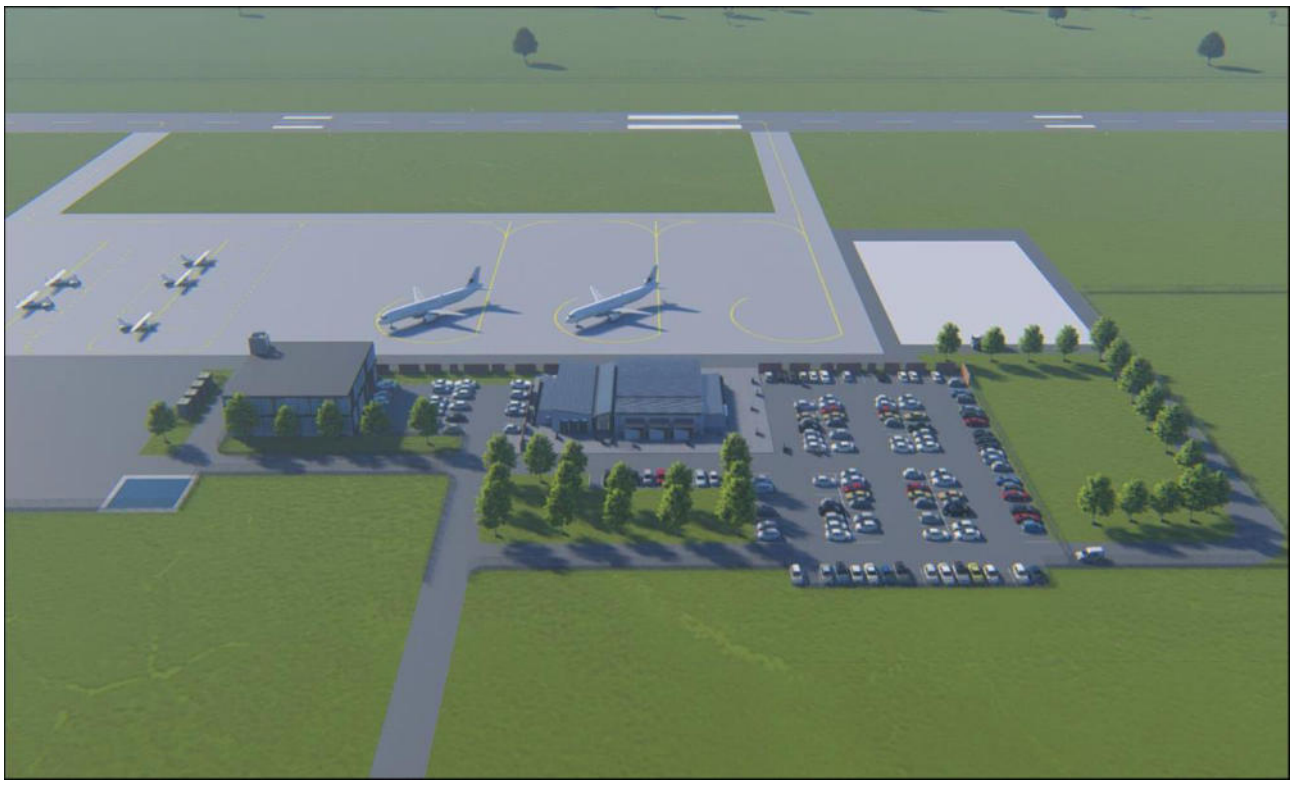


FIGURE 4-1: AIRPORT CONCEPTUAL LAYOUT

4.2.2.1 Runway and helipad(s)

The runway will be approximately 2.2 km in length and 30 meters wide, assuming a level runway. The dimensions of the runway have been calculated in terms of the type of aircraft that will be accommodated by the airport. Factors such as take-off and landing velocity of the aircrafts were considered. A helipad(s) will also be developed to accommodate helicopters at the facility.

4.2.2.2 Access road

A paved access road will be developed which will connect the proposed airport with the R325 regional road. The road will be approximately 1600 m in length and 7 meters wide.

4.2.2.3 Fuel storage and supply

A jet fuel storage tank will be used for the refuelling of aircraft. The ERJ41 turbo-prop aeroplanes that will be the dominant aircraft in the fleet has a fuel capacity of 6 000 liters and fuel will be delivered on 2-week intervals. The storage capacity of the fuel farm will be sized accordingly. Currently it is estimated that a total volume of +/- 40 000 liters will be stored on site. A re-fuelling depot with pumps and delivery systems will also be developed. Appropriate bunding will be installed to ensure potential spillages are contained.

4.2.2.4 Parking area

A parking area will be developed for airport staff and travellers. The parking area will also accommodate car hire vehicles.

4.2.2.5 Fire and rescue building

A fire station building will be developed which will include an elevated fire lookout. Dedicated water tanks will be established for firefighting purposes.

4.2.2.6 Electricity supply lines

A new electricity supply line of 11kV will be developed to connect the proposed facility with a substation nearby the existing Postmasburg airport or alternative substation. The distribution line will run parallel to the access road to limit disturbance.

4.2.2.7 Terminal and supporting facilities.

The terminal will entail a departures lounge with 60 seat capacity plus standing room for 20 pax at 1,2 m^2. The terminal will also include a baggage reclamation area, offices, a kitchen and ablution facilities. For reliable security and passenger processing, 2x X ray machines will be installed to improve throughput, provide redundancy and reduce boarding times. An initial conceptual layout of the terminal is given in Figure 4-2.

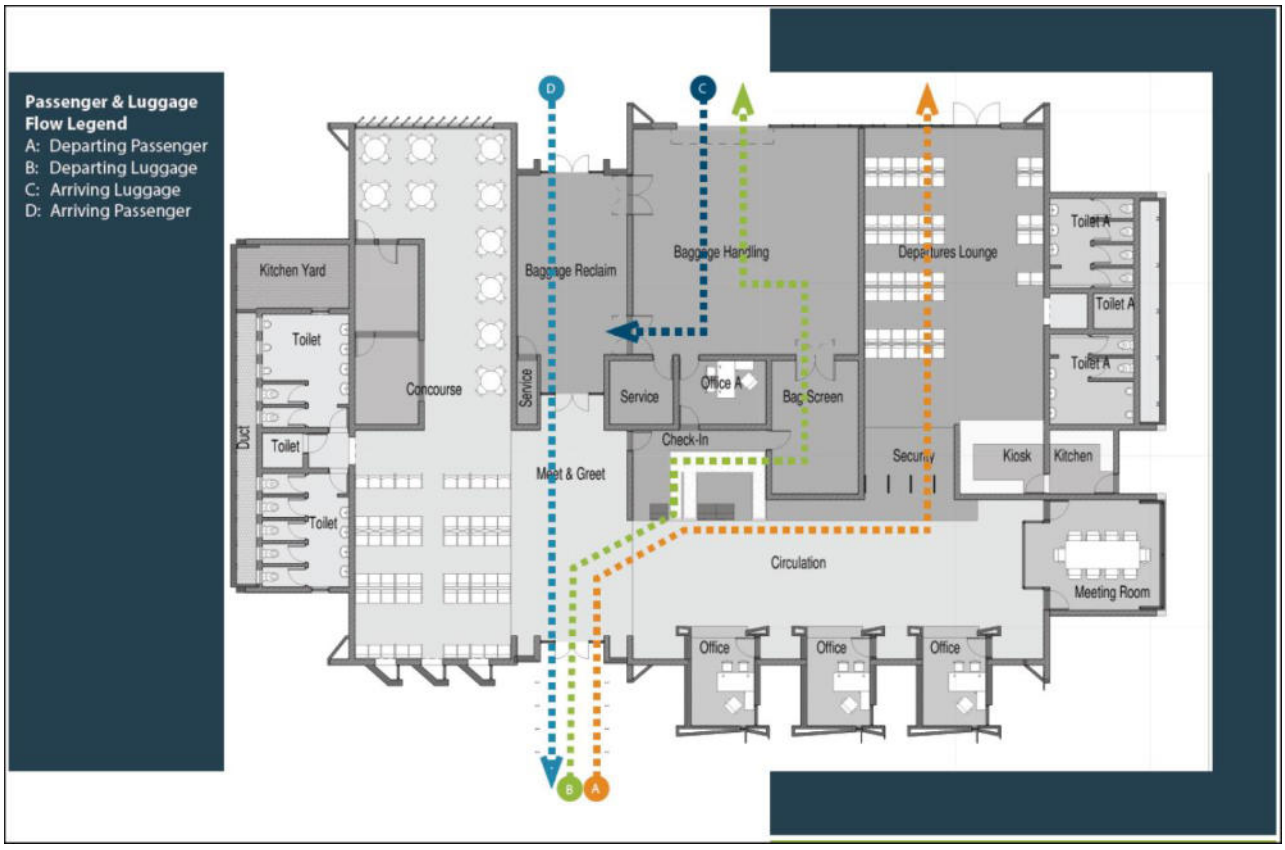


FIGURE 4-2: CONCEPTUAL TERMINAL LAYOUT

4.2.3 Water storage and supply

Water use required at the new facility is expected to be in the form of material mixing during construction, drinking, sanitation, firefighting, maintenance and general use. The water demand for the facility will be approximately 40m³/day during the construction phase and 11m³/day during the operational phase. SIOC proposes to abstract groundwater from a borehole(s) in the surrounding area to supply the water requirements at the airport. The preliminary location of the borehole is as follows:

Latitude	Longitude
28°21'42.38"S	23° 3'58.77"E

A water tower with a capacity of 200m³ will be established at the facility for distribution/pumping to the respective areas. The water tower will also be used as a lookout point. Figure 4-3 illustrates the water supply system that will be installed at the facility. A Water Use Licence (IWUL) application will be submitted to the Department of Water and Sanitation (DWS) for Activity (a) listed under Section 21 of the National Water Act (No. 36 of 1998) to obtain authorisation for the abstraction of groundwater (see Section 6.7).

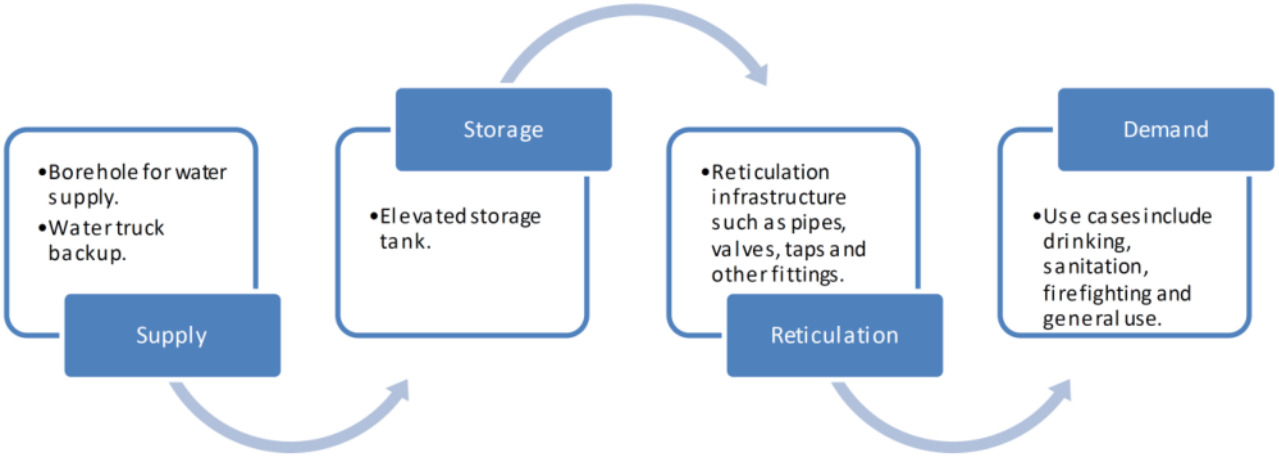


FIGURE 4-3: ON-SITE WATER SUPPLY SYSTEM

4.2.4 Wastewater management

A septic tank system with a capacity of 15m³ will be utilised at the facility for the management of grey water and sewage emanating from the airport operations. A septic tank system utilises settling and anaerobic digestion to provide primary treatment to wastewater. The septic tank(s) will be located underground to facilitate gravity flow into the tank. Sludge emanating from the system requires secondary treatment which will be conducted. The sludge will be removed via a vacuum truck and transported to the Postmasburg Wastewater Treatment Works for secondary treatment.

An evapotranspiration (ET) system is proposed to manage the effluent emanating from the septic tanks. An ET system utilises the evaporation effect for the management of effluent. The ET bed will receive 10m^3 of effluent and will cover a surface area of approximately 2000m^2. Effluent is stopped from exiting the ET bed via a seepage mechanism by means of two layers of geosynthetic clay liner (GCL) below a 1.5 mm HDPE liner. Effluent is channelled into the distribution pipes via gravity and allowed to infiltrate into the surrounding material. The effluent is then evaporated in the ET bed via the evapotranspiration mechanism.

Details of the ET system is provided below:

Element	**Detail**
Effluent diverted to ET beds	10m^3 per day
Surface area	2000 m^2
Volume	1200 m^3
Depth	0.6m

The septic tank system and the management of the effluent will also trigger activity g listed in Section 21 of the NWA and will therefore be included in the WUL application.

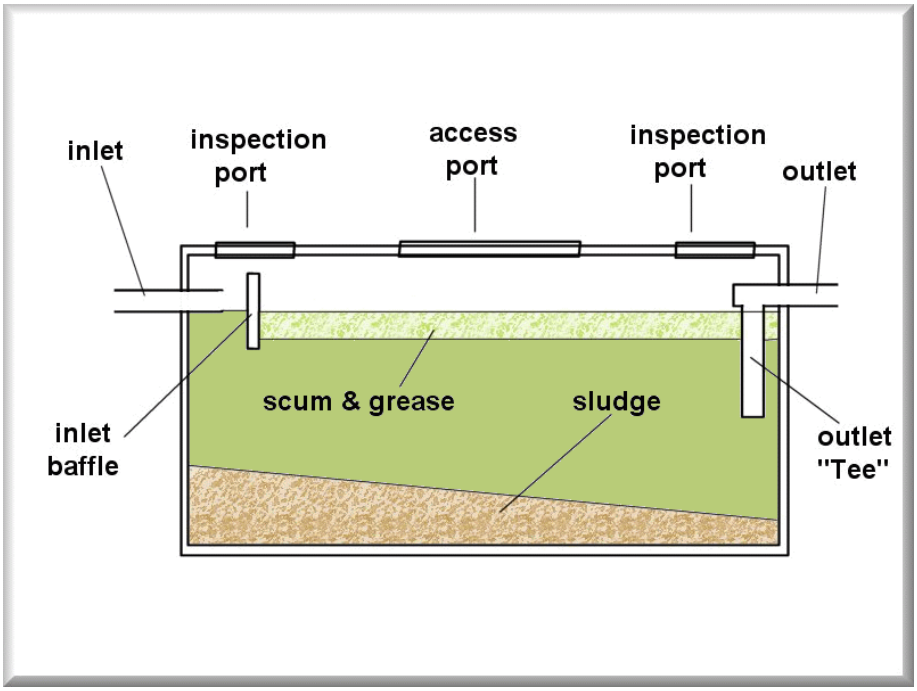


FIGURE 4-4: ILLUSTRATION OF A TYPICAL SEPTIC TANK SYSTEM

4.2.5 Stormwater management

There is no existing stormwater infrastructure in the area on which the proposed airport will be developed. The runway will be designed to allow stormwater to be removed from the surface as swiftly as possible to maintain skid resistance and enhance safety. Minor systems such as culverts and channels will be utilised to convey upstream and on-site runoff. There will be no open ditches, holes or embankments on the aircraft overrun area.

Upstream runoff will be diverted around the terminal and apron areas area by means of channels or berms and released further downstream. It will be ensured that the velocities involved will be managed in such a way as to not cause erosion either within the diversion infrastructure or beyond the downstream release point.

In the case of the access roads, taxiways and runway, direct runoff will be channelled off of these surfaces by means of a camber into the natural drainage systems if pooling is not a problem. Where pooling may be an issue, diversion channels will be used to convey stormwater to acceptable release points. Where natural drainage lines are found to cross these structures, culvers will be provided. Runoff velocities will be managed to ensure that erosion does not occur.

Velocity management may be in the form of linings for stormwater management channels. Energy dissipation at release points may include riprap lined areas that would provide protection of in situ material, dissipate energy and spread flow over large areas to encourage sheet flow.

Contaminated areas, such as fuelling installations, will be bunded to capture potentially contaminated runoff from these areas that will then be disposed-of appropriately. Runoff from the emergency vehicle wash bay will be captured and diverted to an oil trap prior to discharge into the ET beds.

Provision has also been made for an oil separator. This will service spill management areas located at the point where the Jet Fuel installation is refuelled and also where planes are refuelled. Run-off from these areas will report to an oi separator before entering the ET bed.

4.2.6 Borrow pit

Bulk earthworks related to runway construction is often the dominant cost component for a small airport facility. Fill materials for construction purposes will therefore be sourced from an on-site borrow pit which will reduce costs significantly, compared to the sourcing of such material from external sources. The sandy transported soils are expected to be easily excavated using conventional excavators and/or dozers, however, the hardpan calcrete layers may require the use of pneumatic action and/or blasting before excavation can take place. The development of the borrow pit will be subject to a geotechnical investigation.

5. POLICY AND LEGISLATIVE CONTEXT

This document has been prepared strictly in accordance with the requirements of the National Environmental Management Act (NEMA) (No. 107 of 1998) and the EIA Regulations (GNR 326 of 2017). This section outlines the key legislative requirements applicable to the project.

5.1 National Environmental Management Act (No. 107 of 1998)

Section 24 of NEMA provides for the Minister of Environmental Affairs to publish activities that require Environmental Authorisation (EA) prior to commencement. This has resulted in the promulgation of Listing Notices 1 (GN.R. 327), 2 (GN.R. 328) and 3 (GN.R. 329) with the Environmental Impact Assessment (EIA) Regulations (GNR 326 of 2017) of December of 2014 as amended by GN. 324-327 of 7 April 2017. Activities included in Listing Notices 1 and 3 require a Basic Impact Assessment to be undertaken and activities included in Listing Notices 2 require a scoping and full Environmental Impact Assessment (EIA) process to be undertaken in order to obtain EA prior to commencement.

From the initial review, activities under Listing Notice 2 (GN. 328) are triggered and thus the application for environmental authorisation (EA) requires the completion of a scoping and EIA process. The complete list of activities triggered are provided in Section 5.1.

Authorisation is being sought for activities applicable to the development of the airport in terms of the EIA Listing Notices 1, 2 & 3 of GNR. 327-329.

5.2 National Environmental Management: Waste Act (No. 59 of 2008)

In terms of the National Environmental Management: Waste Act (NEM: WA) (No. 59 of 2008)), waste management activities that are listed in regulations published under NEM:WA may not be undertaken without a Waste Management License (WML). The listed activities for which a WML is required are contained in Government Notice (GN 921). Category A activities require a WML and a Basic Impact Assessment (BA) process must be conducted, and Category B activities require a WML and a full Scoping and EIA process must be conducted. In terms of Schedule 3 of NEM: WA, mining waste (residue stockpiles and deposits) are defined wastes falling under Category A – Hazardous Wastes of NEM: WA which includes waste rock.

The project will not require a Waste Management Licence in term of NEM:WA

5.3 National Environmental Management Act: Air quality Act (No. 39 of 2004)

The National Environmental Management: Air Quality Act (NEMA: AQA) (No. 39 of 2004) controls and regulates atmospheric emissions and provides for Listed Activities (GN. 893, November 2010) which have or may have a significant effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage. Any activity captured under this list require the person undertaking the activity to apply for an Atmospheric Emission Licence (AEL).

The project will not trigger any activities listed in the Regulation and there is therefore no need for an AEL.

5.3.1 National Dust Control Regulations (GNR 827 of 2013)

The purpose of the regulations is to prescribe general measures for the control of dust in all areas. It is expected that the construction activities will result in increased dust fall. The project will be required to comply with the National Dust Control Regulations (GN. 827 of 1 November 2013).

5.4 National Environmental Management: Biodiversity Act (No. 10 of 2004)

Section 57 of the National Environmental Management Biodiversity Act (NEMBA) (No. 10 of 2004) restricts certain activities involving threatened and protected species (as listed in Regulation GN. 151 and 152, February 2007) without a permit. Restricted activities applicable to the project are limited to the potential removal of Threatened or Protected Species (TOPS) and plants during the clearance of vegetation.

5.5 National Forests Act (No. 94 of 1998)

Sections 12 and 15 of the National Forests (No.94 of 1998) requires any person who damages, cuts, destroys, prunes or relocates a nationally protected tree (as listed in Regulation GN. 690, September 2017) to apply for a permit from the Department of Agriculture, Forestry and Fisheries (DAFF) to do so.

An application will be submitted for the removal of protected species if any such plants are identified during the Ecological Impact Assessment.

5.6 Northern Cape Nature Conservation Act (No. 9 of 2009)

Section 49 and 50 of the Northern Cape Nature Conservation Act (No. 9 of 2009) requires any person that intends to undertake a restricted activity in respect of protected plants and animals as set out in Schedule I and Schedule II of the Act to apply for a permit from the Northern Cape Department of Environment and Nature Conservation. Application will need to be made for the necessary permits prior to the commencement of site clearance in areas (if any) where protected plants are present. The permit applications will be supported by an Ecological Impact

Assessment specialist study.

An application will be submitted for the removal/disturbance of protected species identified during the Ecological Impact Assessment.

5.7 National Water Act (No. 36 of 1998)

The purpose of the National Water Act (NWA) (No. 36 of 1998) is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled. Section 21 of the NWA contains a list of activities that require a WUL prior to commencement. The proposed airport development will include water uses as defined in terms of Section 21 of the NWA (see Table 5-1).

TABLE 5-1: SECTION 21 WATER USES TO BE INCLUDED IN THE WULA

Water Use	Activity Description	Infrastructure/activity
Section 21 (a)	Abstraction of groundwater from a borehole.	On site borehole
Section 21 (c&i)	Infrastructure that will impact directly on water courses	Establishment of infrastructure footprint on wetland pans or within 500m of wetland pans.
	New infrastructure within 500 m regulated zone of a wetland/watercourse (specific infrastructure to include in the IWUL application will be confirmed after review of specialist findings)	
Section 21 (g)	Discharging water containing waste into a water resource and disposing of waste in a manner which may detrimentally impact on a water resource.	Septic tanks evaporation beds.

An WUL application process is being undertaken in terms of the Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals (GNR. 267 of 2017). The WUL application will be supported by an Integrated Water and Waste Management Plan (IWWMP) compiled in accordance with the requirements of GNR. 267.

The project will require a Water Use Licence from the DWS Provincial Authority

5.8 National Heritage Resources Act (No. 25 of 1999)

The National Heritage Resources Act controls and regulates the interaction with heritage, archaeological, and paleontological artefacts and structures. Sections 34, 35 and 36 require that no person may demolish or alter any structure which is older than 60 years without a permit issued by the relevant provincial heritage resources agency. The NHRA further requires any person that disturbs any archaeological site, paleontological site or grave cannot do so without

a permit.

A Heritage and Impact Assessment and Phase 1 Paleontological Study was undertaken in order to identify any heritage sites within the project footprint area. Should any site need to be altered or destroyed, a permit will need to be obtained in terms of the NHRA. The South African Heritage Resources Council (SAHRA) will be consulted in terms of Section 38 of the Act.

5.9 Mineral and Petroleum Resources Development Act (No. 28 of 2002)

Section 27 of the Minerals and Petroleum Resources Development Act (MPRDA) (No. 28 of 2002) relates to the application for, issuing and duration of mining permits. A mining permit may only be issued if-

- the mineral in question can be mined optimally within a period of two years; and
- the mining area in question does not exceed 5.0 hectares in extent.

As a preferred option, subject to geotechnical investigations, SIOC proposes to source construction filling material from an on-site borrow pit for the construction of the airport facility. The extraction of such material from a borrow pit will require a mining permit if the above criteria are met.

A Basic Impact Assessment process will also need to be undertaken according to the EIA regulations in support of the mining permit application. If deemed feasible to source material from a borrow pit, the permitting process will be undertaken as a separate application with the Department of Mineral Resources & Energy as the competent authority responsible for the authorisation.

SIOC will have to apply for a mining permit in terms of Section 27 for the extraction of aggregate/building material from a borrow pit.

5.10 Civil Aviation Act (No 13 of 2009): Civil Aviation Regulations, 2011

According to Regulation 36 of the Civil Aviation Regulations, an application for the aerodrome in term of regulation 21 must be supported by proof that the facility will comply with the appropriate noise standards as prescribed in Document SA-CATS 36.

Regulation 139.02.11 requires that an airport must establish an aerodrome environment management programme which relates to foreign object debris (FOD), oil and fuel spillages, bird and wildlife presents or are likely to present a hazard to aircraft operating to or from the aerodrome. The Environmental Management Programme (EMPr) must contain measures to minimise the effects of such hazard or potential hazard. The aerodrome operator shall ensure that an environmental management meeting is conducted with interval not exceeding three months and that the minutes of the meetings must be kept and must clearly indicate all identified environmental issues that may affect the operations and the rectification thereof.

In terms of Regulation 139.02.13, an application for the issuing of an aerodrome licence, or an amendment thereof, shall include an environmental impact report and written approval from all interested Government institutions.

The Civil Aviation Authority must be furnished with a copy of the Environmental Impact Report and the EA once it has been approved in support of the application in terms of the Civil Aviation Act.

6. NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES

6.1 Supporting function for Kolomela Mine

Kolomela mine is situated in a remote section of South Africa and the mine is dependent on air transportation to allow contractors and employees to travel from other parts of the country including Kumba's Corporate office located in Gauteng to the mine in an effective and safe manner. Air transportation prevents long overland travelling that would result in a loss of productivity and undue safety risks for the employees and contractors. An airport and associated air travel provides an essential supporting function for the mine's operations. Therefore, a clear need exists for a facility that can accommodate passengers travelling to and from Kolomela mine. The proposed airport will ensure the continued transportation of employees and contractors to the mine.

6.2 Increased capacity to accommodate of air traffic

The purpose of the airport will be to accommodate air traffic related to passengers travelling to and from Kolomela mine from Johannesburg. While the Sishen mine is currently serviced by 19 flights per week of 37 seat regional jet aircraft, Kolomela is serviced by Assmang's Tommy's Field involving 7 flights in 29-seater ERJ41 turbo-prop aeroplanes. Given the shortage of capacity on the Kolomela flights, many passengers are forced to fly to Sishen and are subjected to a long and a potentially dangerous road transfer over 100 km from Sishen airport in Kathu to Postmasburg.

Furthermore, the runway at Tommy's Field is too short to allow for safe departures of fully-loaded aircraft under 'hot and high' conditions and various safety incidents have been reported. Furthermore, it is likely that Airlink will retire the fleet of ERJ41 aircraft currently servicing Kolomela in the future.

The existing runways at Tommy's Field and Postmasburg Airfield were investigated as possible solutions, but these facilities cannot be expanded for various technical reasons, including air space restrictions, proximity to mining activities and residential areas, thus necessitating the need for a new runway and airport to be develop in Postmasburg to support air traffic to Kolomela mine.

A clear need exists to develop a new facility to provide sufficient capacity for air transportation to Kolomela.

6.3 Socio-economic contribution

The project will contribute to economic development in terms of the following:

- Temporary jobs (skilled and unskilled) will be created during the construction phase of

which a portion will be sourced from local labour. The project will result the creation of approximately 205 temporary jobs during construction.

- During the operational phase, Kolomela is likely to move the labour operating Tommy's Airfield to the new airport (Approximately 23 permanent employees). Operational phase employment impacts are considered low.
- The purchasing of local goods and services during construction and operations (fuel, food, cleaning services, maintenance, building material, etc.)

The project also has the potential to have socio-economic spin offs. The airport can be used by local residents and can be used by other aircraft not related to Kolomela mine operations. It will improve transportation of local residents. The current status of infrastructure development in Postmasburg is not favourable and this project will contribute significantly to infrastructure development in the area.

There is an opportunity for ancillary economic activities as a result of the airport development. These include car hire, café's /coffee shops, conferencing facilities etc. Furthermore, the airport could be used by aircraft and possibly even scheduled flights in the future. This will further enhance the socio-economic opportunities and accessibility of the community.

7. MOTIVATION FOR THE PREFERRED DEVELOPMENT FOOTPRINT WITHIN THE APPROVED SITE INCLUDING A FULL DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED DEVELOPMENT FOOTPRINT WITHIN THE APPROVED SITE

(The determination of the site layout taking into consideration the comparison of the original site plan with a plan which takes (1) environmental features; (2) current land uses, (3) issues raised by IAPs and (4) consideration of alternatives, to the initial layout into account.)

7.1 Site selection process

An extensive site selection process was undertaken by SMEC South Africa to identify a suitable location for the proposed airport. The factors that were considered was based on the requirements of the Civil Aviation Authority and/or practical requirements and are considered as either significant or fatal flaws for the development of an airport. These factors are discussed in detail in the Table below:

TABLE 7-1: SITE SELECTION CRITERIA

Criteria	Description
1. Radius	The site selection was conducted in a 20km radius from the town centre of Postmasburg which is optimal in terms of travelling distance and accessibility. All properties outside this radius have been excluded. Traveling further distances will also increase travelling time and safety concerns on roads.
2. Mining considerations	The DMRE D1 database was used to exclude properties on which existing Prospecting Rights or Mining Rights have been issued. The effect of mining activity on both the footprint of the airport and aeronautical approach paths were considered.
3. Military artillery range at Lohatla military base	The Lohatla military base is situated 32km north of Postmasburg. A 15km buffer zone from the restricted airspace associated with the Lohatla bombing range has also been used as a factor for site selection. The buffer has been included to prevent any risk of entering the restricted air space due to previous safety incidents of this nature.
4. Accessibility and travelling distance	Potential sites situated on secondary unpaved roads that are located considerable distances away from Kolomela and Postmasburg have also been excluded due to the viability of road upgrades and accessibility.
5. Proximity to residential areas	Proximity to residential areas was also taken into account during the site selection process due to potential noise impacts and associated nuisance conditions.
6. Site Topography	The runway requires a relatively flat area with a maximum longitudinal slope on the runway centreline of 1.5% or less. A slope map of the 20km radius was generated with areas exceeding 1.5% being highlighted. Localised slope variations could be

Criteria	Description
	tolerated, but sites with overall slopes steeper than 1.5% were excluded from consideration.
7.Surrounding Topography	According to the requirements of the International Civil Aviation Organisation and, subsequently, the South African Civil Aviation Authority, the end of the runway must not be situated within 4000 meters from a topographical feature with a vertical height higher than 45 meters of the runway. The criteria was applied to sites that were deemed acceptable in terms of the above requirements (1. to 6.) and yielded exclusion zones within individual sites in terms of areas that would not meet this requirement.

The abovementioned criteria was used and applied which yielded two feasible properties as indicated in the Figure below.

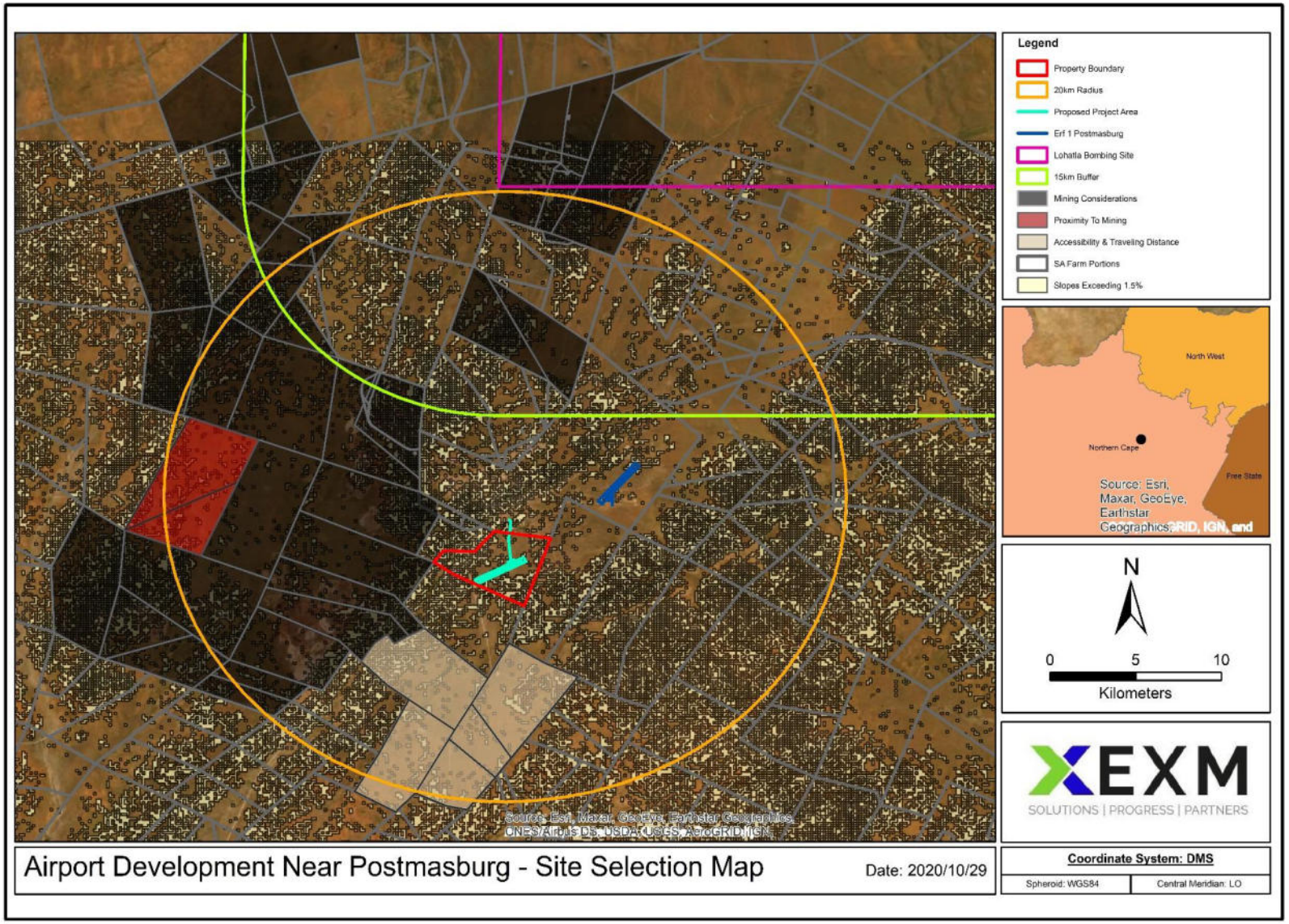


FIGURE 7-1: SITE SELECTION MAP

7.2 Site alternatives excluded for further assessment during scoping phase

Three site alternatives were identified as a result of the above described site selection process as indicated in the Figure below. The sites included Erf 1 of the Town Postmasburg, upgrade of the existing Postmasburg airport and the upgrade of the existing Tommy's field airport. These sites were excluded during the scoping phase of the EIA based on the main factors listed below:

7.2.1 Erf 1 of the Town Postmasburg

- Two prominent drainage features are located on Erf 1 that drain into the Groenwaterspruit river which is classified as an NFEPA river. The drainage features would be directly impacts.
- Large NFEPA wetlands are situated at the northern end where the runway would be situated and poses significant risk for bird strikes.
- Numerous other potential large wetland pans are also situate on the property. The topography of the area does not allow for any layout alterations to prevent impacts on wetlands.
- The land is currently leased by local farmers for grazing purposes and the proposed facility would impact the land use capability and livelihoods of these people.

7.2.2 Upgrade of the existing Tommy's field airport

The site is not a preferred option and has been excluded for further assessment due to the very close proximity (800 m) to Beeshoek mine and associated blasting activities, especially with the use of larger airplanes. Future expansion of activities at Beeshoek may also pose a risk to the project. The site is located close to the Lohatla Military Bombing Range airspace buffer zone and existing safety incidents have been recorded.

7.2.3 Upgrade of the existing Postmasburg airport

The site is optimally located in terms of access and will only entail the extension of an existing facility not a new development. However, the site has been excluded for further assessment due to the very close proximity (<250m) to a residential area. The footprint of the proposed expansion is partially located within a CBA 1 which is regarded as highly sensitive. This alternative is also not preferred in due to the existence and location of nearby overhead power line structures which present potential hazardous aviation obstacles. An existing water tower presents a potential obstacle and bird activity from the nearby waste water treatment

works also poses a potential aviation risk.

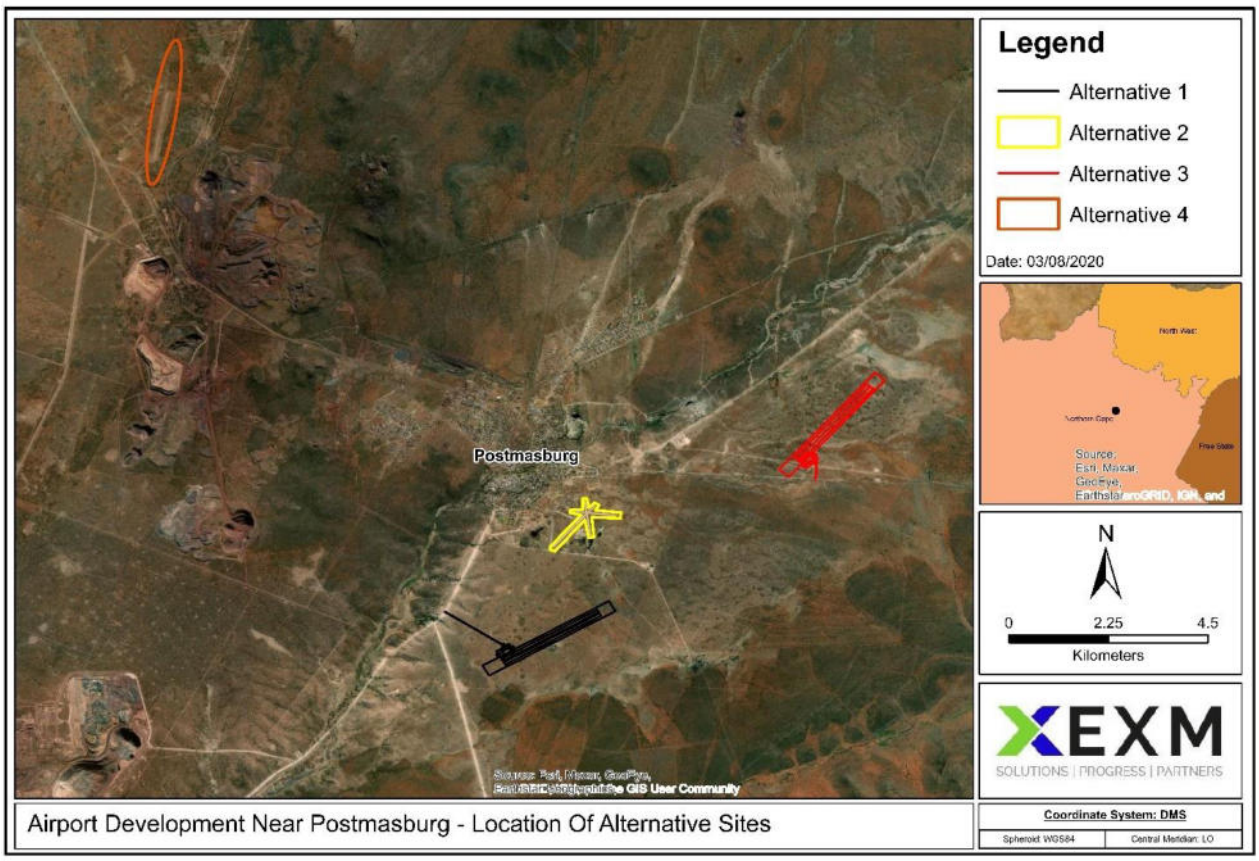


FIGURE 7-2: SITE ALTERNATIVES EXCLUDED FOR FURTHER ASSESSMENT

7.3 Layout alternatives

The original unmitigated layout is illustrated in Figure 7-3 and the revised mitigated layout is illustrated in Figure 7-4. The project layout was further revised to re-align the fenced area in order to avoid some wetlands and their catchments as indicated in Figure 7.5 (final layout). The layout has been changed as a result of the outcome of the respective specialist studies and recommendations made. The original layout has been amended in the following manner to mitigate impacts on the wetland pans and biodiversity:

Position of facility: The entire footprint of the facility has been moved approximately 400 meter towards the south western side of the property as recommended by the Freshwater Ecological Assessment and the open areas (fence) on both sides of the runway has been reduced by 100 meters. The reduced footprint will require less disturbance of flora and faunal habitat and the associated impacts have been reduced.

According to the Freshwater Ecological Assessment (SAS, 2020), the initial layout of the proposed Kolomela airport would have directly impacted eight wetland pans which were located directly within the proposed project footprint, whilst an additional six wetland pans were located within 50 m thereof and were potentially at risk of impacts from edge effects

(thus a total of 14 wetland pans potentially affected).

Whilst complete avoidance of all wetland pans within the study area is unlikely to be feasible due to the abundance of wetland pans throughout the study area, the mitigated layout has resulted in avoidance of several wetland pans that would previously have been affected.

Following optimisation of the project layout, it is expected that only two wetland pans will be completely lost (CWs 3 and 4) as a result of construction of the runway, whilst four wetland pans (CWs 1, 7, 10 and 11) may be partially affected by the construction of the boundary fence through them. Six wetland pans remain outside of planned infrastructure but may potentially be impacted by edge effects. Thus, as a result of the optimised project footprint, the total number of potentially affected CWs is reduced to 12.

Re-alignment of the access road: The re-alignment of the access road eliminates any potential impacts on the Episodic Drainage Lines which may have previously occurred. Although the re-aligned access road traverses the catchment of one cryptic wetland, it is situated approximately 75 m from the delineated boundary of the cryptic wetland and is therefore not considered likely to pose a significant quantum of risk to that cryptic wetland.

The original alignment of the access road would transverse the sensitive Calcrete Outcrop habitat rated as having moderately high sensitivity. This habitat has the potential to accommodate Species of Conservation Concern. The re-alignment of the access road will prevent impacts on the Calcrete Outcrops.

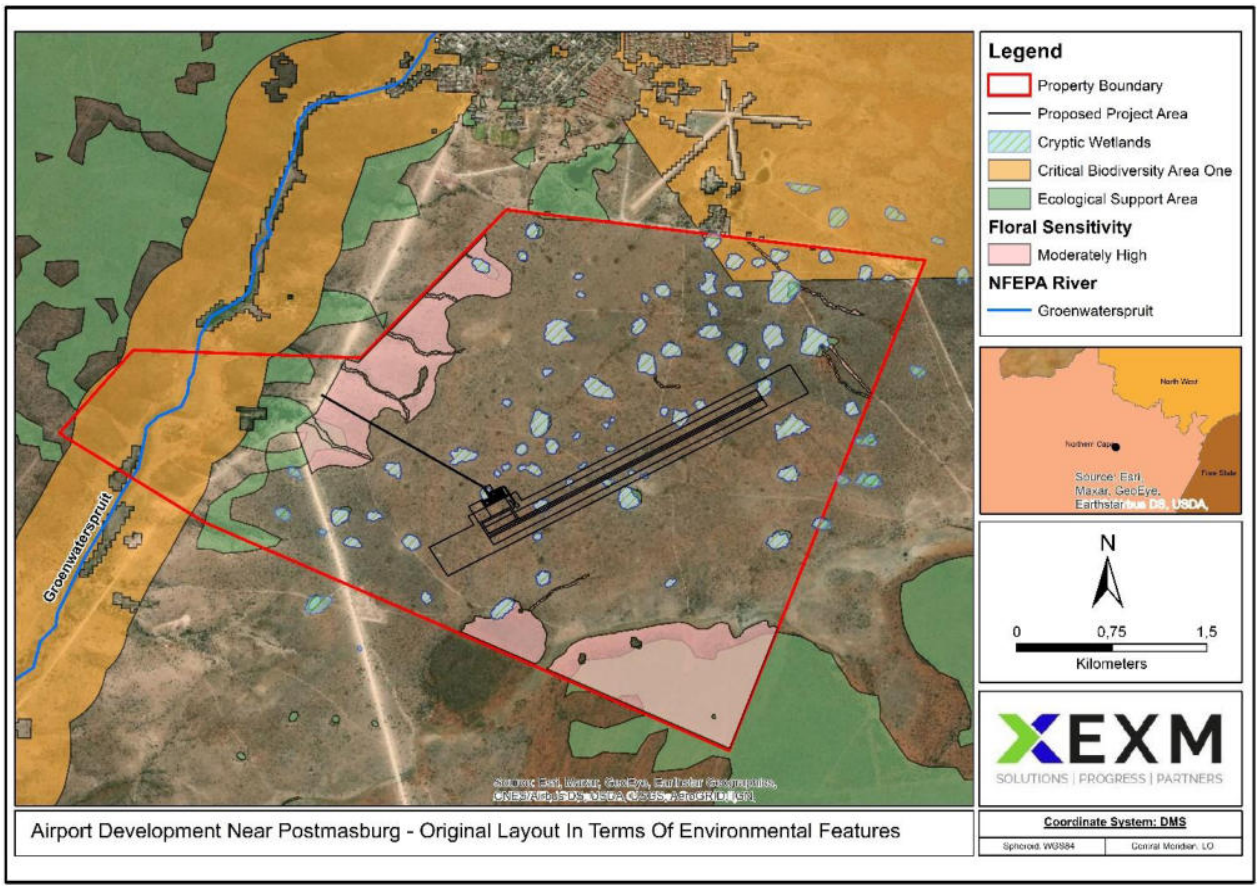


FIGURE 7-3: ORIGINAL UNMITIGATED LAYOUT

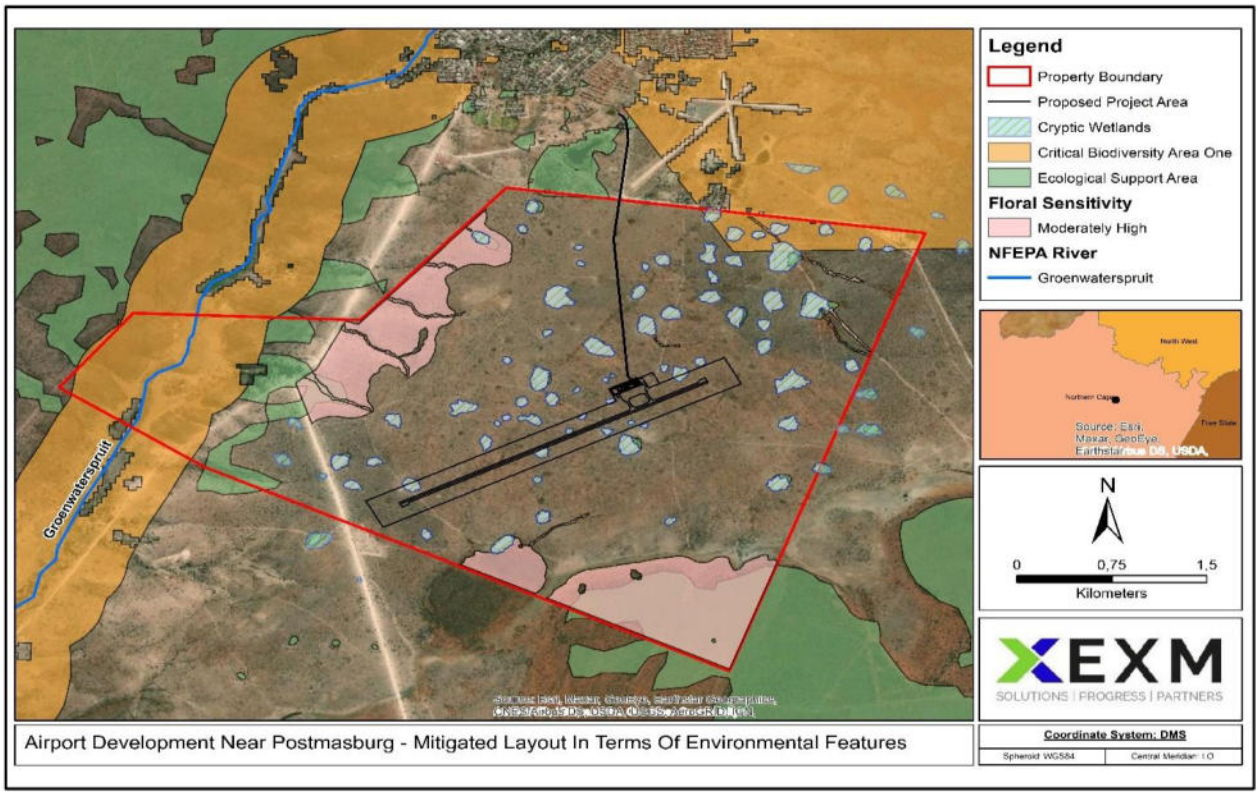


FIGURE 7-4: REVISED MITIGATED LAYOUT

Final layout: The project layout was further revised to re-align the fenced area in order to avoid some wetlands and their catchments as indicated in Figure 7.5 below.

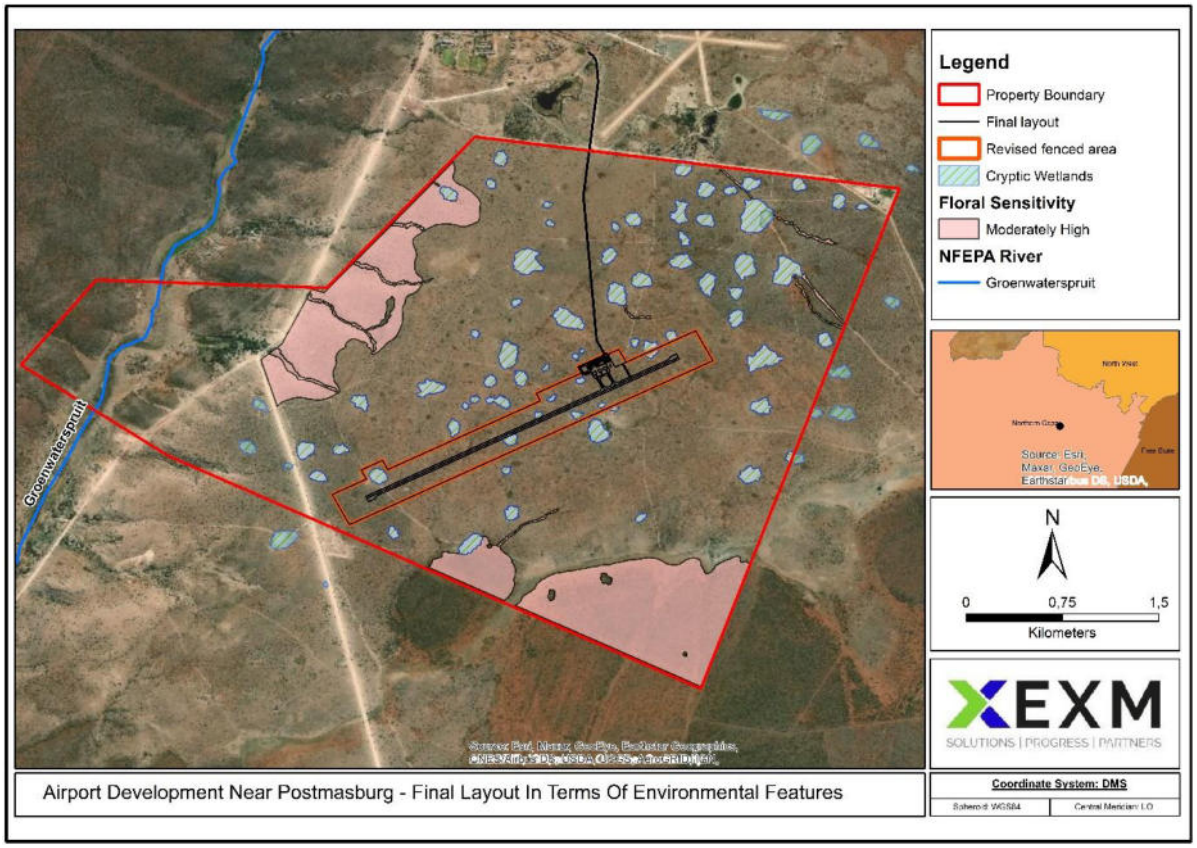


FIGURE 7-5: FINAL LAYOUT

The Figure below shows a comparison of the original layout and the final mitigated layout in terms of the wetland pans and the associated catchment areas. The final layout will impact less wetland pans, including their catchments as described by the Freshwater Ecological Assessment.

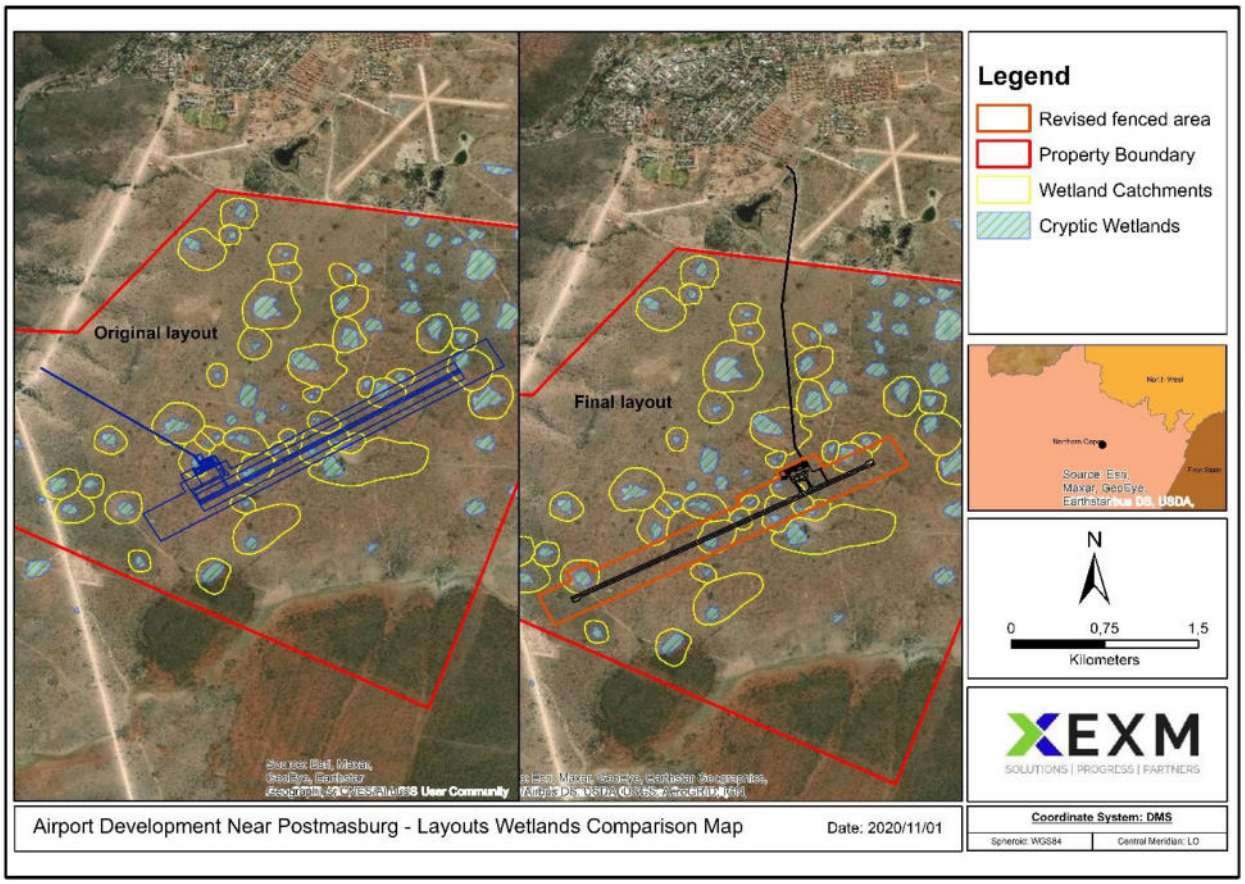


FIGURE 7-6: ORIGINAL LAYOUT COMPARED WITH REVISED MITIGATED LAYOUT

7.4 Access road alternatives

Two access roads are considered as indicated in Figure 7-7 below. Option A will provide a shorter route into town and will not require the use of the R325 regional road and prevent the potential upgrade of the road. Traffic from the airport can easily disperse through town from this route. However, consent must be obtained from the local municipality. Option 2 will entail a longer route to the west and a portion of the R325 will be used and require upgrading.

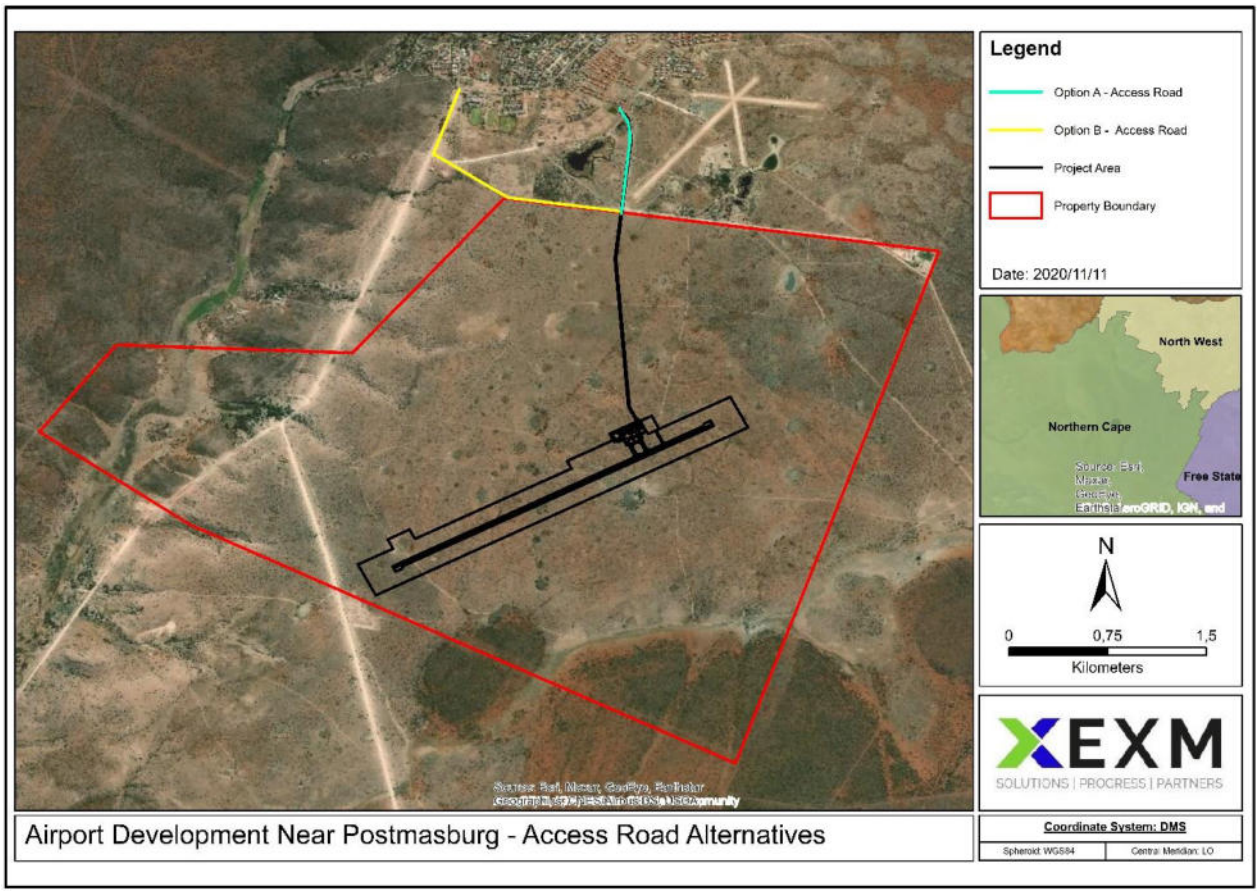


FIGURE 7-7: ACCESS ROAD ALTERNATIVES

7.5 Option of not implementing the activity

In accordance with the NEMA Regulations, the no-go alternative is required to be investigated and assessed. The no-go alternative would entail the non-continuation of the airport development. This would mean that Kolomela will continue to use Assmang's Tommy's Airfield. There is currently a shortage of capacity on the Kolomela flights at the airfield and many passengers are forced to fly to Sishen mine near Kathu and are subjected to a long and potentially dangerous road transfer from Kathu to Postmasburg. The existing runway is too short to accommodate larger planes. The short runway also does not allow for safe departures of fully-loaded aircraft under 'hot and high' conditions and various safety incidents have been reported. As previously discussed, the upgrade of the Tommy's Airfield is not a feasible option. The non-continuation of the proposed airport is therefore not a preferred option.

The non-continuation of the airport development will also negate the socio-economic benefits associated with the facility, including job creation (especially during construction) and the purchasing of local goods and services. The project also has the potential to have socio-economic spin offs. The airport can be used by local residents and can be used by other aircraft not related to Kolomela mine operations. The current status of infrastructure

development in Postmasburg is not favourable and this project will contribute significantly to infrastructure development in the area. These benefits will be prevented if the project does not proceed.

The status quo will remain and the no-go alternative would prevent any potential negative environmental impacts associated with the proposed airport, including the disturbance of surface water resources, removal of vegetation and associated biodiversity impacts, noise generation and associated nuisance conditions, soil erosion, etc. The actual social and economic benefits associated with the project as well as the biophysical impacts will be investigated as part of EIA phase of the project and appropriate mitigation will be proposed.

8. DETAILS OF THE PUBLIC PARTICIPATION PROCESS FOLLOWED

A public participation process is conducted in terms of the Chapter 6 of NEMA and the EIA regulations. The purpose of the public participation process is to inform all the identified Interested and Affected Parties (IAPs) of the proposed development and associated EA application process and allow them to raise comments/concerns. The requirements of the Directions (GN 43412 of 5 June 2020) issued by the Department of Environment, Forestry and Fisheries (DEFF) in terms of the Disaster Management Act (57/2002) in terms of the correct protocol for public participation will be adhered to and has been incorporated in the below description.

8.1 Identification of Interested and Affected Parties

Existing IAP databases were updated for the purposes of this project. Potential Interested and Affected Parties (IAPs) were identified based on the definition of IAPs in the EIA regulations. This includes:

- Landowners or tenants adjacent to or within 100 m from the proposed study area. For the purposes of this study all neighbouring landowners have been identified and notified.
- Any organisation of ratepayers that represent the community in the area (if applicable).
- Representatives of the local municipality/ward councillor with jurisdiction in the area.

  This definition was expanded for the purposes of the assessment to include the mayor, councillors of the local council as well as members of the district municipality. This included representatives of:

  - Tsantsabane Local Municipality
  - ZF Mgcawu District Municipality
- Authority or organs of state having jurisdiction in respect of any aspect of the activity, including. The following organs of state have been notified:

  - Department of Water and Sanitation (Northern Cape)
  - Department of Agriculture, Forestry and Fisheries (Northern Cape)
  - Department of Mineral Resources (Northern Cape)
  - Department of Environment and Nature Conservation (Northern Cape)
  - Department of Land Reform and Rural Development (Northern Cape)
  - Department of Economic Development and Tourism (Northern Cape)
  - Department of Roads and Public Works (Northern Cape)
  - Department of Social Development (Northern Cape)
  - South African Heritage Resources Agency

- South African Civil Aviation Authority

Persons who respond to the Background Information Document (BID), press advertisements and site posters. A list of all parties that have been identified thus far is included as **Appendix B1.**

8.2 Notification of Interested and Affected Parties

In accordance with Section 41(2)(b) of Chapter 6 of the EIA Regulations (GNR 326 of 2017), written notification (including BID document by email or facsimile) was provided to all persons on the IAP database.

- Site notices (Afrikaans and English) have been placed at the access roads to the site as well as at public areas in Postmasburg (**Annexure B 4**)
- Email notifications have been sent to the identified I&APs (**Annexure B5**).
- SMS notification have been sent to the identified I&APs (**Annexure B5**).
- Advertisements have been placed in two newspapers (local and regional), one in English and one in Afrikaans which are distributed in the Postmasburg area (Kalahari Bulletin and Volksblad) (**Annexure B3**).

A copy of the BID is provided in **Appendix B2.** Proof of distribution of the BID is contained in **Annexure B5.**

8.3 Distribution of draft Scoping report for comment:

The Scoping Report was distributed for a period of 30 days to the identified IAPs by means of the following methods:

- An electronic link has been provided to the identified IAPs with access to email. Two platforms will be used including OneDrive and Dropbox to ensure access.
- Other IAPs for whom only cell phone number are available have been notified of the availability of the reports and provided the opportunity to request access to the documents.
- Hard copies of the Scoping report will be placed at a venue which is accessible to the public (e.g. public library and Kumba Public Affairs Offices), only if the IAPs that cannot access the electronic documents request access to a hard copy. No such requests were received.
- Hard copies were sent to the competent authority, if requested.

Proof of distribution is included in **Annexure B5.**

8.4 Distribution of draft Environmental Impact Report (EIR)

The EIR is distributed for a period of 30 days to the identified IAPs by means of the following methods:

- An electronic link is provided to the identified IAPs with access to email. Two platforms will be used including OneDrive and Dropbox to ensure access.
- Other IAPs for whom only cell phone number are available have been notified of the availability of the draft EIR and provided the opportunity to request access to the documents.
- Hard copies of the EIR will be placed at a venue which is accessible to the public (e.g. public library and Kumba Public Affairs Offices), only if the IAPs that cannot access the electronic documents request access to a hard copy. No such requests were received.
- Hard copies were sent to the competent authority.

Proof of distribution of the draft EIR will be included in the final report that will be submitted to the competent authority.

8.5 Public meeting

Accordance with the Public Participation Plan submitted to the Northern Cape Department of Environment and Nature Conservation in line with the directions (GN 43412 of 5 June 2020) issued by the Department of Environment, Forestry and Fisheries (DEFF) in terms of the Disaster Management Act (57/2002), no public meeting was held for the project. Stakeholder groups identified as being directly affected by the project were identified and these persons were engaged specifically on their issues and concerns.

Focus group sessions was held with pertinent IAPs, including landowners and surrounding land owners if sufficient interest is shown by the relevant stakeholders. The meetings were conducted with the owners of the Farm Kalkfontein (affected), Farm Soetfontein (adjacent) and Farm Grootfontein (adjacent), as well as the owners of the hangers at the current Postmasburg Airport.

Refer to **Annexure B7** for the meeting minutes.

8.6 Response to comments received

The table below contains all the comments received from the IAPs and responses thereto. Refer to **Annexure B6** for proof of comments and responses.

8.7 Summary of issues raised by IAPs

Correspondence received is included in **Appendix B7.**

DATE	NAME	CORRESPONDENCE RECEIVED	EAPs RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	CONSULTATION STATUS (consensus, dispute, not finalised, etc.)
AFFECTED PARTIES				
Landowners/Lawful Occupiers of Adjacent Properties No comments received yet.				
28 July 2020	Marna van Zyl	Goeie dag Trevor Ek wil asb aansoek doen namens my man, Johan de Klerk van Zyl (ID 630101 5095 082), eienaar van die Plaas Kameelfontein, aangrensend aan Kalkfontein en Soetfontein, om te registreer as 'n belanghebbende en affekteerde party vir bogenoemde projek. Ons sal dit waardeer indien u beskikbare inligting vir ons kan aanstuur. Groete / Kind regards Marna van Zyl P.O. Box 416 POSTMASBURG 8420 Cell: 082 923 1711 **Translation** I Hereby would like to register my husband Johan de Klerk van Zyl (ID 630101 5095 082), owner of the farm Kameelfontein adjacent to Kalkfontein as an IAP. Please forward the relevant information	All relevant information including the BID and scoping report was provided. Goeiedag Marna, Dankie vir die kommunikasie ontvang. Ek het julle besonderhede op die lys van geintereseerde en geaffekteerde partye bygevoeg. Alle verdere kommunikasie sal verskaf word deur die verloop van die aansoek proses. Groete Trevor **Translation** Thank you for the communication received, your details have been added to the list of IAPs and communication will be provided as the process progresses.	On-going

DATE	NAME	CORRESPONDENCE RECEIVED	EAPs RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	CONSULTATION STATUS (consensus, dispute, not finalised, etc.)
31 July 2020	SP du Plesis	Good morning, I hope you are well. I would like have our company registered as an interested party for dust suppression and road maintenance for the development of an airport by SIOC in Postmasburg. Please see attached the company profile for your perusal. Thank you and regards SP du Plessis	Good day Mr. du Plessis, Thank you for the communication received. I will add your details to the list of registered interested and affected parties. All further information regarding the Environmental Authorisation process will be communicated in due course. Kind regards Trevor	On-going
05 August 2020	SP du Plesis	We are a local SMME delivering products, Plant, and/or a service in dust suppression and road maintenance. Is there any scope for us under Activity 24, or any other activity of Listing Notice 1 (GN R. 327 of 2017)?	Mr. du Plessis has been added as an interested party. Good day Sarel, Regarding your attached comments. We have incorporated you as an interested party in the Environmental Impact Assessment (EIA) process and all further communication will be forwarded. However, the EIA does not facilitate for procurement. The comment and request will be incorporated and communicated. Kind regards Trevor	On-going
03 August 2020	Coenraad Kotze	Hi Trevor. I am a little confused, why would an airport need a water licence? Regards Coenraad	Good day,	On-going

DATE	NAME	CORRESPONDENCE RECEIVED	EAPs RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	CONSULTATION STATUS (consensus, dispute, not finalised, etc.)
			Thank you for the comment. All the details are contained in the Background Information Document and scoping report attached to the email and link provided. The proposed development triggers activities (as listed below) in Section 21 of the National Water Act and therefore a Water Use Licence needs to be obtained. • Section 21 (a) – abstraction of groundwater from a borehole to supply the airport; • Section 21 (c&i) – impeding or diverting the flow of water in a watercourse & altering the bed, banks or characteristics of a watercourse for developments within or close to wetland pans and watercourses. • Section 21 (g) discharging water containing waste into a water resource and disposing of waste in a manner which may detrimentally impact on a water resource. Please feel to contact me if you have any further queries. Kind regards Trevor	
03 August 2020	René van Niekerk	Hallo Trevor, Ek het 'n kennisgewing gekry dat daar 'n omgewings impakstudie gedoen is vir 'n nuwe vliegveld in die Postmasburg omgewing. Kan jy asseblief vir my meer detail gee in verband daarmee?	All relevant information including the BID and scoping report was provided.	On-going

DATE	NAME	CORRESPONDENCE RECEIVED	EAPs RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	CONSULTATION STATUS (consensus, dispute, not finalised, etc.)
		Ek en my man vlieg beide en gebruik Postmasburg vliegveld. Groete. René van Niekerk Sel no: 0827838180	A meeting was conducted with René van Niekerk and her husband on the 20th of August 2020 to discuss the comments raised. The outcome of the meeting has been communicated to the Applicant and will be addressed in the EIA phase.	
03 August 2020	JC Wessels	Hello Sir.. If it's possible can you send me a map or a Google image to indicate the location of the Airport on WhatsApp Thank you JC Wessels 0828557363 (cellphone number)	Good day Mr Wessels, I am busy to consolidate all the comments and responses for the proposed Airport development. I've tried to send the image via WhatsApp, but the file is too large and keep failing. Please find attached. Your details have been added to the list of Interested and Affected Parties. Kind regards Trevor	On-going
06 August 2020	Izak Gous	The impact of the development of the airport on our farm's operational capacity. How will vermin be controlled? Will the current owner/new owner still be able to conduct fence inspections? Security – what will the company do to ensure adequate security to prevent unauthorized entrance (as the runway is near our border fence) and consequently livestock theft, collecting of firewood etc. Water quantity and quality – Will monitoring of boreholes take place to manage any dewatering or quality impacts? Maintenance of the Witsand road towards town – the road is currently in a poor condition and will only deteriorate further with increased traffic, what is the plan of action in that regard?	A meeting was conducted with Izaak Gouws and his family on the 20th of August 2020 to discuss the comments raised. It was concluded that the potential impacts will be addressed in the EIA phase and all further information will be communicated as the process proceeds.	On-going

DATE	NAME	CORRESPONDENCE RECEIVED	EAPs RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	CONSULTATION STATUS (consensus, dispute, not finalised, etc.)
		What lights will be used? Will it be environmentally friendly to soften the effect of the lights?		
03 August 2020	Mimi Swart	Ek registreer hiermee as n belangstellende party in die ontwikkeling van 'n lughawe naby Postmasburg. Kan u dalk vir my n aanduiding gee van waar die beplanning gemaak word? Watter rigting? Hoever uit dorp? Met dank Rdl. Mimi Swart **Translation** I hereby register as an interested party for the development of the Airport near Postmasburg. Please provide an indication of where the development will take place.	Goeiemôre, Dankie vir die kommunikasie ontvang. Soos in die vorige epos gekommunikeer, vind asb aangeheg 'n agtergronddokument wat 'n kaart bevat wat die ontwikkeling aandui asook agtergrond rakende die projek. Die swart gedeelte is die voorgstelde uitleg. Ek het ook 'n addisionele liggingskaart aangeheg. Kontak my gerus indien U verdere vrae het. Groete Trevor **Translation** Thank you for the communication received. Please find attached the BID which provides an indication where the development will be conducted.	On-going
05 August 2020	Deidre Gibson	Good morning. In would like to be added as a person interest in above case if it is still possible please. I am a farmer near one of the proposed sites. Thanks. Deidre Gibson	Good day, Thank you for the communication received. I will add you to list of registered Interested and Affected parties. All further communication will be forwarded to you. Kind regards	On-going

DATE	NAME	CORRESPONDENCE RECEIVED	EAPs RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	CONSULTATION STATUS (consensus, dispute, not finalised, etc.)
			Trevor	
05 August 2020	Deon van Kradenburg	Hi, Trevor I wish to register my company Keanjo Network Infrastructures as an Interested and/or Affected Party. Regards Deon van Kradenburg	Good day, Thank you for the communication received. I will add you to list of registered Interested and Affected parties. All further communication will be forwarded to you. Kind regards Trevor	On-going
Local Authorities				
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA etc.) No comments received yet.				
Traditional Leaders				
Competent Authorities affected No comments received yet.				
INTERESTED PARTIES No comments received yet				

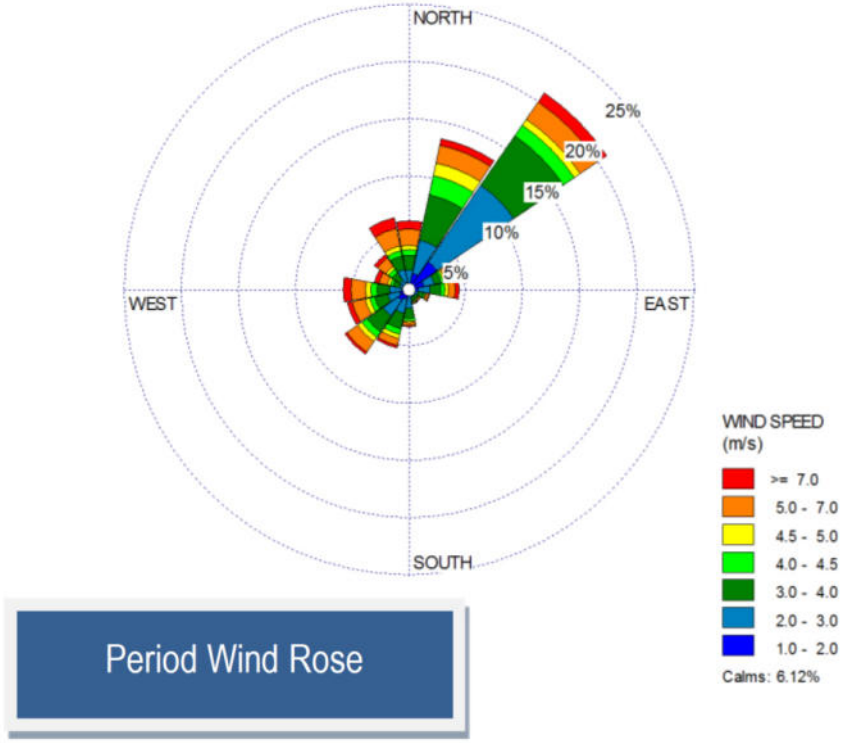
9. ENVIRONMENTAL ATTRIBUTES

9.1 Climate

Kolomela mine is located 7 km south west of the proposed development site. Therefore, climate data recorded at Kolomela mine is pertinent to the site.

9.1.1 Wind

The wind field is dominated by winds from the north-east (see Figure 9-1). The strongest winds (>6 m/s) were also from these directions. Calm conditions occurred only 6% of the time, with the average wind speed being 3.6 m/s. During the day the predominant wind direction are from the north-north east and north east. At night winds tender to blow from the south west and west south west. Strong winds in excess of 6 m/s occurred most frequently during winter and spring months. Calm conditions occur most frequently during autumn months.



Source: Air Quality Impact Assessment for Kolomela mine (Airshed, 2015)

FIGURE 9-1: PERIOD AVERAGE WIND ROSE FOR KOLOMELA MINE 2011-2014

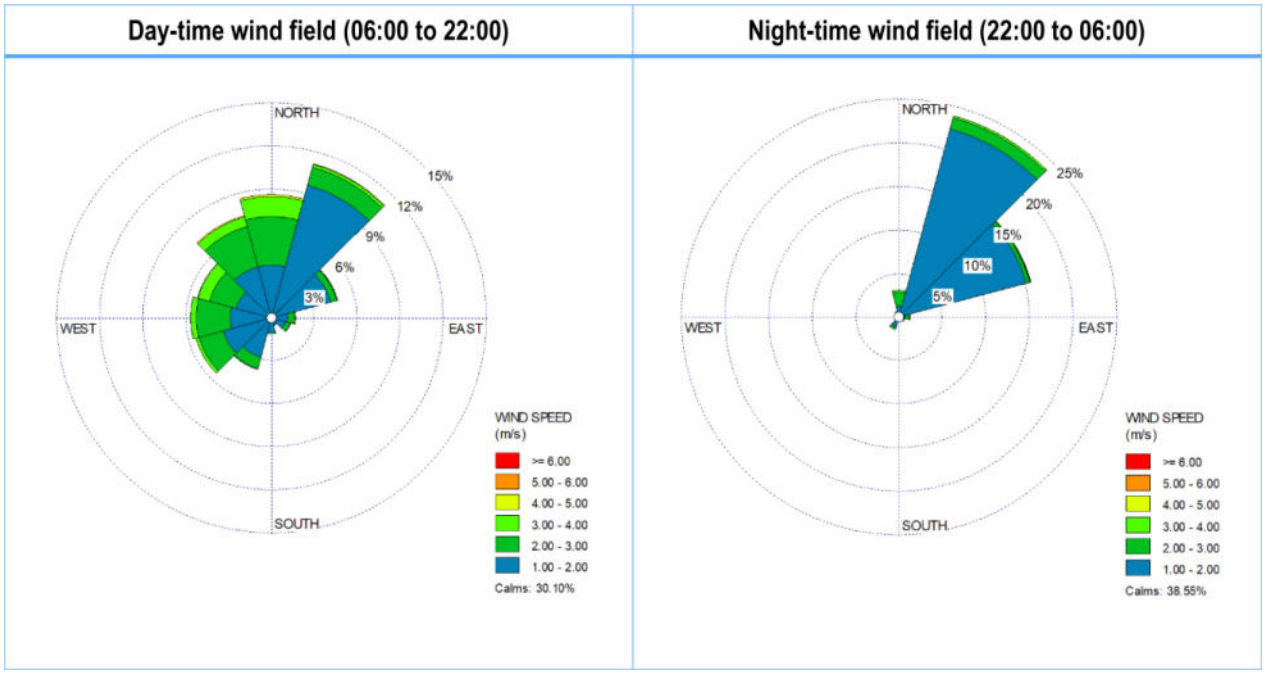


FIGURE 9-2: DAY- AND NIGHT-TIME WIND FIELD (OCTOBER 2014 TO AUGUST 2017)
Source: Noise Impact Assessment for Kolomela mine (Airshed, 2018)

9.1.2 Temperature

Monthly mean and hourly maximum and minimum temperatures are given in Table 9-1. Temperatures range between -7.2 °C and 40 °C. The highest temperatures occur in December and the lowest in July.

TABLE 9-1: MONTHLY TEMPERATURE SUMMARY

Hourly Minimum, Hourly Maximum and Monthly Average Temperatures (°C)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum	9.0	8.0	5.1	1.9	-5.0	-6.0	-7.2	-6.0	-5.0	1.0	2.0	6.0
Maximum	26.7	25.2	22.7	17.1	14.6	10.1	10.3	12.7	16.3	20.1	23.6	24.4
Average	40.0	39.0	38.0	33.0	32.2	27.0	28.2	32.0	38.1	36.0	38.0	40.0

9.1.3 Rainfall and evaporation

Postmasburg is situated within a low rainfall area (see Figure 9-3) with a mean annual rainfall of approximately 285 mm. Rainfall is highly unpredictable with most rainfall occurring between November and April. The rainfall usually falls as a result of thunderstorms when tropical thunderstorm activity extends southwards over the Kalahari. Mean annual evaporation (2 450mm) is higher than annual rainfall (374 mm), which results in a major net moisture deficit of over 2 000 mm throughout the year.

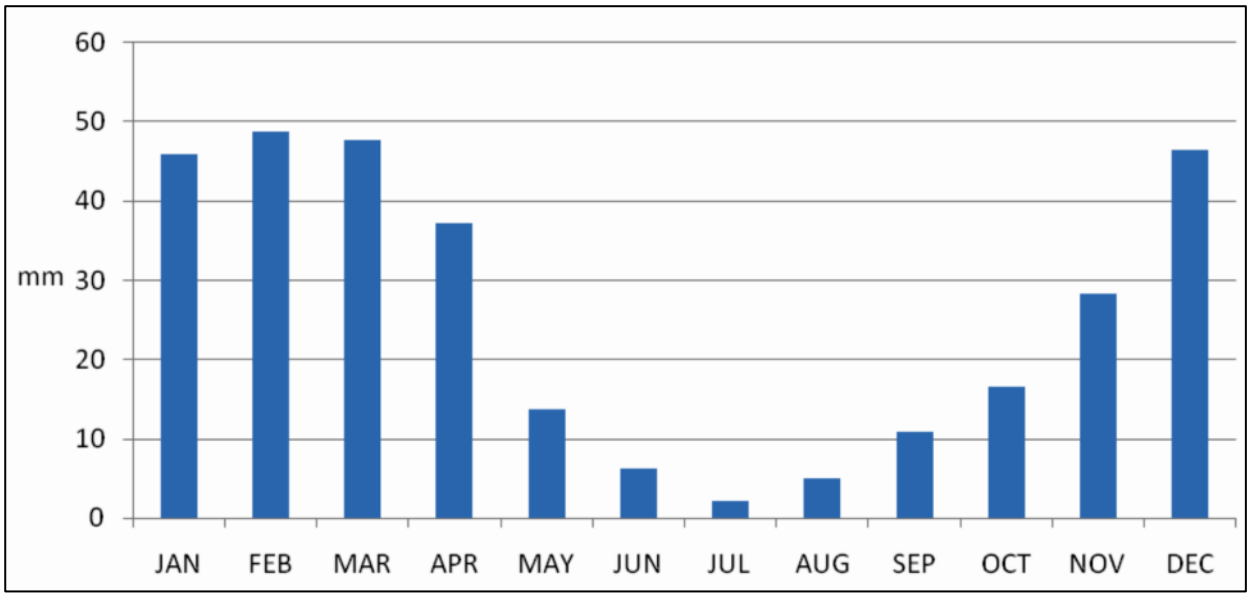


FIGURE 9-3: RAINFALL STATISTICS (POSTMASBURG WEATHER STATION – 1917 TO 1991)

9.2 Topography

The natural topography of the study area is generally flat with an average slope of 0.9% – 1.1 % and a maximum slope of 3.8 %. Refer to Figure 9-4 for a map showing the topography of the area. The majority of the study area slopes gently to the south west towards the Groenwaterspruit which flows south and converges with the Skeifonteinspruit to form the Soutloop river, south of Kolomela mine.

The area has a maximum elevation of approximately 1 334 Metres Above Sea Level (masl) and minimum elevation of 1 312 masl. The slope on the south eastern section is steeper compared to the other areas of the site due to the drainage pattern associated with a natural valley. This tributary also drains south east towards the Groenwaterspruit. Several pans are distributed across the flat-lying, central portions of the area which collect and hold rainwater for short periods after seasonal rainfall.

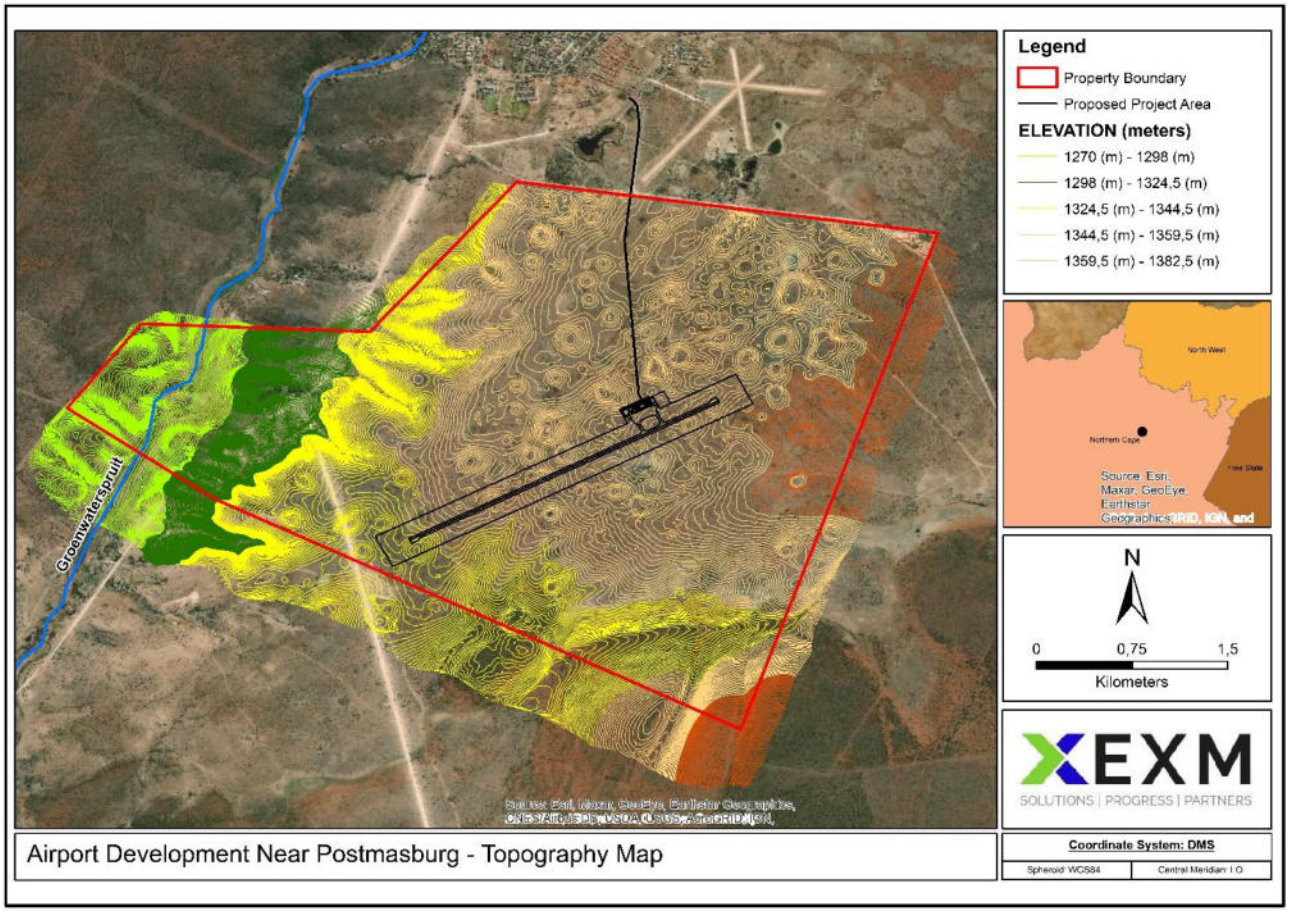


FIGURE 9-4: LOCAL TOPOGRAPHY

9.3 Soil and land capability

According to the Hydropedology Assessment (Zimpande Research Collaborative, 2020) (Annexure A of Part C), the structure of the soils associated with the study area can be broadly described as sandy with loose and single grained structure. Figure 9-5 presents the dominant soil forms associated with the proposed development as identified during the hydropedological assessment.

The project area is currently used for low intensity grazing purposes and was previously utilised for game faming with the intention for hunting. However, it has been indicated by the land owner that large scale grazing is not feasible due to increased livestock theft. Hunting has also ceased at the property.

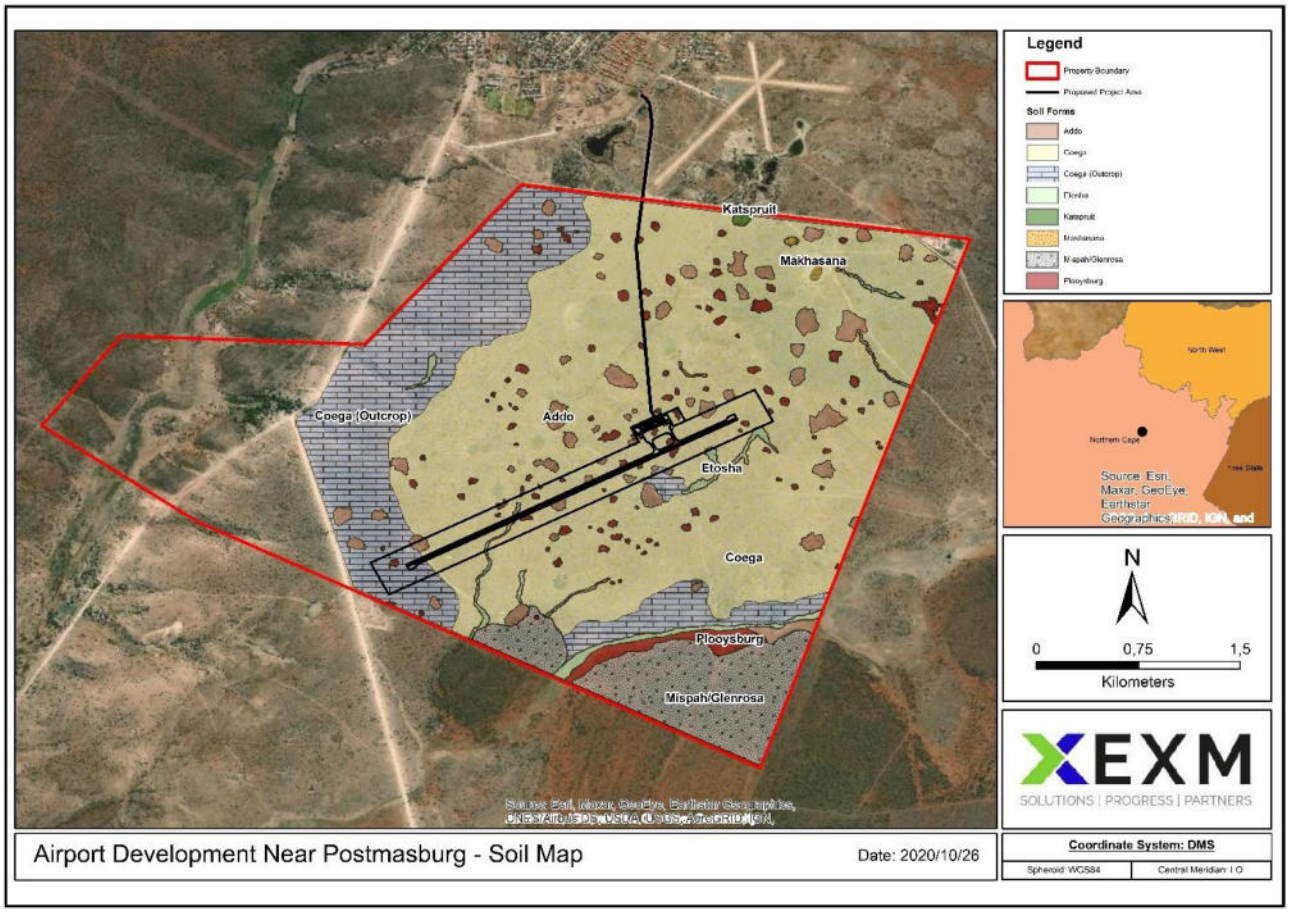


FIGURE 9-5: SOIL MAP

(Source: Hydropedological Assessment - Scientific Terrestrial Services, 2020))

9.4 Air Quality

According to Air Quality Impact Assessment conducted for Kolomela Mina (Airshed, 2015), the region is characterised by being a relatively dry, arid and dusty area. It is expected that various local and far-a-field sources are expected to contribute to suspended fine particulate (PM2.5 and PM10) and dust concentrations in the region. Local sources include wind erosion from exposed areas, fugitive dust from agricultural activities and mining activities, as well as vehicle entrainment from roadways and veld burning. Traffic on the gravel roads (R325 and R309) to Witsand and Griekwastad contribute substantially to dust levels in the area. Some exceedances in terms of the National Dust Control regulations (GNR 827 of 2013) have been recorded for the area and can be ascribed to the abovementioned sources.

9.5 Noise

According to the Noise Impact Assessment (Airshed Planning Professionals, 2020) (Annexure B of Part C) conducted for the facility, the Noise Sensitive Receptors (NSRs) in the vicinity of the airport, as indicated in the Figure below, include the town of Postmasburg and scattered homesteads and farmhouses in the study area, especially those to the northeast and southwest of the airport which expected to be significantly impacted by airplanes landing and taking off

from the airport. An area used for lambing ewes to the east of the airport has also been requested, during the public participation process, to be included as a NSR.

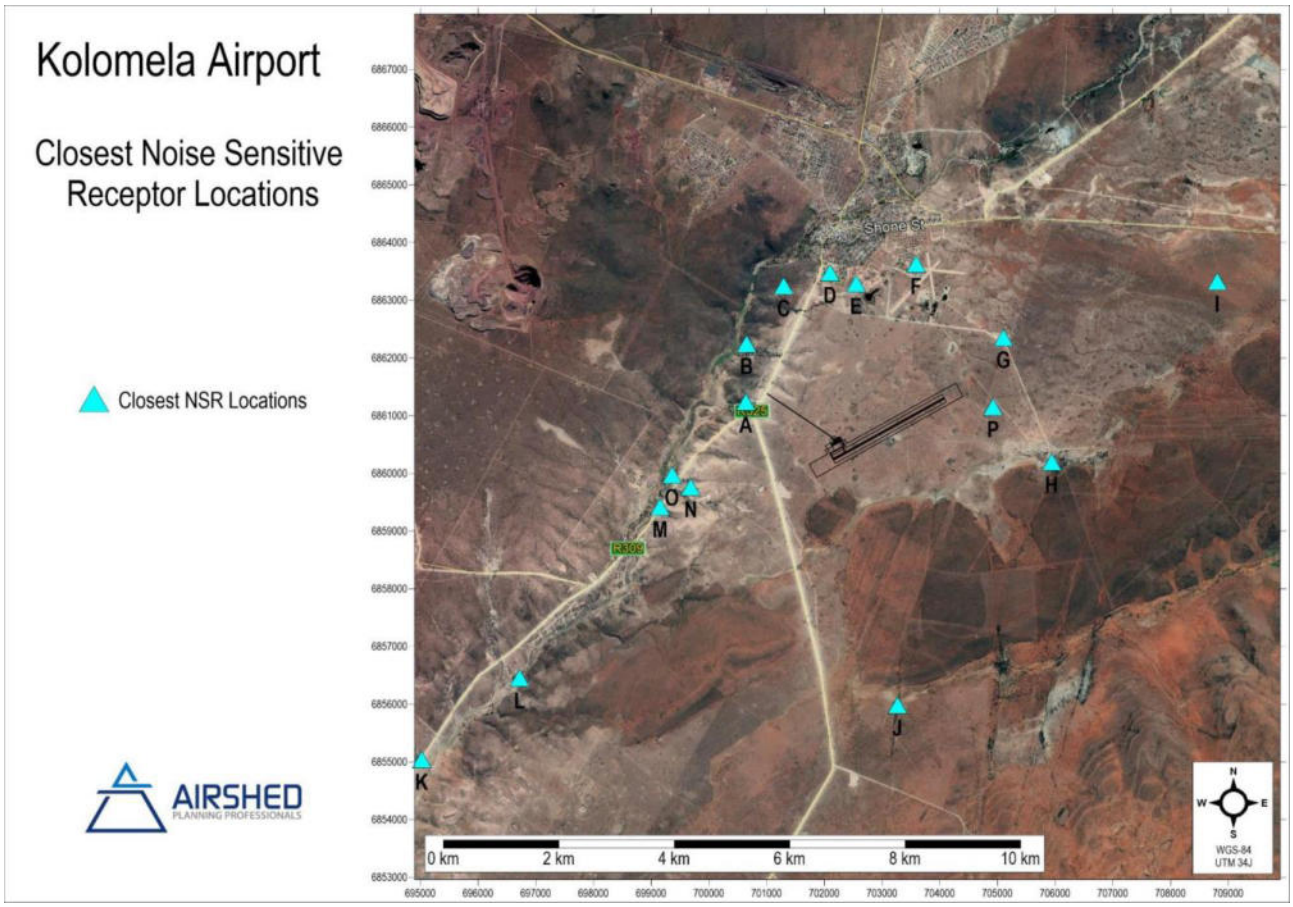


FIGURE 9-6: NOISE SENSISTIVE RECEPTORS

(Source: Noise Impact Assessment - Airshed, 2020))

The topography in the vicinity of the airport is relatively flat, with no topographical features between the airport and the closest NSRs. Ground cover was conservatively assumed to be acoustically hard (not conducive to noise attenuation) due the area's semi-arid nature.

The wind field in the study area is mostly from the north-northwest and north during the day and northwest during the night (which influenced the orientation of the runway). On average, noise impacts are expected to be more notable to the south-west during both the day and night. The average temperature and humidity in the study area is 16°C and 36% respectively.

To assess baseline noise levels and cumulative impacts from the Kolomela Airport, data was included from previous noise surveys conducted for the Kolomela mine to the west of the airport, the most recent of which was conducted in January 2018. For estimating cumulative impacts from the airport, the background noise levels were based on the average daytime (44.3 dBA) and night-time (38.1 dBA) measurements from all surveys.

9.6 Biodiversity - Flora

The following description was derived from the Floral Assessment conducted by Scientific Terrestrial Services (September, 2020) (Annexure C of Part C)

The study area is situated in the Postmasburg Thornveld vegetation type, as defined by Mucina and Rutherford (2006). The vegetation type has a conservation status of Least Concern. The eastern section of the property has however been classified as a Critical Biodiversity Area One in terms of the Northern Cape CBA and is associated with the Groenwaterspruit.

9.6.1 Habitat Units

Five broad habitat units and ten fine-scale habitat units were identified for the property as indicated in Figure 9-7. The habitat units were distinguished and their sensitivity assessed based on species composition, vegetation structure, ecological function, biophysical environment, and habitat condition.

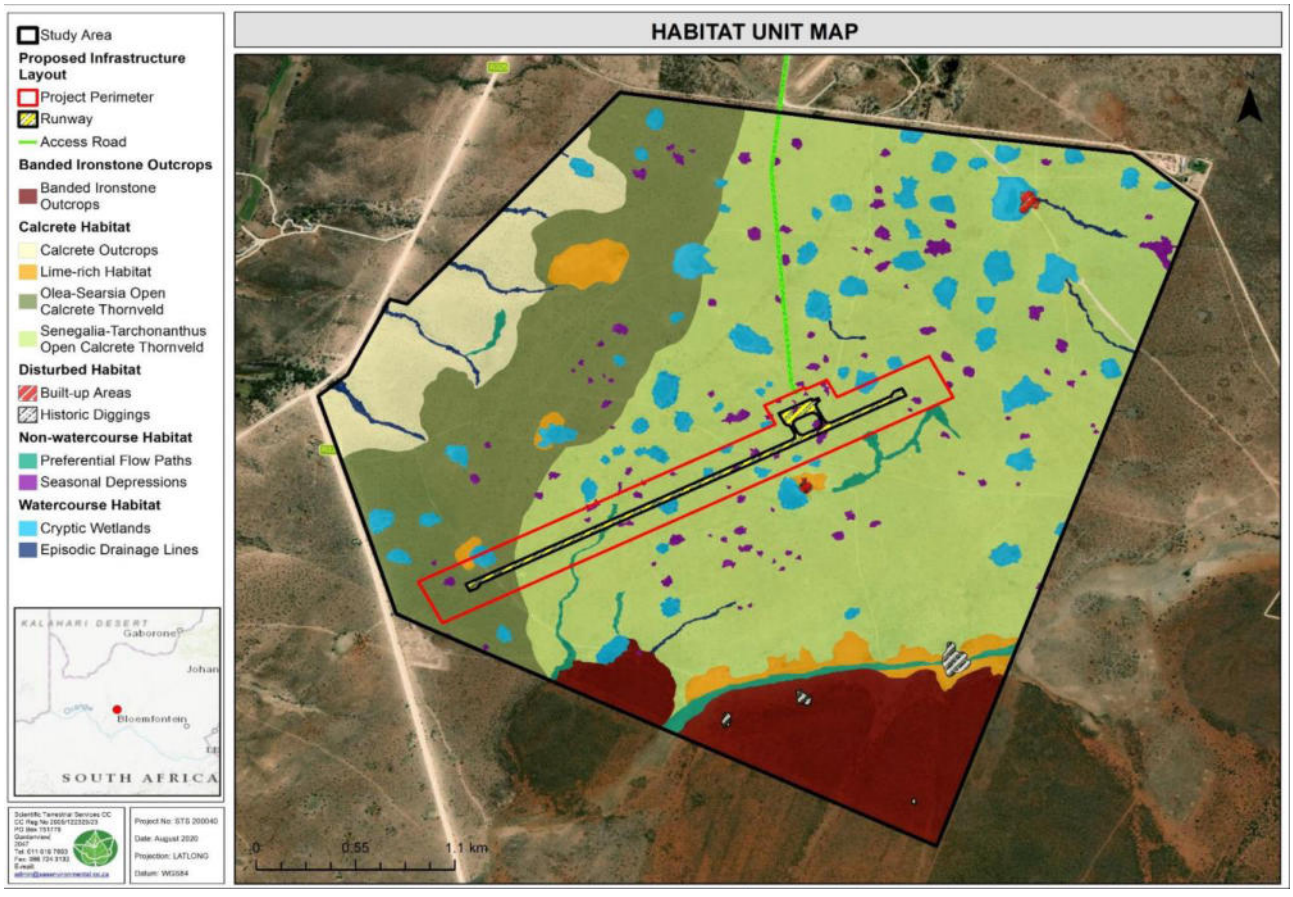


FIGURE 9-7: FLORAL HABITAT UNITS

(Source: Floral Impact Assessment - Scientific Terrestrial Services, 2020))

TABLE 9-2: FLORAL HABITAT UNITS

PLATE 9-1: BANDED IRON STONE OUTCROP

PLATE 9-2: CALCRETE HABITAT

PLATE 9-3: CRYPTIC WETLAND

PLATE 9-4: SEASONAL DEPRESSION

Banded Ironstone Outcrops - This habitat unit is of moderately high sensitivity from a floral ecological and resource management perspective. The vegetation is still natural and represented by indigenous floral species, though the species composition and physical characteristics are more representative of the Kuruman Thornveld and Kuruman Mountain Bushveld than of the Postmasburg Thornveld (as indicated by the latest update of the National Vegetation Map Project (SANBI, 2018)).

The vegetation is in a fair condition, but habitat integrity has decreased, which is most notable with the high abundance of bush encroaching shrubs. A high abundance of the and protected tree (as defined by the Northern Cape Nature Conservation Act (NCNCA) and by the National Forest Act(NFA)), Boscia albitrunca, occur within this habitat unit, along with isolated clumps of the protected tree, Vachellia erioloba. The habitat further provides suitable growing conditions for numerous provincially protected species, making this habitat unit of increased conservation significance. No CBAs or ESAs as per the 2016 Northern Cape Critical Biodiversity Areas (NCDENC, 2016) dataset are indicated for this habitat unit.

Calcrete Habitat - The habitat unit can be divided into three sub-units, namely Open Calcrete Thornveld, Lime-rich Habitat and Calcrete Outcrops. This habitat unit is of intermediate (Open Calcrete Thornveld and Lime-rich Habitat) to moderately high (Calcrete Outcrops) sensitivity from a floral ecological and resource management perspective.

The habitat is considered natural and in a good condition with only the Open Calcrete Thornveld and Lime-rich Habitat noticeably impacted by grazing pressures. The Calcrete Outcrops provide unique habitat and support numerous floral species protected under the NCNCA. The Calcrete Outcrops also provide habitat that can support the vulnerable sensitive plant species identified by the National Web-based Environmental Screening Tool for the study area.

Watercourse Habitat – This habitat unit is of Moderately High (Wetland pans and Episodic Drainage Lines) sensitivity from a floral ecological and resource management perspective.

Habitat integrity varied between the Wetland pans, many of which have suffered impacts from grazing pressures. The Wetland pans and Episodic Drainage Lines comprise species that are protected either nationally or provincially and they are important ecological corridors in the study area. Despite lower species diversity, these features remain important in the larger landscape. The north-eastern corner of the study area is highlighted as a CBA 1 in the 2016 Northern Cape Critical Biodiversity Areas (NCDENC, 2016) dataset owing to the presence of natural wetlands, of which the Wetland pans form part of. The findings of this report confirm this as many of the Wetland pans are within the CBA 1.

Non-watercourse Habitat - This habitat unit is of Moderately Low sensitivity from a floral ecological and resource management perspective. The Seasonal Depressions are deemed less important from an ecological perspective and the degraded nature of these features has resulted in a moderately low floral sensitivity. Floral SCC are not anticipated to be associated with the Seasonal Depressions.

The proposed infrastructure area will impact on several Seasonal Depressions and some of the smaller Preferential Flow Paths. The impact on floral communities associated with the smaller Preferential Flow Paths and the Seasonal Depressions will not be detrimental, as they are well represented throughout the study area and moderately degraded. None of the Seasonal Depressions are mapped as ESAs in the 2016 Northern Cape CBA Map.

Disturbed Habitat - This habitat unit is of moderately low ecological importance and sensitivity. No significant biodiversity features are associated with the Disturbed Habitat and are excluded from the proposed infrastructure areas. The disturbed areas are too small and too scattered to be recommend as alternative areas for the proposed development.

9.6.2 Bush encroachment and Alien and Invasive Plants

Bush encroachment entails increases in the abundance of indigenous woody vegetation in the grassland and savanna biome. The result of bush encroachment includes alterations to the structure and functioning of ecosystems, with these changes becoming increasingly irreversible as the fundamental nature of the ecosystems change.

Bush encroachment was observed within the study area in several sections, but mainly at the Banded Ironstone Outcrops and the Preferential Flow Paths.

Of the Alien and Invasive Plants (AIPs) recorded during the biodiversity specialist study, only one species is listed under the National Environmental Management Biodiversity Act (NEMBA) category 2, namely Populus x canescens. The study area has very few AIPs and as such it is not deemed necessary for an Alien and Invasive Species Management and Control Plan.

9.6.3 Sensitivity mapping

Figure 9.8 conceptually illustrates the areas considered to be of varying ecological sensitivity and how they will be impacted by the proposed infrastructure of the Kolomela Airport. The areas are depicted according to their sensitivity in terms of the presence or potential for floral SCC, habitat integrity and levels of disturbance, threat status of the habitat type, the presence of unique landscapes and overall levels of diversity (compared to a reference type).

The majority of the study area (Open Calcrete Thornveld and Lime-rich Habitat) has been rated as intermediate floral sensitivity. However, the banded iron stone outcrops, wetland pans and calcrete outcrops have received an intermediate to high sensitivity rating. The Seasonal Depressions, Preferential Flow Paths and Disturbed Habitat were rated as Moderately Low Sensitivity. The project area/footprint consist mostly of the Open Calcrete Thornveld and Lime-rich Habitat.

The project will not have direct impacts on the banded iron stone outcrops and calcrete outcrops, but will impact on a few of the wetland pans as discussed by the freshwater ecological impact assessment.

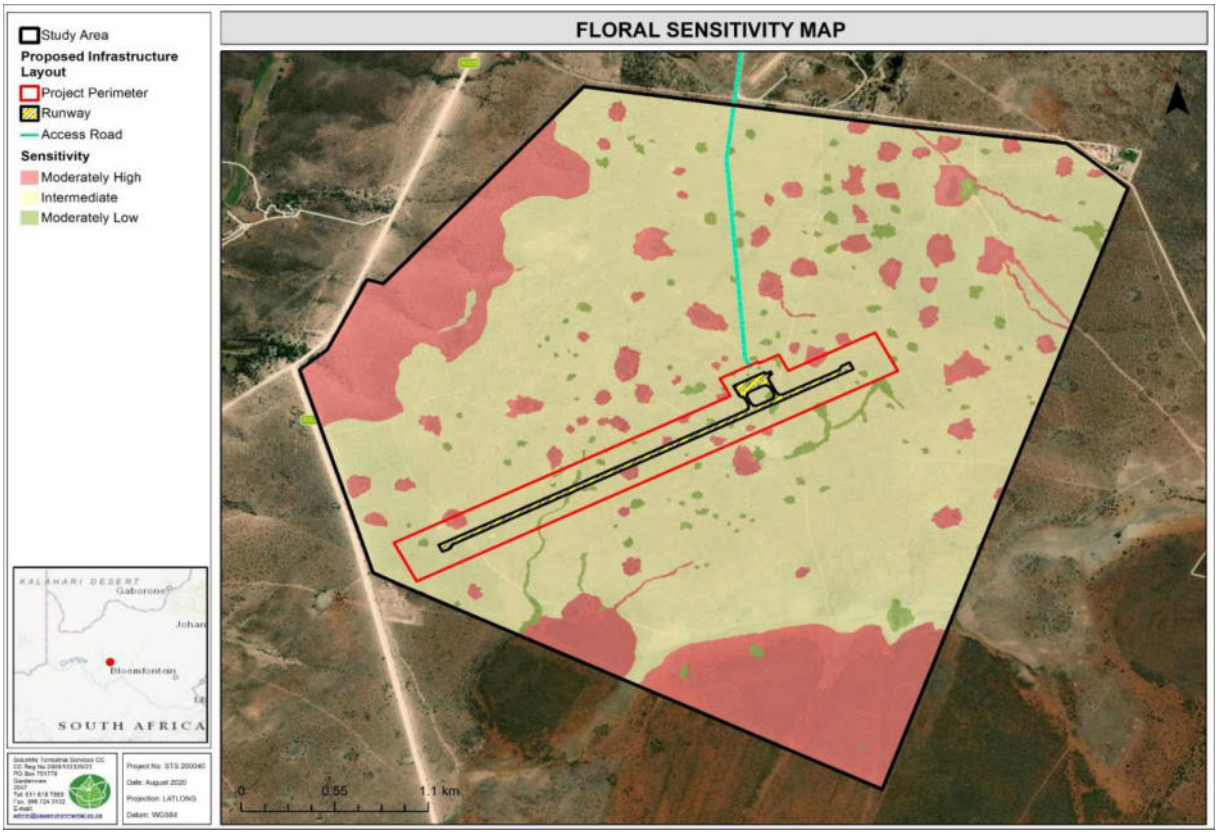


FIGURE 9-8: FLORAL SENSITIVITY MAPPING

(Source: Floral Impact Assessment - Scientific Terrestrial Services, 2020)

9.7 Biodiversity – Fauna

The following description was derived from the Fauna Assessment conducted by Scientific Terrestrial Services (September, 2020) (Annexure D of Part C)

9.7.1 Faunal Habitat

The study area comprises four broad fauna habitat units and is discussed in terms of faunal utilisation and importance.

Banded Ironstone Hills - This portion is structurally the most dense habitat offering suitable shelter for most faunal species, especially birds. This unit provides valuable browsing habitat, however the rocky nature of the habitat limits the growth of the graminoid layer and therefore the grazing potential. Reptiles that are known to occur in rocky areas will be largely restricted to this unit. Insects are likely to be abundant within this unit as trees and shrubs flower on mass.

Calcrete Habitat - The Calcrete Habitat that can be divided into four sub areas. The Open Calcrete Thornveld units which dominate the landscape are open and sparsely vegetated in terms of trees, shrubs, herbs and graminoids. These two subunits are anticipated to host the same faunal assemblages. The Lime-rich Habitat and the Calcrete outcrops are gravelly and rocky by nature and anticipated to be favoured by rupicolous fauna, especially scorpions. During the site assessment it was also obvious that several fossorial species of mammals are present as

numerous burrows were strewn across the Habitat unit. This habitat offers valuable breeding and foraging areas to more selective arid adapted mammals, birds and arachnids.

Freshwater Habitat - The semi-permanent impoundments filled with sewage water offer unique habitat for waterfowl and amphibians while providing a water source for all fauna. The Drainage lines tend to be more well wooded offering better browsing for herbivores and greater structural diversity which is often favoured by avifauna. Depressions are mostly surrounded by areas of increased bush or tree density with improved cover and browse. The central portions of the depressions are grass and herb dominated or largely barren only providing limited forage as a result of being overgrazed. These habitats support the highest diversity and abundance of avifauna and will also provide valuable habitat for water dependant fauna during high rainfall events.

Disturbed habitat - The transformed habitat unit consists of a very small proportion of the study area where historic diggings, dilapidated day visiting infrastructure and earth-moving activities have occurred, resulting in an altered physical environment and vegetation composition. Habitat for rupicolous species is created within the old mine diggings and the vent shaft was utilized by porcupines. All the old infrastructure is degrading, and the surrounding vegetation has established within these areas providing habitat for fauna.

The Figure below shows the habitat units associated with the project area.

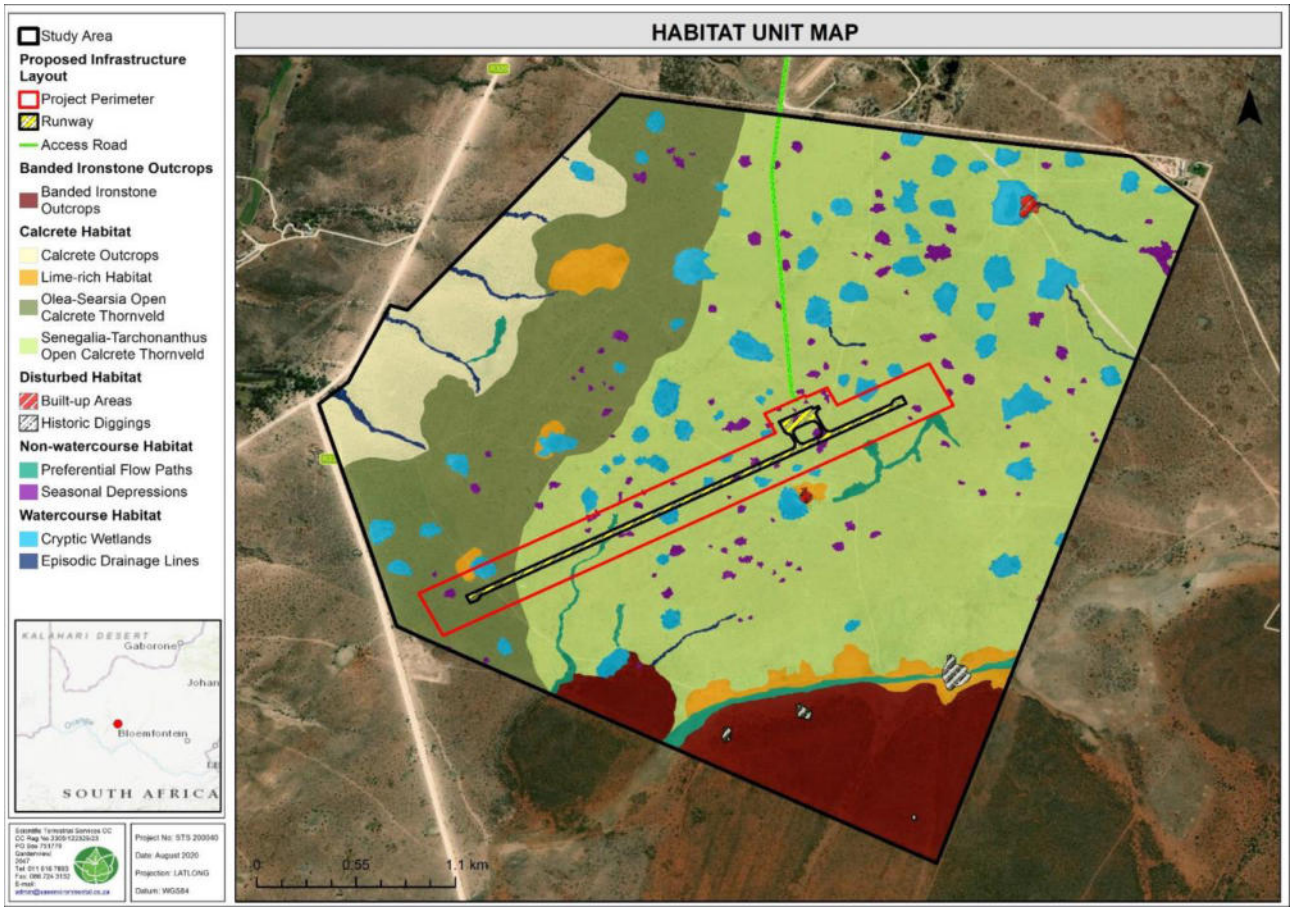


FIGURE 9-9: FAUNAL HABITAT UNITS

(Source: Faunal Impact Assessment - Scientific Terrestrial Services, 2020)

9.7.2 Mammal diversity

The mammal diversity and activity in the study area was considered to be moderately high. The current characteristics of the area allows most game species to inhabit the area. Only predators, which would naturally occur at low densities, are absent from the study area. Game fences ensure that the movement of larger mammals is restrained while medium and small mammals are able to move into and off of the property without hinderance.

The reduced landscape heterogeniety (general calcrete habit of the area) offers very little alternative habitats for specialist species or species with specific niche requirement (e.g. permanent freshwater resources). The current operations of the study area have ensured that it has maintained its natural state yet have increased resource competition for grazers and browsers. Several SCC species do have habitat within the study area. Signs of fossorial mammals were abundant and scattered throughout the study area.

During the field assessment the SCC Otocyon megalotis (Bat-eared Fox) and Threatened or Protected Species (TOPS)), was observed and signs of Orycteropus afer (Aardvark, Specially Protected and TOPS) were noted. The potential habitat for the presence of more SCC within the study area, namely; Poecilogale albinuch (African Striped Weasel, Specially Protected), Ictonyx

striatus (Striped Polecat, Specially Protected), Vulpus chama (Cape Fox, Specially Protected and TOPS) and Felis nigripes (Black-footed Cat, VU and TOPS) was observed.

9.7.3 Avifauna diversity

The avifaunal habitat sensitivity for the study area is considered to be intermediate. Although a large contingent of SCC are considered likely to utilise the study area for foraging, three SCC are deemed to potentially utilise the site for breeding, namely: Ardeotis kori (Kori Bustard, NT) Neotis ludwigii (Ludwig's Bustard, EN) and Cursorius rufus (Burchell's Courser, VU), which favour the plains interspersed with gravelly/bare areas. The large contingent of SCC raptors, (all known to have wide ranging habits) are considered unlikely to breed within the study area due to the lack of tall trees which would be required to build their nests. Species abundance levels will vary within the study area in accordance with rainfall and seasonal changes and their effect on available food resources, with some avifaunal species migrating north during the winter months.

9.7.4 Amphibians

Overall, the amphibian sensitivity associated with the study area is considered intermediate, with habitat restricted to the temporary freshwater systems. No amphibian SCC were observed during the assessment, neither are any expected to occur within the study area. Amphibian activity is known to be highest in the summer months following good rainfall, with the winter months likely having almost no detectable amphibian activity (vocalising and observations). During winter many amphibian species burrow and enter a state of aestivation, which is characterised by a reduced metabolic rate and concurrently activity.

9.7.5 Reptiles

The sensitivity of the site for reptiles is considered intermediate. Although a limited reptile assemblage is expected to be present and it is unlikely that reptile SCC will occur within the study area, it is still important to ensure that the impacts from the proposed airport activities be kept as small as possible. This can be achieved by avoiding unnecessary disturbance and minimising the construction footprints. It must also be ensured that all disturbed areas are rehabilitated to prevent the proliferation of alien and invasive plant species.

9.7.6 Insects

Overall, the insect sensitivity associated with the study area is considered intermediate. The floral characteristics of the surrounding habitat types do not support a wide diversity of insect species, yet, do offer suitable habitat for insects adapted to more arid habitats. High resource competition with mammal grazers is a limiting factor for insects as overgrazing was apparent.

9.7.7 Arachnids

Overall, the arachnid sensitivity associated with the study area is considered intermediate. During the site assessment an intermediate abundance and diversity of spiders was observed. Although actively searched for, few scorpions where seen during the field investigation. A moderately low abundance and diversity is expected considering the landscape within the study area.

9.7.8 Faunal sensitivity mapping

Figure 9-10 below conceptually illustrates the areas considered to be of increased faunal ecological sensitivity. The areas are depicted according to their sensitivity in terms of the presence or potential for faunal SCC, habitat integrity, levels of disturbance and overall levels of diversity. The majority of the study area has been allocated an intermediate sensitivity. The sensitivity reflects the absence of any large-scale human disturbances ensuring that these systems remain high in their ecological functioning capabilities. These units also experience high levels of grazing from domestic and endemic games which has increased competition for resources reducing the sensitivity of the habitat marginally. These habitats offer suitable corridors, forage and breeding locations for the several SCC. The Freshwater habitat will provide valuable niche habitat for water reliant faunal species during times of high rainfall. The Calcrete Outcrops and Banded Ironstone Hills will be preferable to scorpion and arachnid species.

Although the study area provides suitable habitat for several SCC, none are severely range restricted and neither is their habitat considered threatened. The habitat is of intermediate significance, due to the intermediate floral species diversity, relatively homogenous structure, and fragmented nature of natural portions of this unit. From a faunal perspective, development within these habitat units is not considered detrimental, provided that some portions remain as open space to ensure corridors for faunal movement

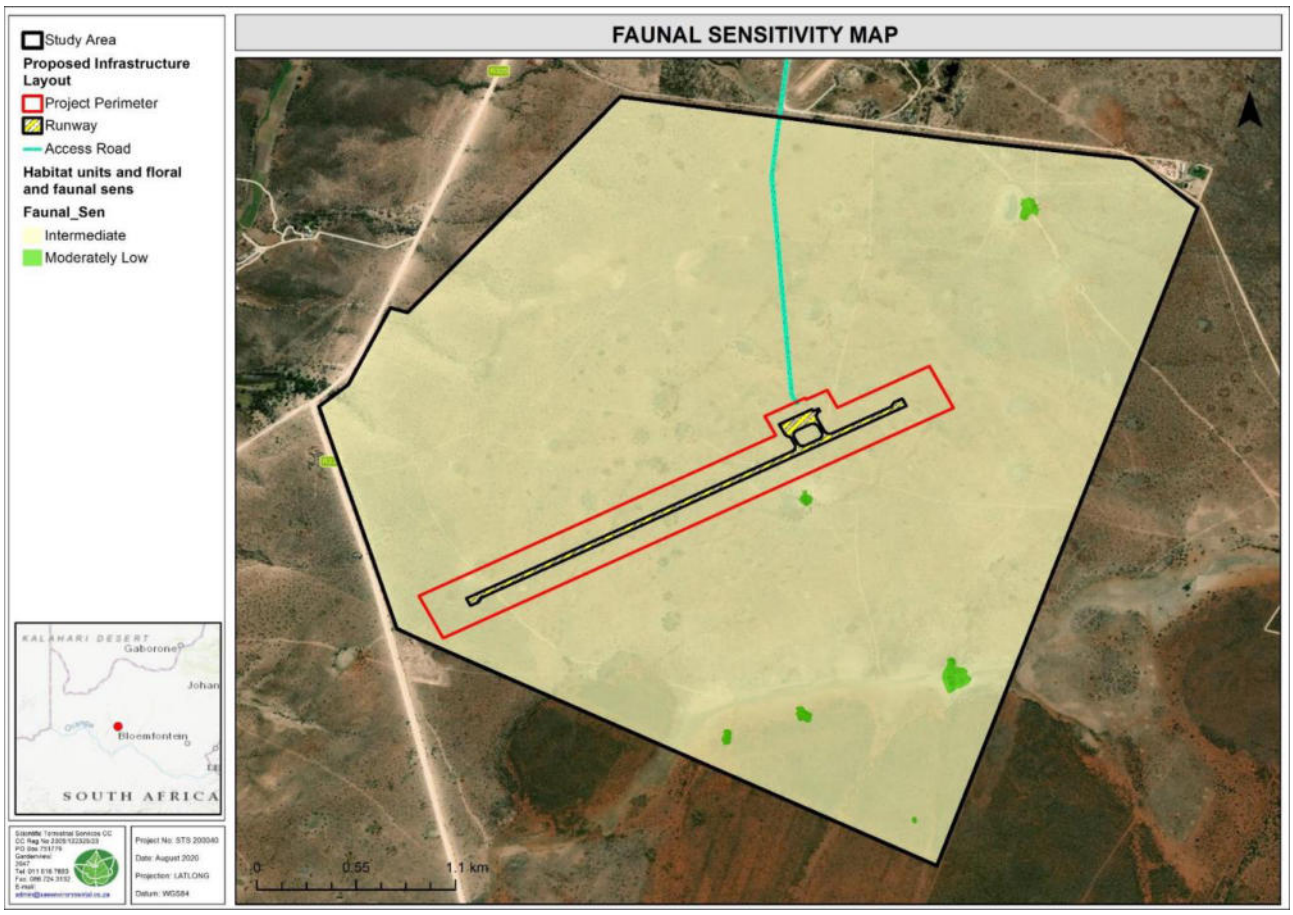


FIGURE 9-10: FAUNAL SENSITIVITY MAP

(Source: Faunal Impact Assessment - Scientific Terrestrial Services, 2020)

9.8 Surface Water Resources

The following description was derived from the Freshwater Ecological Assessment conducted by Scientific Aquatic Services (September, 2020) (Annexure E of Part C).

9.8.1 Identification and delineation

Various factors (i.e. soil characteristics, vegetation) were used for the identification and delineation of wetlands and riparian zones on site. During the field assessment undertaken in August 2020, over 200 features were ground-truthed by the specialist. Of these features, 68 were defined as "wetland pans", nine as episodic drainage lines (with riparian vegetation), 110 as "seasonal depressions".

9.8.2 Characterisation of water courses

The seasonal depressions were defined as areas which are low-lying in the landscape, usually but not always possessing closed contours and being inwardly draining. However, the floral species and soil characteristics associated with those depressions were completely different from those depressions classified as wetland pans.

The preferential flow paths were defined as areas where, when present, surface water flows but

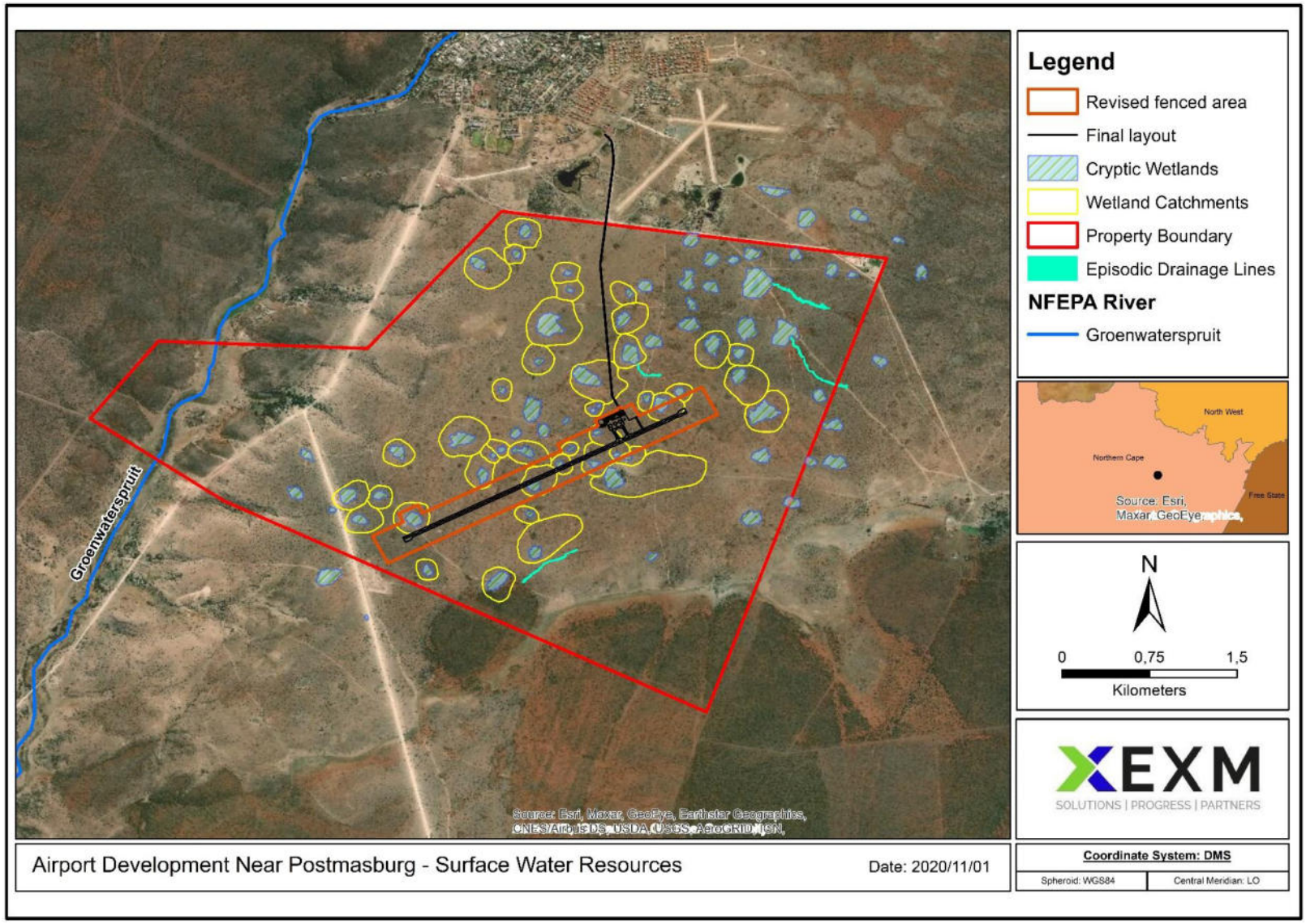
is not retained in the landscape for a sufficient period of time to encourage the establishment of a floral community indicative of periodic saturation. Neither the seasonal depressions nor the preferential flow paths met the definitions of "wetland pans" or watercourses from an ecological perspective (as defined by the NWA) and were therefore excluded from further assessment. Only the wetland pans (CWs) and episodic drainage lines were further assessed. For simplicity and understandability the wetland pans will be referred to as wetland pans further in the document.

The results of the ecological assessment indicated that the wetland pans and episodic drainage lines are in a largely natural to moderately modified ecological state, with few to no impacts on hydraulic and geomorphological processes. Vegetation has been impacted as a result of grazing pressure, although it should be taken into account that the assessment was undertaken towards the end of the dry winter season following several years of below-average annual rainfall in the region which is certain to have had a detrimental effect on floral assemblages.

The wetland pans are deemed important in terms of biodiversity maintenance on a landscape scale. The episodic drainage lines are considered ecologically important for the provisioning of certain ecological services, as well as for biodiversity maintenance. The wetland pans and episodic drainage lines may provide important habitat, refugia, foraging and migratory sites for various faunal species on a seasonal basis. Additionally, whilst no floral SCC were identified during the site assessment many flora in this region, particularly geophytic species, have restricted growth and flowering periods and these may only emerge following adequate rainfall.

TABLE 9-3: WATER FEATURES ON SITE

	
PLATE 9-5: CRYPTIC WETLAND	**PLATE 9-6: EPISODIC DRAINAGE LINE**



Source: Freshwater Ecological Assessment (Scientific Aquatic Services, 2020).

FIGURE 9-11: SURFACE WATER RESOURCES

9.9 Hydropeodology

According to the Hydropedology Assessment (Zimpande Research Collaborative, 2020), the structure of the soils associated with the study area can be broadly described as sandy with loose and single grained structure. A somewhat impermeable calcrete (evaporite) layer is present at shallow depth within most part of the landscape, which has a moderate to good water holding capability. The Wetland pans however do not hold water long enough to create wetness soil morphological indicators as the evaporative demand is greater than the water residence time within these features. Infiltration rates on the shallow soils underlined by the permeable fractured bedrock is anticipated to be very high due to large cracks present in the bedrock.

The study area, with specific mention to the watercourses and the catchment areas thereof are characterised by stagnating soils which are characterized by high evapotranspiration. Surface outflow in these soils is limited or restricted. Direct precipitation and overland flow during the rainy season are the dominant recharge mechanisms for watercourses associated with the study area. Although infiltration occurs readily, the dominant hydrological flow path in the soil is upward, driven by evapotranspiration.

9.10 Groundwater

9.10.1 Aquifers

According to the Kolomela Integrated Water and Waste Management Plan (IWWMP) (EXM Advisory Services, 2017), the geohydrological regime in the area is made up of two main aquifer systems. The first, the upper, unconfined to semi-confined aquifer occurs in the calcrete. The aquifer is usually developed on the contact between the calcrete and underlying clay formations of Kalahari age or in localised pebble horizons within the calcrete. Although relative low yields occur in this aquifer, it is developed widely throughout most of the region and has been the sole reliable source of water supply to most of the farms in the area for more than a century. Yields of up to 2 litres per second occur in this aquifer with shallow water table and spring formation common in especially the lower-lying topography.

The second aquifer is associated with fractures, fissures, joints and other discontinuities within the consolidated bedrock and associated intrusives of the Transvaal/Griqualand West Sequences. The aquifer occurs at depths from 40 to more than 200 meters below surface in the area. It is semiconfined and has greatly varying yields that are directly associated with the geology and geological structure. Yields of the aquifer are as high as 40 litres per second in mainly the chert breccia and banded iron formation and iron ore formations.

9.10.2 Groundwater levels and abstraction

In the Postmasburg area, static groundwater levels vary from zero meters (springs flowing out at surface), usually in the topographically lower lying areas, to a maximum of approximately 75 meters below surface to the north-east of Postmasburg. There are no definite groundwater level trends, apart from a possible distinction of deeper groundwater levels to the east and north-east of Postmasburg on the banded iron formation with shallower groundwater levels to the south-east on the Ghaap Plateau dolomites .

Groundwater is mainly used for domestic supply, livestock watering and watering of gardens. The borehole yields from the upper calcrete aquifer are relatively low and groundwater cannot be pumped in quantities sufficient for extensive crop irrigation purposes. Kolomela mine conducts dewatering of groundwater for the safe continuation of operations. However, it is not expected that Farm Kalkfontein will be affected in terms of aquifer drawdown.

The borehole that will be used to supply water to the facility will be drilled to obtain groundwater from the deeper aquifer to ensure that sufficient water is available. The operational phase will only require 11m3 of water per day,

9.10.3 Groundwater quality

Boreholes and springs situated on Kalkfontein are indicated in Figure 9-14 below – only Kal04 is a spring. The boreholes/springs are monitored occasionally as part of Kolomela's groundwater monitoring programme. The results of the groundwater monitoring were compared with the thresholds stipulated in the SANS drinking water standards (SANS 241-2015). The results show that the water is of good quality and none of the constituents exceeded the thresholds of SANS 241, except Nitrate slightly exceeded the screening limit at two occasions. Electrical Conductivity is well within the limits which is indicative of the salt concentrations in the groundwater.

Sewage effluent is currently pumped from the municipal Waste Water Treatment Works (WWTW) to a dam in the northern section of the property (Farm Kalkforntein). This has the potential to cause pollution of underground water resources. However, current monitoring does not results show pollution occurring. The municipality must be engaged to source a solution to the discharge of effluent onto the property. A full analysis, including organic compounds (i.e. e-coli) must be conducted prior to commencement of water abstraction from the water supply borehole.

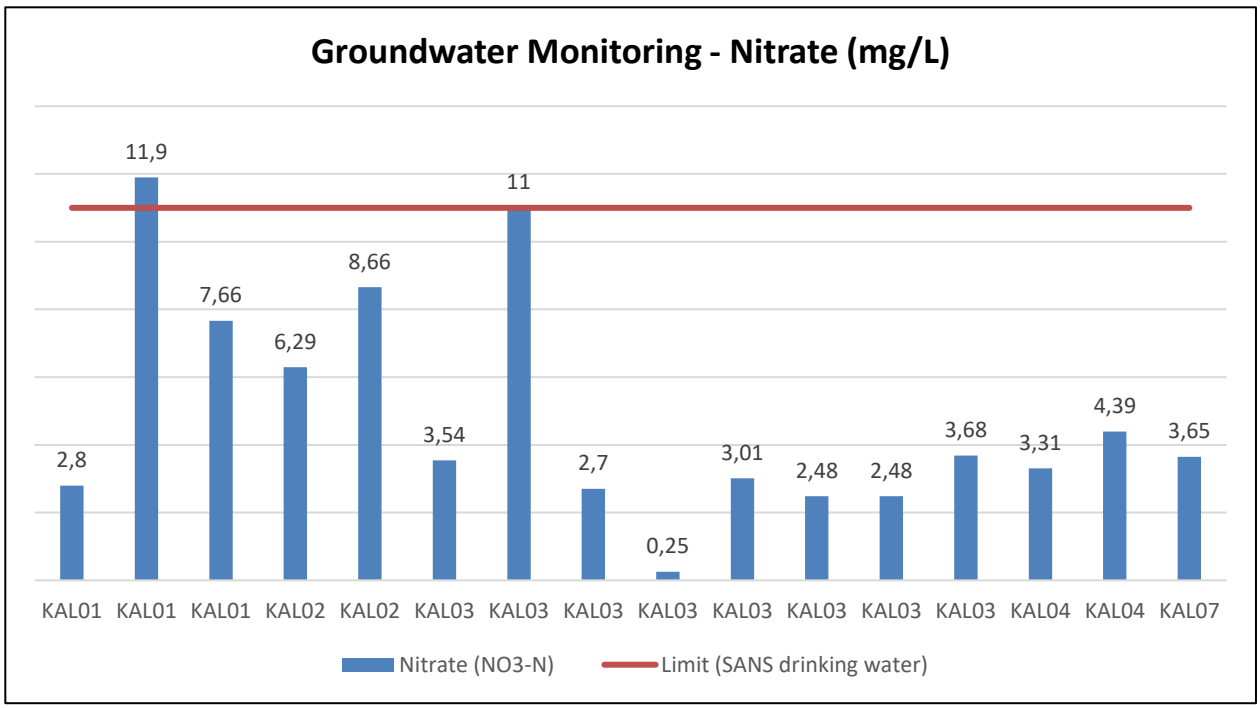


FIGURE 9-12: GROUNDWATER MONITORING RESULTS FOR NITRATES

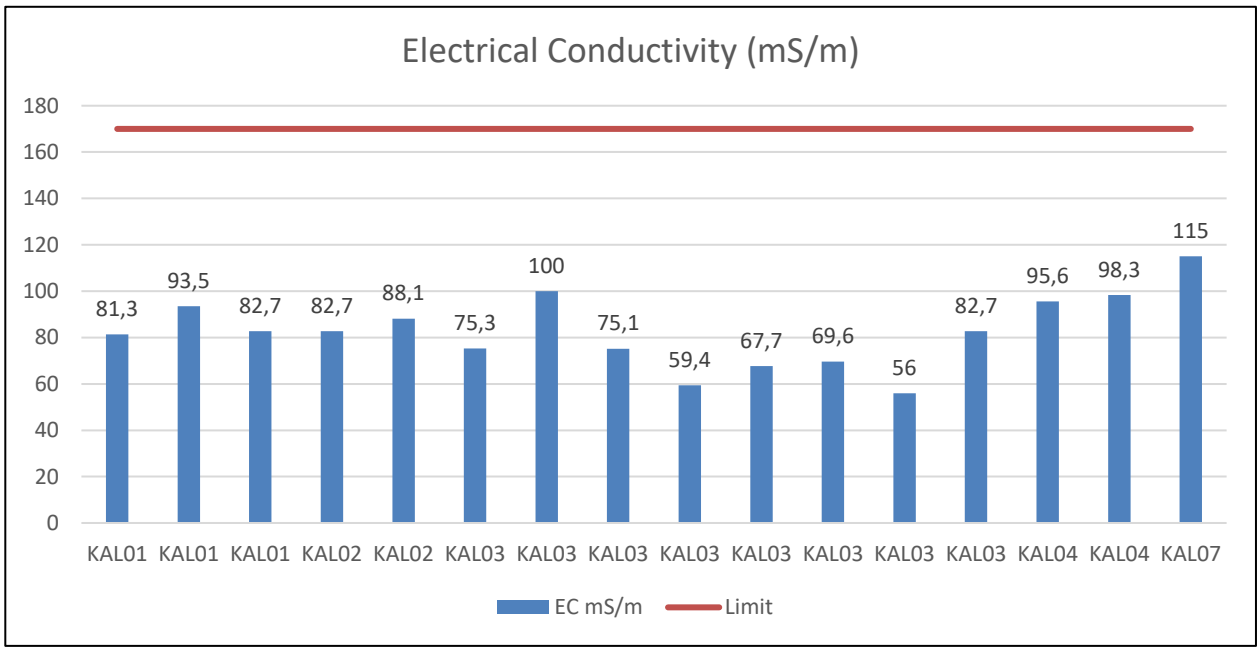


FIGURE 9-13: GROUNDWATER MONITORING RESULTS FOR ELECTRICAL CONDUCTIVITY

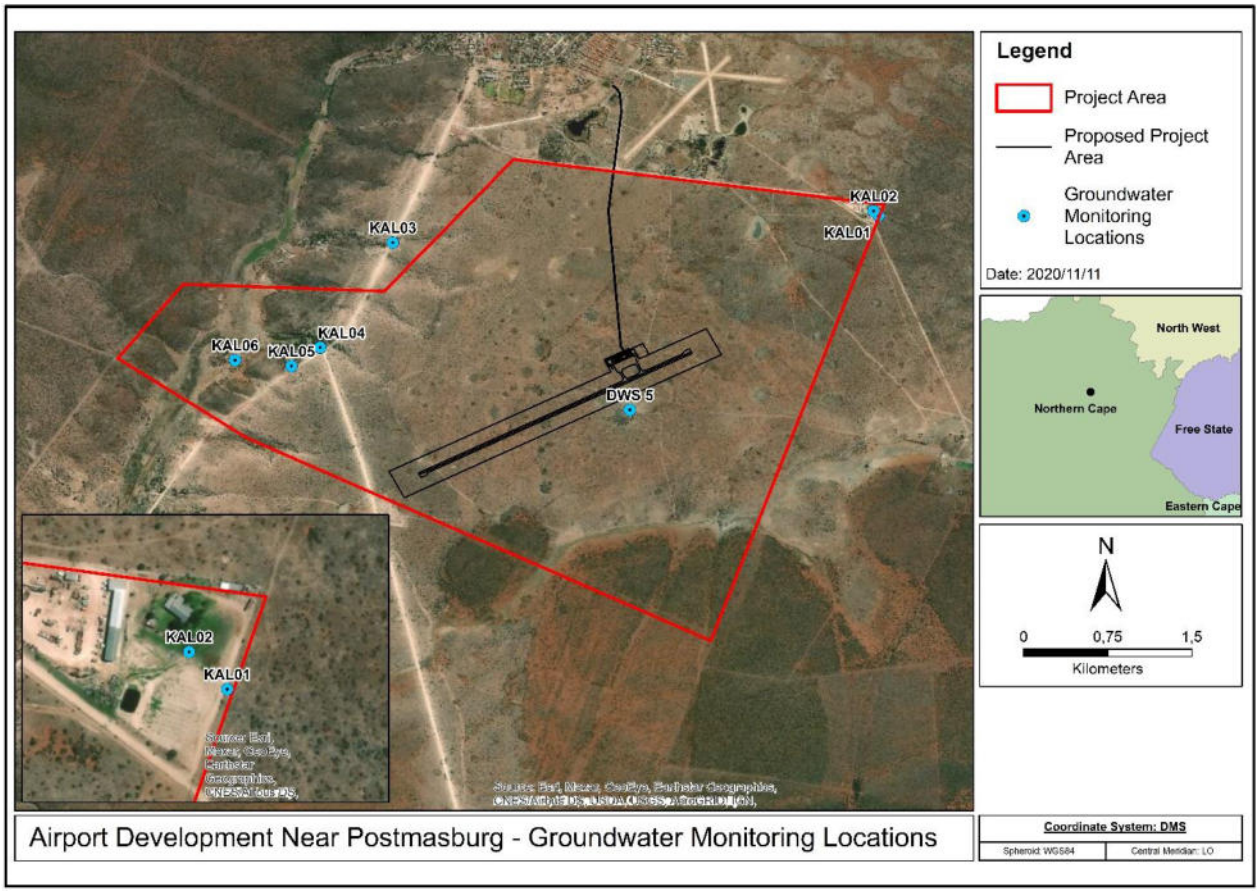


FIGURE 9-14: BOREHOLES/SPRINGS SITUATED ON KALKFONTEIN

9.11 Land Tenure

The property on which the proposed airport will be developed is owned by a private person (Andries Johannes van der Walt). Land tenure of affected and neighbouring properties is given in Figure 9-15.

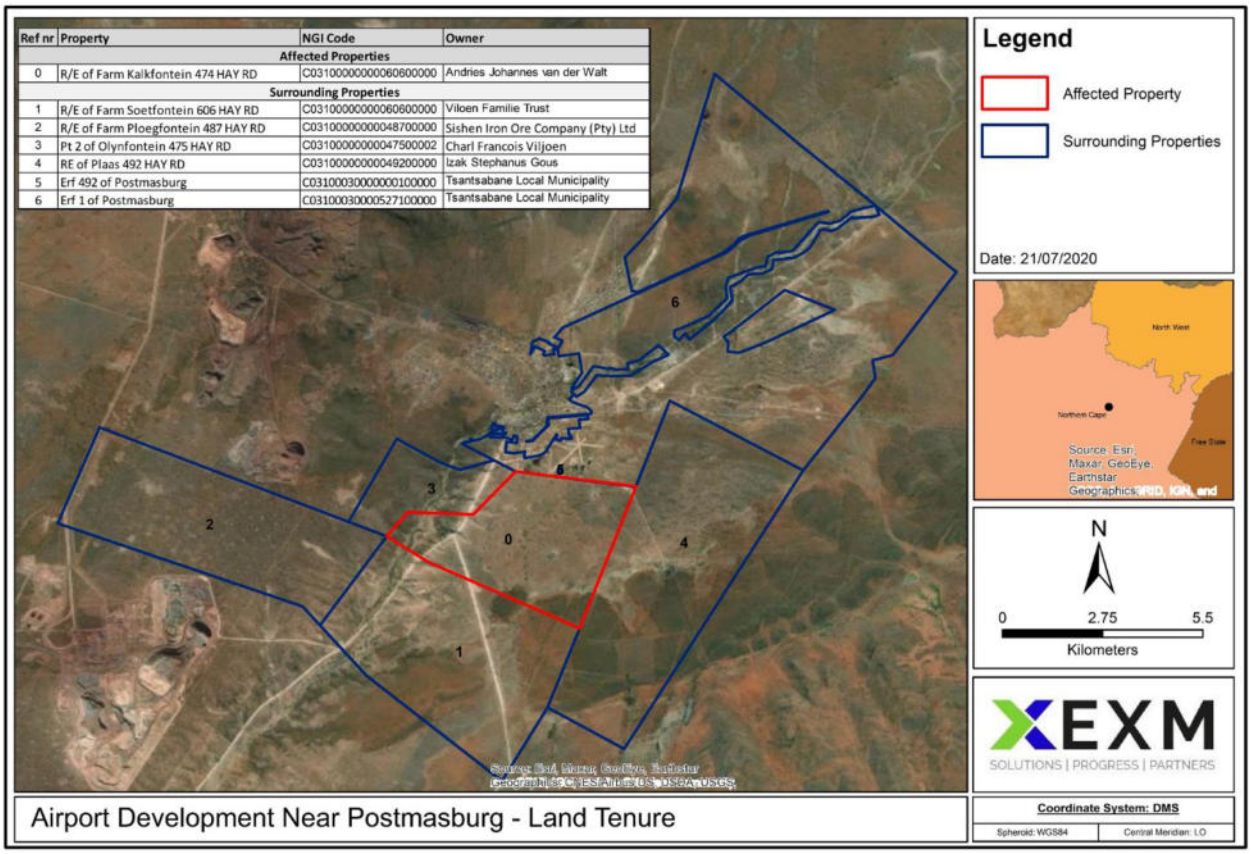


FIGURE 9-15: LAND OWERSHIP MAP

9.12 Cultural Heritage

9.12.1 Heritage

A Heritage and Palaeontological Impact Assessment was conducted by PGS Heritage (August, 2020) (Annexure F of Part C) for the project area. According to the Heritage Screening Report obtained from the Department of Environmental Affairs National, the project area has a Medium heritage sensitivity.

During the surface survey conducted by the specialist 11 heritage sites were identified of which 10 sites (PMB-01 to PMB-10) consist of archaeological sites around pan areas characterised by surface stone tool scatter, while one site (PMB-11) contains features that could be possible graves. A background scatter of Middle Stone Age (MSA) and Later Stone Age (LSA) stone tools was observed throughout the area. The areas with a high-density scatter, especially around pans were marked as sites.

The identified heritage sites are summarised in the Table below and illustrated in Figure 9-16. It should be noted that none of the heritage sites identified falls within the development footprint.

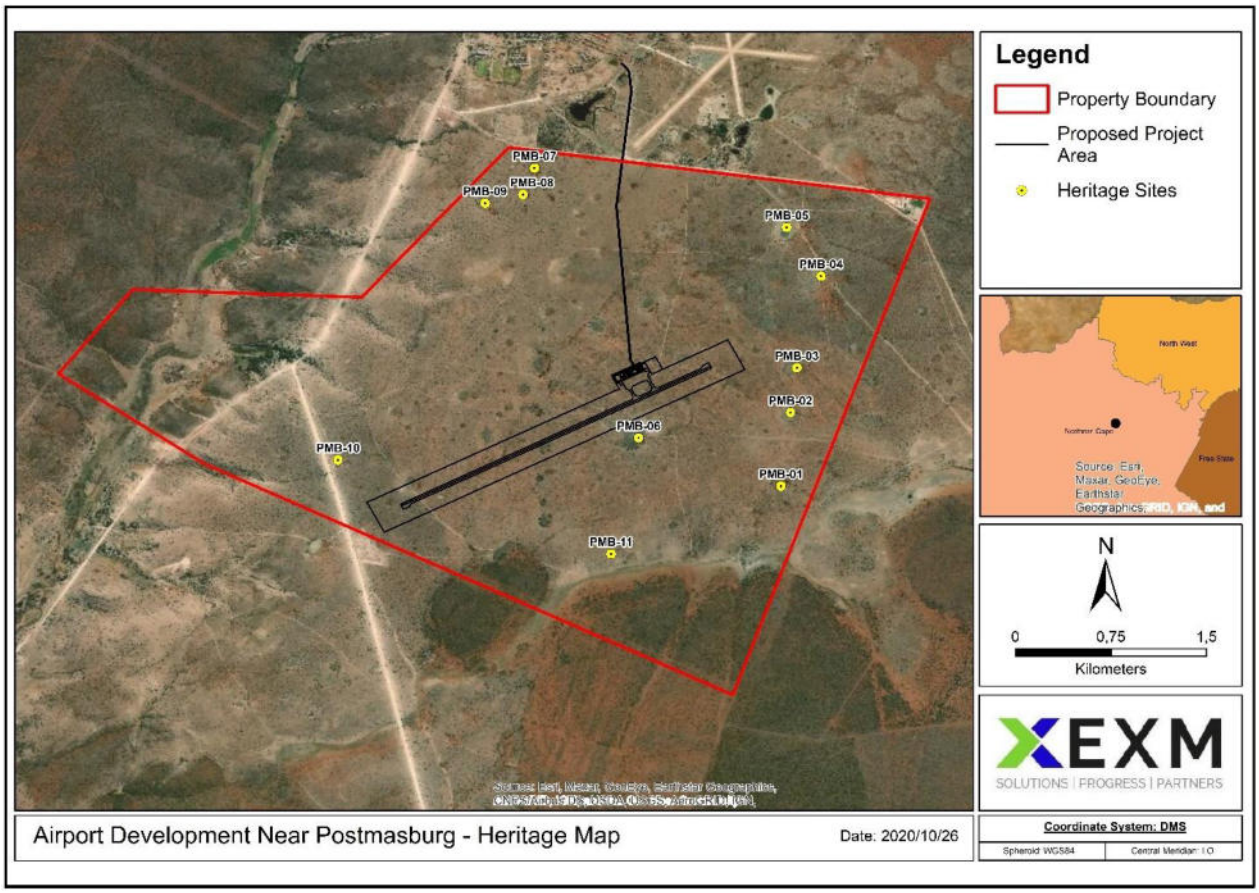


FIGURE 9-16: IDENTIFIED HERITAGE SITES

(Source: Heritage Impact Assessment – PGS, 2020)

TABLE 9-4: SUMMARY OF HERITAGE RESOURCES

(Source: Heritage Impact Assessment – PGS, 2020)

Site nr	Description	Significance	Plate
PMB-01	A high-density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-01. The tools are scattered around and in a pan. The site is approximately 192m in width and 217m in length.	Medium	
PMB-02	A medium-density surface scatter of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-02. The tools are scattered around and in a pan. The site is approximately 80m in width and m 105m in length.	Medium	

Site nr	Description	Significance	Plate
PMB-03	A high-density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-03. The tools are scattered around and in a pan. The site is approximately 106m in width and 117m in length.	Medium	
PMB-04	A high-density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-01. The tools are scattered around and in a pan. The site is approximately 157m in width and 265m in length.	Medium	
PMB-05	A high-density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-05. The tools are scattered around and in a pan. The site is approximately 154m in width and 248m in length.	Medium	
PMB-06	A medium-density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-06. The tools are scattered around and in a pan. The site is approximately 146m in width and 170m in length.	Medium	
PMB-07	A high-density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-07. The tools are scattered around and in a pan. The site is approximately 51m in width and 72m in length.	Medium	

Site nr	Description	Significance	Plate
PMB-08	A medium density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-08. The tools are scattered around and in a pan. The site is approximately 33m in width and 37m in length.	Medium	
PMB-09	A high-density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-09. The tools are scattered around and in a pan. The site is approximately 82m in width and 53m in length.	Medium	
PMB-10	A medium density scatters of stone tools, dating to the LSA and MSA, including cores, flakes and blades were observed at PMB-10. The tools are scattered around and in a pan. The site is approximately 48m in width and 52m in length.	Medium	
PMB-11	A possible prospector's grave was identified near the southern boundary of the project area. The grave was pointed out by the landowner. The grave is overgrown and consists of an upright stone surrounded by packed stones. This site is however located outside of the proposed project area.	High	

9.12.2 Palaeontology

The palaeontological impact assessment (PIA) conducted by Banzai Environmental as part of the HIA determined that the site is underlain by the Quaternary aged sediments of the Kalahari Group as well underlying Griqualand West Basin rocks, Transvaal Supergroup. According to the PalaeoMap of South African Heritage Resources Information System the Palaeontological Sensitivity of the Kalahari Group is high and the Griqualand West rocks of the Transvaal Supergroup is moderate. A 1-day site specific field survey of the development footprint were

conducted on foot and by motor vehicle on 15 August 2020. No visible evidence of fossiliferous outcrops was found.

9.13 Socio-Economic Environment

The section below provides a description of the baseline socio-economic environment for the area as described in the Social Impact Assessment & Social and Human Rights Impact and Risk Analysis (Tloleho Consulting, 2020) (Annexure G of Part C).

9.13.1 Economic sectors

The site is located in the Tsantsabane Local Municipality within the ZF Mgcawu District Municipality. According to Kumalo (2020), mining and agriculture have been coexisting in the Tsantsabane area for many years as the main economic sectors, although mining has become more prominent in recent years. The Kolomela and Beeshoek Iron Ore mines are the most prominent mines in the immediate area. Some of the smaller, newer mines close to Postmasburg have also recently been developed.

The energy sector is becoming more prominent with at least three major green energy projects being established in the Tsantsabane municipal area – Redstone Solar Thermal Power, Jasper Solar Energy and Lesedi Solar Park.

The nearest large business centre is Kimberley, approximately 200 km away, but with a number of newly built shopping centres in Kathu, Tsantsabane residents do most of their business in Kathu which is 92 km away. Many persons working in Postmasburg also have chosen to reside in Kathu and commute to Postmasburg. This is motivated by better recreational opportunities and access to retail outlets, restaurants, health care and schools Kathu.

The Sishen airport is serviced by Airlink and these flights are also open to private users (outside of Kumba) which makes the town more accessible and facilitates movement of persons to Gauteng, although very expensive.

9.13.2 Public Services and Infrastructure

There is distinct lack of facilities and amenities in Tsantsabane (for sport, recreation, leisure, healthcare) which results in residents having to frequently travel to other towns and cities in the region.

Stakeholders interviewed revealed that the farm Kalkfontein 474 is used by the Postmasburg public for the purposes of recreation such as jogging and mountain biking. The property presents a safe locality for such activities. There is also a picnic area on the property to which the landowner provides access.

The municipal sewage treatment works lies adjacent to the northern boundary of the

property. Effluent from the works is released onto the property creating permanent water on the property. This water and the works are a source of odour for surrounding residences. The water also attracts birdlife, which is a concern, as bird strikes pose a hazard for an airport development. The municipal land surrounding the sewage treatment works and the airfield is used as a dumping ground.

The development of an airport at Kalkfontein will require that the existing Postmasburg Airfield be closed due to the close proximity of the site. The current airfield is owned by the local municipality but the private users have taken responsibility for maintaining the facility. There are existing hangars and a tarred apron. The airfield is used by the persons with hangars as well as external parties that land at the site. The project has provided for a General Aviation Area where private users could be accommodated. A dirt track has been developed around the landing strip which according to stakeholders interviewed is used by the local community as a source of recreation.

9.13.3 Access to basic services

Access to basic services in Tsantsabane has improved gradually since 2001. However, between 2014 and 2019 there was a drop in the percentage of households with access to the services. The lower number can be attributed to a sharp increase in informal settlements, as well as service delivery pressures on the Tsantsabane Local Municipality. Rural areas such as Groenwater, Maremane, Skeyfontein and Jen Haven do not have access to proper refuse removal services many households do not have access to proper sanitation.

Infrastructure in Tsantsabane is in a poor condition. Tar roads are full of potholes and gravel roads are not being maintained. Bulk infrastructure is old and not able to endure the pressure of a rapidly increasing population. Water and electricity interruptions happen frequently.

9.13.4 Population and demographics

The population in the Tsantsabane municipal area has increased significantly since 2001. The population estimate for 2020 according to Stats SA, is 57% higher than in 2001. The population increase can be attributed to the increased economic activity due to mining development.

Even though Kolomela mine's presence is not the only contributing factor to population growth, the mine is generally viewed as the biggest "pull factor" for job seekers. Almost three quarters of participants in the 2019 community baseline survey (73%) indicated that Kolomela mine is seen as a key reason for rapid population growth in Tsantsabane. Any project undertaken by Kolomela mine will result in community expectations of employment by the growing population. There is also the increased potential for site-induced migration.

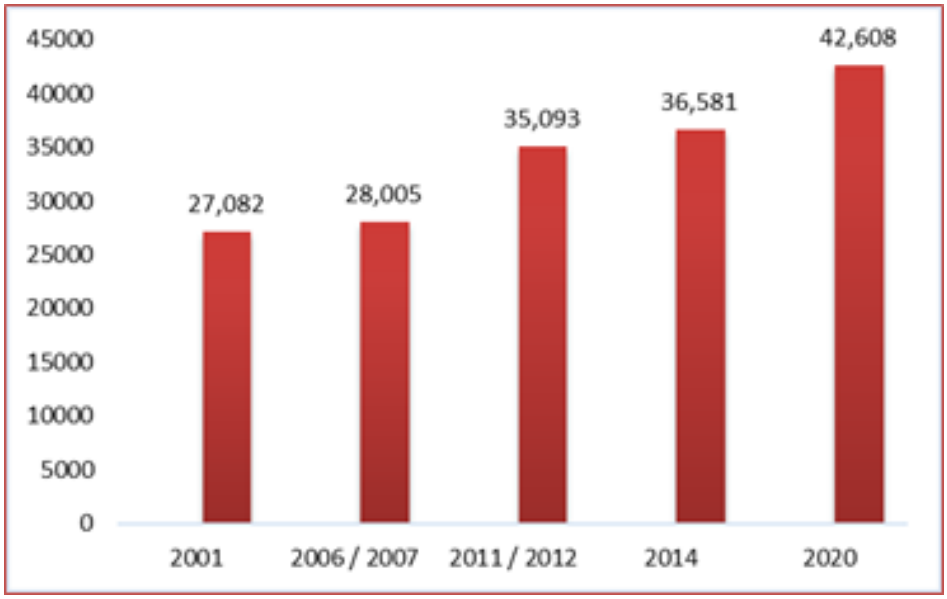


FIGURE 9-17: TSANTSABANE POPULATION GROWTH

(Source: Social Impact Assessment (Tloleho Consulting, 2020))

9.13.5 Unemployment

The employment rate for adults is low, with only 33% employed full-time, 16% part-time and 2% self-employed, bringing the employment rate to 51%. The unemployment rate is at 39%, which is significantly higher than the national average of 29%. Low education and skills levels among adults described earlier, contribute to a low employment rate for the area.

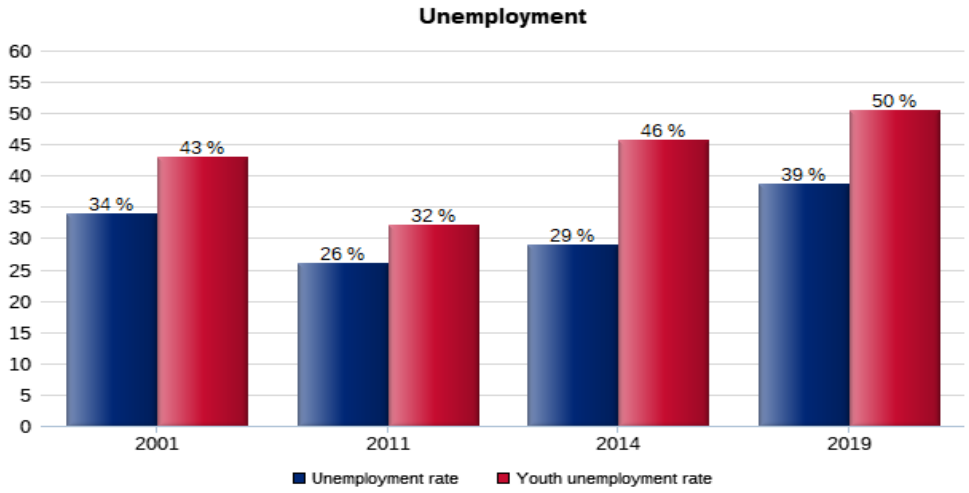


FIGURE 9-18 COMPARISION OF UNEMPLOYMENT OVER TIME FOR ADULTS AND YOUTH IN TSANTSABANE

(Source: Social Impact Assessment (Tloleho Consulting, 2020))

The unemployment rate declined between 2001 and 2011, with the arrival of Kolomela mine. But from 2014 the unemployment rate started to rise again, as a result of an influx of job seekers to the area and with the construction of the mine coming to an end in 2012. Youth unemployment (adults of 35 years old or younger) showed the same trend, but at much higher rates. The youth unemployment rate was at 50% in 2019, a very concerning statistic, especially given the low number of learners who passed Grade 12 at one of the high schools and the lack of post-school training among the youth. The national youth unemployment rate was at an all- time high in the third quarter of 2019, at 58.2% - which provides some perspective on the unemployment rate among the Tsantsabane youth.

9.13.6 Education and skills

Education and skills levels in Tsantsabane is low. Only 53% of the Tsantsabane adult population have passed Grade 12. A skills audit was conducted in the community in 2020. Approximately two-thirds of skills audit participants (65%) have some form of post-school training or education – in most instances on the job training (60% of all participants who have undergone training or education). The high percentage of job seekers with on the job training is in stark contrast with the small percentage who have university or university of technology qualifications – only 3%. Most participants received training or were educated in the skills category for mining, engineering and construction skills (49%).

9.14 Description of current land use and services infrastructure

Kalkfontein is currently used for the purposes of livestock farming in the form of game and some goats and cattle. The farmer removed most of the livestock and dismantled internal management camps in response to stock theft on the farm, largely attributed to the proximity of the farm to Postmasburg townlands. The maintenance of fences on the property have also proved to be problematic for the landowner. The R325 regional road is located west of the study area from which access will be obtained for the facility. The R325 splits within the south western corner of the property with two alternative routes to Griekwastad located approximately 75 km to the south.

There are 3 residences on portions of the property where family representatives of the landowner reside. In addition, there is one residence on the western side of the property that is occupied, but it was indicated by the land owner that there is no formal lease agreement in place. The landowner indicated that the residence has a house in town and will move once the property is sold. SIOC will have to engage the landowner to verify the way forward with regards to the residence to ensure the outcome is clear.

The landowner has indicated support for the development of the airport with an understanding that the portion of the farm would be sold to SIOC. However, the owner's wish

to retain ownership of portions where they have existing residences and also business (engineering) infrastructure.

The portion of land north of the Farm Kalkfontein 474 that is owned by the municipality (Erf 1 of Postmasburg) is used by emerging communal farmers.

Surrounding land uses include livestock farming on farms to the east, south and west. The farm to the south (Soetfontein) is also used as guesthouse. The land to the north is owned by the TLM and included the TLM Sewage Treatment Works and the Postmasburg Airfield.

There is a lack of waste management within TLM. The area surrounding the Postmasburg Airfield is used as an illegal public dumping ground with litter and garbage strewn throughout the area.

9.14.1 Environmental sensitivity map

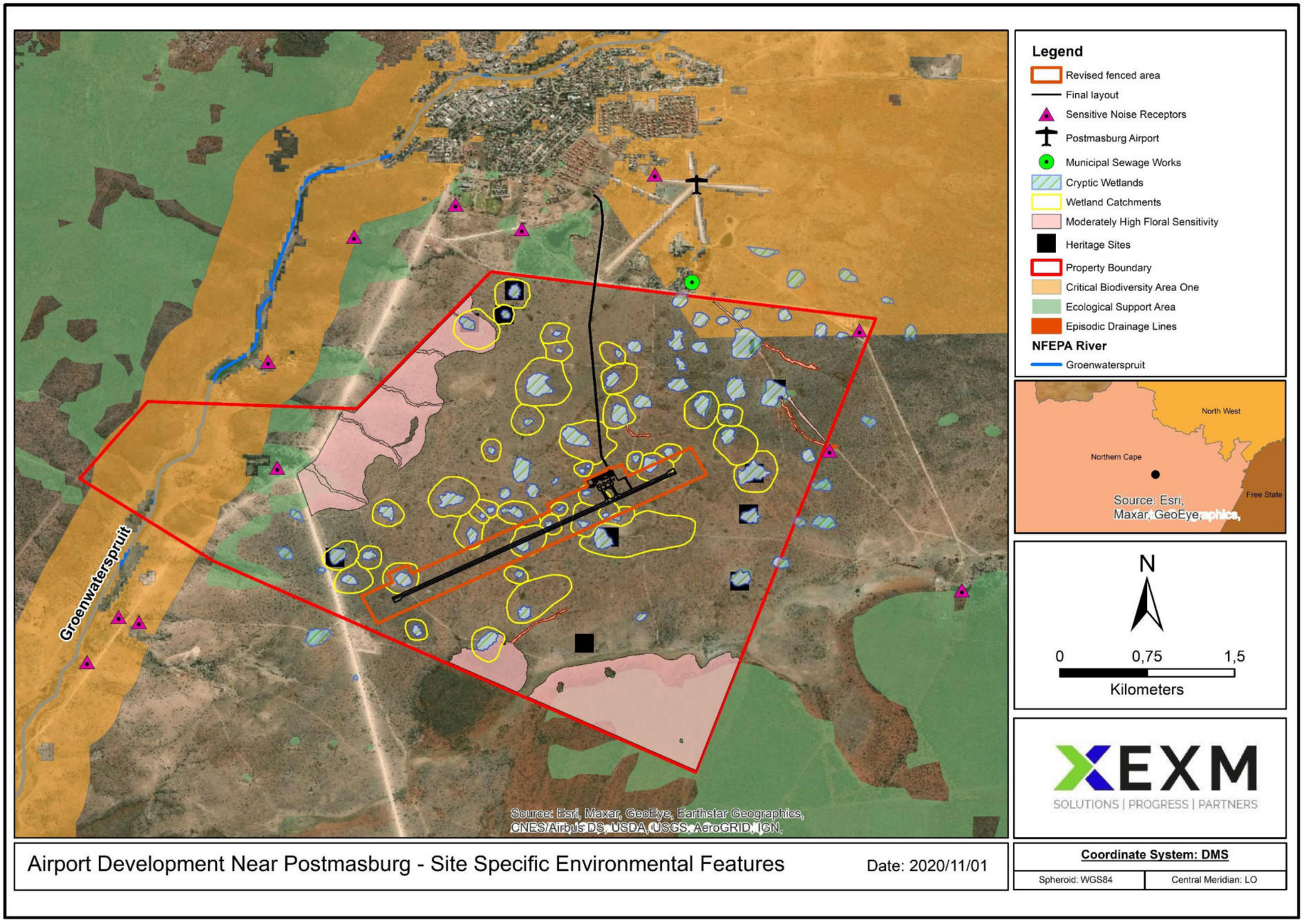


FIGURE 9-19: FINAL AIRPORT LAYOUT WITH SPECIFIC ENVIRONMENTAL FEATURES

10. IMPACTS AND RISKS IDENTIFIED INCLUDING THE NATURE, SIGNIFICANCE, CONSEQUENCE, EXTENT, DURATION IN AND PROBABILITY OF THE IMPACTS, INCLUDING THE DEGREE TO WHICH THESE IMPACTS CAN BE REVERSED, AVOIDED, MANAGED, MITIGATED AND EXTENT TO WHICH THEY MAY CAUSE IRREPLACEABLE LOSS OF RESOURCES

10.1 Methodology used in determining the significance of environmental impacts

The impact assessment method used in this assessment takes into account the current environment, the details of the proposed amendment activities and the findings of the specialist studies. Cognisance has been given to both positive and negative impacts that may result from the developments. The significance of the impact is dependent on the consequence and the probability that the impact will occur.

impact significance = (consequence x probability)

Where:

consequence = (severity + extent)/2

and

severity = [intensity + duration]/2

Each criterion is given a score from 1 to 5 based on the definitions given below. Although the criteria used for the assessment of impacts attempts to quantify the significance, it is important to note that the assessment is generally a qualitative process and therefore the application of this criteria is open to interpretation. The process adopted will therefore include the application of scientific measurements and professional judgement to determine the significance of environmental impacts associated with the project. The assessment thus largely relies on experience of the environmental assessment practitioner (EAP) and the information provided by the specialists appointed to undertake studies for the EIA.

Where the consequence of an event is not known or cannot be determined, the "precautionary principle" has been applied and the worst-case scenario assumed. Where possible, mitigation measures to reduce the significance of negative impacts and enhance positive impacts will be recommended. The significance of the impact in light of the mitigation measures has also been rated based on a confidence rating of the mitigation measures.

Consideration will be given to the phase of the project during which the impact occurs. The phase of the development during which the impact will occur will be noted to assist with the scheduling and implementation of management measures.

TABLE 10-1: SEVERITY CRITERIA FOR ASSESSING THE IMPACT SIGNIFICANCE

INTENSITY = MAGNITUDE OF IMPACT	**RATING**
Insignificant: impact is of a very low magnitude	1
Low: impact is of low magnitude	2
Medium: impact is of medium magnitude	3
High: impact is of high magnitude	4
Very high: impact is of highest order possible	5
DURATION = HOW LONG THE IMPACT LASTS	**RATING**
Very short-term: impact lasts for a very short time	**1**
Short-term: impact lasts for a short time e.g. construction period	**2**
Medium-term: impact lasts for the for less than the life of operation.	**3**
Long-term: impact occurs over the operational life of the project	**4**
Residual: impact is permanent (remains after mine closure)	**5**
EXTENT = SPATIAL SCOPE OF IMPACT/FOOTPRINT AREA/NUMBER OF RECEPTORS	**RATING**
Limited: Impact only affects the mine site or part there of	**1**
Neighbours: Limited to the immediate surroundings;	**2**
Local: Affecting a larger area (beyond immediate surroundings or neighbours)	**3**
District: Affects entire district	**4**
Regional: Affects an entire region e.g. Province	**5**
PROBABILITY = LIKELIHOOD THAT THE IMPACT WILL OCCUR	**RATING**
Highly unlikely: the impact is highly unlikely to occur	**0.2**
Unlikely: the impact is unlikely to occur	**0.4**
Possible: the impact could possibly occur	**0.6**
Probable: the impact will probably occur	**0.8**
Definite: the impact will occur	**1**

IMPACT SIGNIFICANCE

NEGATIVE IMPACTS

≤1	Very low	Impact is negligible. No mitigation required.
>1≤2	Low	Impact is of a low order. Mitigation could be considered to reduce impacts. But does not affect environmental acceptability.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts. Mitigation should be implemented to reduce impacts.
>3≤4	High	Impact is substantial. Mitigation is required to lower impacts to acceptable levels.
>4≤5	Very High	Impact is of the highest order possible. Mitigation is required to lower impacts to acceptable levels. Potential Fatal Flaw.

POSITIVE IMPACTS

≤1	Very low	Impact is negligible.
>1≤2	Low	Impact is of a low order.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts.
>3≤4	High	Impact is substantial.
>4≤5	Very High	Impact is of the highest order possible.

DEVELOPMENT PHASE

C	Impact is applicable to the CONSTRUCTION PHASE ONLY
O	Impact is applicable to the OPERATIONAL PHASE ONLY
C&O	Impact is applicable to the CONSTRUCTION AND OPERATIONAL PHASE

10.2 The positive and negative impacts that the proposed activity will have on the environment and the community that may be affected

NOTE: A COMPREHENSIVE ASSESSMENT OF ALL IMPACTS IS GIVEN IN SECTION 10.5. A SHORT DESCRIPTION OF KEY IMPACTS IS PROVIDED BELOW.

10.2.1 Soils

The storage and handling of hazardous substances (i.e. hydrocarbons) during the construction phase may result in spillages and soil pollution. Runoff from disturbed areas during construction may result in soil erosion and loss of topsoil. Soil compaction may also result in impacts on soil characteristics and land capability, especially adjacent areas. The operations will have spill management measures (bunding and clean up equipment) to prevent/minimise potential impacts.

10.2.2 Land use

The project area is currently used for low intensity grazing purposes and was previously utilised for game farming with the intention of hunting. However, it has been indicated by the land owner that large scale grazing is not feasible due to increased livestock theft. Hunting has also ceased at the property. Other land uses include engineering workshops operated by the owner's family which may be affected if the property is sold. Surrounding land use including lambing ewes and guest housed can also be affected by noise generation associated with the facility. An opportunity exist for SIOC to improve land management and the status of biodiversity on the remaining area of the property.

10.2.3 Groundwater

Groundwater abstracted from an on-site borehole will be used to supply water to the facility. The construction phase will require 40 m^3 of water per day and the operational phase will require approximately 11 m^3 per day. The groundwater will be obtained from the deeper aquifer not from the shallower aquifer which is used by users to obtain water from. The springs in the area is

associated with the shallower aquifer and will not be affected by the groundwater abstraction. The development will only require insignificant volumes of groundwater from the deeper aquifer and the potential impact is deemed insignificant.

Sewage effluent is currently pumped from the municipal Waste Water Treatment Works (WWTW) to a dam in the northern section of the property (Farm Kalkforntein). This has the potential to cause pollution of underground water resources. The municipality must be engaged to source a solution to the discharge of effluent onto the property.

10.2.4 Surface Water Resources

According to the Freshwater Ecological Assessment (SAS, 2020) (Annexure E of Part C), impacts on surface water resources will be medium to low. The initial layout of the proposed Kolomela airport would have directly impacted eight wetland pans which were located directly within the proposed project footprint, whilst an additional six wetland pans were located within 50 m thereof and were potentially at risk of impacts from edge effects (thus a total of 14 wetland pans potentially affected). Refer to the Figure below for the wetlands that will be impacted.

Whilst complete avoidance of all wetland pans within the study area is unlikely to be feasible due to the abundance of wetland pans throughout the study area, the mitigated layout has resulted in avoidance of several wetland pans that would previously have been affected.

Following optimisation of the project layout, it is expected that only two wetland pans will be completely lost (CWs 3 and 4) as a result of construction of the runway, whilst four wetland pans (CWs 1, 7, 10 and 11) may be partially affected by the construction of the boundary fence through them. Six wetland pans remain outside of planned infrastructure but may potentially be impacted by edge effects. Thus, as a result of the optimised project footprint, the total number of potentially affected CWs is reduced to 12. The boundary fence has been re-aligned to minimise impacts on some of the wetland pans. Proper stormwater management measures must also be implemented to prevent erosion and sedimentation.

Furthermore, re-alignment of the access road eliminates any potential impacts on the Episodic Drainage Lines which may have previously occurred. Although the re-aligned access road traverses the catchment of one cryptic wetland, it is situated approximately 75 m from the delineated boundary of the cryptic wetland and is therefore not considered likely to pose a significant quantum of risk to that cryptic wetland. The re-alignment of the fence has also resulted in the prevention of impacts on some wetland pans.

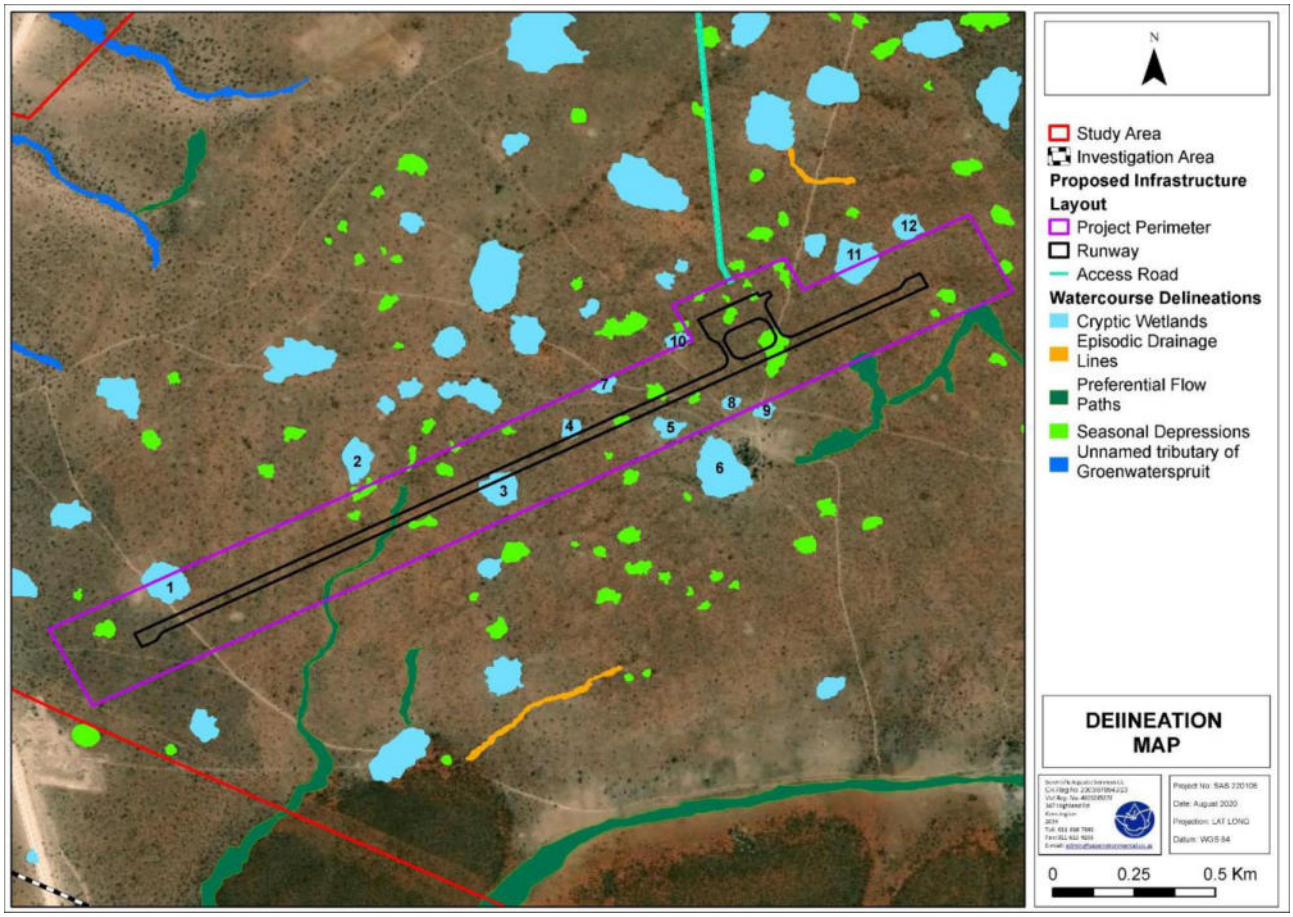


FIGURE 10-1: WETLANDS TO BE IMPACTED

10.2.5 Hydropedology

A Hydropedological Assessment (Zimpande Research Collaborative, 2020) (Annexure A of Part C) was conducted to assess assessment was to investigate the hydropedological properties of the soils in the vicinity of the watercourses within the study area, to infer the potential recharge mechanisms and destination of the transferred water of the surrounding soils that may be affected during the life of the proposed development. It was also an objective to assess the impact of the proposed development activity on the watercourses in terms of the hydropedological drivers.

10.2.6 Biodiversity

The following description was derived from the Floral Assessment conducted by Scientific Terrestrial Services (September, 2020) (Annexure C of Part C)

Flora: The proposed layout of the airport is not situated within the banded iron stone outcrop habitat unit and no direct impacts on floral communities are anticipated. Due to the potential for supporting floral Species of Conservation Concern (SCC), this habitat unit should be off limits to all personnel and customers of the Kolomela Airport.

The proposed infrastructure area will however directly impact on a small portion of the Lime-rich Habitat and will directly impact on floral species associated with the Open Calcrete Thornveld. Given that the mitigation measures are adhered to, this impact is not anticipated to be detrimental to the floral communities within the region as the Open Calcrete Thornveld is well represented locally. The proposed layout will not impact on the sensitive Calcrete Outcrops and thus excludes the numerous SCC recorded for this habitat.

The proposed infrastructure area will impact on several smaller Wetland pans. The impact on floral communities associated with the Wetland pans will be unfavourable, especially since these provide unique habitat within this semi-arid region and they serve as important ecological corridors.

The proposed infrastructure area will impact on several Seasonal Depressions and some of the smaller Preferential Flow Paths. The impact on floral communities associated with the smaller Preferential Flow Paths and the Seasonal Depressions will not be detrimental, as they are well represented throughout the study area and moderately degraded.

The following description was derived from the Fauna Assessment conducted by Scientific Terrestrial Services (September, 2020) (Annexure D of Part C)

Fauna: Impact significance of that the proposed airport will have on faunal diversity was assessed by the faunal impact assessment as medium-high (especially in terms of the Calcrete Habitat) prior to the implementation of the mitigation measures and medium to post mitigation.

Mammals: The proposed activities are unlikely to have a high significant impact on mammal habitat or diversity due to the large size of the study area and the relatively small proportion that the airport will be located on (80 ha). Movement of mammals directly through the airport will be restricted, yet, suitable similar habitat encompasses the entire property. Reduced abundance and activity of mammals is likely to result from the new airport and noise and human traffic and activity increase. The proposed infrastructure and intermittent impacts from planes landing will not be detrimental to the diversity of the area yet abundances will be reduced due to the loss of habitat.

The study area is of a moderately high ecological sensitivity in terms of mammal conservation. Impacts to mammal species will be moderately low in terms of the loss of habitat and abundance. Mammal diversity is unlikely to be affected within the study area.

Avifaunal - Clearing of vegetation for the proposed airport development and facilities for on-site personnel as well as the linear developments associated with the access roads will have a direct impact on habitat availability in these areas and will increase edge effects, leading to

localised migration of many avifaunal species to adjacent habitats yet the size of the study area will limit the losses to diversity. Avifaunal; abundances within the footprint will however likely decrease. Species that relocate into the surrounding areas will be subject to higher levels of competition for food resources and space.

Amphibians - Impacts to amphibian species within the study area will result in the localised loss of habitat, yet species diversity and abundance are unlikely to be affected as many of the more suitable larger Wetland pans will be left unaltered. Edge effects and footprint creep may impact on amphibian species in the immediate vicinity of the development. As amphibians are sensitive to changes in water quality, any changes in water chemistry, temperature and flow regimes resulting from the proposed development will affect freshwater resources.

Reptiles - Clearing of vegetation for the proposed development as well as the linear development of access roads will have a direct impact on habitat availability in these areas, leading to localised migration of reptile species into the surrounding areas. The movement of reptile species out of the disturbance footprint areas will result in higher levels of competition for food resources and habitat, however, it is unlikely that a change in diversity will result from the development. Additionally, the increased movement of vehicles traveling to and from the proposed development as well as increased human movement will likely increases the risk of persecution for reptile species.

Insects - The proposed development and associated infrastructure will lead to the loss of habitat and a minor decrease in food resources, leading to a decreased abundance of insect species in the study area, yet, is unlikely to cause a loss in diversity of insects. Insect species provide a vital food resource for many of the other faunal species in the study area. As such the loss of insect abundance will have a negative cascading effect on other faunal species in the study area. Impacts on insect species within the study area such as localised loss of habitat, will increase resource competition in areas adjacent to the development leading to a decrease in abundance. Edge effects such as additional lighting and footprint creep will impact on insect species in the local area.

The realignment of the project layout and access road will avoid impacts on the sensitive calcrete outcrops. The construction footprint must be limited to the demarcated and sensitive habitats must be designated as no-go areas during construction and operations.

10.2.7 Visual

The airport structure will be relatively flat and will not result in significant visual intrusion for the surrounding receptors. The most visible feature will be the airport building including the terminal

area. Figure 10-1 below shows the elevation profile from the town of Postmasburg to the airport and Figure 10-2 shows the elevation profile from the residents to the west from the site as well as the R325 to the airport. The local topography will shield the visual footprint of the facility from these receptors. The facility may be visible for vehicles travelling on the Griquastad road only from directly adjacent to the site, but will not be visible for vehicles traveling north on this road. The airport may be visible from resident at Plaas 492 to the east of the site, but not to a large extent due to the distance (>2.8km).

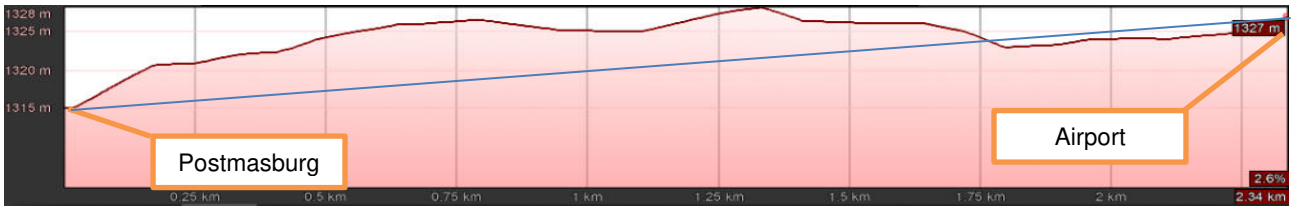


FIGURE 10-2: ELEVATION PROFILE FROM POSTMASBURG TO THE AIRPORT

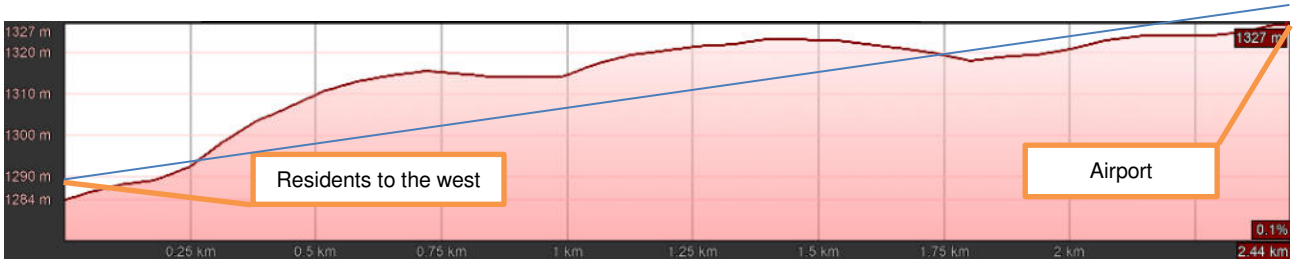


FIGURE 10-3: ELEVATION PROFILE FROM RESIDENTS AND TO THE WEST TO THE AIRPORT

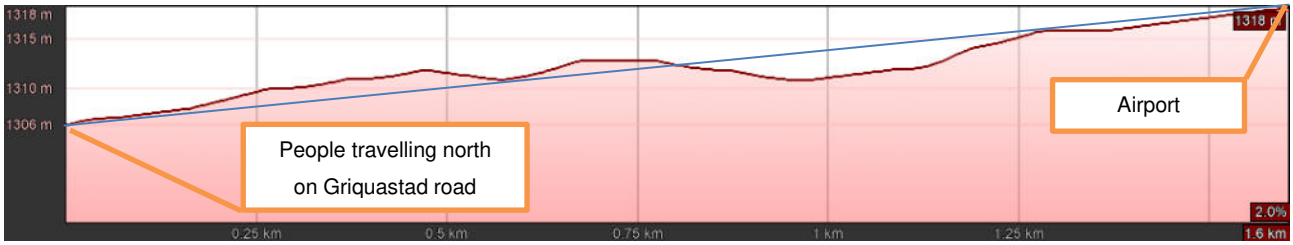


FIGURE 10-4: ELEVATION PROFILE FOR PEOPLE TRAVELING NORTH ON R325 GRIQUASTAD ROAD

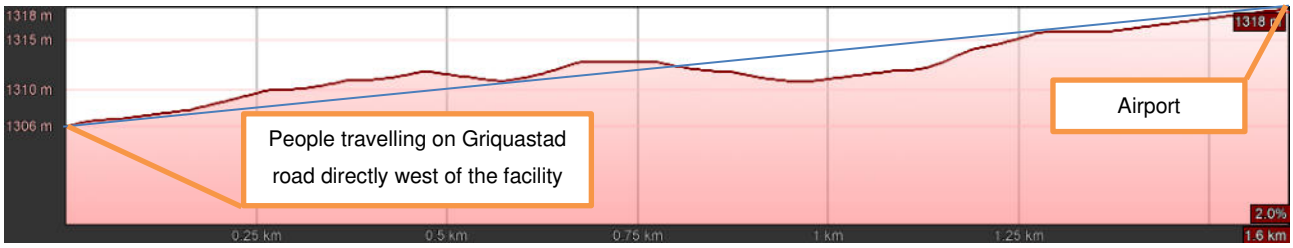


FIGURE 10-5: ELEVATION PROFILE FOR PEOPLE TRAVELING ON GRIQUASTAD ROAD DIRECTLY WEST OF THE SITE

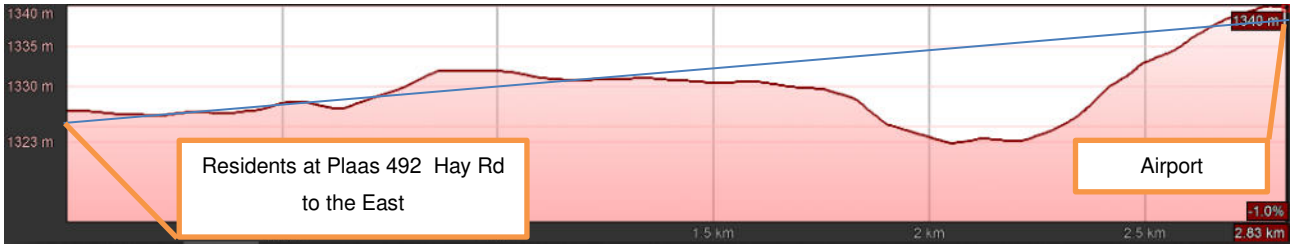


FIGURE 10-6: ELEVATION PROFILE FOR RESIDENTS AT PLAAS 492 HAY RD TO THE EAST

10.2.8 Air Quality

The construction activities including soil disturbance from earth works, borrow pit operations and vehicles traveling on exposed surface and roads has the potential to result in increased dust fall in the area. However residential units are situated relative far from the development and it is not anticipated that the project will result in significant air quality impacts, especially taking into consideration the implementation of the mitigation measures. Emissions from vehicles and machinery will result in the release of greenhouse gases, but not to a large extent.

10.2.9 Traffic Impacts

A traffic assessment was undertaken by R&G Kalahari Consulting Engineers (Annexure H of Part C) to determine the impact of the proposed project on traffic. The traffic to be generated was calculated based on projected flight schedule which includes 7 flights per week operating 5 days a week.

When considering the current traffic volumes and projected traffic at three critical nodes (School, Shone Street and Traffic Light at intersection to Beeshoek and Kolomela mine). The level of service on these nodes does not change which means there is no additional traffic that will result in complaints.

There will be no impact on safety (collisions) due to the increased peak traffic volumes (except in the proximity of the school). Safety can be improved by upgrading road signs and the painting of markings. Although the volume of traffic diverted through residential areas are relatively low, it does increase the safety risk. Increased traffic volumes through town (surfaced road) may result in safety concerns at the school intersection school.

Although the traffic study reveals an insignificant change in traffic volumes due to the airport development, when speaking to South Africa Police Services there is currently unbearable traffic during peak hours (before 8 am and after 4pm). The operation of the airport will add to the perception of increased traffic.

The impact of additional traffic on roads is rated as having low impact significance. This is due to the fact that the traffic study revealed no significant changes to levels of service. However, the perception of traffic increases is likely. As such a management of perceptions are required.

The baseline traffic on the R325 already poses a safety risk to users. The daily volumes are already at a level where there are safety concerns relating to dust generation and poor visibility. Additional traffic will further increase the community safety risks on the road. The road should be surfaced to address these concerns. The re-alignment of the access road will avoid a large portion of the R325 regional road that would have previously been used. Only a small section will require surfacing.

10.2.10 Noise Impacts

A Noise Impact Assessment (Airshed, 2020) (Annexure B of Part C) was conducted to determine the potential increase in noise levels from the baseline environment and to assess the potential impacts on sensitive noise receptors. The baseline noise levels were based on various previous noise studies conducted in the area.

The IFC General Environmental Health and Safety Guidelines states that noise levels should not exceed 55dBA for residential areas during the day. The Table below shows the predicted increase in noise levels at the NSR.

Due to the large distance between the airport and any nearby NSRs, construction phase impacts are expected to be very low at all nearby sensitive receptor locations.

Simulated equivalent continuous day-time rating levels (LReq,d) exceed 55 dBA (IFC noise guideline level for residential areas) at NSR locations G (a farmstead to the northeast of the runway) and P (the area used for lambing ewes). While simulated cumulative levels are below 55 dBA at all other identified NSRs, due to the low baseline noise levels (average of 44.3 dBA), significant increases (>5 dBA) are predicted at the NSRs to the southwest of the runway (NSRs L, M and N) and to the northeast of the runway (NSRs G, I and P) as well as along the access road to the airport. These receptors are indicated in the green area on Figure 10-7 which shows the outcome of the noise model. No impacts from the airport are expected at night.

Maximum impacts, especially during take-off and landing of aircraft will be significantly higher for short periods of time. Based on the perceived noise levels for the aircraft that will frequent the airport, short term noise levels of 75 to 90 dBA can be expected at the closest NSRs along the flight paths (NSRs L, M, N, O, G and P) when aircraft are landing and taking off. Based on its location, very high (>90dBA) noise (and vibration) impacts could be experienced at NSR G during the take-off of aircraft from the airport.

TABLE 10-2: SUMMARY OF SIMULATED NOISE LEVELS FOR THE CONSTRUCTION AND OPERATIONAL PHASE OF THE KOLOMELA AIRPORT AT NSR WITHIN THE STUDY AREA

Receiver Name	Cumulative Daytime Noise Levels		Change from Baseline (44.3 dBA)		Cumulative Day/Night Equivalent Noise Levels		Change from Baseline (45.1 dBA)	
	Oper[a]	Cons[b]	Oper[a]	Cons[b]	Oper[a]	Cons[b]	Oper[a]	Cons[b]
	$L_{Aeq,d}$	$L_{Aeq,d}$	$\Delta L_{Aeq,d}$	$\Delta L_{Aeq,d}$	$L_{Aeq,dn}$	$L_{Aeq,dn}$	$\Delta L_{Aeq,dn}$	$\Delta L_{Aeq,dn}$
A	46.1	44.8	1.8	0.5	46.2	45.4	1.1	0.3
B	44.9	44.3	0.6	0.0	45.4	45.1	0.4	0.0
C	44.8	44.3	0.5	0.0	45.3	45.1	0.3	0.0
D	45.1	44.3	0.8	0.0	45.5	45.1	0.4	0.0
E	45.8	44.5	1.5	0.2	45.9	45.2	0.9	0.1
F	46.3	45.3	2.0	1.0	46.3	45.7	1.2	0.6
G	55.3[c]	44.8	11.0	0.5	53.8	45.3	8.7	0.3
H	47.3	44.3	3.0	0.0	47.0	45.1	1.9	0.0
I	51.4	44.3	7.1	0.0	50.3	45.1	5.2	0.0
J	44.4	44.3	0.1	0.0	45.1	45.1	0.1	0.0
K	47.1	44.3	2.8	0.0	46.9	45.1	1.8	0.0
L	49.4	44.3	5.1	0.0	48.6	45.1	3.5	0.0
M	52.9	44.3	8.6	0.0	51.5	45.1	6.5	0.0
N	52.3	44.5	8.0	0.2	51.0	45.2	5.9	0.1
O	49.6	44.4	5.3	0.1	48.8	45.1	3.7	0.1
P	55.5[c]	45.9	11.2	1.6	54.0	46.0	9.0	0.9

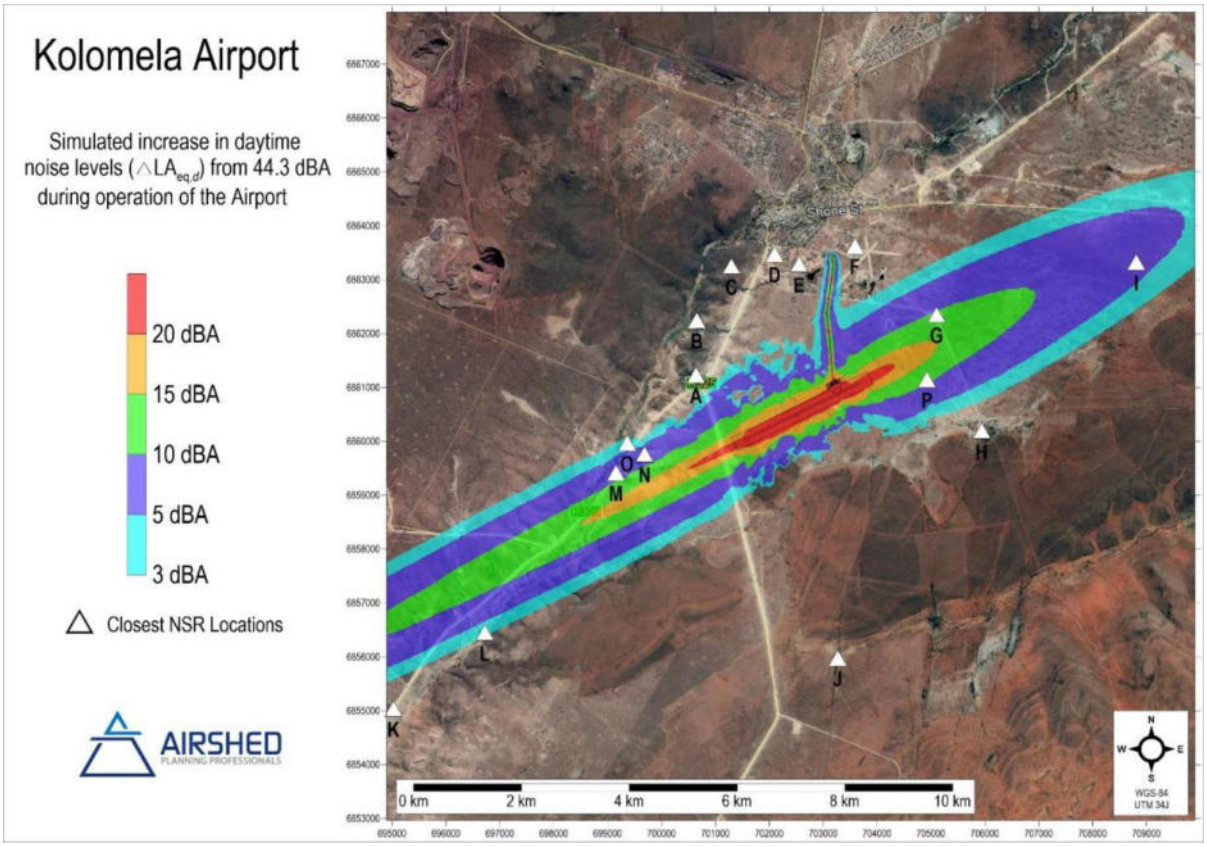


FIGURE 10-7: SIMULATED INCREASE FROM BASELINE DAY-TIME NOISE LEVELS DUE TO OPERATIONS AT THE KOLOMELA AIRPORT

Noise levels at NSR P were assessed in detail as this area is used for lambing ewes. Noise levels in exceedance of 90dB could be experienced at the area used for lambing ewes (which is located ~600m from the end of the runway) during take-off of aircraft. Literature indicates that while sheep appear to adapt to increased noise levels, particularly to continuous noise such as vehicle traffic sheep appear more responsive to mechanical noise rather than natural animal noise. Noise intensities of 90dB inhibited the release of thyroxine and triiodothyronine in growing lambs. Noise at 75 dB increased average daily weight gain of lambs and improved their feed efficiency compared to control groups exposed to 100 dB. Evidence suggests that lambs become acclimatised to loud sounds.

Studies specifically related to aircraft and helicopters have found that short term 90 dB noise levels have caused sheep to departure from the sound source and to accumulate in a group in the lying position. Bighorn sheep responded to helicopter flights by decreasing their time spent foraging (Stockwell). Caribous and mountain sheep respond to the sound produced by aircraft flyovers with increased activity, but the reaction varies with time of year suggested that frequent disturbance by aircraft could cause animals to vacate their home territory. The distance from the source of disturbance is an important indicator of alert behaviour. The distance moved decreased sharply when the helicopter was further than 150 m away. Goats were often disoriented and ran away to a distance up to 1.5 km in response to helicopter over-flights.

10.2.11 Heritage and palaeontological Impacts

11 heritage sites were identified during the Heritage Impact Assessment (Annexure F of Part C), but none of the sites identified falls within the development footprint. The impact is therefore low

The impact significance before mitigation on the identified archaeological sites will be moderate negative before mitigation. The possibility of the impact occurring is unlikely except for site PMB-06 that is close to the footprint area of the airport.

Very High palaeontological sensitivity has been allocated to the Ghaap Group while the Kalahari Group has a high Palaeontological Sensitivity. The expected duration of the impact is assessed as potentially permanent to long term to permanent. In the absence of mitigation procedures (should fossil material be present within the affected area) the damage or destruction of any palaeontological materials will be permanent. Impacts on palaeontological heritage during the construction phase could potentially occur but are regarded as having a moderate possibility.

10.2.12 Socio-Economics

A Social Impact Assessment & Social and Human Rights Impact and Risk Analysis (Tloleho Consulting, 2020) (Annexure G of part C) was conducted to assess the potential impacts that the development may have on the social and economic environment. The following provides a summary of the impacts identified.

Economic Loss – Economic activities (livestock farming and small engineering operations) will discontinues and lead to income loss. The owner's family income generation ability will definitely be compromised. The airport and associated noise may also influence economic activities (lambing ewes and the Soetfontein guesthouse) on adjacent properties.

Employment of Local Labour - The proposed airport development will result in the creation of jobs during the construction and operational phase. The construction phase will result in 205 job opportunities (temporary) of which 45 will be for unskilled (local) and 15 semi-skilled (may include local labour) and 145 skilled (may also be sourced locally). The consequence type for this impact is considered to be a positive high as the employment will likely benefit the vulnerable group. During the operational phase, Kolomela is likely to move the labour operating Tommy's Airfield to the new airport. Operational phase employment impacts are considered low.

Local Procurement - The construction of the airport will involve contract packages that can be carried out by local service providers. In addition, the operation of the airport may require service providers (e.g. security, catering).

In Migration - TLM has experienced high influxes of people from 2001 to 2019. The in-migration is mainly of young persons in search of job opportunities. In migration has led to land invasion within the municipality. The potential invasion of the neighbouring land presents a risk as it further compromises the limited grazing land for communal farmers.

Although the potential for the airport project to drive in-migration is considered to be relatively low due to the limited construction job opportunities, the cumulative impact of this project together with the Kapstevel South Project at Kolomela mine, would increase the attraction to the area by job-seekers.

Relocation of Residential Houses on Farm Kalkfontein - The development of the airport will require the relocation of families residing on the property. As indicated, the farm owner and his family will remain on the property . One other family stays on the farm, but no formal agreement is in place with the landowner. The landowners indicated that they will move as they have their homes in town. The consequence level of this impact is minor as it will result in partial change for the residents and they can easily recover from the change as they have other houses.

Closing of Postmasburg Airfield - The current Postmasburg Airfield is owned by TLM and used by the local aviation club. The club comprises of local residents who maintain and operate the landing strip and its associated infrastructure including hangars. The construction and operation of the airport by SIOC will require the closure of the existing Postmasburg Airfield. The loss of use of the current landing strip will result in a high significance for the local aviation club. However, this impact can be mitigated.

Further Compromise in Municipal Infrastructure – The influx of people due to the airport project coupled by the influx caused by the Kapstevel project will put additional pressure on municipal infrastructure.

10.3 The possible mitigation measures that could be applied and the level of residual risk

The mitigation measures for each of the identified impacts are included in Tables 10-3 to 10-6. Mitigation of key impacts and risks are also discussed in detail in Part B: Environmental Management Programme.

The significance of the impact with mitigation has been weighted by multiplying the significance rating without significance by the following, depending on the confidence placed in the successful implementation of the mitigation measures or the effectiveness of those measures in reducing the impact.

Mitigation Confidence Negative Impacts

1	Very High Risk (no confidence)	Measures are very difficult or expensive to implement or are not expected to be effective in reducing the impact (No Confidence)
0.8	High Risk (low confidence)	Measures are difficult or expensive to implement or are expected to have limited effectiveness in reducing the impact (20% Confidence)
0.5	Moderate Risk (moderate confidence)	Measures can be implemented with some effort and cost and/or the measures can be effective in mitigating the impact if implemented (50% Confidence)
0.2	Low Risk (high confidence)	There is high confidence that mitigation measures can be implemented and can be effective in mitigating the impact (80% Confidence)

Enhancement Confidence Positive Impacts

1	Very High Risk (no confidence)	Measures are very difficult or expensive to implement or are not expected to be effective in enhancing the impact.
1.2	High Risk (low confidence)	Measures are difficult or expensive to implement or are expected to have limited effectiveness in enhancing the impact (20% Confidence)
1.5	Moderate Risk (moderate confidence)	Measures can be implemented with some effort and cost and/or the measures can be effective in enhancing the impact if implemented (50% Confidence)
1.8	Low Risk (high confidence)	There is high confidence that mitigation measures can be implemented and can be effective in enhancing the impact (80% Confidence)

10.4 Motivation where no alternative sites were considered

Not applicable as alternatives layouts have been considered based on the mitigation of impacts. Alternatives considered are described in Section 7.

10.5 Statement motivating the alternative development location within the overall site

The project alternatives and the motivation for the selection of the preferred alternative is provided in Section 7. The preferred layout alternatives are provided in:

Figure 4-2 (Original layout)

Figure 4-3 (Mitigated layout)

Figure 4-4 (Final layout)

10.6 Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (in respect of the final site layout plan) through the life of the activity

Please refer to Section 10.1 for the methodology used in the ranking of impacts. Please refer to Section 10.3 for the methodology used for the application of a mitigation confidence ranking to the impact ranking.

10.7 Assessment of each identified potentially significant impact risk

IMPACT SIGNIFICANCE

NEGATIVE IMPACTS

≤1	Very low	Impact is negligible. No mitigation required.
>1≤2	Low	Impact is of a low order. Mitigation could be considered to reduce impacts. But does not affect environmental acceptability.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts. Mitigation should be implemented to reduce impacts.
>3≤4	High	Impact is substantial. Mitigation is required to lower impacts to acceptable levels.
>4≤5	Very High	Impact is of the highest order possible. Mitigation is required to lower impacts to acceptable levels. Potential Fatal Flaw.

POSITIVE IMPACTS

≤1	Very low	Impact is negligible.
>1≤2	Low	Impact is of a low order.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts.
>3≤4	High	Impact is substantial.
>4≤5	Very High	Impact is of the highest order possible.

TABLE 10-3: PLANNING PHASE - IMPACT RISK ASSESSMENT

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSE-QUENCE	EXTENT	SEVE-RITY	PROBA-BILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Biodiversity - Flora and Flora	Establishment of borrow pit	Encroachment of fauna and flora habitat	Direct or indirect impacts on habitat	4	3	3,5	2	2,75	0,8	2,2	• A licence from the Department of Environment, Forestry and Fisheries (DEFF) is required for the removal of NFA protected tree species. For the disturbance of protected flora in terms of the NCNCA, a license is required from the Department of Environment and Nature Conservation (DENC). • Construction footprint must be clearly demarcated according to mitigated project layout. • All areas of increased	0,8	1,76
Biodiversity - Flora	Planning of facility	Construction of airport footprint	Impact on floral Habitat and Diversity	3	3	3	3	3	0,8	2,4		0,8	1,92
Biodiversity - Flora	Planning of facility	Construction of airport footprint	Impact on SCC	3	3	3	3	3	0,8	2,4		0,8	1,92
Biodiversity - Fauna	Planning of facility	Construction of airport footprint	Impact on faunal Habitat and Diversity	2	3	2,5	3	2,75	0,8	2,2		0,8	1,76

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSE-QUENCE	EXTENT	SEVE-RITY	PROBA-BILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Biodiversity - Fauna	Planning of facility	Construction of airport footprint	Impact on SCC	3	3	3	3	3	0,8	2,4	ecological sensitivity should be designated as No-Go areas.	0,8	1,92
Surface Water Resources	Proposed surface infrastructure layout	Construction of airport footprint	Destruction of wetlands. Indirect impacts such as sedimentation.	4	3	3,5	1	2,25	1	2,25	• Realignment of the fence to prevent encroachment of wetlands on the outer edge of the facility. Implement the mitigated project layout. • Develop and implement a stormwater management plan with specific measures to prevent erosion.	0,8	1,8
Surface Water Resources		Construction of boundary fence		3	3	3	2	2,5	0,8	2		0,8	1,6
Surface Water Resources	Establishment of borrow pit	Encroachment of cryptic wetlands	Direct or indirect impacts on wetlands.	4	3	3,5	2	2,75	0,8	2,2		0,8	1,76

TABLE 10-4: CONSTRUCTION PHASE - IMPACT RISK ASSESSMENT

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Soil	Earth works	Removal of topsoil	Loss of soil and land capability	4	2	3	3	3	0,8	2,4	• Soils to be removed and protected from erosion for use in rehabilitation and landscaping of temporarily disturbed areas.	0,6	1,44
Soil	Storage and use of hazardous substances	Potential spillages	Soil pollution	3	2	2,5	4	3,25	0,6	1,95	• Hazardous substances containers must be clearly marked and must be stored in an area with containment measures in place. • Spill response equipment must be readily available. Safety data sheets must be available on site for all hazardous substances. • Large spills must be reported as incidents and managed accordingly. • Refuelling (if any) must be conducted in a designated area with containment measures in place. • Drip trays are to be in place to contain oil drips and spillages. • No major repairs or maintenance are to be undertaken on site.	0,8	1,56
Soil	General waste generation	Storage and management of general waste (building rubble, domestic waste)	Litter in adjacent areas Soil pollution	3	2	2,5	3	2,75	0,6	1,65	• Store general waste in designated areas in marked containers. • Littering must be prohibited. • Construction footprint and adjacent areas must be inspected regularly to detect and clean up any litter. • Dispose general waste that cannot be recycled at a licenced facility. • Provide bins for separate waste streams. • Provide separated waste streams to a registered waste management facility for recycling/reuse. • A waste manifest system must be implemented for the site.	0,6	0,99
Soil	Hazardous waste generation	Storage and management of hazardous waste (contaminated rags and PPE, used oil)	Environmental pollution	4	2	3	3	3	0,6	1,8	• Store hazardous waste in designated areas in marked containers with containment in place. • Any spillages must be cleaned up appropriately. • Dispose hazardous waste at a licenced facility	0,6	1,08
Air quality	Construction activities (earth works, moving equipment, vehicles travelling)	Soil disturbance Vehicles traveling on unpaved surfaces	Increased dust fall. Nuisance conditions	3	2	2,5	2	2,25	0,6	1,35	• Watering of exposed surfaces, i.e., by using a water bowser. • Integrate complaints management into the Kolomela complaint management procedure. • Conduct dust fall monitoring in terms of the National Dust Control Regulations if complaints are received. Implement additional measures if required.	0,6	0,81
Air quality	Construction activities (earth works, moving equipment, vehicles travelling)	Exhaust emissions	Contribution to greenhouse gas emissions.	2	2	2	2	2	0,6	1,2	• Maintain of vehicles and equipment to ensure emissions are kept to a minimum.	0,8	0,96

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Noise	Construction activities (earth works, moving equipment, vehicles travelling)	Increased noise levels	Nuisance conditions for receptors in the area.	2	2	2	2	2	0,6	1,2	• All diesel-powered equipment and plant vehicles should be kept at a high level of maintenance. • Implement strict speed limits on the access road between Postmasburg and the airport. • Limiting construction activity and vehicle traffic to hours between 06:00 and 18:00 where possible. • A noise complaints register must be kept, communication channels with nearby NSRs established and noise complaints investigated.	0,6	0,72
Biodiversity - Flora	Construction of facility	Vegetation clearance Encroachment of invader plant species	Impact on floral Habitat and Diversity	3	2	2,5	3	2,75	1	2,75	• All areas of increased ecological sensitivity (i.e. Calcrete Outcrops, Cryptic Wetlands outside of the construction footprint, Banded Ironstone Outcrops) should be designated as No-Go areas • Vehicles should be restricted to travel only on designated existing roadways • No temporary waste storage sites should be allowed in areas with natural vegetation. • All soil compacted as a result of construction activities should be ripped, profiled and reseeded; • Any unauthorised collection or harvesting of floral species or material must be prohibited; • An invader plant control plan must be developed and implemented for the site and must include ongoing alien and invasive plant monitoring and clearing/control.	0,8	2,2
Biodiversity - Flora	Construction of facility		Impact on floral SCC	4	2	3	3	3	0,8	2,4		0,8	1,92
Biodiversity - Fauna	Construction of facility	Vegetation removal for construction purposes Earth works	Impact on faunal Habitat and Diversity	4	3	3,5	3	3,25	0,8	2,6	• The development footprint should be demarcated, and it should be ensured that no development related activities take place outside of the demarcated footprint • Any structures which may act as perching sites for birds should be installed with anti-perching spikes; • Providing shelter for wildlife increases their potential activity around the airport. Methods to reduce available shelter include: 1) Exclusion measures such as spikes, netting, panelling on ledges and holes around buildings assist in prevention of birds taking residence, 2) Nest removal and 3) Cutting of grass within the fenced off infrastructure area and/or 30m from the runway. • No hunting/trapping or collecting of faunal species is allowed. • Internal resources with appropriate training should be used for the removal of smaller, less venomous snakes. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. • Any natural areas beyond the development footprint, that have been affected by the construction activities, must be rehabilitated using indigenous plant species.	0,8	2,08
Biodiversity - Fauna	Construction of facility	Vegetation removal for construction purposes Earth works	Impact on SCC	3	3	3	3	3	0,8	2,4		0,8	1,92
Surface water	Storage and use of hazardous substances	Potential spillages of hazardous substances.	Pollution of surface water resources	4	2	3	4	3,5	0,6	2,1	• Refer to section related to soil pollution	0,8	1,68

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Surface water	Soil disturbance	Runoff from exposed surfaces	Erosion and sedimentation of water courses	4	5	4,5	2	3,25	0,8	2,6	• Develop and implement a stormwater management plan to prevent erosion and the associated sedimentation of wetlands. • Monitor all potentially affected wetlands, which are not lost during construction, for changes in vegetation structure and composition.	0,6	1,56
Surface water	Establishment of footprint	Construction of airport infrastructure (runway, airport building, fence etc).	Total or partial loss of wetland pans and or the associated catchments	4	5	4,5	2	3,25	1	3,25	• Construct airport facility according to the mitigated layout plan to avoid/minimise impacts on wetlands. • Contractor laydown areas, and material storage facilities to remain outside of the wetland pans and their associated catchments. • Refer to section related to soil pollution • The wetland pans, not impacted by the development, must be demarcated and defined as no-go areas. • Only designated personnel must be allowed to enter the areas where the fence will be constructed across the wetland pans.	0,8	2,6
Surface Water Resources	Management of sewage system	Spillages	Pollution of surface water resources	4	4	4	3	3,5	0,6	2,1	• Temporary toilets to be provided during construction. Ablutions are to be serviced regularly and safe disposal documented through a waste manifest system. • Good housekeeping must be applied to maintain high hygienic levels.	0,8	1,68
Surface Water Resources	Establishment of borrow pit	Runoff from exposed surfaces	Erosion and sedimentation of water courses	4	3	3,5	2	2,75	0,8	2,2	• Erosion control measures must be implemented at borrow pit if required.	0,8	1,76
Surface Water Resources	Establishment of borrow pit	Encroachment of cryptic wetlands	Direct or indirect impacts on wetlands.	4	3	3,5	2	2,75	0,8	2,2	• The location of the borrow pit must take into consideration site sensitivities and avoid impacts on wetlands and sensitive floral habitats. • The footprint of the borrow pit must be clearly demarcated and excavation must be limited to that area. • Rehabilitation of borrow pit must commence as soon as possible after construction has been completed.	0,8	1,76
Hydropepelogical impacts	Site preparation	Disturbance of wetlands and indirect disturbance	Soil compaction and sedimentation of the wetland;	3	2	2,5	2	2,25	0,6	1,35	• Refer to section related to surface water resources.	0,8	1,08
Hydropepelogical impacts	Construction of the proposed surface infrastructure	General construction activities	Removal of vegetation and compaction of soil.	2	2	2	2	2	0,6	1,2		0,8	0,96
Groundwater	Groundwater abstraction from on-site borehole	Use of natural resources	Potential impact on aquifer yield and groundwater users	3	2	2,5	4	3,25	0,4	1,3	• Monitor groundwater consumption. • Monitor levels of other boreholes.	0,8	1,04
Groundwater	Use of hazardous substances, including hydrocarbons	Spillages - seepage	Potential pollution of groundwater	3	2	2,5	4	3,25	0,4	1,3	• Conduct groundwater quality monitoring at boreholes on the property. • Refer to section related to soil pollution,	0,8	1,04

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Heritage	Footprint construction	Encroachment of identified heritage sites	Impact on burial ground and graves	2	2	2	1	1,5	0,4	0,6	• Implement a chance find procedure as stipulated in the Kolomela heritage management plan in case where possible heritage finds are uncovered. • In the event that any of the identified archaeological sites will be impacted, a Phase 2 archaeological mitigation process must be implemented. A permit issued under s35 of the NHRA will be required to conduct such work. • If fossil remains are discovered during construction, either on the surface or exposed by fresh excavations the Chance Find Protocol must be implemented by the ECO.	0,6	0,36
Heritage	Footprint construction	Encroachment of identified heritage sites	Impact on archaeological sites	5	2	3,5	3	3,25	0,6	1,95		0,6	1,17
Heritage	Footprint construction	Encroachment of identified heritage sites	Impact on palaeontological resources	5	2	3,5	3	3,25	0,6	1,95		0,6	1,17
Visual	Establishment of footprint	Visual appearance of airport	Visual intrusion of facility	2	2	2	4	3	0,4	1,2	• Keep footprint of facility as small as possible according to demarcated area. • Landscaping around airport building. • Rehabilitation temporary disturbed areas.	0,4	0,48

TABLE 10-5: OPERATIONAL PHASE - IMPACT RISK ASSESSMENT

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Soil	Storage and use of hazardous substances Bulk fuel storage Refuelling	Potential spillages	Soil pollution Surface water pollution	4	4	4	4	4	0,6	2,4	• Hazardous substances containers must be clearly marked and must be stored in an area with containment measures in place. • Spill response equipment must be readily available. • Safety data sheets must be available on site for all hazardous substances. • Large spills must be reported as incidents and managed accordingly. • Refuelling must be conducted in a designated area with containment measures in place. • Bulk fuel storage containers must be placed in a bunded area with capacity to contain 110% of the tank volume or 25% of the volume where multiple tanks are stored. • Runoff from the bulk fuel storage and refuelling area as well as the fire truck wash bay must be diverted to an oil separator prior to discharge into the ET ponds.	0,6	1,44
Soil	Impervious surfaces	Increased runoff from impervious surface.	Soil erosion and loss of topsoil Sedimentation of wetland pans	4	5	4,5	4	4,25	0,6	2,55	• Implement a stormwater management plan which stipulates specific measures to control runoff in order to prevent erosion.	0,6	1,53
Soil and surface water resources	Hazardous waste generation	Storage and management of hazardous waste	Environmental pollution	3	4	3,5	3	3,25	0,6	1,95	• Store hazardous waste in designated areas in marked containers with containment in place. • Any spillages must be cleaned up appropriately. • Dispose hazardous waste at a licenced facility	0,6	1,17

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Soil and surface water resources	General waste generation	Storage and management of general waste (domestic waste)	Litter in adjacent areas Environmental pollution	3	4	3,5	3	3,25	0,6	1,95	• Store general waste in designated areas in marked containers. • Littering must be prohibited. Construction footprint and adjacent areas must be inspected regularly to detect and clean up any litter. • Dispose general waste that cannot be recycled at a licenced facility. • Provide bins for separate waste streams. • Provide separated waste streams to a registered waste management facility for recycling/reuse.	0,6	1,17
Noise	Take-off and landing of airplanes	Increased noise levels	Nuisance conditions for receptors in the area.	4	3	3,5	3	3,25	1	3,25	• Construct airport according to the mitigated layout plan to reduce noise levels at sensitive receptors. • Specific mitigation measures that must be incorporated in the operational manual to minimise noise levels are included in section 6 of the EMPr. These measures relate to the optimisation of the landing and departures which specifically states how the airplanes will approach or depart from the facility in terms of the identified receptors. • Implement complaint management procedure. • Flight schedules should be communicated to nearby NSRs, especially those to the northeast and southwest of the airport. Any deviation to flight schedules must be communicated to affected parties	0,6	1,95
Biodiversity - Flora	Operational activities	Encroachment of remaining natural habitat	Impact of floral Habitat and Diversity	3	4	3,5	3	3,25	0,6	1,95	• No additional habitat is to be disturbed during the operational phase of the development; • Prohibit vehicles to drive through sensitive habitat and natural areas; • The airport must be adequately fenced to prevent personnel and customers from entering the remaining natural veld.	0,8	1,56
Biodiversity - Flora	Operational activities	Encroachment of remaining natural habitat	Impact of SCC	3	4	3,5	3	3,25	0,6	1,95		0,8	1,56
Biodiversity - Fauna	Operational activities	Increased risk of vehicle collisions with fauna Potential overexploitation	Impact on faunal Habitat and Diversity	2	4	3	3	3	0,8	2,4	• No hunting/trapping or collecting of faunal species is allowed. • Internal resources with appropriate training should be used for the removal of smaller, less venomous snakes. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. • Enforce a strict speed limit on access road - signs indicating the presence of animals (especially kudus) can be erected on the access road.	0,8	1,92
Biodiversity - Fauna	Operational activities	Vehicles driving on access road	Animal/bird strikes on access roads	3	4	3,5	3	3,25	0,6	1,95		0,8	1,56
Biodiversity - Fauna	Operational activities		Impact on SCC	2	4	3	3	3	0,8	2,4		0,8	1,92
Biodiversity - Fauna	Land management	Implement sound land management on entire property	Improve status of environmental characteristics of the remaining portions of the farm Kalkfontein	4	4	4	4	4	0,6	2,4	• Rehabilitation of identified disturbed areas within the property. • Removal of Alien and Invasive plants currently on site. • Investigate the management of bush encroachment, especially in Banded Iron Stone Outcrops.	1	2,4

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
											• Where practicable, rehabilitate current disturbance of cryptic wetlands. • Implement solution to prevent further discharge of sewage effluent onto the property. • Assess property for erosion problems and implement measures to remediate.		
Biodiversity	Vermin management	Food availability Food waste	Increased rodent problem which may affect adjacent farming activities	3	4	3,5	3	3,25	0,8	2,6	• Appoint a certified Pest Control Operator to manage rodents and other pests. • Rodent traps must be changed as required by PCO or manufacturer's specifications. • Ensure food waste is properly managed and good housekeeping practices applied. • Food waste must be regularly removed and disposed or provided to livestock farmers to prevent rotting thereof.	0,6	1,56
Surface Water Resources	Operational activities	Encroachment of wetland pans	Degradation of remaining wetland pans	4	5	4,5	3	3,75	0,6	2,25	• Remaining wetland pans must be designated as no-go areas • Prohibit placement of any material in the remaining wetland pans • Inspect remaining wetland pans in close proximity to the airport on a quarterly basis.	0,8	1,8
Surface Water Resources	Management of sewage system	Spillages	Pollution of surface water resources	4	4	4	3	3,5	0,6	2,1	• Regular inspection of sewage system. • Maintenance must be conducted as required by standard practice.	0,8	1,68
Hydropepelogical impacts	Operation of the stormwater management structures	Surface runoff	Altered surface runoff characteristics, change in runoff volumes delivered in each pan	3	2	2,5	2	2,25	0,6	1,35	• Ensure that the pre and post runoff volumes to each pan is not altered.	0,8	1,08
Groundwater	Groundwater abstraction from on-site borehole	Use of natural resources	Potential impact on aquifer yield and groundwater users	3	3	3	4	3,5	0,4	1,4	• Monitor groundwater consumption. Monitor levels of other boreholes.	0,8	1,12
Groundwater	Use of hazardous substances, including hydrocarbons	Spillages - seepage	Potential pollution of groundwater	3	3	3	4	3,5	0,4	1,4	• Conduct groundwater quality monitoring at boreholes on the property. Refer to section related to hazardous substances,	0,8	1,12
Groundwater	Storage of effluent from the on-site septic tanks system in evaporation ponds.	Spillages - seepage	Potential pollution of groundwater	4	3	3,5	4	3,75	0,6	2,25	• Installation and maintenance of liner system. • Inspections and maintenance of ET beds. • Use trained operations for the management of the septic tank system.	0,6	1,35
Groundwater	Continuation of sewerage being diverted to dam on property	Seepage	Pollution of groundwater	3	4	3,5	4	3,75	0,8	3	• Engage with the municipality to discontinue with the discharge of sewage onto the property. • Investigate a solution, in collaboration with the municipality, to resolve capacity issues at the waste water treatment works. • A full analysis, including organic compounds (i.e. e-coli) must be conducted prior to	0,8	2,4

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
											commencement of water abstraction from the water supply borehole.		
Resource consumption	Electricity consumption	Power provided by coal powerplant.	Indirect contribution to greenhouse gas emissions.	1	4	2,5	4	3,25	0,4	1,3	• The following measures can be considered to manage energy consumption: • Installation of low energy light bulbs. • Use of natural light during day time. • Solar heating systems. • Use of gas in kitchens. • Solar lights on runways if practicable. • Awareness training.	0,8	1,04
Visual	Establishment of footprint	Visual appearance of airport	Visual intrusion of facility	2	4	3	4	3,5	0,4	1,4	• Landscaping around airport building. • Rehabilitation temporary disturbed areas.	0,4	0,56
Fire management	Bulk fuel storage Refuelling	Potential fires	Veld fires affecting adjacent properties and farming activities	4	4	4	4	4	0,6	2,4	• Firefighting equipment must be placed at strategic locations and serviced according to manufacturer's specifications. • Implement an emergency preparedness plan. Sufficient emergency water must be available on site for firefighting purposes. • Collaborate with adjacent farmers with regards to fire management. • Implement a Fire Break Management Procedure	0,8	1,92
Safety and security	Management of boundary fences	Degradation/cutting of fences	People gaining access to adjacent properties.	3	4	3,5	4	3,75	0,6	2,25	• Implement a fence maintenance agreement with adjacent land owners, which stipulates the roles and responsibilities of the parties involved and how the maintenance of fences will be managed.	0,6	1,35
Traffic	Employees and passengers traveling to and from the airport	Increased traffic volumes through town (surfaced road).	Increased traffic volumes through town (surfaced road).	1	4	2,5	4	3,25	0,4	1,3	• The minimal impact (if detected) can be offset by minor slipway • improvements and improved road signs.	0,6	0,78
Traffic	Employees and passengers traveling to and from the airport	Increased traffic volumes through town (surfaced road).	Safety (collisions) due to the increased peak traffic volumes - specifically proximity of the school.	3	4	3,5	4	3,75	0,6	2,25	• Safety can be improved by upgrading road signs and paint markings. • Traffic calming measures are required including speed restriction.	0,6	1,35
Traffic	Employees and passengers traveling to and from the airport	Increased traffic volumes on gravel roads..	An existing and increased safety risk due to dust.	3	4	3,5	4	3,75	0,8	3	• The recommended action is the upgrading to a surfaced standard of the gravel road sections.	0,6	1,8
Traffic	Employees and passengers traveling to and from the airport	Increased traffic volumes on gravel roads.	Possible negative impact on neighbouring farmers due to dust on grazing.	3	4	3,5	4	3,75	0,6	2,25	• The recommended action is the upgrading to a surfaced standard of the gravel road sections.	0,6	1,35

TABLE 10-6: SOCIO ECONOMIC – IMPACT RISK ASSESSMENT

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Socio-economic	Construction and operations of airport facility	Impact on current occupiers and economic activities by landowner	Loss of land used for farming Loss of land used for engineering works Relocation of residences on the property (only one)	Construction and operations	4	4	4	3	3,5	1	3,5	• Purchase farming land to allow for re-establishment of farming elsewhere. • Proactively engage with landowner to source way forward for people residing on property.	0,6	2,1
Socio-economic	Operation of airport facility	Impact on economic activities undertaken by neighbouring landowners	Noise impacts resulting in land not being suitable for current activities (lambing ewes and guesthouse)	Operations	3	4	3,5	4	3,75	0,8	3	• Refer to section related to noise	0,6	1,8
Socio-economic	Construction of airport facility	Employment opportunities during construction	Employment opportunities during construction	Construction	3	3	3	4	3,5	1	3,5	• Maximise the employment of local persons (unemployed youth) by contractors.	1	3,5
Socio-economic	Operation of airport facility	Employment of local persons during operations	Permanent Employment	Operations	1	4	2,5	4	3,25	0,6	1,95	• Maximise the employment of local persons.	1	1,95
Socio-economic	Construction and operations of airport facility	Local contractors used in construction and operational activities	Local Procurement	Construction and operations	2	3	2,5	3	2,75	0,8	2,2	• Procurement plan to set aside contracts for local contractors where such contracts do not require specialised work. • Maximise expenditure within the area of influence.	1	2,2
Socio-economic	Construction and operations of airport facility	Increased noise levels due to planes passing overhead	Noise disturbance	Operations	4	1	2,5	3	2,75	1	2,75	• Refer to section related to noise	0,6	1,65
Socio-economic	Influx of persons	Persons attracted to area due to increased employment opportunities	Infrastructure challenges and opportunistic occupation of land	Construction and operations	4	4	4	4	4	0,8	3,2	• Employment practices focussed at local labour.	0,6	1,92
Socio-economic	Closing of Postmasburg Airfield	Closing of airfield required due to new CAA licence issued in close proximity	Loss of use of Postmasburg Airfield	Construction	3	4	3,5	3	3,25	1	3,25	• Consultation with stakeholders at aviation club. • Plan to accommodate the users of Postmasburg airfield at new airport. • Investigate opportunity for continued use of Postmasburg Airfield as co-dependent runway.	0,6	1,95

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Socio-economic	Construction and operations of airport facility	Influx of persons	Pressure on municipal services and infrastructure	Construction and operations	3	3	3	3	3	0,8	2,4	• Consultation with local municipality with respect to planning and Kolomela mine to provide support in future planning as required.	0,6	1,44

TABLE 10-7: DECOMISSIONING - IMPACT RISK ASSESSMENT

IMPACT CATEGORY	ACTIVITY	ASPECT	POTENTIAL IMPACT	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Soil	Removal of infrastructure	Runoff from disturbed areas	Soil erosion	4	3	3,5	3	3,25	0,6	1,95	• Appropriate sloping of areas to reflect natural landscape. • Monitor site after closure and decommissioning for erosion problems	0,6	1,17
Soil	Movement of vehicles	Soil compaction	Affect soil characteristics and fertility/	3	3	3	3	3	0,6	1,8	• Rip all compacted areas prior to seeding.	0,6	1,08

Soil	General waste generation	Storage and management of general waste (building rubble, domestic waste)	Litter in adjacent areas Environmental pollution	3	3	3	3	3	0,6	1,8	• Store general waste in designated areas in marked containers. • Littering must be prohibited. • Construction footprint and adjacent areas must be inspected regularly to detect and clean up any litter. • Dispose general waste at a licenced facility.	0,6	1,08
Soil	Hazardous waste generation	Storage and management of hazardous waste (contaminated rags and PPE, used oil)	Environmental pollution	4	3	3,5	3	3,25	0,6	1,95	• Store hazardous waste in designated areas in marked containers with containment in place. • Any spillages must be cleaned up appropriately. • Dispose hazardous waste at a licenced facility	0,6	1,17
Biodiversity - Flora and flora	Decommissioning of infrastructure	Earth works - edge effects	Impact on habitat	3	3	3	3	3	0,8	2,4	• Clearly demarcate area for decommissioning • Rehabilitate footprint with indigenous floral species. • Implement follow up and monitoring to ensure sustained vegetation growth.	0,8	1,92
Surface Water Resources	Decommissioning / removal of surface infrastructure	*Compacted soils, latent impacts of vegetation losses; and *Altered flow and runoff	Sedimentation of wetlands *Proliferation of alien vegetation *Potential indiscriminate disposal of rubble	4	3	3,5	3	3,25	0,8	2,6	• *Pollution prevention through infrastructure design, in order to prevent, eliminate and/or control potential pollution of soils, groundwater and surface water should be implemented • Implement a monitoring programme to detect and prevent the pollution of soils, surface water and groundwater. • Restrict any movement in undisturbed cryptic wetlands during decommissioning.	0,6	1,56
Land use	Closure and rehabilitation of facility.	Return site to reflect baseline environment.	Restoration of ecosystems Return land to predevelopment state.	3	5	4	3	3,5	0,8	2,8	• Implement rehabilitation plan upon decommissioning.	1	2,8
Socio-economic	Decommissioning	Non-continuation of facility	Job losses	3	3	3	3	3	1	3	• Engage with employees timeously prior to closure. • Investigate the reallocation of resources.	1	3

11.SUMMARY OF SPECIALIST REPORTS

The Table below contains a summary of the mitigation measures proposed by the specialists and also shows the measures that have been transferred to the Environmental Management Programme (Part B). The mitigation measures incorporated in the EMPr is based on the practical implementation thereof. It will allow the applicant to ensure that adequate mitigation is implemented from a practical and realistic point of view.

TABLE 11-1: SUMMARY OF SPECIALIST STUDIES AND RECOMMENDATIONS

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
Noise Impact Assessment (Airshed Planning Professionals, October 2020)	For construction activities, the following good engineering practice should be applied: • All diesel-powered equipment and plant vehicles should be kept at a high level of maintenance. This should particularly include the regular inspection and, if necessary, replacement of intake and exhaust silencers. Any change in the noise emission characteristics of equipment should serve as trigger for withdrawing it for maintenance. • Equipment with lower sound power levels must be selected. Vendors should be required to guarantee optimised equipment design noise levels. • Maintain road surfaces regularly to avoid corrugations, potholes etc. • Implement strict speed limits on the access road between Postmasburg and the airport. • Limiting construction activity and vehicle traffic to hours between 06:00 and 18:00 where possible. No construction activities should be conducted between 22:00 and 06:00. • A noise complaints register must be kept, communication channels with nearby NSRs established and noise complaints investigated. **Operations** • All ground fleet vehicles should be kept at a high level of maintenance. Refer to the first point under Section 5.1 above. • Maintain road surfaces of the access road regularly to avoid corrugations, potholes etc. • Implement strict speed limits on the access road between Postmasburg and the airport. • Limiting airport activity and vehicle traffic to between 06:00 and 18:00 where possible. No airport activities or flights should be conducted between 22:00 and 6:00. • Flight routes, timing and altitude for aircraft flying over NSRs should be carefully planned to minimise noise impacts.	**Construction** • All diesel-powered equipment and plant vehicles should be kept at a high level of maintenance. This should particularly include the regular inspection and, if necessary, replacement of intake and exhaust silencers. Any change in the noise emission characteristics of equipment should serve as trigger for withdrawing it for maintenance. • Implement strict speed limits on the access road between Postmasburg and the airport. • Limiting construction activity and vehicle traffic to hours between 06:00 and 18:00 where possible. • A noise complaints register must be kept, communication channels with nearby NSRs established and noise complaints investigated. **Operations** •Construct airport according to the mitigated layout plan to reduce noise levels at sensitive receptors. •Specific mitigation measures that must be incorporated in the operational manual to minimise noise levels are included in section 6 of the EMPr. These measures relate to the optimisation of the landing and departures which specifically states how the airplanes will approach or depart from the facility in terms of the identified receptors. •Implement complaint management procedure. •Flight schedules should be communicated to nearby NSRs, especially those to the northeast and southwest of the airport. Any deviation to flight schedules must be communicated to affected parties

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Flight schedules should be communicated to nearby NSRs, especially those to the northeast and southwest of the airport. Any deviation to flight schedules must be communicated to affected parties. • A noise complaints register must be kept communication channels with nearby NSRs established and noise complaints investigated.	
Freshwater Ecological Assessment (Scientific Aquatic Services, 2020)	**Planning** • Infrastructure footprint has been realigned and optimised to minimise direct encroachment on CWs and their catchments, resulting in a notable reduction in the total extent of wetland habitat that may potentially be lost as a result of the proposed development. • If further optimisation is feasible to avoid direct encroachment on CWs 3 and 4 and their catchment this is encouraged however it is acknowledged that due to the abundance of wetland pans within the study area, this may not be feasible. • Encroachment into any CWs located along the outer boundaries of the infrastructure footprint area must be avoided if possible or minimised if avoidance is not feasible to ensure that the impact significance of edge effects is minimized; * • Appropriate stormwater management measures must be implemented to prevent ingress of contaminated runoff to CW 10. **Construction - Clearing of vegetation and site preparation prior to construction activities** • The mitigated layout has resulted in reduced encroachment of infrastructure on CWs and their associated catchments. If it is possible to further optimise the project footprint to further reduce the direct impacts to CWs and their related catchments this should be undertaken. It is acknowledged however that due to the abundance of CWs this may not be feasible; • Strict control of sewage water treatment must take place and the sewage system must link into the existing sewer network • Since no infrastructure is planned near the EDLs, there should be no need for personnel or vehicular activity within or in proximity to the EDLs. The EDLs must be designated as 'no go' areas and no disposal of waste products is permitted within the EDLs or the CWs; • CWs 1, 7, 10 and 11 may only be accessed by authorised personnel for the purposes of erecting the boundary fence. No indiscriminate activities must be permitted within those CWs; • CWs 2, 5, 6, 8, 9 and 12 must be demarcated as 'no go' areas, remaining off-limits to all personnel and vehicles/machinery;	• Construct airport facility according to the mitigated layout plan to avoid/minimise impacts on wetlands. • Contractor laydown areas, and material storage facilities to remain outside of the wetland pans and their associated catchments. • Refer to section related to soil pollution • The wetland pans, not impacted by the development, must be demarcated and defined as no-go areas. • Only designated personnel must be allowed to enter the areas where the fence will be constructed across the wetland pans.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Adequate stormwater management must be incorporated into the design of the proposed development in order to prevent erosion and the associated sedimentation of the wetland pans. In this regard special mention is made of: - Sheet runoff from cleared areas, paved surfaces and access roads needs to be curtailed; and -Runoff from paved surfaces should be slowed down by the strategic placement of berms. • The use of 'green' stormwater management techniques such as vegetated swales, constructed wetlands (attenuation ponds), and permeable paving (where practical, e.g. in parking areas) is strongly recommended. Such methods will assist in polishing stormwater runoff, thus minimising potential pollution of the receiving freshwater environment; • Monitor all potentially affected CWs which are not lost during construction for changes in vegetation structure and composition related to water stress should variation in the vegetation be observed.	
	Construction – o **Construction of airport infrastructure (runway) partially over CWs 3 and 4. Boundary fence to traverse CWs 1, 7, 10, 11.** o **Potential edge effects on CWs 2, 5, 6, 8, 9 and 12.** • The presence of all faunal species (including macroinvertebrates) and any floral SCC associated with the CWs within the infrastructure footprint must be determined by a suitably qualified specialist prior to commencement of construction and preferably during the summer rainfall period, and appropriate mitigation measures implemented prior to the commencement of any site-clearing activities. This may potentially take the form of 'rescue and relocation' efforts, and may require permits; thus, this aspect must be incorporated into the planning phase of the proposed development.	
	Construction of access road and surface infrastructure located adjacent to CWs not directly affected by infrastructure (CWs 2, 5, 6, 8, 9 and 12). • All vegetation clearing to be limited to what is essential, and as much indigenous vegetation as possible is to be retained. • An Alien Invasive Plant (AIP) plan must be compiled by a suitably qualified specialist and must be implemented prior to construction and throughout the life of the development.	

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	Construction: Stockpiling of topsoil, earthworks, potential indiscriminate movement of vehicles within affected CWs and their catchments. Potential disposal of hazardous and non-hazardous materials in CWs or EDLs • Contractor laydown areas, and material storage facilities to remain outside of the wetland pans and episodic drainage lines and their associated catchments. • All vehicle re-fuelling is to take place outside of the wetland pans, episodic drainage lines and their catchments. • The wetland pans, episodic drainage lines and their catchments must be demarcated and defined as areas in which no activities are proposed and should be marked as a no-go area outside of the boundaries of the airport.	
Freshwater Ecological Assessment (Scientific Aquatic Services, 2020)	Operations: Increased risk of pollution of surface water • Pollution prevention through infrastructure design, in order to prevent, eliminate and/or control potential pollution of soils, groundwater and surface water should be implemented; and • Implement a monitoring programme to detect and prevent the pollution of soils, surface water and groundwater.	• Remaining wetland pans must be designated as no-go areas • Prohibit placement of any material in the remaining wetland pans • Inspect remaining wetland pans in close proximity to the airport on a quarterly basis. • Regular inspection of sewage system. • Maintenance must be conducted as required by standard practice.
Freshwater Ecological Assessment (Scientific Aquatic Services, 2020)	**Decommissioning / removal of surface infrastructure** • Demolition footprint must be clearly demarcated and no related activities, including the movement of vehicles, must be permitted to occur outside of the footprint area; • All related waste and rubble must be removed from site and disposed of according to relevant SABS standards. No waste must be permitted to enter the wetland pans or episodic drainage lines; • Edge effects such as erosion must be monitored and managed as recommended during construction and operational phases; • Rehabilitation must ensure that the vegetation assemblage structure and function are reinstated in such a way as to ensure the ongoing functionality of the wetland pans and episodic drainage lines at pre-development levels; • All areas must be resloped and an appropriate layer of topsoil reapplied and where necessary and reseeded with indigenous grasses; and • It is critical that ongoing monitoring of alien vegetation is maintained post-closure, as proliferation of alien vegetation in the demolition areas is expected.	• Regular inspection of sewage system. • Maintenance must be conducted as required by standard practice.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
Floral Assessment (Scientific Terrestrial Services, 2020)	**Planning Phase** **Floral Habitat and Diversity** • Minimise loss of indigenous vegetation where possible through adequate planning and, where necessary, by incorporating the sensitivity of the biodiversity report as well as other specialist studies; • It must be ensured that, as far as possible, all proposed infrastructure, including temporary infrastructure, is placed outside of sensitive habitat units, i.e., Wetland pans (and associated zones) **Floral SCC** • Due to the potential for a higher abundance and diversity of floral SCC occurring within the study area than what was found during the field investigation (seasonal constraints), it is recommended that another walkdown of the footprint area take place prior to vegetation clearing - especially December to February (i.e. within the flowering season of most floral species), with January likely to be most suitable, on condition that rainfall was adequate.. This walkdown must coincide with the flowering period of all potentially occurring SCC and should be conducted by a suitably qualified specialist. Where possible, these species should be relocated to suitable habitat outside of the direct footprint area; and • A licence from the Department of Environment, Forestry and Fisheries (DEFF) is required for the removal of NFA protected tree species (only one individual of Vachellia erioloba likely to be impacted). For the removal, destruction or relocation of protected flora in terms of the NCNCA, a license is required from the Department of Environment and Nature Conservation (DENC).	• A licence from the Department of Environment, Forestry and Fisheries (DEFF) is required for the removal of NFA protected tree species. For the disturbance of protected flora in terms of the NCNCA, a license is required from the Department of Environment and Nature Conservation (DENC). • Construction footprint must be clearly demarcated according to mitigated project layout. • All areas of increased ecological sensitivity should be designated as No-Go areas.
	Construction Phase **Development footprint** • It is recommended that all construction personnel be educated in environmental awareness; • The construction footprint must be kept as small as possible in order to minimise impact on the surrounding environment (edge effect management). The approved footprint area must be demarcated to avoid unnecessary clearing and destructing of natural vegetation; • Removal of vegetation must be restricted to what is absolutely necessary and should remain within the approved development footprint; • All areas of increased ecological sensitivity (i.e. Calcrete Outcrops, Wetland pans outside of the construction footprint, Banded Ironstone Outcrops) should be designated as No-Go areas and be off limits to all unauthorised construction vehicles and personnel;	• All areas of increased ecological sensitivity (i.e. Calcrete Outcrops, Cryptic Wetlands outside of the construction footprint, Banded Ironstone Outcrops) should be designated as No-Go areas • Vehicles should be restricted to travel only on designated existing roadways • No temporary waste storage sites should be allowed in areas with natural vegetation. • All soil compacted as a result of construction activities should be ripped, profiled and reseeded; • Any unauthorised collection or harvesting of floral species or material must be prohibited;

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Vehicles should be restricted to travelling only on designated roadways to limit the ecological footprint of the construction activities; • Planning of temporary roads and access routes should take the site sensitivity plan into consideration. If possible, such roads should be constructed outside of the sensitive habitat and planned in a manner that will not lead to habitat fragmentation. It is recommended that existing roads be utilised; • No dumping of litter, rubble or cleared vegetation on site should be allowed. Infrastructure and rubble removed as a result of the construction activities should be disposed of at an appropriate registered dump site away from the development footprint. No temporary dump sites should be allowed in areas with natural vegetation. Waste disposal containers and bins should be provided during the construction phase for all construction rubble and general waste. Vegetation cuttings must be carefully collected and disposed of at a separate waste facility; • If any spills occur, they must be cleaned up immediately to avoid soil contamination which has the potential to hinder floral rehabilitation down the line. Spill kits should be kept on-site within workshops. In the event of a breakdown, maintenance of vehicles must take place with care, and the recollection of spillage should be practised, preventing the ingress of hydrocarbons into the topsoil; and • Upon completion of construction activities, it must be ensured that no bare areas remain, and that indigenous species be used to revegetate the disturbed area. **Edge effect management** • To limit edge effect impacts to the surrounding natural habitat, the below must be followed: • Demarcating all footprint areas during construction activities; • No construction rubble to be disposed of outside of demarcated areas, and should be taken to a registered waste disposal facility; • All soils compacted as a result of construction activities should be ripped, profiled and reseeded; • Suppress dust to mitigate the impact of dust on flora within a close proximity of construction activities; • Minimise the risk of erosion by limiting the extent of disturbed vegetation and exposed soil; and • Manage the spread of AIP species and bush encroachers, which may affect remaining natural habitat within surrounding areas. **Floral SCC** • Any unauthorised collection of floral material is to be prohibited;	• An invader plant control plan must be developed and implemented for the site and must include ongoing alien and invasive plant monitoring and clearing/control.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Monitoring of rescued and relocated floral SCC should commence during the construction phase; • Harvesting of protected floral species by construction personnel should be strictly prohibited; and • Edge effect control needs to be implemented to prevent further degradation and potential loss of floral SCC outside of the proposed development footprint area. **Fire** • No illicit fires must be allowed during the construction of the proposed development. **Rehabilitation** • Any areas that have been left bare as a result of the construction activities should be rehabilitated using indigenous species.	
Floral Assessment (Scientific Terrestrial Services, 2020)	**Operational and Maintenance Phase** **Development footprint** • No additional habitat is to be disturbed during the operational phase of the development; • No vehicles are allowed to indiscriminately drive through sensitive habitat and natural areas; • Upon completion of construction activities and decommissioning of temporary access roads or infrastructure, all impacted and disturbed areas should be ripped, reprofiled and reseeded with indigenous species from the region that will assist to stabilise soils as soon as possible; • The airport must be adequately fenced to prevent personnel and customers from entering the remaining natural veld and potentially causing further degradation or harvesting of indigenous flora; • Where formal landscaped gardens are envisioned, use should be made of indigenous species or ornamental alien species that are not listed within the NEMBA Alien Species List (2016); and • No dumping of litter or garden refuse must be allowed on-site. As such it is advised that vegetation cuttings from landscaped areas be carefully collected and disposed of at a separate waste facility. **Floral SCC** • Monitoring of rescued and relocated floral SCC should continue during the operational and maintenance phase until it is evident that the species have successfully established; • As far as possible, no collection of floral SCC or medicinal floral species within the study area or adjacent natural habitat must be allowed during the operational phase of the Postmasburg Airport development; and	• No additional habitat is to be disturbed during the operational phase of the development; • Prohibit vehicles to drive through sensitive habitat and natural areas; • The airport must be adequately fenced to prevent personnel and customers from entering the remaining natural veld.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Edge effect control needs to be implemented to prevent further degradation and potential loss of floral SCC or suitable habitat for such species outside of the proposed development footprint.	
Faunal Assessment (Scientific Terrestrial Services, 2020)	**Planning phase** **Faunal Habitat and Diversity** • At all times, ensure that sound environmental management is in place during the planning phase; • During the site-pegging phase of surface infrastructure, any faunal SCC that will be affected by surface infrastructure must be noted and, where possible, relocated to suitable habitat surrounding the disturbance footprint. The relevant permits must be applied for from the Northern Cape Department of Environment and Nature Conservation (NCDENC) prior to construction; • Minimise loss of indigenous vegetation where possible through refining the final development footprint, optimising the design within habitat of lowered ecological importance and sensitivity while avoiding development within the sensitive or unique habitats (Freshwater Habitat) as far as possible, while maintaining the desired aesthetic effect envisioned for the development; • Prior to vegetation clearing activities in the natural vegetation units the site should be inspected for the presence of mammal and scorpion burrows, reptiles and baboon spiders. If located, these species should be carefully excavated ensuring no harm to the specimens, and relocated to similar surrounding habitat outside of the footprint area; • Design of infrastructure should be environmentally sound and all construction equipment to be utilised must be a good working condition, and all possible precautions taken to prevent potential spills and /or leaks; • Prior to the commencement of proposed activities on site an alien vegetation management plan should be compiled for implementation throughout all development phases; • A stormwater management plan should be designed and implemented for all phases of the development to ensure changes in the hydrological cycle and its influence on Freshwater Habitat is mitigated for; and • The final development plan should be assessed by a suitably qualified faunal specialist in order to ensure sensitive habitats have been avoided as far as feasibly possible, in line with the mitigation hierarchy as advocated by the DEA (2013).	• The development footprint should be demarcated, and it should be ensured that no development related activities take place outside of the demarcated footprint • Any structures which may act as perching sites for birds should be installed with anti-perching spikes; • Providing shelter for wildlife increases their potential activity around the airport. Methods to reduce available shelter include: 1) Exclusion measures such as spikes, netting, panelling on ledges and holes around buildings assist in prevention of birds taking residence, 2) Nest removal and 3) Cutting of grass within the fenced off infrastructure area and/or 30m from the runway. • No hunting/trapping or collecting of faunal species is allowed. • Internal resources with appropriate training should be used for the removal of smaller, less venomous snakes. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. • Any natural areas beyond the development footprint, that have been affected by the construction activities, must be rehabilitated using indigenous plant species.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
Faunal Assessment (Scientific Terrestrial Services, 2020)	**Construction phase** **Development footprint** • The development footprint should be demarcated, and it should be ensured that no development related activities take place outside of the demarcated footprint. This final footprint area should be reviewed by a faunal specialist to ensure no detrimental impacts to faunal assemblages occur; • In order to reduce faunal and bird presence within the infrastructure footprint (fenced off area), constant disturbance or harassment to any birds and mammals attempting to utilize the area (for breeding or foraging) should be initiated; • Any structures which may act as perching sites for birds should be installed with anti-perching spikes; • Providing shelter for wildlife increases their potential activity around the airport. Methods to reduce available shelter include: 1) Exclusion measures such as spikes, netting, panelling on ledges and holes around buildings assist in prevention of birds taking residence, 2) Nest removal and 3) Cutting of grass within the fenced off infrastructure area and/or 30m from the runway should be considered depending on the major bird assemblages, as some species prefer short grass while other species prefer long grass; • Faunal habitat beyond the demarcated area should not be cleared or altered; • Construction equipment should be restricted to travelling only on designated roadways to limit the ecological footprint of the development activities. Additional road construction should be limited to what is absolutely necessary, and the footprint thereof kept to a minimal; • No dumping of litter, rubble or cleared vegetation on site should be allowed. As such it is advised vegetation cuttings (especially AIP) to be carefully collected and disposed of at a separate waste facility; • If any spills occur, they should be immediately cleaned up to avoid soil contamination that can hinder floral rehabilitation later down the line and faunal recolonization. In the event of a breakdown, maintenance of vehicles must take place with care, and the collection of spillages should be practised preventing the ingress of hydrocarbons into the topsoil; and • No hunting/trapping or collecting of faunal species is allowed. **Alien vegetation** • An AIP control plan must be developed for the site and must include ongoing alien and invasive plant monitoring and clearing/control throughout all phases of the development.	• The development footprint should be demarcated, and it should be ensured that no development related activities take place outside of the demarcated footprint • Any structures which may act as perching sites for birds should be installed with anti-perching spikes; • Providing shelter for wildlife increases their potential activity around the airport. Methods to reduce available shelter include: 1) Exclusion measures such as spikes, netting, panelling on ledges and holes around buildings assist in prevention of birds taking residence, 2) Nest removal and 3) Cutting of grass within the fenced off infrastructure area and/or 30m from the runway. • No hunting/trapping or collecting of faunal species is allowed. • Internal resources with appropriate training should be used for the removal of smaller, less venomous snakes. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. • Any natural areas beyond the development footprint, that have been affected by the construction activities, must be rehabilitated using indigenous plant species.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• The project perimeters should be regularly checked for AIP establishment and to prevent spread into surrounding natural areas; and • Alien vegetation that is removed must not be allowed to lay on unprotected ground as seeds might disperse upon it. All cleared plant material to be disposed of at a licensed waste facility, which comply with legal standards. **Faunal SCC** • No collection of faunal SCC within the study area may be allowed by construction personnel; • Edge effect control needs to be implemented to prevent further degradation and potential loss of faunal SCC habitat outside of the proposed development footprint; • Once the final development plan (should the current layout change) has been formalized, a suitably qualified specialist should be consulted as to the overall suitability of the project, in line with the mitigation hierarchy as advocated by the DEA (2013); • Should any other faunal species protected under the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) or the Northern Cape Nature Conservation Act, 2009 (Act No. 9 of 2009) be encountered, construction should be halted and authorisation to relocate such species must be obtained from NCDENC or the Department of Environmental Affairs (DEA); • Edge effect control needs to be implemented to ensure no further degradation and potential loss of faunal SCC outside of the proposed project footprint area; • A suitable rescue and relocation plan should be developed and overseen by a suitably qualified specialist should SCC be identified within the study area in order to ensure that species loss during construction activities is kept to a minimum; and • Smaller species such as scorpions and reptiles are likely to be less mobile during the colder period, as such should any be observed in the study site during clearing and operational activities, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance footprint. Construction personnel are to be educated about these species and the need for their conservation. Smaller scorpion species and harmless reptiles should be carefully relocated by a suitably nominated construction person or staff member. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. **Fire** • No illicit fires must be allowed during the construction phase of the proposed development.	

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	Stormwater Management • An adequate stormwater management plan must be incorporated into the design of the proposed development in order to prevent, hydrocarbon ingress, erosion of topsoil and siltation of watercourses leading to the loss of faunal habitat through the discharge of water into the receiving environment. In this regard, special mention is made of: • Sheet runoff from cleared areas and access roads needs to be curtailed; • Runoff from paved surfaces should be slowed down by the strategic placement of berms and water dissipation structures; and • Stormwater runoff has potential to cause harm to the sensitive Freshwater Habitat units which fauna utilise . It is also important that as far as possible the hydropedological regimes are not altered. **Rehabilitation** • Should large areas be exposed, a rehabilitation plan should be compiled by a suitable specialist. This rehabilitation plan should consider all development phases of the project indicating rehabilitation actions to be undertaken during, and once construction has been completed as well as ongoing rehabilitation during the operational phase of the project to ensure habitat for fauna is restored; and • Any natural areas beyond the development footprint, that have been affected by the construction activities, must be rehabilitated using indigenous plant species.	
Faunal Assessment (Scientific Terrestrial Services, 2020)	**Operational phase** **Development footprint** • It is recommended that the natural landscape be retained as far as possible, and that no elaborate ornamental gardens be created, to prevent the spread of ornamentals into the surrounding natural habitat. Where formal landscaped gardens are envisioned, use should be made of indigenous species; • All vehicles should be restricted to travelling only on designated roadways to limit the ecological footprint of the development activities; • The entire runway should be fenced to ensure no fauna may run onto the landing strip causing a collision with an aircraft. The fencing should however only be aimed at keeping larger mammal species out, as well as domestic livestock. The fence should still facilitate the movement of small mammals and reptiles; • No sewage water or any other water sources (other than those released from the natural hydrological cycle) should be released or impounded on the property as this increases the likelihood of large waterfowl and other birds utilizing the area, increasing the likelihood that bird strikes may occur;	• No hunting/trapping or collecting of faunal species is allowed. • Internal resources with appropriate training should be used for the removal of smaller, less venomous snakes. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. • Enforce a strict speed limit on access road - signs indicating the presence of animals (especially kudus) can be erected on the access road.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Reactive control measures to manage birds and other wildlife at the airport include dispersal measures(sirens, lasers, pyrotechnics, and Border Collies) and removal measures (live capture, nest removal or culling); • No dumping of litter or garden refuse should be allowed to remain on-site. As such it is advised that vegetation cuttings to be carefully collected and disposed of at a separate waste facility; and • No hunting/trapping or collecting of faunal species is allowed unless authorised as part of the management of problem birds of other fauna. **Alien vegetation** • Ongoing alien and invasive plant monitoring and clearing/control should take place throughout the operational phase, and the project perimeters should be regularly checked for AIP establishment to prevent spread into surrounding natural areas which may alter the suitability of the habitat to faunal species; and • Alien vegetation that is removed must not be allowed to lay on unprotected ground as seeds might disperse upon it. All cleared plant material to be disposed of at a licensed waste facility, which comply with legal standards. **Faunal SCC** • No collection of faunal SCC within the study area may be allowed by operational phase personnel; • Kori and Ludwig's Bustards and Burchell's coursers do inhabit the area and their presence around the study area should be monitored. Should these species, or and other avifaunal SCC, forage near the runway Sirens, pyrotechnics or trained dogs can be utilized to disturb the birds so they may vacate the runway. • Should any other faunal species protected under the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) or the Northern Cape Nature Conservation Act, 2009 (Act No. 9 of 2009) be encountered, a suitably qualified specialist should be consulted. Should it be deemed necessary to move the taxa authorisation to relocate such species must be obtained from NCDENC or the Department of Environmental Affairs (DEA); and • Smaller species such as scorpions and arachnids are likely to be less mobile during the colder period, as such should any be observed in the study site during operational activities, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance footprint. Construction personnel are to be educated about these species and the need for their conservation. Smaller scorpion species and harmless reptiles should be carefully relocated by a suitably nominated construction person or staff member. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. **Rehabilitation**	

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Where bare soils are left exposed as a result of construction activities, they should be immediately rehabilitated. Rehabilitated efforts should continue to be monitored throughout the operational phase, until natural processes will allow the ecological functioning and biodiversity of the area to be re-instated.	
Heritage Impact Assessment (PGS Heritage, 2020)	**General project area** • Implement a chance to find procedure in case where possible heritage finds are uncovered. **Possible graves** • The site should be demarcated with a 30-meter buffer and the grave should be avoided if any construction is to happen close to it. **Identified archaeological sites** • In the event that any of the identified archaeological site are to be impacts a Phase 2 archaeological mitigation process must be implemented. This will include, surface collections, test excavations and analysis of recovered material. A permit issued under s35 of the NHRA will be required to conduct such work. **Palaeontological finds** • However, if fossil remains are discovered during any phase of construction, either on the surface or exposed by fresh excavations the Chance Find Protocol must be implemented by the ECO in charge of these developments.	**General project area** • Implement a chance to find procedure in case where possible heritage finds are uncovered. **Possible graves** • The site should be demarcated with a 30-meter buffer and the grave should be avoided if any construction is to happen close to it. **Identified archaeological sites** • In the event that any of the identified archaeological site are to be impacts a Phase 2 archaeological mitigation process must be implemented. This will include, surface collections, test excavations and analysis of recovered material. A permit issued under s35 of the NHRA will be required to conduct such work. **Palaeontological finds** • However, if fossil remains are discovered during any phase of construction, either on the surface or exposed by fresh excavations the Chance Find Protocol must be implemented by the ECO in charge of these developments.
Social Impact Assessment & Social and Human Rights Impact and Risk Analysis (Tloleho Consulting, 2020)	**Economic** **Economic Loss – Current Landowners** • Consider subdivision of land to allow for continued use of portions for engineering works or if not possible allow for compensation to allow businesses to continue elsewhere. • Purchase farming land to allow for re-establishment of farming elsewhere. **Economic Loss – Neighbouring Landowners** • Mitigation implemented to reduce noise levels. • Relocation/alteration of economic activities. **Employment of Local Labour – Construction Phase** • Maximise the employment of local persons (unemployed youth) by contractors. **Employment of Local Labour – Operational Phase** • Training of local persons to increase potential for employment	**Economic** **Economic Loss – Current Landowners** • Purchase farming land to allow for re-establishment of farming elsewhere. **Economic Loss – Neighbouring Landowners** • Mitigation implemented to reduce noise levels. • Relocation/alteration of economic activities. **Employment of Local Labour – Construction Phase** • Maximise the employment of local persons (unemployed youth) by contractors. **Employment of Local Labour – Operational Phase** • Maximise the employment of local persons. **Local Procurement**

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Maximise the employment of local persons. **Local Procurement** • Procurement plan to set aside contracts for local contractors where such contracts do not require specialised work. • Maximise expenditure within the area of influence. **Loss of Recreational Land** • Land not used for airport infrastructure should continue to be used for recreation, as far as practicable. • Investigate additional opportunities for enhancing recreation activities on property. **Increase noise levels** • Alteration of layout to reduce noise impacts on neighbours. • Alteration of flight paths on approach and take-off to reduce noise impacts. • Flight schedules should be communicated to receptors. • Noise complaints investigated. **In-Migration** • Kolomela mine to work with Tsantsabane LM to address security on open land (Erf 1) • Employment practices focussed on local labour. **Relocation of Residential Houses on Farm Kalkfontein** • Investigate opportunity for persons to continue to reside on property. • Expedite negotiations with landowner to allow parties adequate time to reach amicable agreement. **Closing of Postmasburg Airfield** • Consultation with stakeholders at aviation club. • Plan to accommodate the users of Postmasburg airfield at new airport. **Further Compromise in Municipal Infrastructure / Services due to Influx of Persons** • Implement measure to mitigate the potential for in-migration. • Consultation with local municipality with respect to planning and Kolomela mine to provide support in future planning as required. **Increase in Traffic – Impact on Municipal Road Networks** • Ongoing consultation with SAPS and Traffic Department to manage perceptions • Undertake minor improvements within town to improve traffic safety in town. • Reduce traffic from airport to Kolomela mine by bussing of persons to and from the mine. **Increase in Traffic – Road Infrastructure** • Investigate the feasibility of surfacing section of R325 as part of the project. • Lobby the provincial department of Roads & Public Works to improve R325. **Disturbance of Heritage Resources**	• Procurement plan to set aside contracts for local contractors where such contracts do not require specialised work. • Maximise expenditure within the area of influence. **Increase noise levels** • Implement mitigation proposed by noise specialist. **In-Migration** • Employment practices focussed on local labour. **Relocation of Residential Houses on Farm Kalkfontein** • Investigate opportunity for persons to continue to reside on property. • Expedite negotiations with landowner to allow parties adequate time to reach amicable agreement. **Closing of Postmasburg Airfield** • Consultation with stakeholders at aviation club. • Plan to accommodate the users of Postmasburg airfield at new airport. **Further Compromise in Municipal Infrastructure / Services due to Influx of Persons** • Consultation with local municipality with respect to planning and Kolomela mine to provide support in future planning as required. **Increase in Traffic – Impact on Municipal Road Networks** • Ongoing consultation with SAPS and Traffic Department to manage perceptions • Undertake minor improvements within town to improve traffic safety in town. • Reduce traffic from airport to Kolomela mine by bussing of persons to and from the mine. **Increase in Traffic – Road Infrastructure** • Investigate the feasibility of surfacing section of R325 as part of the project. • Lobby the provincial department of Roads & Public Works to improve R325. **Reduced Road Safety** • Implement measures to improve road infrastructure. • Lobby the provincial authority to investigate to upgrade the road.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	• Kolomela mine grievance mechanism to use as a platform for community to raise heritage concerns. • Chance-Find Procedure to be implemented during construction. • Grave site to be demarcated to avoid accidental disturbance. • Phase 2 mitigation of heritage sites to be disturbed to be carried out prior to construction. **Reduced Road Safety** • Implement measures to improve road infrastructure. • Lobby the provincial authority to investigate to upgrade the road.	
Traffic Impact Assessment (R & G Kalahari Consulting Engineers, 2020)	**Routes through town** **Increased traffic volumes through town (surfaced road).** • The minimal impact can be offset by minor slipway improvements and improved road signs. • Safety can be improved by upgrading road signs and paint markings at the school intersection. • Traffic calming measures. • Traffic calming measures are required including speed restriction. **Increased traffic volumes on gravel roads.** • The recommended action is the upgrading to a surfaced standard of the gravel road sections. Dust suppression methods are not recommended for this scenario. **Routes to the south** **Increased traffic volumes on both gravel and surfaced roads.** • Same measure as recommended for the route through town. • Proper access control gate with security fenced access road up to the main entrance gate.	• Safety can be improved by upgrading road signs and paint markings at the school intersection. • The recommended action is the upgrading to a surfaced standard of the gravel road sections. Dust suppression methods are not recommended for this scenario. • Proper access control gate with security fenced access road up to the main entrance gate.
Hydropedological Assessment (Zimpande Research Collaborative, 2020)	**Construction** **Site preparation** • Contractor laydown areas should be located outside of the wetlands as far as practically possible; • Vegetation clearing to be limited to what is absolutely essential; and • Utilise existing roads to gain access to site; • Exposed soils to be protected by suitable covering; and • Duration of impacts must be minimised. **Construction of the proposed surface infrastructure** • If possible, vegetation clearing should be done in a phased manner to limit bare/exposed soils which are prone to erosion. • Exposed soils to be protected by suitable covering; and • Duration of impacts must be minimised.	**Site preparation** • Limit construction footprint to impact on the minimum number of wetlands. • Re-align fence if possible, around wetlands and associated catchments. • Utilise existing roads to gain access to the site. **Construction** • If possible, vegetation clearing should be done in a phased manner to limit bare/exposed soils which are prone to erosion. **Operational** • Ensure that the pre and post runoff volumes to each pan is not altered.

SPECIALIST	RECOMMENDATIONS OF SPECIALIST REPORTS	RECOMMENDATIONS INCLUDED IN THE EMPR REPORT
	Operational **Groundwater abstraction** • Ensure that the abstraction boreholes are properly sealed to avoid seepage and possible cone of depression impacts. **Operation of the stormwater management structures** • Ensure that the pre and post runoff volumes to each pan is not altered. **Decommissioning** • Ensure that the wetland hydrology is not altered.	**Decommissioning** • Ensure that the wetland hydrology is not altered.

12.ENVIRONMENTAL IMPACT STATEMENT

12.1 Summary of Key Findings of the Environmental Impact Assessment

The following have been identified as the key findings of the impact assessment:

12.1.1 Opportunities for Employment, Local Procurement and Economic Development

The project will contribute to economic development in terms of the following:

- Temporary jobs (skilled and unskilled) will be created during the construction phase of which a portion will be sourced from local labour. The project will result the creation of approximately 205 temporary jobs during construction.
- During the operational phase, Kolomela is likely to move the labour operating Tommy's Airfield to the new airport (Approximately 23 permanent employees). Operational phase employment impacts are considered low.
- The purchasing of local goods and services during construction and operations (fuel, food, cleaning services, maintenance, building material, etc.)

12.1.2 Opportunity to improve land management on remainder of property

- The remainder of the farm Kalkfontein should be managed to improve the current state of the environment. This can be done by the rehabilitation of identified disturbed areas, AIP control, bush encroachment management, fence maintenance, investigating and implementing a solution for the current discharge of sewage effluent onto the property.

12.1.3 Socio-economic

12.1.3.1 Loss of agricultural land

- Current economic activities (livestock farming and small engineering operations) will discontinued and lead to income loss. The owner's family income generation ability will definitely be compromised.

12.1.3.2 In-migration of job seekers

- Although the potential for the airport project to drive in-migration and consequent land invasion is considered to be relatively low due to the limited construction job opportunities, the cumulative impact of this project together with the Kapstevel South Project at Kolomela mine, would increase the attraction to the area by job-seekers. The influx of people due to the airport project coupled by the influx caused by the Kapstevel project will put additional pressure on municipal infrastructure.

12.1.3.3 Closure of current airport

- The current Postmasburg Airfield is owned by TLM and used by the local aviation club. The club comprises of local residents who maintain and operate the landing strip and its associated infrastructure including hangars. The construction and operation of the airport by SIOC will ideally require the closure of the existing Postmasburg Airfield for safety reasons. The loss of use of the current landing strip will result in a high significance for the local aviation club. However, this impact can be mitigated through proper consultation and accommodating the users within the General Aviation Area at the new airport. Alternatively, the existing Postmasburg airstrip can be declared as a co-dependent facility to the Kolomela Airport.

12.1.4 Noise

- Noise generation during the operational phase has the potential to result in nuisance conditions for surrounding receptors. The noise will however only be for short durations during aircraft landing and departures. There will be seven flights per week, with flights five days per week
- Noise from the facility has the potential to affect the adjacent sensitive receptors including the farm to the east where lambing ewes are situated and residences and guesthouse located to the south west. The location and alignment of the runway has been adjusted as far as practicable within civil aviation constraints to minimise impacts on receptors.
- Noise mitigation must be incorporated in the operational manual to ensure that the proposed mitigation to reduce noise levels are incorporated in the facility's operations. The incorporation of the noise mitigation in the manual will automatically ensure that flights are managed in a manner which reduce impacts on the noise receptors.

12.1.5 Wetlands

- The project will entail the direct and potentially indirect disturbance of wetland pans on and adjacent to the project footprint. However, as a result of layout optimisation direct impacts on some of the wetlands have been avoided and indirect impacts will be minimised. The layout of the airport has been optimised within the limits of aviation constraints such as topography to minimise impacts on the wetland pans. The access road has also bee realigned to avoid impacts on the pans' catchments.

12.1.6 Biodiversity - flora

- Site establishment and construction of the facility will entail the removal of natural vegetation. This will result in a loss of flora habitat related to the Open Calcrete Thornveld, Lime-rich Habitat and Wetland pans. Impacts on the sensitive banded iron stone outcrop and calcrete outcrops will be avoided due to layout optimisation.
- The establishment of the project footprint may also impact on floral Species of Conservation Concern (SCC) not identified during the specialist study.

12.1.7 Noise impacts

- Noise generation during the operational phase has the potential to result in nuisance conditions for surrounding receptors. The noise will only be for short durations during aircraft landing and departures.
- Noise from the facility has the potential to affect the adjacent farm where lambing ewes are situated and may affect the operations of a guesthouse.
- Noise mitigation must be incorporated in the operational manual to ensure that the proposed mitigation to reduce noise levels are incorporated in the facility's operations.

12.1.8 Freshwater Resources

- The project will entail the direct and potentially indirect disturbance of wetland pans on and adjacent to the project footprint. However, as a result of layout optimisation direct impacts on some of the wetlands will be avoided and indirect impacts will be minimised.
- Incorrect hazardous substance and sewage management has the potential to result in pollution of remaining wetland pans. However, adequate measures have been included to prevent potential impacts.
- Erosion due to increased runoff can result in sedimentation of water course.

12.1.9 Biodiversity - flora

- Site establishment and construction of the facility will entail the removal of natural vegetation. This will result in a loss of flora habitat related to the Open Calcrete Thornveld, Lime-rich Habitat and Wetland pans. Impacts on the sensitive banded iron stone outcrop and calcrete outcrops will be avoided due to layout optimisation.
- The establishment of the project footprint may also impact on floral Species of Conservation Concern not identified during the specialist study.

12.1.10 Biodiversity - fauna

- The perceived impact significance of the proposed development (prior to mitigation) on faunal habitat, diversity and SCC range from medium high to very low. The potential for local or regional impacts are unlikely if recommended mitigation measures are adhered to. If effective mitigation takes place at all stages of the proposed project, most of the impacts may be reduced to a lower significance rating.
- Impacts to SCC will be medium high in the Calcrete Habitat if mitigations measures are ignored due to the high abundance of SCC which utilize this habitat and the permanent alteration of suitable habitat and the impacts resulting from increased vehicle traffic and human disturbances. Mitigation, if implemented correctly, will reduce the impact significance to SCC.

12.1.11 Groundwater

- Groundwater will be abstracted from an on-site borehole to supply the facility. The borehole will be established in the deeper aquifer and insignificant volumes of water will be abstracted. It is not anticipated that the abstraction will impact groundwater users or spring in the area.
- Sewage effluent is currently pumped from the municipal Waste Water Treatment Works (WWTW) to a dam in the northern section of the property (Farm Kalkforntein). This has the potential to cause pollution of underground water resources. The municipality must be engaged to source a solution to the discharge of effluent onto the property.

12.1.12 Land use

- Land uses on the property include low intensity grazing and engineering workshops operated by the owner's family which may be affected if the property is sold. Farming on the property is severely constraint by livestock theft and has scaled down and the impact will not be significant. Surrounding land use including lambing ewes and a guest house that can be affected by noise generation.

12.1.13 Disturbance of Heritage Resources

- Several heritage sites have been identified, but none of these sites are located within the project footprint. However, a chance find procedure must be implemented to ensure that potential heritage resources are preserved.
- Very High palaeontological sensitivity has been allocated to the Ghaap Group while the Kalahari Group has a high Palaeontological Sensitivity. Impacts on palaeontological

heritage during the construction phase could potentially occur but are regarded as having a moderate possibility.

12.1.14 Road Safety and Traffic Disturbance

- There will be no impact on safety (collisions) due to the increased peak traffic volumes (except in the proximity of the school). Safety can be improved by upgrading road signs and the painting of markings. Although the volume of traffic diverted through residential areas are relatively low, it does increase the safety risk. Increased traffic volumes through town (surfaced road) may result in safety concerns at the school intersection school.
- The baseline traffic on the R325 already poses a safety risk to users. The daily volumes are already at a level where there are safety concerns relating to dust generation and poor visibility. Additional traffic will further increase the community safety risks on the road. The road should be surfaced to address these concerns.

12.2 Final site map

The final site layout maps (Mitigated Scenario) is presented in Figure 9-19 and Figure 7-4.

12.3 Summary of the positive and negative implications and risks of the proposed activity and identified alternatives

TABLE 12-1: SUMMARY OF KEY POSITIVE AND NEGATIVE IMPACTS IDENTIFIED FOR THE CONSTRUCTION PHASE

IMPACT CATEGORY	ASPECT	POTENTIAL IMPACT	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	SIGNIFICANCE WITH MITIGATION
Biodiversity - Flora	Vegetation clearance Encroachment of invader plant species	Impact on floral Habitat and Diversity Impact on floral Species of Conservation Concern (SCC)	Moderate	• All areas of increased ecological sensitivity (i.e. Calcrete Outcrops, Cryptic Wetlands outside of the construction footprint, Banded Ironstone Outcrops) should be designated as No-Go areas • Vehicles should be restricted to travel only on designated existing roadways • No temporary waste storage sites should be allowed in areas with natural vegetation. • All soil compacted as a result of construction activities should be ripped, profiled and reseeded; • Any unauthorised collection or harvesting of floral species or material must be prohibited; • An invader plant control plan must be developed and implemented for the site and must include ongoing alien and invasive plant monitoring and clearing/control.	Low
Surface water – Wetland Pans	Runoff from exposed surfaces	Erosion and sedimentation of water courses	Moderate	• Develop and implement a stormwater management plan to prevent erosion and the associated sedimentation of wetlands. • Monitor all potentially affected wetlands, which are not lost during construction, for changes in vegetation structure and composition.	Low
Surface water – Wetland Pans	Construction of airport infrastructure (runway, airport building, fence etc).	Total or partial loss of wetland pans and or the associated catchments	High	• Construct airport facility according to the mitigated layout plan to avoid/minimise impacts on wetlands. • Contractor laydown areas, and material storage facilities to remain outside of the wetland pans and their associated catchments. • Refer to section related to soil pollution • The wetland pans, not impacted by the development, must be demarcated and defined as no-go areas. • Only designated personnel must be allowed to enter the areas where the fence will be constructed across the wetland pans.	Moderate

TABLE 12-2: SUMMARY OF KEY POSITIVE AND NEGATIVE IMPACTS IDENTIFIED FOR THE OPERATIONAL PHASE

IMPACT CATEGORY	ASPECT	POTENTIAL IMPACT	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	SIGNIFICANCE WITH MITIGATION
Soil and surface water resources	Increased runoff from impervious surface.	Soil erosion and loss of topsoil Sedimentation of wetland pans	Moderate	• Implement a stormwater management plan which stipulates specific measures to control runoff in order to prevent erosion.	Low
Surface water – Wetland Pans	Potential spillages of hazardous substances	Soil pollution Surface water pollution	Moderate	• Hazardous substances containers must be clearly marked and must be stored in an area with containment measures in place. • Spill response equipment must be readily available. • Safety data sheets must be available on site for all hazardous substances. • Large spills must be reported as incidents and managed accordingly. • Refuelling must be conducted in a designated area with containment measures in place. • Bulk fuel storage containers must be placed in a bunded area with capacity to contain 110% of the tank volume or 25% of the volume where multiple tanks are stored. • Runoff from the bulk fuel storage and refuelling area as well as the fire truck wash bay must be diverted to an oil separator prior to discharge into the ET ponds.	Low
Noise	Take-off and landing of airplanes Increased noise levels	Nuisance conditions for receptors in the area.	High	• Construct airport according to the mitigated layout plan to reduce noise levels at sensitive receptors. • Specific mitigation measures that must be incorporated in the operational manual to minimise noise levels are included in section 6 of the EMPr. These measures relate to the optimisation of the landing and departures which specifically states how the airplanes will approach or depart from the facility in terms of the identified receptors. • Implement complaint management procedure. • Flight schedules should be communicated to nearby NSRs, especially those to the northeast and southwest of the airport. Any deviation to flight schedules must be communicated to affected parties	Low
Biodiversity - Fauna	Increased risk of vehicle collisions with fauna Potential overexploitation	Impact on faunal Habitat and Diversity	Moderate	• No hunting/trapping or collecting of faunal species is allowed. • Internal resources with appropriate training should be used for the removal of smaller, less venomous snakes. For larger venomous snakes, a suitably trained official or specialist should be contacted to affect the relocation of the species, should it not move off on its own. • Enforce a strict speed limit on access road - signs indicating the presence of animals (especially kudus) can be erected on the access road.	Low

IMPACT CATEGORY	ASPECT	POTENTIAL IMPACT	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	SIGNIFICANCE WITH MITIGATION
Biodiversity – Fauna and flora	Implement sound land management on entire property	Improve status of environmental characteristics of the remaining portions of the farm Kalkfontein	Moderate positive	• Rehabilitation of identified disturbed areas within the property. • Removal of Alien and Invasive plants currently on site. • Investigate the management of bush encroachment, especially in Banded Iron Stone Outcrops. • Where practicable, rehabilitate current disturbance of cryptic wetlands. • Implement solution to prevent further discharge of sewage effluent onto the property. • Assess property for erosion problems and implement measures to remediate.	Moderate positive
Groundwater	Seepage	Pollution of groundwater	Moderate	• Engage with the municipality to discontinue with the discharge of sewage onto the property. • Investigate a solution, in collaboration with the municipality, to resolve capacity issues at the waste water treatment works. • A full analysis, including organic compounds (i.e. e-coli) must be conducted prior to commencement of water abstraction from the water supply borehole.	Low
Traffic	Increased traffic volumes through town (surfaced road).	Safety (collisions) due to the increased peak traffic volumes - proximity of the school.	Moderate	• Safety can be improved by upgrading road signs and paint markings. • Traffic calming measures are required including speed restriction.	Low

TABLE 12-3: SUMMARY OF KEY POSITIVE AND NEGATIVE IMPACTS IDENTIFIED RELATED TO SOCIO ECONOMIC CONSIDERATIONS

IMPACT CATEGORY	ASPECT	POTENTIAL IMPACT	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	SIGNIFICANCE WITH MITIGATION
Socio-economic	Impact on current economic activities by landowner	Loss of land used for farming Loss of land used for engineering works	High	• Purchase farming land to allow for re-establishment of farming elsewhere. • Engage with the landowner on the way forward with regards to people residing on the property.	Low
Socio-economic	Local contractors used in construction and operational activities	Local Procurement	Moderate positive	• Procurement plan to set aside contracts for local contractors where such contracts do not require specialised work. • Maximise expenditure within the area of influence.	Moderate positive
Socio-economic	Persons attracted to area due to increased employment opportunities	Infrastructure challenges and opportunistic occupation of land	High	• Employment practices focussed at local labour.	Low
Socio-economic	Closing of airfield required due to new CAA licence issued in close proximity	Loss of use of Postmasburg Airfield	High	• Consultation with stakeholders at aviation club. • Plan to accommodate the users of Postmasburg airfield at new airport. • Investigate opportunity for continued use of Postmasburg Airfield as co-dependent runway.	Low

12.4 Proposed management objectives and the impact management outcomes for inclusion in the EMPr

The key mitigation measures to be included in the EMPr are as follows:

- Implementation of project layout as per Mitigated Scenario.
- The site operational manual must include measures to minimise noise from aircrafts approaching and departing the facility.
- The construction footprint must be clearly demarcated according to the mitigated layout and activities must be restricted to the predetermined footprint.
- The sensitive habitats, including the wetland pans (not impacted), the banded iron stone outcrops and calcrete outcrops must be established as no-go areas.
- Adequate containment measures for hazardous substances must be implemented to prevent soil and surface water contamination.
- Implement a stormwater management plan which addresses potential erosion and spill management at refuelling area.
- Conduct thorough consultation with the users of the existing Postmasburg airfield to reach an agreement on the way forward for the potential use of the proposed airport.
- SIOC must implement measures to ensure that appropriate land management is implemented at the remainder of the farm, i.e. rehabilitation of disturbed areas, alien and invasive plant management etc.
- Sufficient resources must be available to manage fires on the property.
- Implement measures to minimise impact on the social environment, including i.e.
    - Procurement plan to set aside contracts for local contractors where such contracts do not require specialised work.
    - Engage with the landowner to verify to the way forward regarding the people currently residing on the property.

12.5 Final proposed alternatives

See Section 7. The final proposed layout alternatives are provided in:

Figure 7-2 (Original layout)

Figure 7-3 (Mitigated layout)

Figure 7-4 (Final layout)

12.6 Aspects for inclusion as conditions in the authorisation

The authorisation is subject to the implementation of the Mitigated Layout Plan which is required to reduce negative impacts to acceptable levels. The authorisation is also subject to the recommendations contained in the EMPr (Part B). Key conditions to be included are the implementation of an operational manual which includes measures for the minimisation of noise during arrivals and departures. The project footprint must be clearly demarcated prior to site preparation and activities must be confined to the predetermined dimensions.

12.7 Description of any assumptions, uncertainties and gaps in knowledge

The outcomes of this EIA Report are based on the following assumptions, uncertainties and knowledge gaps:

- The impacts are associated with the project description provided by the Sishen Iron Ore Company and as described in Section 4.
- The proposed layout of project as provided are conceptual. Detailed design of such infrastructure is still to be undertaken. The final layout may differ slightly from the conceptual layout plan. The principles as specified in the outcomes of the EIA Report will however be adhered to during final design.
- The EIA was done at a specific time frame according to current environmental legislation which may change over time.
- Each specialist study contains specific assumptions and limitations that apply to the outcome of the EIA process.
- The ecological assessments (fauna, flora and water course studies) were conducted during August. A more accurate assessment would require that assessments take place in all seasons of the year, especially during the rainy season when flora and fauna species are more active. However, on-site data was significantly augmented with all available desktop data and specialist experience in the area, and the findings of this assessment are considered to be an accurate reflection of the ecological characteristics of the study area.
- The available budget to implement management and mitigation measures to enhance positive social impacts and mitigate negative environmental impacts, are dependent on economic conditions.

12.8 Reasoned opinion as to whether the proposed activity should or should not be authorised

It is the opinion of the EAP that the activities associated with the development of the airport near Postmasburg be authorised based on the following reasons:

- The existing Tommy's field airfield is currently used by Kolomela to transport passengers to the mine. However, the continued use of Tommy's field or the expansion thereof is not viable. The proposed airport will ensure the continued transportation of employees and contractors to the mine. Therefore, the proposed airport and associated air travel will provide an essential supporting function for Kolomela's operations.
- The proposed airport will provide socio-economic benefits, including job creation (approximately 205 temporary) and local procurement during the construction phase and continued employment of current people at Tommy's airfield.
- The project has the potential to result in improved land management on the remaining portion of the property, including rehabilitation of disturbed areas, fence maintenance, invader plant management and the current state of the environment can be enhanced.
- The airport will result in impacts on water courses, including wetland pans. Whilst complete avoidance of all wetland pans within the study area is unlikely to be feasible due to the abundance of wetland pans throughout the study area, the mitigated layout has resulted in avoidance of several wetland pans that would previously have been affected.
- The project has the potential to affect sensitive noise receptors, including lambing ewes and an existing guest house. The impacts will however only be for short periods during take-off and landings. The implementation of the proposed mitigation measures including optimisation of flight arrivals and departures will reduce the impacts to acceptable standards.
- The project has the potential to cause impacts on floral and faunal habitats. The mitigated layout, including road realignment, will avoid sensitive habits associated with the Calcrete Outcrops and Banded Iron Stone Outcrops.
- The identified impacts can affectively managed to acceptable levels, but will require commitment from the applicant.

12.9 Period for which the environmental authorisation is required

The Kolomela mine Life of Mine (LoM) currently stands in 2032 with the potential for future expansion if further ore bodies ae deemed feasible to mine. The operational life of the airport which will correspond to the life of Kolomela mine. The airport could potentially be used as a commercial entity if not required for air travel related to Kolomela after mine closure.

13. DEVIATIONS FROM THE APPROVED SCOPING REPORT AND PLAN OF STUDY

13.1 Deviations from the methodology used in determining the significance of the potential environmental impacts and risks

Not applicable

13.2 Motivation for deviation

Not applicable

14. OTHER INFORMATION REQUIRED BY COMPETENT AUTHORITY

Not applicable

15. OTHER MATTERS REQUIRED IN TERMS OF SCETIONS 24(4)(A) AND (B) ON NEMA

Not applicable

16. UNDERTAKING

I, Trevor Hallatt, the Environmental Assessment Practitioner responsible for compiling this report, undertake that:

- the information provided herein is correct;
- the comments and inputs from stakeholders and I&APs have been correctly recorded;
- information and responses provided to stakeholders and I&APs by the EAP is correct; and
- the level of agreement with I&APs and stakeholders has been correctly recorded and reported.

Report Sign-Off			
Name	**Designation**	**Signature**	**Date**
Trevor Hallatt	EXM Advisory Services (Pty) Ltd Senior Environmental Scientist (EAP)		2020/12/18

17.REFERENCES

Airshed Planning Professionals, October 2020. Noise Specialist Study for the Proposed Kolomela Airport, near Postmasburg, Northern Cape Province. Report No. 20EXM01.

PGS Heritage, August 2020. The proposed Development of an Airport for Kolomela Mine in Postmasburg, Northern Cape. Project Number: 470HIA.

Airshed Planning Professionals, March 2015. Air Quality Specialist Report for the Proposed Kolomela Amendment Project. Project Number: 13SLR22.

Tloleho Consulting, September 2020. Kolomela Mine: Social Impact Assessment & Social and Human Rights Impact and Risk Analysis.

R&G Kalahari Consulting Engineers, October 2020. Traffic Impact Assessment for the Kolomela Airport Project.

EXM Advisory Services, May 2017. Sishen Iron Ore: Integrated Water and Waste Management Plan for Kolomela Mine.

Scientific Aquatic Services, October 2020. Freshwater Ecological Assessment as Part of the Environmental Impact Assessment and Water Use Licencing Authorisation Processes for the Proposed Development of an Airport for Kolomela Mine, on the Farm Kalkfontein 474, Postmasburg, Northern Cape Province.

Scientific Terrestrial Services, October 2020. Biodiversity Assessment as Part of the Environmental Authorisation Process for the Development of an Airport on Farm Kalkfontein 474, Postmasburg, Northern Cape. Part A: Background Information.

Scientific Terrestrial Services, October 2020. Biodiversity Assessment as Part of the Environmental Authorisation Process for the Development of an Airport on Farm Kalkfontein 474, Postmasburg, Northern Cape. Part B: Floral Assessment.

Scientific Terrestrial Services, October 2020. Biodiversity Assessment as Part of the Environmental Authorisation Process for the Development of an Airport on Farm Kalkfontein 474, Postmasburg, Northern Cape. Part C: Faunal Assessment.

Zimpande Research Collaborative, September 2020**.** Hydropedological Assessment as Part of the Environmental Impact Assessment and Water Use Licencing Authorisation Processes for the Proposed Development of the Postmasburg Airport, on the Farm Kalkfontein 474, Northern Cape Province. Report number: ZRC 20-0020.

Appendix B1

I&AP Database

NEIGHBOURS AND AFFECTED PARTIES								
NAME		**INTEREST**	**AFFILIATION/FARM**	**EMAIL**	**CELL**	**PHONE**	**FACSIMILE**	**POSTAL ADDRESS**
DRIES	VAN DER WALT	AFFECTED LAND OWNER	KALKFONTEIN		0733494643			PO BOX 585, MASBURG, 8420
VILJOEN	VAN DER WALT	AFFECTED LAND OWNER	KALKFONTEIN	VANDERWALTVILJOEN@GMAIL.COM	0727192858			
FERDI AND LIZBE	NEL	AFFECTED LAND OWNER	KALKFONTEIN	lizbe.nel@assmang.co.za	0823123920			
VILJOEN								
PIETER	DU PLESSIS	AFFECTED LAND OWNER	KALKFONTEIN	diebakkery@xmedia.co.za	0826197558			
IZAK	GOUS	NEIGHBOUR	GROOTFONTEIN	izak.gous@angloamerican.co.za	0832338875			PO BOX 10, Postmasburg, 8420
IZAK	GOUS (SNR)	NEIGHBOUR	GROOTFONTEIN	sakkie.gous@gmail.com	0832338875			PO BOX 10, Postmasburg, 8421
CHARL	VILJOEN	NEIGHBOUR	OLIENFONTEIN /GEELBULT	cfciljoen@lantic.net cfviljoen3@gmail.com	0823714737	053 313 1906		PO BOX 435, POSTMASBURG, 8420
JOHAN	VILJOEN	NEIGHBOUR	SOETFONTEIN	johan@soetfontein.co.za	0836787721	0533130982 / 0533131020/28		PO BOX 314, POSTMASBURG, 8422
ALBERTUS	VILJOEN	NEIGHBOUR /TSHIPING WUA	SOETFONTEIN	info@tshiping.co.za/ ajviljoen@soetfontein.coza	0836495452	053 313 0982 /053 313 1949	053 313 1949	PO BOX 314, POSTMASBURG, 8420
JOHAN	DE KLERK VAN XYL	LAND OWNER	KAMEELFONTEIN	marnavz@lantic.net	082 923 1711			

INTERESTED PARTIES								
NAME		**INTEREST**	**AFFILIATION/FARM**	**EMAIL**	**CELL**	**PHONE**	**FACSIMILE**	**POSTAL ADDRESS**
GEORGE	BENJAMIN	KOLOMELA MINE	KOLOMELA PUBLIC AFFAIRS	george.benjamin@ angloamerican.com	0832513864	053313 7644		
JWM	BOER	SAPS	TSANTSABANE SAPS	wmboaj@saps.org.za	0824195494			
CHRIS	BREDENKAMP	FARMER	KLIPBANKSFONTEIN	chris@klipbankfontein.co.za	0832948386	053 313 2074		PO BOX 90, POSTMASBURG, 8420
JIM	BREDENKAMP	FARMER		jim@jimbos.co.za	0836797333			
BENNIE	BREDENKAMP	FARMER	BROOMLANDS	benniebroomlands@gmail.com	0833690308	053 313 1964		PO BOX 8, POSTMASBURG, 8420
CHRISTO	BRIEDENHANN	FARMER	SUNNYSIDE 542	briedenhann.christo@gmail.com	0823714717	053 313 1385 / 053 313 1035	0533131542	PO BOX 797, POSTMASBURG, 8420
GERARD	CLAASSENS	FARMER	KOUWATER	gclaassens@ceracast.co.za	0825618391	053 313 0667/8	053 313 1819	PO BOX 110, POSTMASBURG, 8420
JJ	CLAASSENS	FARMER	NABOT					PO BOX 128, POSTMASBURG, 8420
CC	CLAASSENS	FARMER	MARTAHSPOORT	Chrisanneclaassens@gmail.com	0828212728			PO BOX 924, POSTMASBURG, 8420
WILLIE	CORNELISSEN	FARMER	WRIGHTLEY	wright@polka.co.za	0823680356			PO BOX 170, KATHU, 8440
JOHN	DANIEL	FARMER	LUCASDAM	elhpdan@gmail.com	0825522933	053 311 4634		PO BOX 206, POSTMASBURG, 8420
RUDIE	ERASMUS	FARMER	VOELWATER	rudie@possies.co.za	0731239095	0533130360/ 0533131904	0533130360	PO BOX 57, POSTMASBURG, 8420
DIRK	ESAU			dirkesau@gmail.com	"0839469737			
JAN	FOURIE				0781988258			
DEIDRE	GIBSON	FARMER	KLIPBANKSFONTEIN	gibson.deidre@gmail.com	0837894065			
O	HORN	FARMER	DUNHILL	mail@thehorns.co.za	0822669748	0533114637		
HENNIE	KARSTEN	FARMER	PAARDEPAN					PO BOX 446, POSTMASBURG, 8420
JACO	KARSTEN	FARMER	VLAKPLAAS	karstenJaco@gmail.com	0731592005			PO BOX 446, POSTMASBURG, 8420

INTERESTED PARTIES								
NAME		**INTEREST**	**AFFILIATION/FARM**	**EMAIL**	**CELL**	**PHONE**	**FACSIMILE**	**POSTAL ADDRESS**
ALIDA	KATZ	BUSINESS	KATZ BUILDING CONSTRUCTION	alidokatz11@gmail.com	0714850763			
JOHAN	KLEYNHANS	FARMER	OLYNFONTEIN 475 AND BEESHOEK 448	Johan.Kleynhans@assmang.co.za	0724721055			
MAVIS	KOLBERG	KOLOMELA MINE	KOLOMELA PUBLIC AFFAIRS	mavis.kolberg@angloamerican.com	0822695611	533139235		
JOHAN	KOTZE	FARMER	FLORADALE	Johan.kotze@floradaleboerdery.co.za	0829256032			PO BOX 81, POSTMASBURG, 8421
COENRAAD	KOTZE	FARMER	FLORADALE	kalahariplanman@gmail.com	0845871070	0533130472		PO BOX 81, POSTMASBURG, 8420
EKSTEEN	KOTZE	FARMER	FLORADALE	eksteenk@gmail.com				
NICOLAS	LOUBSER	NEIGHBOURING MINE	RINGSIDE TRADING	nicolas@geckoridge.net	083516 8042		086 687 0133	PO BOX 48, KATHU, 8446
WYNIE	LUBBE	FARMER	WILDEALSPUT	wynielubbe@gmail.com	0836541150		053 313 0366	PO BOX 79, POSTMASBURG, 8422
SANET	MARITZ	FARMER	PUTJIE		0836502129			
DH	MARITZ	FARMER	PUTJIE		0836501219	053 313 0294 / 053 313 1501	053 313 1391	
HESTIA	MARITZ	FARMER	PUTJIE	hestiamaritz@gmail.com	0791262114			
JACQUES	MEYER	KOLOMELA FARM MANAGER	WOLHAARKOP	jacques.meyer@angloamerican.com	0833890931			PO BOX 389, POSTMASBURG, 8420
MARTIN	MOLLER	FARMER	AUCAMPSRUS	martinmoller@telkomsa.net				
MARLENE	MOTLHALANE	ENVIRONMENTAL HEAL OFFICER COMMUNITY SERVICES		marlenemotlhalane@gmail.com	0787670942			
THEMBI	NIKANI	EMPLOYMENT	TSANTSABANE UNEMPLOYMENT FORUM	thembinikani024@gmail.com	0637268365			
J	RIET	SAPS	TSANTSABANE SAPS	rietj@saps.org.za	0795264642			
JAN	SCHOEMAN	FARMER	VLAKPLAAS	janman@mjvn.co.za	0828206977			
MSIMELELO	SILOMNTU	NEIGHBOURING MINE	BEESHOEK MINE	Msimelelo.Silomntu@assmang.co.za	0718654535			
TJAART	SNYMAN	FARMER	GRASVLAKTE	tjaartpmg@lantic.net	0832295828			PO BOX 1355, POSTMASBURG, 8421
TJ	SNYMAN	FARMER	GRASVLAKTE	tjsnijman@gmail.com				

INTERESTED PARTIES								
NAME		**INTEREST**	**AFFILIATION/FARM**	**EMAIL**	**CELL**	**PHONE**	**FACSIMILE**	**POSTAL ADDRESS**
HEIN	SNYMAN	FARMER		snymanht@gmail.com				
MIMI	SWART	RATE PAYERS ASSOCIATION	TSANTSABANE RATE PAYERS ASSOCIATION	swami5353@gmail.com	0832922540	053 313 1217		PO BOX 777, POSTMASBURG, 8420
WILLIE	UYS	FARMER'S UNION		willie.uys66@gmail.com	0845174913			
CHRIS	VAN DER MERWE	FARMER	MOOIDRAAI	mooidraai@lantic.net	0832353280			
CHRISTA	VAN DER MERWE	FARMER	BOSPOORT	christa@bospoort.co.za	0834465656			
JOHAN	VAN DER MERWE	FARMER	BOSPOORT	johan@bospoort.co.za	0837681868			PO BOX 859, POSTMASBURG, 8420
JOHAN	VAN ZYL	FARMER	KAMEELFONTEIN	marnavz@lantic.net	0733611941	0533130174	0533130174	PO BOX 416, POSTMASBURG, 8422
MARITZA	VILJOEN	FARMER	AUCAMPSRUS	maritza.mvw@gmail.com	0826284435			
ALTUS	VILJOEN	FARMER	AUCAMPSRUS	altus.aj@gmail.com	0729251906			
ADAM	WAHL	FARMER	WILDEALSPUT	adam9wahl@gmail.com	0825661844	053 311 4647		PO BOX 875, POSTMASBURG, 8420
SAMUEL	WILLEMSE	FARMER	SWARTMODDER	samuelw73@ovi.com	0832887067			PO BOX 716, POSTMASBURG, 8421
				sdrewinds@mjvn.co.za				
				cmcmathe@gmail.com				
				hcon1@live.com				
				psbsteen@vodamail.co.za				
				kobusdirk@gmail.com				
Morne	Vd Merwe	FARMER	NOKKI	mornevdmerwe@outlook.com	0824163328			
Johan	Sounes	FARMER	Agri Postmasburg	agripostmasburg@gmail.com				
Hentie	Fourie	4e Innovation	Chief Operating Officer	hentie.fourie@4e-i.com	0836091237			
Sonet	Du Plooy	BUSINESS	Lead 2 Business	SonetDl2b.co.za	0860836337		0333435882	

INTERESTED PARTIES								
NAME		**INTEREST**	**AFFILIATION/FARM**	**EMAIL**	**CELL**	**PHONE**	**FACSIMILE**	**POSTAL ADDRESS**
Burger	Maritz			burger_mar@yahoo.com	0823771454			
SP	Du Plessis			sarel@kpds.co.za	082 459 4655			

AUTHORITIES								
NAME		**POSITION**	**AFFILIATION/FARM**	**EMAIL**	**CELL**	**TEL**	**FAX**	**POSTAL ADDRESS**
ABE	ABRAHAMS	REGIONAL MANAGER	NORTHERN CAPE: DEPARTMENT OF WATER & SANITATION	AbrahamsA@dws.gov.za		053 836 7600	086 650 9646	PRIVATE BAG X6101, KIMBERLEY, 8301
PHILANI	MSIMANGO	ACTING VAAL RIVER PROTO - CMA	VAAL RIVER PROTO - CAM	MsimangoP@dws.gov.za		053 836 7649	086 650 9646	PRIVATE BAG X6101, KIMBERLEY, 8301
JACOLINE	MANS	REGIONAL HEAD FORESTER	NORTHERN CAPE: DEPARTMENT OF FISHERIES & FORESTRY	JacolineMa@daff.gov.za	082 808 2737	054 338 5909	054 334 0030	PRIVATE BAG X5912, UPINGTON, 8800
VINCENT	MUILA	OFFICER	NORTHERN CAPE: DEPARTMENT OF MINERAL RESOURCES	vincent.muila@dmr.gov.za		053 807 1700		PRIVATE BAG X6093, KIMBERLEY, 8300
BRYAN	FISHER	HEAD ENVIRONMENT	DEPARTMENT OF ENVIRONMENT AND NATURE CONSERVATION	bfisher@ncpg.gov.za	0824630224	053 807 7300	053 807 7328/67	
W.	MOTHIBI	HEAD OF DEPARTMENT	NORTHERN CAPE: DEPARTMENT OF LAND REFORM AND RURAL DEVELOPMENT	kgosimoleko@gmail.com		053 838 9100	053 831 4685/3635	
DARIUS	BABUSENG	HEAD OF DEPARTMENT	NORTHERN CAPE: DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM	dedat@ncpg.gov.za		053 839 4000	053 831 3668	
KOLEKILE	NOGWILE	HEAD OF DEPARTMENT	DEPARTMENT OF ROADS AND PUBLIC WORKS	drpw-Info@ncpg.gov.za		053 839 2100	053 839 2291	
ELIZABETH	BOTES	HEAD OF DEPARTMENT	DEPARTMENT OF SOCIAL DEVELOPMENT			053 874 9100	053 871 1062	
P	SAAYMAN	SATELLITE OFFICE POSTMASBURG	DEPARTMENT OF SOCIAL DEVELOPMENT	psaayman@ncpg.gov.za		053 313 2141	053 313 3256	

SAHRIS			SOUTH AFRICAN HERITAGE RESOURCES COUNCIL	info@sahra.org.za		021 462 4502	021 462 4509	
N	Nkabiti		CIVIL AVIATION AUTHORITY	nkabitin@caa.co.ca				
S	Maphanga		CIVIL AVIATION AUTHORITY	maphangas@caa.co.za				
B	Maphanga		CIVIL AVIATION AUTHORITY	phirwab@caa.co.za				
BS	Lenkoe	Head of Department	Northern Cape Department: Co-operative Governance, Human Settlements and Traditional Affairs	bslenkoe@ncpg.gov.za				
MM	Van den Berg	Traditional Affairs		mvandenberg@ncpg.gov.za				
A	Phete	ZF Mgcawu Region		aphete@ncpg.gov.za				

MUNCIPALITIES

NAME		POSITION	AFFILIATION/FARM	EMAIL	PHONE	FACSIMILE	POSTAL ADDRESS	NOTIFICATION METHOD
CLLR. M	MASHILLA	MAYOR	TSANTSABANE LOCAL MUNICIPALITY			053 313 7301	053 313 3548	PO BOX 5, POSTMASBURG, 8420

C.	MARAIS	MAYORS SECRETARY	TSANTSABANE LOCAL MUNICIPALITY			053 313 7300	053 313 3548	PO BOX 5, POSTMASBURG, 8420
HEINRICH	MATHOBELA	MUNICIPAL MANAGER	TSANTSABANE LOCAL MUNICIPALITY	mm@tsantsabane.gov.za		053 313 7300	`	19 SPRINGBOK STREET , POSTMABURG 8420
GLADYS	WITBOOI	SECRETARY TO THE MUNICIPAL MANAGER	TSANTSABANE LOCAL MUNICIPALITY	mmsec@tsantsabane.co.za				
CLLR JJJ	OLYN	EXECUTIVE MAYOR	ZF MCGAWU DISTRICT MUNICIPALITY	admin@zfm-dm.gov.za'		054 337 2800	054 337 2888	
JG	LATEGAN	MUNICIPAL MANAGER	ZF MCGAWU DISTRICT MUNICIPALITY	admin@zfm-dm.gov.za'		054 337 2800	054 337 2888	
PREMIER ZAMANI	SAUL	PREMIER	NORTHERN CAPE PROVINCIAL GOVERNMENT	premierspa@ncpg.gov.za		053 802 5000	053 838 2626	

Appendix B2

Copy of BID

SISHEN IRON ORE COMPANY (PTY) LTD

ATTENTION: INTERESTED AND/OR AFFECTED PARTY

NOTICE OF a full environmental impact assessment and Water use licence application

development of an airport near postmasburg in the northern cape

1. 1. INTRODUCTION

Notice is hereby given that Sishen Iron Ore Company (Pty) Ltd (SIOC) proposes to develop an airport on Farm Kalkfontein 474, located approximately 3.4 km south of the town of Postmasburg, Tsantsabane Local Municipality, in the Northern Cape.

The development of the airport triggers various activities listed in Listing Notices 1 (GN R. 983 as amended in 2017), 2 (GN R. 984 as amended in 2017) and 3 (GN R. 985 as amended in 2017) published in terms of the National Environmental Management Act (No. 107 of 1998). Therefore, a full Environmental Impact Assessment and Scoping process must be undertaken in terms of the EIA regulations (GNR 982 as amended in 2017) to obtain Environmental Authorisation (EA) for the proposed project. The Northern Cape Department of Environment and Nature Conservation is the Competent Authority (CA) for the EIA process.

The development of the airport also triggers activities a, c and i listed in Section 21 of the National Water Act (No. 36 of 1998). Therefore, a Water Use Licence (WUL) must be obtained from the Department of Water and Sanitation Northern Cap prior to commencement.

A public participation process must be undertaken in terms of the EIA regulations (GNR 982 as amended in 2017) and the Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals (GNR. 267 of 2017) to inform all relevant Interested and Affected Parties of the proposed project allow the IAPs to comment. This letter serves to **notify you as a landowner, lawful occupier, interested or affected party of the EIA and WUL application processes that are being undertaken.** EXM Environmental Advisory (Pty) Ltd has been appointed as the Independent Environmental Assessment Practitioners (EAP) responsible for administrating the abovementioned application process:

PURPOSE:

This document serves to:

- Notify you of the EIA process and WUL application
- Describe the application processes.
- Inform you as to how you can provide input into the process.

YOUR ROLE:

As an interested and affected party, your role is to:

- Ask questions, raise issues and concerns.
- Attend public meetings.
- Review and provide comment on environmental reports.

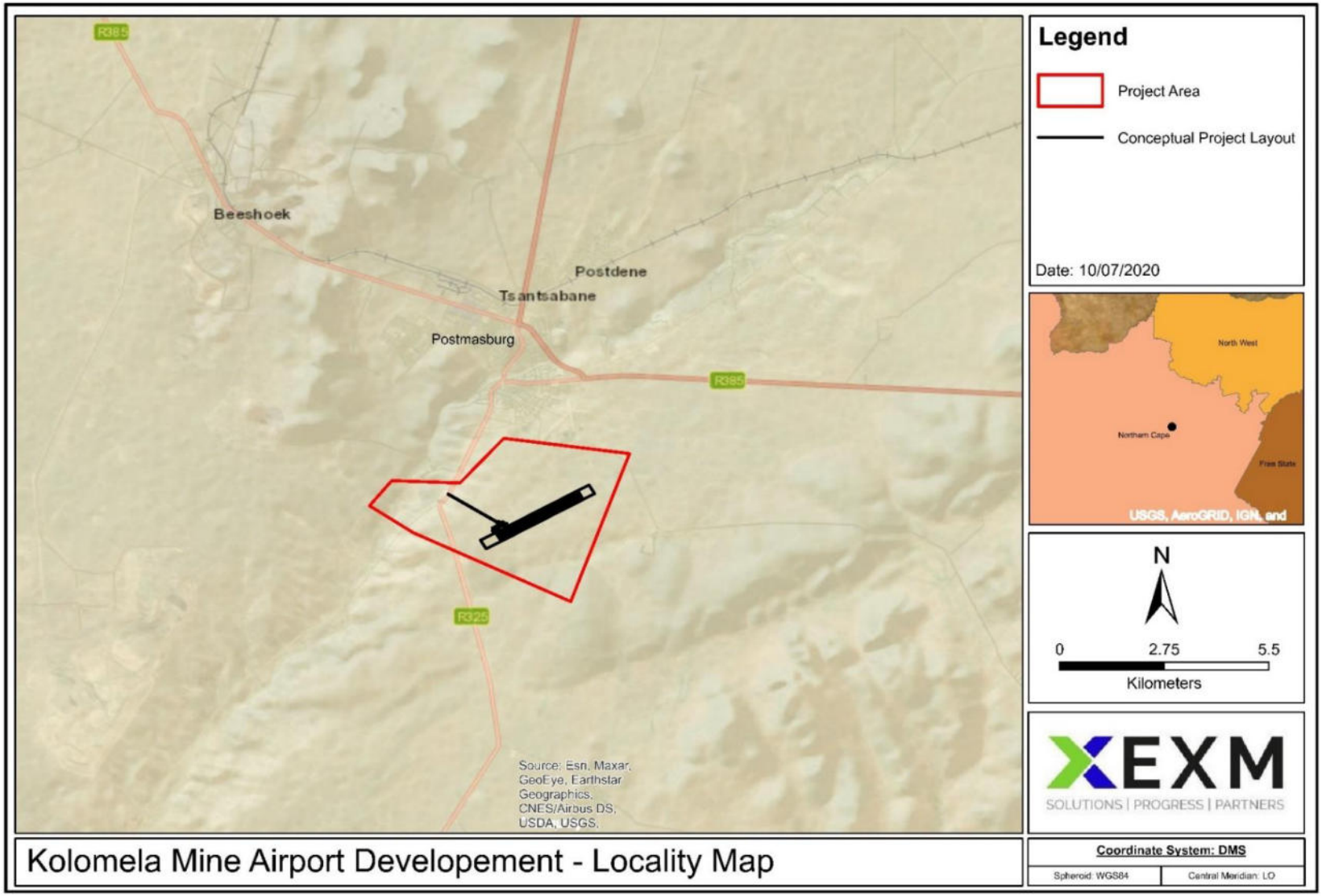


FIGURE 1: GENERAL LOCATION AND LAYOUT

2. 2. PRELIMINARY OVERVIEW OF THE OF THE PROPOSED AIRPORT DEVELOPMENT

SIOC is proposing the development of a new airport on the on the Farm Kalkfontein 474 R/E, south of Postmasburg. The purpose of the will to accommodate air traffic related to passengers travelling to and from Kolomela mine.

While the Sishen mine is serviced by 19 flights per week of 37 seat regional jet aircraft, Kolomela is serviced by Assmang's Tommy's Field by 7 flights in 29-seater J41 turbo-prop aeroplanes. Given the shortage of capacity on the Kolomela flights, many passengers are forced to fly to Sishen and are subjected to a long and potentially dangerous road transfer from Kathu to Postmasburg.

Furthermore, the runway at Tommy's Field is too short to allow for safe departures of fully-loaded aircraft under 'hot and high' conditions and various safety incidents have been reported. Furthermore, it is likely that SA Airlink will retire the fleet of J41 aircraft currently servicing Kolomela in the future.

The existing runways at Tommy's Field and Postmasburg Airfield were investigated as possible solutions, but these facilities cannot be expanded thus necessitating the need for a new runway and airport to be develop in Postmasburg to support traffic to Kolomela mine.

The proposed airport and associated infrastructure will cover approximately 80 hectares and will entail the development of the following structures/infrastructure (See Figure 2).

- A runway of approximately 2.2 km.
- Helipad(s).
- Control tower.
- Fuel farm to house fuel storage tanks.
- Water storage tanks.
- Access road (approximately 2.5 km).
- Water supply tanks.
- Parking area.
- Septic tank system.
- Terminal and supporting facilities.
- Waste management area.
- Electricity supply lines (<33kV).

Water supply to the airport will be sourced from groundwater boreholes.

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FIGURE 2: INITIAL CONCEPTUAL LAYOUT OF AIRPORT

3. 3. ENVIRONMENTAL APPROVALS REQUIRED

3.13.2 National Environmental Management Act (No. 107 of 1998) (NEMA)

The development of the proposed airport triggers various activities listed in Listing Notices 1 (GN R. 983 as amended in 2017), 2 (GN R. 984 as amended in 2017) and 3 (GN R. 985 as amended in 2017) published in terms of the National Environmental Management Act (No. 107 of 1998). The listed activities triggered in terms of these notices are provided in Table 1.

Activities triggered in terms of Listing notice 2 require an environmental authorisation which needs to be supported by a full EIA and Scoping process that must be conducted in terms of the NEMA EIA regulations (GNR. 982 of 2014, as amended). Activities triggered in terms of Listing notices 1 and 3 require an environmental authorisation which needs to be supported by a Basic Impact Assessment, however a full EIA will be required. According to the EIA Regulations, the competent authority for submission of the application for environmental authorisation is the Minister responsible for mineral resources i.e. the Northern Cape Department of Environmental and Nature Conservation. The regulated timeframes for the completion of the EIA process, as provided in the EIA Regulations, are provided in Figure 3.

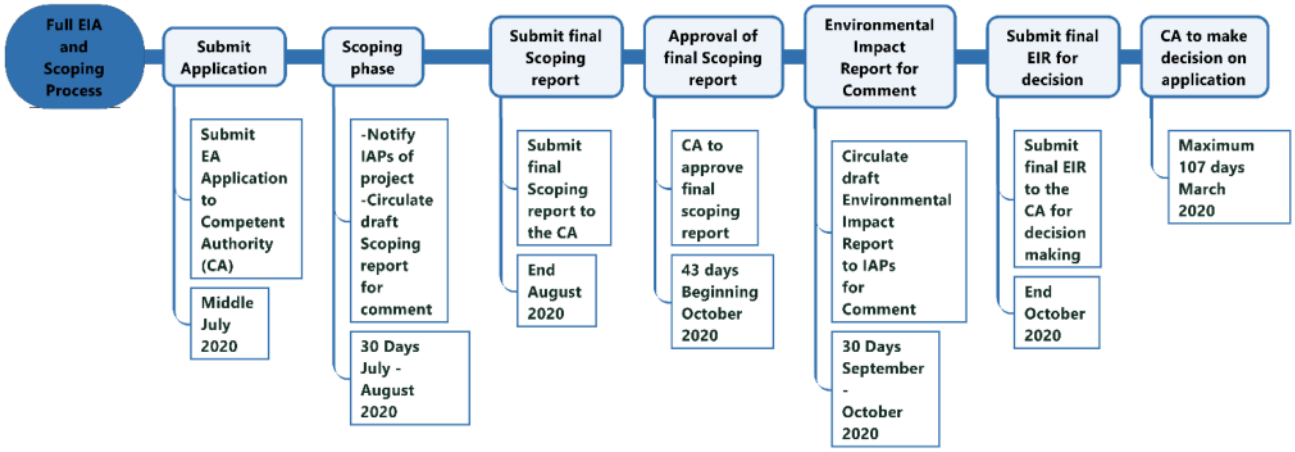


FIGURE 3: EIA Process

Table 1: NEMA Listed Activities triggered by the Project

Applicable Regulation		Project Infrastructure triggering the Listed Activity
Listing Notice 1 (GN R. 983 as amended in 2017)		
Activity 12	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse	Several pans (water courses) are situated on the property which will potentially be impacted by the project footprint. A WUL application will be submitted to obtain authorisation in terms of activities listed in Section 21 of the National Water Act (No. 36 of 1998).
Activity 14	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.	The development will entail the storage of fuel that will be used in the re-fuelling of airplanes.
Activity 19	The infilling or depositing of any material of more than [5] 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than [5] 10 cubic metres from [—(i)] a watercourse; [(ii) the seashore; or i. (iii)the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or estuary, whichever distance is the greater.	Several pans (water courses) are situated on the property which will potentially be impacted by the project footprint. A WUL application will be submitted to obtain authorisation in terms of activities listed in Section 21 of the National Water Act (No. 36 of 1998)
Activity 24	The development of a road— (i) [a road] for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) [a road] with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;	The length of the access road that will be constructed as part of the project will be approximately 2.5 km and will be wider than 8 meters.

Applicable Regulation		Project Infrastructure triggering the Listed Activity
	but excluding a road— (a) [roads] which [are] is identified and included in activity 27 in Listing Notice 2 of 2014; (b) [roads] where the entire road falls within an urban area; or i. (c) which is 1 kilometre or shorter.	
Activity 28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	The property on which the proposed airport will be developed has been used for the purpose of game farming.
<u>Listing Notice 2 (GN R. 984 as amended in 2017)</u>		
Activity 8	Activity 8. The development of— (i) airports; or (ii) runways or aircraft landing strips longer than 1,4 kilometres.	The project entails the development of an airport with a runway exceeding 1,4km.

Applicable Regulation		Project Infrastructure triggering the Listed Activity
Activity 15	Activity 15. The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The project footprint will cover approximately 80 hectares and will entail the clearance of indigenous vegetation exceeding 20 hectares.
Listing Notice 3 (GN R. 985 as amended in 2017)		
Activity 10	The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres. g. Northern Cape ii. Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland;	The development will entail the storage of fuel that will be used in the re-fuelling of airplanes. A portion of the property on the proposed airport will be developed is classified as a Critical Biodiversity Area according to the Northern Cape Critical Biodiversity Map. Refer to Appendix 7 for the environmental sensitivity map.

3.3 National Water Act (No. 36 of 1998) (NWA)

The proposed development will include water uses as defined in terms of Section 21 of the National Water Act (Act 36 of 1998). These proposed water uses are provided in Table 2 below.

Table 2: Section 21 water uses to be included in the IWULA

Water Use	Activity Description
Section 21 (a)	Abstraction of groundwater from a borehole.
Section 21 (c&i)	Infrastructure that will impact directly on water courses
	New infrastructure within 500 m regulated zone of a wetland/watercourse (specific infrastructure to include in the IWUL application will be confirmed after review of specialist findings)

Authorisation of the abovementioned water uses will require an application for an Integrated Water Use Licence (IWUL) in terms of the Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals (GNR. 267 of 2017).

The IWUL application will be supported by a Technical Report compiled in accordance with the requirements of the relevant Annexures of the Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals (GNR. 267 of 2017). The regulated timeframes for an Integrated Water Use Licence Application process in terms of GN R. 267 of 2017 are provided in Figure 4.

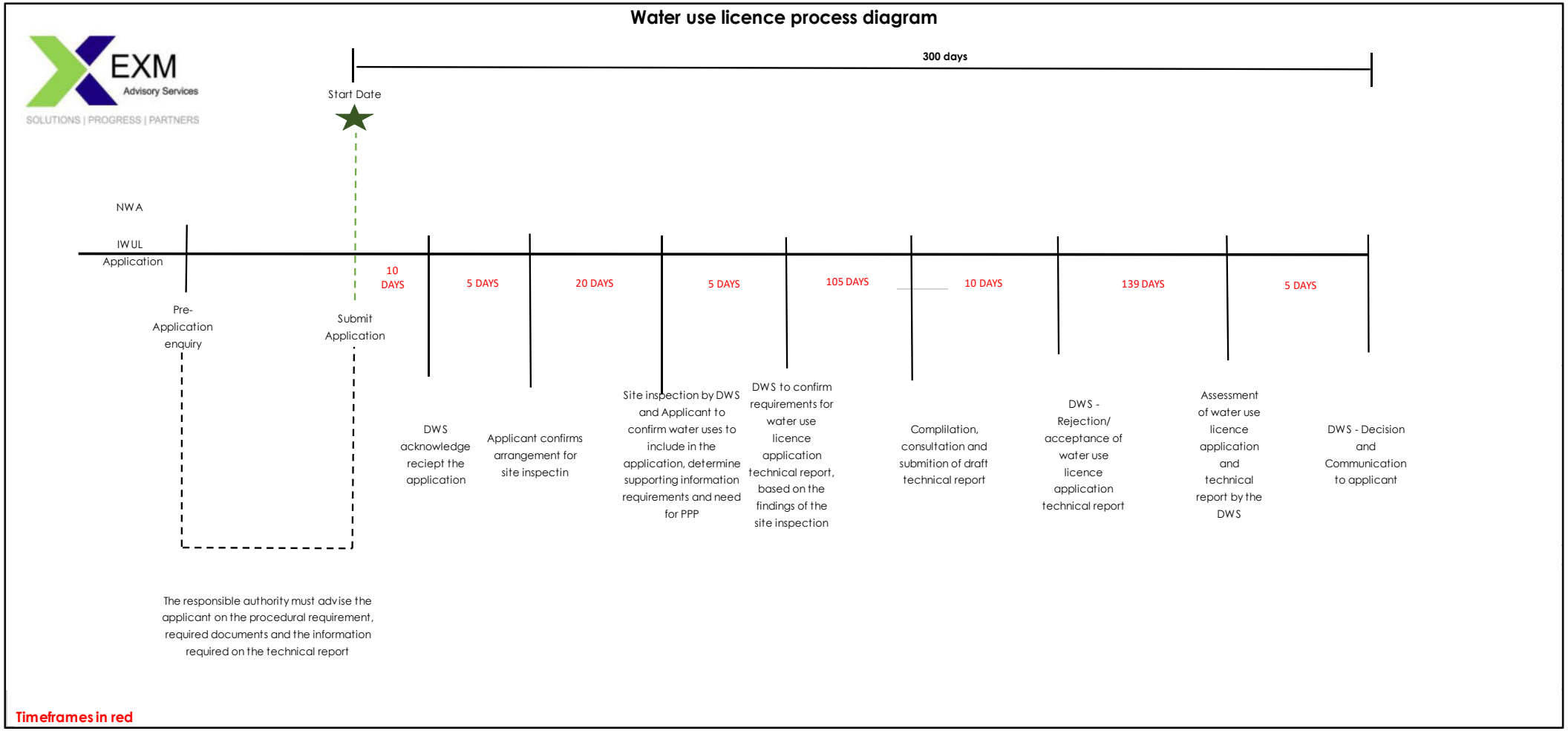


FIGURE 4: INTEGRATED WATER USE LICENCE APPLICATION PROCESS

4. 4. PUBLIC PARTICIPATION PROCESS

A public participation process is being undertaken as part of the applications. The process is conducted in terms of the NEMA EIA regulations (GNR. 982 of 2014, as amended) and the Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals (GNR 267 of 2017) promulgated under the National Water Act, 1998 (Act No.36 of 1998). Stakeholders are offered the opportunity to be informed about the application, raise comments, issues or concerns and provide input into the application and reports.

Interested & affected parties are invited to participate in the environmental process. You can provide input by:

- Registering as an interested & affected party (IAP);
- Asking questions and raising initial concerns by completing and returning the response sheet (attached);
- Reviewing and providing comment on reports.

All I&APs will be inform when all the documents will be available for review.

Should you have questions or require more information, **please contact**:

Trevor Hallatt

EXM Advisory Services

Cell: 071 689 2229 Office: 010 007 3617

Fax: 086 527 4619

Email: trevor@exm.co.za

PO Box 1822, Rivonia, 2128

Yours sincerely

Trevor Hallatt

Environmental Assessment Practitioner

EXM Advisory Services (Pty) Ltd

SISHEN IRON ORE COMPANY (PTY) LTD **ENVIRONMENTAL IMPACT ASSESSMENT AND WATER USE LICENCE APPLICATION: DEVELOPMENT OF AN AIRPORT SOUTH OF POSTMASBURG**	
Name:	
Address:	
Telephone/cell phone:	
Fax:	
E-mail:	
Date:	
Signature:	

If you know of others who should be informed of this application, please provide us with their contact details:

Name:	
Address:	
Telephone/cell phone:	
Fax:	
E-mail:	

ISSUES, CONCERNS AND QUESTIONS

Appendix B3

Proof of advert

Build on your balancing skills

Balance boards are becoming a popular way to build core strength and balancing skills. Why not make one for your children?

Requirements:

- Pine wood, one of 18 mm x 610 mm x 1 800 mm
- Hand drill
- Drill bit (star point)
- Chipboard screws 3,5 x 40 mm
- Pilot hole drill 3 mm
- Wood glue
- P100 sandpaper
- Paint
- Paint brush
- Wood filler, pine
- Pencil
- Jigsaw
- Measure tape

Step by step:

- Measure the following sizes and make a mark. One pieces of 18 mm x 610 mm x 508 mm, two pieces of 18 mm x 102 mm x 305 mm and one piece of 18 mm x 89 mm x 305 mm.
- Cut with the jigsaw on each marking you made on the wood piece. Take the two pieces of 18 mm x 102 mm x 305 mm and cut them so that they look like half circles. Sand the wood until it is smooth and has no splints.
- Take the two round cut pieces of the 18 mm x 102 mm x 305 mm wood piece and put glue on the 18 mm sides and place it on the two 610 mm sides. Drill two holes in each corner on top and trough the 18 mm x 610 mm x 508 mm and 18 mm x 102 mm x 305 mm. Drill a screw in each hole.
- Take the 18 mm x 89 mm x 305 mm pieces, place it between the half circles and drill a hole through each half circle, but in the middle, and drill a screw through the half circle and the 18 mm x 89 mm x 305 mm piece.
- Fill each hole with the wood filler and let dry.

Sand the wood filler spots until it is smooth.

- Apply paint and your board is ready to be used.

Visit Lumber City Kuruman for your supplies.

Letters being delivered to the police station in Kuruman. From the left are Christo Groenewald, Jeanne Fraser, Prudence Pule, Duncan Pule, Lily Melito, Alice de Vos, Capt. Johan Kruger, Kamo Borake, Johanita Kumm and Lt Col Alona Human.

Photo: Supplied

Boxes filled with gratitude

Alzane Narrain

"Dear police officer. Thank you for all the hard work on and off duty. We are so thankful to you for making our lives easier and safer. All of you make a big difference in our lives and in a sad world."

This is just one of many heart-warming letters learners of the Sediba Academy in Kuruman wrote to over 400 essential workers serving at the front line of the Covid-19 pandemic.

These learners wanted to honour Nelson Mandela's legacy by expressing gratitude to staff members of the Kuruman Hospital and the SAPS who sacrifice their time and safety to keep Kuruman safe.

Learners of the Sediba Academy wrote letters to thank frontline workers.

With safety measures in place to curb the spread of Covid-19, people were not able to do normal outreach projects on Mandela Day.

Instead, people associated with the academy surprised doctors, nurses, police officials, administrative staff, cleaners and security guards with a delivery of boxes filled with letters of appreciation.

The deliveries were made on 17 July.

Another learner wrote: "I thank you for the work that you are doing. God bless you."

Each letter was attached to a packet of instant soup to warm the hands and hearts of frontline workers.

GA-SEGONYANA MUNICIPALITY / MUNISIPALITEIT

Voorgestelde onderverdeling Erf 6253 (Gedeelte van Erf 1), Kuruman, Ga-Segonyana Munisipaliteit, Afdeling Kuruman, Noord-Kaap Provinsie, ingevolge die Ruimtelike Beplanning en Grondgebruikbestuur Verordening van die Ga-Segonyana Munisipaliteit:

Kennis geskied hiermee dat 'n aansoek om onderverdeling ingevolge die Ruimtelike Beplanning en Grondgebruikbestuur Verordening, waarvan besonderhede hieronder verskyn, by die Munisipaliteit Ga-Segonyana, ingedien is. Besonderhede van die aansoek lê ter insae by die Munisipale kantoor, vanaf Maandae tot Vrydae tussen 07:30 tot 13:00 en 14:00 tot 16:30. Enige persoon of instansie wat van voorneme is om beswaar aan te teken teen die aansoek, moet sodanige beswaar, skriftelik rig aan die Munisipale Bestuurder ten einde Mnr Ditebogo Mochware (E-pos: dmochware@ga-segonyana.gov.za / omonchusi@ga-segonyana.gov.za Faks: (053) 712 3581) by die manisipale beplanne department te bereik, nie later as 31 Augustus 2020 nie. Persone wat nie kan lees of skryf nie, word ingevolge artikel 21 van Wet 32 van 2000 versoek om gedurende normale kantoorure bogemelde persoon by die munisipale kantoor te Kuruman te nader om u kommentaar of besware op skrif te stel. Sou geen besware binne bogemelde tydperk op die voorgeskrewe wyse ontvang word nie, sal aanvaar word dat daar geen besware teen die aansoek is nie.

Besonderhede van die aansoek is soos volg:

1. **Aansoeker:** Macroplan Upington en Kimberley (Len Jacobus Fourie) namens die Ga-Segonyana Plaaslike Munisipaliteit.
2. **Grondeenheid:**

2.1 Beskrywing en Oppervlakte: Erf 6253 (Gedeelte van Erf 1), Kuruman: 47.2006ha

2.2 Huidige Sonering: Spesiale Sone (Metaal Industriële Groepering)

3. **Beoogde Onderverdeling:**

3.1 Onderverdeling van Erf 6253, Kuruman in 19 aparte grondgedeeltes.

4. **Doel van die aansoek:** Die kadastrale verdeling van die betrokke grondgedeelte, ten einde die onderverdeelde grondgedeeltes apart van mekaar te verkoop.

- o 0 o -

Proposed subdivision of Erf 6253 (Portion of Erf 1), Kuruman, Ga-Segonyana Municipality, Kuruman RD, Northern Cape Province, in terms of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Municipality:

Notice is hereby given that an application for subdivision in terms of the Spatial Planning and Land Use Management By-Law, particulars of which appear here under, has been lodged at the Ga-Segonyana Municipality. Particulars of the application are available at the Municipal Offices, from Mondays to Fridays between 07:30 to 13:00 and 14:00 to 16:30. Any person or organisation that is of the intention to lodge an objection against the application must direct such objection in writing the Municipal Manager to reach Mr Ditebogo Mochware (E-mail: dmochware@ga-segonyana.gov.za / omonchusi@ga-segonyana.gov.za Fax: (053) 712 3581) at the municipal town planning department by or not later than 31 August 2020. In terms of section 21 of Act 32 of 2000, persons who cannot read or write is invited to come to the above mentioned person at the municipal office in Kuruman during normal office hours, where assistance would be given to transcribe their comments or objections. Should no objections in the prescribed manner be lodged it shall be regarded that there is no objections.

Particulars of the application are as follows:

1. **The Applicant:** Macroplan Upington and Kimberley (Len Jacobus Fourie) on behalf of the Ga-Segonyana Local Municipality.
2. **Land Unit:**

2.1 Description and extent: Erf 6253 (Portion of Erf 1), Kuruman: 47.2006ha

2.2 Existing Zoning: Special Zone (Metals Industrial Cluster)

3. **Proposed Subdivision:**

3.1 Subdivision of Erf 6253, Kuruman into 19 separate land units.

4. **Purpose of the application:** The cadastral division of the involved property, in order to enable the subdivided land units to be sold separately from one another.

MUNICIPAL MANAGER, M M TSATSIMPE, Private Bag X1522, Kuruman, 8460

Achievers awarded laptops, tablets

A total of 80 top-performing Gr. 11 and Gr. 12 mathematics and science learners in the Northern Cape were awarded laptops and tablets by the provincial Department of Education in collaboration with Stellenbosch University.

The department said that 40 Gr. 11 top achievers were issued with tablets, while 40 Gr. 12 top achievers received laptops. The recipients of these devices had to achieve 70% and above in both mathematics and science to be eligible for selection to the programme.

Due to Covid-19, the top-achievers' camps had to be suspended and in its place, learners received these devices.

SISHEN IRON ORE COMPANY (PTY) LTD

DEVELOPMENT OF AN AIRPORT

POSTMASBURG, NORTHERN CAPE

Sishen Iron Ore Company (Pty) Ltd (SIOC) proposes to develop an airport on Farm Kalkfontein 474, located approximately 3.4 km south of the town of Postmasburg, Tsantsabane Local Municipality, in the Northern Cape. The airport will be used to accommodate air traffic related to passengers travelling to and from Kolomela Mine, situated 10 km north west of Postmasburg.

Environmental authorisation in terms of the National Environmental Management Act (Act 107 of 1998) for the following:

- **Listing Notice 1 of the EIA Regulations (GN R. 983 of 2014, as amended) activities 12 –** infrastructure development within water course, **14** – fuel storage (storage of dangerous goods), **19 –** infrastructure development within water course, **24** - construction of a road, and **28** – commercial development in area used for game farming
- **Listing Notice 2 of the EIA Regulations (GN R. 984 of 2014, as amended) activities 6 –** management of effluent from septic tank system **activities 8 –** development of runway > 1,4km, **15** - clearance of vegetation > 20 hectares .
- **Listing Notice 3 of the EIA Regulations (GN R. 985 of 2014, as amended) activity 10** – fuel storage within 100m of a wetland triggered in listing Notice 3 (GN R. 985 of 2014)

The application will be supported by a **full Environmental Impact Assessment and Scoping process** in terms of the Environmental Impact Assessment Regulations (GN R982 of 2014, as amended by GN R326 of 2017)

Application is also being made for an **Integrated Water Use Licence** in terms of the National Water Act (Act No. 36 of 1998) for:

- Section 21 **(a)** – abstraction of groundwater from a borehole to supply the airport;
- Section 21 **(c&i)** – impeding or diverting the flow of water in a watercourse & altering the bed, banks or characteristics of a watercourse for developments within or close to wetland pans and watercourses.
- Section 21 **(f&g)** discharging water containing waste into a water resource and disposing of waste in a manner which may detrimentally impact on a water resource.

You are hereby invited to register as an Interested and or Affected Party (IAP) to receive further information, review reports and to raise environmental issues, concerns and objection to the application. Kindly make written submission to:

Trevor Hallatt

EXM Advisory Services (Pty) Ltd

Tel: 071 689 2229 ‖ Fax: 086 527 4619 ‖ Post: PO Box 1822 Rivonia, 2128 ‖ Email: trevor@exm.co.za

Hollywood-ster wil 16-jarige sensasie vir rugbyligaklub gryp

Die akteur Russell Crowe het sy gewig agter pogings ingegooi om die Australiese tiener-sensasie Joseph Suaalii by die South Sydney Rabbitohs, 'n rugbyligaklub Doer Onder, te hou.

Crowe, bekend vir rolle in flieks soos *Gladiator* en *Robin Hood*, is die mede-eienaar van die Rabbitohs.

Volgens 'n berig in *The Australian* het hy Suaalii en 'n paar van die 16-jarige se familielede, asook van die Rabbitohs se bestuurslede in sy eie vliegtuig na sy landgoed in Nieu-Suid-Wallis geneem.

Die Rabbitohs het Suaalii in Februarie sover gekry om 'n voorlopige kontrak van drie jaar te onderteken en hoop dat die kontrak geldig sal word wanneer hy Saterdag 17 jaar oud word.

Rugby Australië probeer egter ook om Suaalii oor te haal om eerder vyfhienmanrugby te begin speel.

Die Rabbitohs wou hom nie oor Crowe se betrokkenheid uitlaat nie. Die voorsitter, Nick

Russell Crowe

Joseph Suaalii

Pappas, het egter gesê hulle is nie "skaam om te erken dat hulle begerig is" om die tiener vir rugbyliga te behou nie.

"Maar ons is ook daarvan bewus dat Joseph 16 is en dat die besluit ten volle by hom en sy gesin berus," het Pappas aan *The Australian* gesê.

"Ek weet daar mag 'n begeerte by hom wees om volgende jaar by die Olimpiese Spele sewesrugby vir Australië te speel. Wat Joseph en sy gesin ook al besluit, ons sal dit respekteer."

Die bohaai oor Suaalii het verlede week die hoogte ingeskiet toe berig is dat Rugby Australië hom vir A$3 miljoen gekontrakteer het.

Rugby Australië, wat hom weens die Covid-19-pandemie in 'n finansiële krisis bevind, het dié bewerings as onwaar afgemaak.

Crowe het al voorheen 'n invloedryke rol gespeel om spelers vir die Rabbitohs te werf.

Terwyl hy in 2010 aan *Robin Hood* in Engeland gewerk het, het hy met Sam Burgess vergader.

Burgess was in daardie stadium ook deur Manly geoormerk, maar Crowe het hom oortuig dat sy heil by die Rabbitohs lê. – **Reuters**

SPRINGBOK-STUT DEEL SY MENING

Beast loof Rassie in video oor BLM

Die legendariese Springbok-stut Tendai (Beast) Mtawarira het sy stilswye verbreek oor die Black Lives Matter-beweging en wat dit vir Suid-Afrikaanse sport verteenwoordig.

Mtawarira het hom by Siya Kolisi, sy kaptein in die Bokke se suksesvolle Wêreldbeker-veldtog verlede jaar in Japan, aangesluit om sy mening rakende die kwessies rondom die #BLM-veldtog te lug.

Mtawarira, wat 'n rekord 117 toetse op loskop vir Suid-Afrika gespeel het, beklemtoon die rol wat Rassie Erasmus gespeel het om 'die olifant in die kamer' aan te spreek.

"Ek het genoop gevoel om hierdie video te maak in solidariteit en ter ondersteuning van Siya nadat ek na sy kommentaar oor Black Lives Matter en inklusiwiteit in Suid-Afrika geluister het," sê Mtawarira in 'n video op Instagram.

Kolisi word in sommige kringe geloof vir 'n video wat hy op 19 Julie op sosiale media geplaas het waarin hy onder meer sy steun aan BLM toesê. Hy vertel in die openhartige video dat hy destyds

Beast Mtawarira het die Wêreldbeker-trofee verlede jaar in Japan saam met die Springbokke verower. Foto: GETTY IMAGES

"dom en verleë" gevoel het in die Bok-groep omdat hy nie Afrikaans, wat toe die voorkeurtaal in die span was, verstaan het nie.

Mtawarira sê hy verstaan ook goed hoe die stelsel in die land sekere demografiese en etniese groepe marginaliseer.

"Dit is nie maklik om aan jouself te moet twyfel nie – nie weens jou gebrek aan talent en werkverrigting nie, maar omdat jy nie onder sekere 'aanvaarbare' kategorieë val nie.

"Dit is moeilik om vrede te maak met die feit dat jy twee keer so hard moet werk om die helfte van die beskikbare geleenthede gegun te word," sê hy.

"Ons moet mekaar dieselfde geluk geleenthede in sport, die korporatiewe wêreld, skole en die wyer gemeenskap gun.

"Ons moet ook die krag van ons diversiteit benut."

Mtawarira sê diversiteit sonder inklusiwiteit is egter vergeefs.

"Ek is verheug dat die Springbokke die afgelope twee jaar onder Rassie se leierskap begin het om die olifant in die kamer aan te spreek en dit het reeds uitstekende vrugte begin afwerp.

"Ek sien uit na die dag wanneer hierdie bloudruk die norm eerder as die uitsondering is," sê Mtawarira.

Jurie Roux, uitvoerende hoof van die Suid-Afrikaanse Rugbyunie, het vroeër in reaksie op Kolisi se video gesê daar sal nie van ongemaklike gesprekke weggeskram word nie.

Jean de Villiers, die Bokke se kaptein in die Heyneke Meyer-era, het vrae oor Kolisi se video flink gesystap en gesê enigiets wat hy daaroor sal kwytraak, kan verkeerd vertolk word. – **Sportredaksie**

KENNISGEWINGS

SISHEN IRON ORE COMPANY (PTY) LTD

ONTWIKKELING VAN 'N LUGHAWE

POSTMASBURG, NOORDKAAP

Sishen Iron Ore Company (Pty) Ltd (SIOC) stel voor om 'n lughawe te ontwikkel op die Plaas Kalkfontein 474 wat 3.4 km suid van Postmasburg geleë is in die Tsantsabane Plaaslike Munisipaliteit, Noordkaap Provinsie. Die voorgestelde lughawe word beoog om lugverkeer en passasiers te akkommodeer wat na en vanaf Kolomela Myn reis. Die myn is 10 km noordwes van Postmasburg geleë.

Aansoek word gemaak vir omgewingsbermagtiging vir die volgende gelyste aktiwiteite in terme van die Omgewingsbestuurswet (Nr 107 of 1998):

- **Notering Kennisgewing 1 van die Omgewingsimpakbepalingsreguliasies (GN R. 983 van 2014, soos gewysing) aktiwiteite 12** – infrastruktuur ontwikkeling binne 'n waterhulpbron, **14** – storing van brandstof (storing van gevaarhoudende stowwe), **19** – infrastruktuur ontwikkeling binne 'n waterhulpbron, **24** – kostruksie van 'n pad, en **28** – ontwikkeling van >5ha in 'n area wat gebruik word vir wildsboerdery.
- **Notering Kennisgewing 2 van die Omgewingsimpakbepalingsreguliasies (GN R. 984 van 2014, soos gewysing) aktiwiteite 6** – bestuur van afvalwater vanaf sephiese tenk stelsels **8** – ontwikkeling van 'n dansvloerbaan > 1.4km, **15** – verwydering van plantegroei > 20 hektaar.
- **Notering Kennisgewing 3 van die Omgewingsimpakbepalingsreguliasies (GN R. 985 van 2014, as amended) activity 10** – fuel storage within 100m of a vleiland

Die aansoek word ondersteun deur 'n volledige Omvangsbepaling- en Omgewingsimpakbepalingsproses (OIB) in terme van die OIB regulasies (GN R982 of 2014, soos gewysing deur GN R326 van 2017).

Aansoek vir n watergebruiklisensie, in terme van die Nasionale Waterwet (Nr. 36 van 1998) Artikel 21, word gemaak vir die volgende watergebruike:

- Artikel 21 **(a)** – onttrekking van grondwater vanaf 'n boorgat;
- Artikel 21 **(c&i)** – belemmeling of herleiding van watervloei in 'n waterhulpbron & altering the bed, banks or karakteriesierkoppe van 'n waterhulpbron vir ontwikkeling binne of naby vleilandpanne of water and waterlope; and
- Artikel 21 **(f&g)** – ontlaoling/storting van afvalbevattende water in 'n waterhulpbron en storting van afval in n manier wat potensiële negatiewe impakte op waterhulpbronne mag veroorsaak.

'n Publieke deelname proses word ondergaan i.l.v. die OIB regulasies (GN R982) om enige belanghebbende en geaffekteerde partye in kennis te stel van die proses en geleenthied te bied vir kommentaar. Indien u verdere inligting wil verkry of as 'n belanghebbende en geaffekteerde party wil registreer, maak asseblief skriftelike voorlegging aan:

Trevor Hallatt

EXM Advisory Services (Pty) Ltd

Tel: 071 689 2229 | Faks: 086 527 4619 | Posadres: PO Box 1822 Rivonia, 2128 | Epos: trevor@exm.co.za

Cheetahs het lekker kopseer oor agterlyn

Owen Kock

Vra maar vir die Cheetah-spelers watter soort afrigter hul agterlynbreier, Melusi Mthethwa, is en jy hoor gou hy is iemand wat 'n heel ander benadering tot die spel het.

Dit was juis danksy Mthethwa se invloed dat die Shimlas se agterlyn verlede seisoen met hernude krag in die Varsitybeker-reeks gespeel het.

Toe hy aan die begin van die Pro14-reeks amptelik by die Cheetahs ingeval het, was hy aan talle van die spelers bekend, omdat hy voorheen met hulle as juniors gewerk het. Hy het hom intussen goed ingeburger en het 'n belangrike skakel in Hawies Fourie (hoofafrigter) se afrigtingspan geword.

Mthethwa sê sedert hulle verlede week in groepe kon saamtrek, kon hy sien hoe spesiaal die groep spelers is wat die Cheetahs nou bymekaar het.

"Die oefeninge was interessant en dit is goed om weer terug op die veld te kan wees.

"Die spelers het nà die lang afwesigheid (weens die inperking) met 'n positiewe ingesteldheid opgedaag," sê Mthethwa.

Hy is veral opgewonde oor hoe die agterlyn daaruit kan sien wanneer rugby hervat word. Die koms van die deurwinterde Springbok Frans Steyn is natuurlik waarna elke Cheetah-ondersteuner uitsien.

"Dis opwindende tye, met opwindende spelers tot ons beskikking. Die afrigtingspan voel geëerd oor die uitdaging om die agterlyn uit soveel goeie spelers te moet kies, maak nie saak of dit vir die beginspan of die plaasvervangersbank is nie."

Hy is baie opgewonde oor Steyn en soos die res van die wêreld weet hy presies wat die man met die kanonpoot bied. Hy het egter ook 'n lansie gebreek vir die veelsydige Malcolm Jaer, wat onlangs van die nasionale sewes-akademie af teruggekeer het.

"Die groep is opwindend met Frans wat hom by ons aangesluit het. Dis egter belangrik om te weet daar is ewe goeie spelers in ons vergrote groep en almal het eintlik maar 'n invloed op mekaar.

"Malcolm is byvoorbeeld 'n ongelooflike rugbyspeler. Ook hy bring iets anders na die spel. Dis veral sy werk sonder die bal en sy goeie kommunikasie van agter af wat 'n groot invloed op die spandinamika het."

Mthethwa sê wat die mededinging onder die agterspelers betref, sê hy elke speler gaan veral nou wil wys hy soek plek in die eerste beginspan nà die inperking.

"Ek stem volkome saam dat die kompetisie vir plekke taai gaan wees. Hoe anders dan? Dis hoe dit hoort. Elke speler werk hard en lewer sy beste om die eerste keuse te wees. Ek dink die mededinging tussen die spelers is gesond en dis wat jy in 'n span-omgewing soek."

Hy sê ofskoon die groep nou maar eers 'n week bymekaar is, lyk die spelers geestelik baie sterk nà so 'n lang tyd wat hulle op hul eie moes klaarkom.

"Ek is van die mening dat die spelers nie te ver van gereed is om te kan speel nie, maar, dit is belangrik dat almal nou hul kant bring om te verseker dat ons 100% slaggereed is," sê Mthethwa.

Malcolm Jaer is een van die opwindende spelers met wie Melusi Mthethwa vanjaar by die Vrystaat-Cheetahs werk. Foto: GALLO IMAGES

Japan, Fidji in reeks saam met Sesnasies-grotes

Die Sesnasies-spanne, saam met Japan en Fidji, sal later vanjaar aan 'n reeks van agt lande deelneem, wat die gebruiklike jaareind-rugbytoetse in Europa sal vervang, het die **BBC** aangekondig.

Dié toernooi is veronderstel om op 14 November te begin, twee weke nadat die Sesnasies-reeks, wat in Maart weens die koronaviruspandemie uitgestel is, voltooi is.

Luidens die BBC-berig sal Engeland in 'n groep van vier lande saam met Wallis, Ierland en Fidji wees, terwyl Skotland, Frankryk, Italië en Japan, onder breierskap van Jamie Joseph, in die ander groep sal wees.

Nadat elkeen een keer teen mekaar gespeel het, sal die spanne in die laaste naweek teen die lande in die ander groep wat dieselfde posisie as hulle op die puntelys beklee, te staan kom.

Engeland sal op Twickenham teen Ierland en Fidji speel, terwyl die plek vir die Wallis-stryd nog bepaal moet word.

Die toernooi vind tot 5 Desember op vier agtereenvolgende naweke plaas, in ooreenstemming met Wêreldrugby se voorgestelde tydelike internasionale vensters-tydperk.

Spanne van die Suidelike Halfrond speel tradisioneel in November teen Europese teenstanders, maar weens die Covid-19-pandemie sal die Rugbykampioenskap vanjaar in dié tydperk plaasvind. – **Reuters**

Jamie Joseph

Appendix B4

Proof of site notices

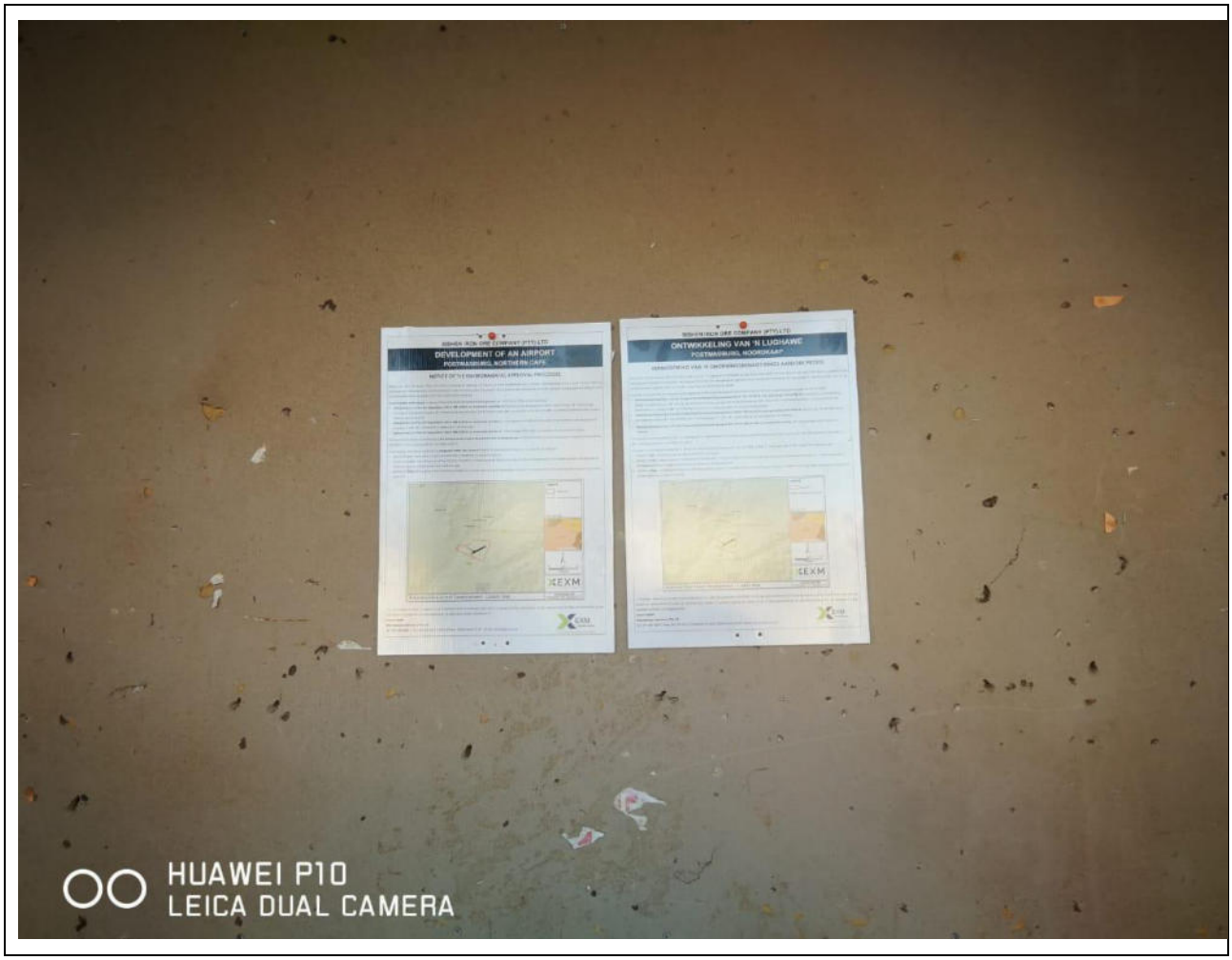
Northern Access Gate


On fence along R325

Postmasburg Spar

Post office


PROPERTY MANAGEMENT
RENTALS
CNT 478 NC
HUAWEI P10
LEICA DUAL CAMERA


DEVELOPMENT OF AN AIRPORT
ONTWIKKELING VAN 'N LUGHAWE
HUAWEI P10
LEICA DUAL CAMERA

Appendix B5

Proof of BID and Scoping Report Distribution

SMS

Phone number	Status	Sent Data
27837894065	DELIVRD	Public Notice: Environmental Impact Assessment (EIA) - Development of Airport near Postmasburg. Please contact Trevor Hallatt before the 3rd of September 2020 to register as an Interested/Affected Party, obtain further information or to review the scoping report in support of the EIA. Cell: 0716892229; email: trevor@exm.co.za
27839469737	EXPIRED	
27845174913	DELIVRD	
27845871070	DELIVRD	
27637268365	EXPIRED	
27714850763	UNDELIV	
27718654535	EXPIRED	
27724721055	DELIVRD	
27729251906	DELIVRD	
27731239095	DELIVRD	
27731592005	DELIVRD	
27731609977	DELIVRD	
27733494643	DELIVRD	
27733611941	DELIVRD	
27739361443	EXPIRED	
27781988258	UNDELIV	
27787670942	DELIVRD	
27791262114	EXPIRED	
27795264642	DELIVRD	
27817419278	EXPIRED	
27822669748	DELIVRD	
27823680356	DELIVRD	
27823714717	UNDELIV	
27823714737	DELIVRD	Public Notice: Environmental Impact Assessment (EIA) - Development of Airport near Postmasburg. Please contact Trevor Hallatt before the 3rd of September 2020 to register as an Interested/Affected Party, obtain further information or to review the scoping report in support of the EIA. Cell: 0716892229; email: trevor@exm.co.za
27824195494	DELIVRD	
27824653524	UNDELIV	
27824922849	DELIVRD	
27825522933	DELIVRD	
27825618391	DELIVRD	
27825661844	DELIVRD	
27826284435	DELIVRD	
27828082737	DELIVRD	
27828206977	EXPIRED	
27828212728	DELIVRD	
27828557363	DELIVRD	
27829256032	DELIVRD	
27832295145	UNDELIV	
27832295828	DELIVRD	
27832353280	DELIVRD	
27832887067	DELIVRD	
27832922540	DELIVRD	

Phone number	Status	Sent Data
27832948386	DELIVRD	
27833040849	DELIVRD	
27833690308	DELIVRD	
27833890931	DELIVRD	
27834465656	DELIVRD	
27835168042	DELIVRD	
27836495452	DELIVRD	
27836501219	EXPIRED	
27836502129	DELIVRD	
27836541150	DELIVRD	
27836787721	BLIST	
27836797333	DELIVRD	
27837681868	DELIVRD	

Emails

From:	Trevor Hallatt
Bcc:	skfloradale@gmail.com; rudi.kameelhoek@gmail.com; abac223@gmail.com; telpoortb@vodamail.co.za; islaylinde@gmail.com; johankleynnans001@gmail.com; samuelwillemse19@gmail.com
Subject:	Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date:	Tuesday, 04 August 2020 15:00:00
Attachments:	image001.png Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf Commenting Sheet.docx

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

SISHEN IRON ORE COMPANY (PTY) LTD

PROJECT: ENVIRONMENTAL IMPACT ASSESSMENT AND WATER USE LICENCE APPLICATION FOR THE DEVELOPMENT OF AN AIRPORT NEAR POSTMASBURG

Sishen Iron Ore Company (Pty) Ltd (SIOC) proposes to develop an airport on the Farm Kalkfontein 474, located approximately 3.4 km south of the town of Postmasburg, Tsantsabane Local Municipality, in the Northern Cape Province.

An Environmental Impact Assessment (EIA) and Scoping process in terms of the Environmental Impact Assessment Regulations (GN R982 of 2014, as amended by GN R326 of 2017) is undertaken to obtain Environmental Authorisation (EA) for the proposed project. A Water Use Licence (WUL) Application Process is also undertaken for the proposed project in terms of the National Water Act (No. 36 of 1998). EXM Environmental Advisory (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner (EAP) to facilitate the EIA and WUL application as well as the supporting public consultation process.

Attached please find the Background Information Document (BID) which contain all the relevant information regarding the EA and WUL application processes. The draft Scoping report is available for review at the following locations:

Electronic copy: trevor@exm.co.za (on request)

Electronic link: https://exmadvisoryservices-my.sharepoint.com/:f:/g/personal/trevor_exm_co_za/EhPrfpgYCGxBuyNfXPPam7wB7JVR0Hwd8gg83xZBdNougg?e=dDHg6V

Electronic link: https://www.dropbox.com/sh/cjq7leuk3fi3vnn/AAC16-anq0s89B87XZeQ3Jf7a?dl=0

If you wish to register as an Interested and/or Affected Party or raise any comments on the scoping report, please complete the attached comment sheet and return before the **4th of September 2020**.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 527 4619

Email: trevor@exm.co.za

From: Trevor Hallatt
To: cfviljoen@lantic.net
Subject: FW: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Monday, 03 August 2020 16:27:00
Attachments: image001.png
Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Commenting Sheet.docx

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Electronic link: https://www.dropbox.com/sh/cjq7leuk3fi3vnn/AAC16-anq0s89B87XZeQ3JfZa?dl=0

If you wish to register as an Interested and/or Affected Party or raise any comments on the scoping report, please complete the attached comment sheet and return before the **3rd of September 2020**.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 527 4619

Email: trevor@exm.co.za

Kind regards

Trevor

From: Trevor Hallatt
Bcc: mm@tsantsabane.gov.za; mmsec@tsantsabane.co.za; admin@zfm-dm.gov.za"; premierspa@ncpg.gov.za
Subject: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Monday, 03 August 2020 15:49:00
Attachments: image001.png
Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Commenting Sheet.docx

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SISHEN IRON ORE COMPANY (PTY) LTD

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Electronic link: https://www.dropbox.com/sh/cjq7leuk3fi3vnn/AAC16-anq0s89B87XZeQ3JfZa?dl=0

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Contact person: Trevor Hallatt
Cell phone nr: 071 689 2229
Fax: 086 527 4619
Email: trevor@exm.co.za

Kind regards
Trevor

From: Trevor Hallatt
Bcc: george.benjamin@angloamerican.com; wmboaj@saps.org.za; chris@klipbankfontein.co.za; jim@jimbos.co.za; benniebroomlands@gmail.com; briedenhann.christo@gmail.com; gclaassens@ceracast.co.za; Chrisanneclaassens@gmail.com; wright@polka.co.za; elhpdan@gmail.com; rudie@possies.co.za; dirkesau@gmail.com; gibson.deidre@gmail.com; mail@thehorns.co.za; karstenJaco@gmail.com; alidokatz11@gmail.com; Johan.Kleynhans@assmang.co.za; mavis.kolberg@angloamerican.com; Johan.kotze@floradaleboerdery.co.za; kalahariplanman@gmail.com; eksteenk@gmail.com; nicolas@geckoridge.net; wynielubbe@gmail.com; hestiamaritz@gmail.com; jacques.meyer@angloamerican.com; martinmoller@telkomsa.net; marlenemotlhalane@gmail.com; thembinikani024@gmail.com; rietj@saps.org.za; janmari@mivn.co.za; Msimelelo.Silomntu@assmang.co.za; tjaartpmg@lantic.net; tjsnijman@gmail.com; snymanht@gmail.com; swami5353@gmail.com; willie.uys66@gmail.com; mooidraai@lantic.net; christa@bospoort.co.za; johan@bospoort.co.za; marnavz@lantic.net; maritza.mvw@gmail.com; altus.aj@gmail.com; adam9wahl@gmail.com; samuelw73@ovi.com; sdrewinds@mivn.co.za; cmcmathe@gmail.com; hcon1@live.com; psbsteen@vodamail.co.za; kobusdirk@gmail.com; mornevdmerwe@outlook.com; agripostmasburg@gmail.com; hentie.fourie@4e-i.com; Sonet@DI2b.co.za; burger_mar@yahoo.com; SP du Plessis
Subject: FW: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Monday, 03 August 2020 15:45:00
Attachments: image001.png
Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Commenting Sheet.docx

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SISHEN IRON ORE COMPANY (PTY) LTD

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If you wish to register as an Interested and/or Affected Party or raise any comments on the scoping report, please complete the attached comment sheet and return before the **3rd of September 2020**.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 527 4619

Email: trevor@exm.co.za

From: Trevor Hallatt
Bcc: AbrahamsA@dws.gov.za; MsimangoP@dws.gov.za; JacolineMa@daff.gov.za; vincent.muila@dmr.gov.za; bfisher@ncpg.gov.za; kgosimoleko@gmail.com; dedat@ncpg.gov.za; drpw-Info@ncpg.gov.za; psaayman@ncpg.gov.za; info@sahra.org.za; nkabitin@caa.co.ca; maphangas@caa.co.za; phirwab@caa.co.za; bslenkoe@ncpg.gov.za; mvandenberg@ncpg.gov.za; aphete@ncpg.gov.za
Subject: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Monday, 03 August 2020 15:48:00
Attachments: image001.png
Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Commenting Sheet.docx

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If you wish to register as an Interested and/or Affected Party or raise any comments on the scoping report, please complete the attached comment sheet and return before the **3rd of September 2020**.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 527 4619

Email: trevor@exm.co.za

Kind regards

Trevor

From:	Trevor Hallatt
Bcc:	"VANDERWALTVILJOEN@GMAIL.COM"; "lizbe.nel@assmang.co.za"; "diebakkery@xmedia.co.za"; "izak.gous@angloamerican.co.za"; "sakkie.gous@gmail.com"; "cfciljoen@lantic.net"; "cfviljoen3@gmail.com"; "johan@soetfontein.co.za"; "info@tshiping.co.za"; "ajviljoen@soetfontein.coza"; "marnavz@lantic.net"
Subject:	Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date:	Monday, 03 August 2020 15:41:00
Attachments:	image001.png Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf Commenting Sheet.docx

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Electronic link: https://www.dropbox.com/sh/cjq7leuk3fi3vnn/AAC16-anq0s89B87XZeQ3Jf7a?dl=0

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 527 4619

Email: trevor@exm.co.za

Kind regards

Trevor

From: Trevor Hallatt
To: Gous, Izak
Subject: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Monday, 03 August 2020 15:46:00
Attachments: image001.png
Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Commenting Sheet.docx

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

SISHEN IRON ORE COMPANY (PTY) LTD

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Electronic link: https://www.dropbox.com/sh/cjq7leuk3fi3vnn/AAC16-anq0s89B87XZeQ3JfZa?dl=0

If you wish to register as an Interested and/or Affected Party or raise any comments on the scoping report, please complete the attached comment sheet and return before the **3rd of September 2020**.

Contact person: Trevor Hallatt

Appendix B6

Comments and response

From: Trevor Hallatt
To: coenraad kotze
Subject: RE: Proposed Airport
Date: Monday, 03 August 2020 16:03:00

Good day,

Thank you for the comment. All the details are contained in the Background Information Document and scoping report attached to the email and link provided. The proposed development triggers activities (as listed below) in Section 21 of the National Water Act and therefore a Water Use Licence needs to be obtained.

- Section 21 (a) – abstraction of groundwater from a borehole to supply the airport;
- Section 21 (c&i) – impeding or diverting the flow of water in a watercourse & altering the bed, banks or characteristics of a watercourse for developments within or close to wetland pans and watercourses.
- Section 21 (f&g) discharging water containing waste into a water resource and disposing of waste in a manner which may detrimentally impact on a water resource.

Please feel to contact me if you have any further queries.

Kind regards
Trevor

From: coenraad kotze <kalahariplanman@gmail.com>
Sent: Monday, 03 August 2020 15:55
To: Trevor Hallatt <trevor@exm.co.za>
Subject: Proposed Airport

Hi Trevor.

I am a little confused, why would an aiport need a water licence?

Regards
Coenraad

From: gibson.deidre
To: Trevor Hallatt
Subject: Airport enviromental
Date: Wednesday, 05 August 2020 07:41:42

Good morning. In would like to be added as a person interest in above case if it is still possible please. I am a farmer near one of the proposed sites.

Thanks.

Deidre Gibson

Sent from my Samsung Galaxy smartphone.

From: Trevor Hallatt
To: gibson.deidre
Subject: FW: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Monday, 17 August 2020 09:51:00
Attachments: image001.png
Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Commenting Sheet.docx

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

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Electronic link: https://www.dropbox.com/sh/cjq7leuk3fi3vnn/AAC16-anq0s89B87XZeQ3JfZa?dl=0

If you wish to register as an Interested and/or Affected Party or raise any comments on the scoping report, please complete the attached comment sheet.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 527 4619

Email: trevor@exm.co.za

Kind regards

Trevor

From: Marna van Zyl
To: Trevor Hallatt
Subject: Kolomela Mine Airport Development
Date: Tuesday, 28 July 2020 11:11:08

Goeie dag Trevor

Ek wil asb aansoek doen namens my man, Johan de Klerk van Zyl (ID 630101 5095 082), eienaar van die Plaas Kameelfontein, aangrensend aan Kalkfontein en Soetfontein, om te registreer as 'n belanghebbende en affekteerde party vir bogenoemde projek.

Ons sal dit waardeer indien u beskikbare inligting vir ons kan aanstuur.

Groete / Kind regards

Marna van Zyl
P.O. Box 416
POSTMASBURG
8420

Cell: 082 923 1711

From: Trevor Hallatt
To: Marna van Zyl
Subject: RE: Kolomela Mine Airport Development
Date: Monday, 03 August 2020 13:22:00
Attachments: image001.png

Goeiedag Marna,

Dankie vir die kommunikasie ontvang. Ek het julle besonderhede op die lys van geintereseerde en geaffekteerde partye bygevoeg. Alle verdere kommunikasie sal verskaf word deur die verloop van die aansoek proses.

Groete
Trevor

From: Mimi Swart
To: Trevor Hallatt
Date: Monday, 03 August 2020 23:01:27

"DEVELOPMENT AIRPORT NEAR POSTMASBURG".

El registreer hiermee as n belangstellende party in die ontwikkeling van 'n lughawe naby Postmasburg.
Kan u dalk vir my n aanduiding gee van waar die beplanning gemaak word? Watter rigting? Hoever uit dorp?
Met dank
Rdl. Mimi Swart

From: Trevor Hallatt
To: Mimi Swart
Subject: DEVELOPMENT OF AN AIRPORT NEAR POSTMASBURG
Date: Tuesday, 04 August 2020 09:25:00
Attachments: Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Projekliggings kaart.pdf

Goeiemôre,

Dankie vir die kommunikasie ontvang. Soos in die vorige epos gekommunikeer, vind asb aangeheg 'n agtergronddokument wat 'n kaart bevat wat die ontwikkeling aandui asook agtergrond rakende die projek. Die swart gedeelte is die voorgstelde uitleg. Ek het ook 'n addisionele liggingskaart aangeheg.

Kontak my gerus indien U verdere vrae het.

Groete
Trevor

From: M. R. Van Niekerk
To: Trevor Hallatt
Subject: René van Niekerk
Date: Monday, 03 August 2020 22:54:54

Hallo Trevor,
Ek het 'n kennisgewing gekry dat daar 'n omgewings impakstudie gedoen is vir 'n nuwe vliegveld in die Postmasburg omgewing.
Kan jy asseblief vir my meer detail gee in verband daarmee?
Ek en my man vlieg beide en gebruik Postmasburg vliegveld.
Groete.
René van Niekerk
Sel no: 0827838180

From: Trevor Hallatt
To: renevn@me.com
Subject: FW: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Wednesday, 12 August 2020 07:56:00
Attachments: image001.png
Airport Development near Postmasburg Environmental Authorisation BID_03082020.pdf
Commenting Sheet.docx

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

SISHEN IRON ORE COMPANY (PTY) LTD

PROJECT: ENVIRONMENTAL IMPACT ASSESSMENT AND WATER USE LICENCE APPLICATION FOR THE DEVELOPMENT OF AN AIRPORT NEAR POSTMASBURG
Sishen Iron Ore Company (Pty) Ltd (SIOC) proposes to develop an airport on the Farm Kalkfontein 474, located approximately 3.4 km south of the town of Postmasburg, Tsantsabane Local Municipality, in the Northern Cape Province.

An Environmental Impact Assessment (EIA) and Scoping process in terms of the Environmental Impact Assessment Regulations (GN R982 of 2014, as amended by GN R326 of 2017) is undertaken to obtain Environmental Authorisation (EA) for the proposed project. A Water Use Licence (WUL) Application Process is also undertaken for the proposed project in terms of the National Water Act (No. 36 of 1998). EXM Environmental Advisory (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner (EAP) to facilitate the EIA and WUL application as well as the supporting public consultation process.

Attached please find the Background Information Document (BID) which contain all the relevant information regarding the EA and WUL application processes. The draft Scoping report is available for review at the following locations:

Electronic copy: trevor@exm.co.za (on request)

Electronic link: https://exmadvisoryservices-my.sharepoint.com/:f:/g/personal/trevor_exm_co_za/EhPrfpgYCGxBuyNfXPPam7wB7JVR0Hwd8gg83xZBdNougg?e=dDHg6V

Electronic link: https://www.dropbox.com/sh/cjq7leuk3fi3vnn/AAC16-anq0s89B87XZeQ3JfZa?dl=0

If you wish to register as an Interested and/or Affected Party or raise any comments on the scoping report, please complete the attached comment sheet and return before the **3rd of September 2020**.

Contact person: Trevor Hallatt
Cell phone nr: 071 689 2229
Fax: 086 527 4619
Email: trevor@exm.co.za

Kind regards
Trevor

From: SP du Plessis
To: Trevor Hallatt
Subject: Interested party registration
Date: Friday, 31 July 2020 11:57:55
Attachments: Company Profile.pdf

Good morning, I hope you are well. I would like have our company registered as an interested party for dust suppression and road maintenance for the development of an airport by SIOC in Postmasburg. Please see attached the company profile for your perusal.

Thank you and regards
SP du Plessis

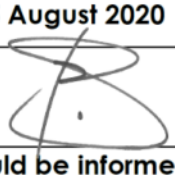
Dust Suppression
Kgatelopele Dust Suppression
5 Bokmakierie str, Kathu
Cell: 082 459 4655
Local B-BEE level 2 Black owned SMME

From: Trevor Hallatt
To: "SP du Plessis"
Subject: RE: Interested party registration
Date: Monday, 03 August 2020 13:11:00

Good day Mr. du Plessis,

Thank you for the communication received. I will add your details to the list of register interested and affected parties. All further information regarding the Environmental Authorisation process will be communicated in due course.

Kind regards
Trevor

SISHEN IRON ORE COMPANY (PTY) LTD ENVIRONMENTAL IMPACT ASSESSMENT AND WATER USE LICENCE APPLICATION: DEVELOPMENT OF AN AIRPORT SOUTH OF POSTMASBURG	
Name:	**SP du Plessis**
Address:	**Bokmakierie str 5 Kathu 8446**
Telephone/cell phone:	**082 459 4655**
Fax:	
E-mail:	**sarel@kpds.co.za**
Date:	**5 August 2020**
Signature:	

If you know of others who should be informed of this application, please provide us with their contact details:

Name:	
Address:	
Telephone/cell phone:	
Fax:	
E-mail:	

ISSUES, CONCERNS AND QUESTIONS
We are a local SMME delivering products, Plant, and/or a service in dust suppression and road maintenance. Is there any scope for us under Activity 24, or any other activity of Listing Notice 1 (GN R. 983 as amended in 2017)?

From: Trevor Hallatt
To: "SP du Plessis"
Subject: FW: Public Notice: Environmental Impact Assessment and Water Use Licence Application - Development of an Airport South of Postmasburg
Date: Wednesday, 16 September 2020 12:11:00
Attachments: 2020.08.05 Commenting Sheet Development of an airport near Postmasburg-signed.pdf

Good day Sarel,

Regarding your attached comments. We have incorporated you as an interested party in the Environmental Impact Assessment (EIA) process and all further communication will be forwarded. However, the EIA does not facilitate for procurement. The comment and request will be incorporated and communicated.

Kind regards

SISHEN IRON ORE COMPANY (PTY) LTD **ENVIRONMENTAL IMPACT ASSESSMENT AND WATER USE LICENCE APPLICATION: DEVELOPMENT OF AN AIRPORT SOUTH OF POSTMASBURG**	
Name:	Izak Gous
Address:	Grootfontein (Farm)
Telephone/cell phone:	0836979037
Fax:	
E-mail:	Izak.gous@angloamerican.com
Date:	06/08/2020
Signature:	

If you know of others who should be informed of this application, please provide us with their contact details:

Name:	
Address:	
Telephone/cell phone:	
Fax:	
E-mail:	

ISSUES, CONCERNS AND QUESTIONS
The impact of the development of the airport on our farm's operational capacity. How will vermin be controlled? Will the current owner/new owner still be able to conduct fence inspections?
Security – what will the company do to ensure adequate security to prevent unauthorized entrance (as the runway is near our border fence) and consequently livestock theft, collecting of firewood etc.
Water quantity and quality – Will monitoring of boreholes take place to manage any dewatering or quality impacts?
Maintenance of the Witsand road towards town – the road is currently in a poor condition and will only deteriorate further with increased traffic, what is the plan of action in that regard?
What lights will be used? Will it be environmentally friendly to soften the effect of the lights?

Appendix B7 Meeting Minutes

EXM
SOLUTIONS | PROGRESS | PARTNERS

KOLOMELA MINE
AIRPORT DEVELOPMENT
RECORD OF STAKEHOLDER ENGAGEMENT

NOTE: In accordance with the Public Participation Plan submitted to the Northern Cape Department of Environment and Nature Conservation in line with the directions (GN 43412 of 5 June 2020) issued by the Department of Environment, Forestry and Fisheries (DEFF) in terms of the Disaster Management Act (57/2002), no public meeting was held for the project. Stakeholder groups identified as being directly affected by the project were identified and these persons were engaged specifically on their issues and concerns.

These notes serve as a record of such engagements.

1. RECORD OF DISCUSSION WITH NEIGHBOURING LANDOWNER (FARM SOETFONTEIN 491)

Date: 19 August 2020

Present: Albertus Viljoen (Soetfontein)
Trevor Hallatt (EXM Environmental Advisory)
Kerry Fairley (EXM Environmental Advisory)

1.1 Mr Viljoen questioned whether Kumba intended buying the Farm Kalkfontein.

EXM replied that no discussions had commenced, however the owners of Kalkfontein had indicated that they would be open to selling the farm.

1.2 Mr Vijoen questioned if the southern gate to Kolomela will be used to access the mine.

EXM indicated that the route was being investigated as an alternative to the main access route due to the long distance and traffic issues. A Traffic Impact Assessment was being undertaken to investigate. However, the project had not indicated that the alternative would be used although they are open to considering this, if needed.

1.3 Mr Vijoen indicated if private persons would be allowed to fly on the Airlink flights.

EXM replied that this was being considered and that it was anticipated that the airport may operate much in line with the current Sishen Airport.

1.4 Mr Viljoen said that the presence of the airport may be beneficial for the guesthouse on the farm, especially if the southern gate is used as traffic would pass his farm.

1.5 Mr Viljoen suggested that although dust would be worse, the current dust from traffic was already impacting on him and he did not expect it would be much worse.

1.6 Mr Viljoen indicated that he had no major concerns regarding the airport development. He however expressed concern regarding the state of the access road (R325), which was not in a state to carry increased traffic from the airport.

EXM indicated that the project is aware of the state of the road and this was being investigated as part of the feasibility study. Furthermore, this was also being considered in the Traffic Impact Assessment which is part of the EIA.

2. RECORD OF DISCUSSION WITH AFFECTED LANDOWNER (FARM KALKFONTEIN 474)

Date: 20 August 2020

Present: Drikus Nel

Ferdi Nel

Dries van der Walt

Lientjie van der Walt

Viljoen van der Walt

Trevor Hallatt (EXM Environmental Advisory)

Kerry Fairley (EXM Environmental Advisory)

The following key issues, comments and concerns were raised:

2.1 The seriousness of Kumba's intentions to develop the airport was questioned and also the date as to when development would start.

EXM indicated that Kumba were in the process of a feasibility study for the project and had already completed the prefeasibility phase. The farm Kalkfontein is regarded as the preferred option, although another site on municipal land to the north east of the farm was also still considered as an alternative. The intention was to commence construction as soon as the environmental approvals are in place i.e. May 2021.

2.2 The farm Kalkfontein is being used for game farming. Internal camps were removed and livestock in the form of sheep and cattle removed as a resulting of poaching on the farm.

2.3 The landowner and representatives present indicated that should Kumba wish to purchase the land for the development, the 3 residences in use by the landowner and his family should remain. They indicated that they should retain these portions of land i.e. the farm should be subdivided. It was indicated that these portions were already separated from the area under consideration for the development of the airport by means of public roads.

EXM indicated that this information regarding would be relayed to the project team.

2.4 The landowners indicated that there are 2 employee houses on the portion of the farm to be affected by the airport. These persons do not reside permanently on the farm and have alternative houses in town.

2.5 It was questioned of the use of water by the airport would impact on the water supply to user on the farm.

EXM responded that the quantities of water to be used are low (11 000 litres/day) and it was unlikely given that the borehole would probably use the deeper dolomitic aquifer. However, the EIA should address this concern.

ATTENDANCE REGISTER

KOLOMELA AIRPORT DEVELOPMENT PROJECT – STAKEHOLDER ENGAGEMENT

DATE: 24 August 2020 **VENUE:** Kalkfontein

NAME	FARM/COMPANY/ AFFILIATION	PHONE/CELL	EMAIL	POSTAL ADDRESS	SIGNATURE
Dirkus Nel	kalkfontein	079 775 1628	dirkus9@gmail.com	Farm kalkfontein	
Ferdi Nel	kalkfontein	082 507 3310	ferdinelk@gmail.com	Farm kalkfontein	
Vivyan van Wyk	kalkfontein	0727192858	vanderwaltvivyan@gmail.com	Pobox 558	
Dries van Wyk	kalkfontein	0636573170	—	558	
Hentjie van Wyk	kalkfontein	0795304986	vanderwaltentjie@gmail.com	558	
Trevor Hallatt	EXM	0716492229	trevor@exm.co.za		

3. RECORD OF CONSULTATION WITH THE CURRENT USERS OF POSTMASBURG AIRFIELD (TO BE CLOSED)

Date: 20 August 2020

Present: René van Niekerk

Trevor Hallatt (EXM Environmental Advisory)

Kerry Fairley (EXM Environmental Advisory)

3.1 The seriousness of Kumba's intentions to develop the airport was questioned and the date as to when development would start.

EXM indicated that Kumba were in the process of a undertaking a feasibility study for the project and had already completed the prefeasibility phase. The intention was to commence construction as soon as the environmental approvals are in place i.e. May 2021.

3.2 It was questioned as to what would happen to the current Postmasburg Airport.

EXM indicated that the Postmasburg Airfield would be permanently closed due to the proximity to the new airport.

3.3 It was indicated that the van Niekerk's have taken it on their own accord to manage and maintain the airfield on behalf of the municipality.

3.4 It was questioned as to whether private persons would be accommodated at the Kolomela Airport.

EXM indicated that the project has planned to set aside an area for private users. The land would be used in terms of a lease agreement with the landowner. It was indicated that the use of the airport would be in accordance with CAA requirements and agreement with Kolomela.

3.5 The seriousness of Kumba's intentions to develop the airport was questioned and also the date as to when development would start.

EXM indicated that Kumba were in the process of a feasibility study for the project and had already completed the prefeasibility phase. The farm Kalkfontein is regarded as the preferred option, although another site on municipal land to the north east of the farm was also still considered as an alternative. The intention was to commence construction as soon as the environmental approvals are in place i.e. May 2021.

3.6 The landing strip is maintained by the private users. Security is also provided by the private users. In additional recreation facilities for the community had been provided by the private users which included a track around the airstrip.

3.7 It was indicated that the current users would incur additional costs including erection of hangars as well as costs associated with the lease of the land and the use of the airport. It was requested that such costs be communicated as soon as possible. Currently there are no costs for persons using the Postmasburg Airfield and in future should they land at the Kolomela Airport they expect substantial landing costs. It was suggested that if the current users could not be accommodated at the new airport, they would object to the airport.

EXM indicated that they do not know the costs and the project had not progressed to a stage where these would have been determined at this stage. However, the request will be conveyed to the project.

3.8 The Farm Kalkfontein is used for recreation such as mountain biking and jogging as it presented as safe and pleasant environment in which to undertake such recreation. It was Infrastructure at the airfield includes 4 hangars with 2 planes permanently kept at the airfield. It was suggested that the farm continue to be used for this purpose as a large part of the farm will not be needed for the airstrip.

EXM indicated that this was a good suggestion and would be considered further.

3.9 It was requested that the civil aviation specialist consult with the van Niekerks regarding the future arrangements for private use at the airport.

EXM indicated that the request will be put to the project.

4. RECORD OF CONSULTATION WITH NEIGHBOURING LANDOWNER (GROOTFONTEIN 492)

Date: 20 August 2020

Present:

Charl Gous (Grootfontein)

Izak Gous (Grootfontein)

Trevor Hallatt (EXM Environmental Advisory)

Kerry Fairley (EXM Environmental Advisory)

4.1 The main concern of landowner is the impact of the noise of the planes on the farming activities. In particular the impact on the lambing by ewes. The farm has been set up so that the ewes are located along the boundary closest to the proposed runway. Planes will land/depart over the section of the farm where the ewes are located. It was noted that the farm had been specifically laid oput in this manner in that the ewes are located close to the farm house and fitted with a collar which alerts the landowners should the ewes be under stress (raised heart rate). This was to manage poaching on the farm. It will not be easy to undertake the farming practice at a location further away from the runway.

EXM indicated that a noise impact assessment is being undertaken and it will be requested that the noise specialist look at the impact. However, it is anticipated that their will be such an impact which would be difficult to mitigate.

4.2 A further concern related to the maintenance of the fence on Kalkfontein and Grootfontein. It was indicated that currently the fence was not adequately maintained, since the farmer at Kalkfontein had removed most of the livestock due to poaching. It was accepted that the area around the airport will be secure, but the security of the rest of the property is of concern. It was requested that the details regarding the maintenance of the fence and security be conveyed.

EXM indicated that this would be raised and the information will be conveyed back to the Gous family.

4.3 From a social perspective it was questioned if the development of a new airport should be priority for Kolomela, given that the town of Postmasburg is in need of intervention in terms of improving living conditions. The town is a mess with little to no waste management, a sewage works that overflows etc. The town is in need of recreational facilities for the people that live there.

EXM indicated that it has been suggested that the farm Kalkfontein be used to promote recreation i.e. the areas outside of that used by the airport could be used for mountain biking, jogging etc.

This idea was supported.

4.4 It was questioned as to the source and impact of water to be used at the airport.

EXM responded that groundwater be used and that it is likely that a new borehole would be put in place given that the current boreholes are not is suitable locations. The quantities of water to be used will be low.

It was indicated that Kolomela Geohydrologists could assist in the siting and drilling of the borehole for the project.

EXM indicated that they would convey this message to the project team.

4.5 Any development that impacted on the vlei area (Groenwaterspruit) would be opposed. Although it was acknowledged that the impact would be insignificant as compared to Kolomela and Beeshoek impacts.

EXM acknowledged that the EIA should address the potential for impacts on water sources such as the vlei.

ATTENDANCE REGISTER

KOLOMELA AIRPORT DEVELOPMENT PROJECT – STAKEHOLDER ENGAGEMENT

DATE: 20.08.20 **VENUE:** Shaun st. 16. (Postmasburg)

NAME	FARM/COMPANY/ AFFILIATION	PHONE/CELL	EMAIL	POSTAL ADDRESS	SIGNATURE
Izak Gous	Grootfontein KIO Kolomela	0836979037	Izak.gous@anglo american.com	P.O. Box 10.	
IZAK GOUS	GROOTFONTEIN	0832338875	sakkie.gous@gmail.com	P.O.Box 10	
Charl Gous	Grootfontein	0716268466	charl.gous@angloamerican.com	P.O.Box 10	
Trevor Hallatt	EXM	0716892229	trevor@exmcaza		

Compiled by: Kerry Fairley and Trevor Hallatt

24 August 2020