CONTRACT NO. W/DP/RA-22/2020

DESIGN AND CONTRACT DOCUMENTATION TO UPGRADE 145KM OF MO119 (TO602 TO TALISMANUS) TO LOW VOLUME SEAL

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Enviro Management Consultants Namibia
PO Box 11574
Windhoek
Namibia
Email: enviromc@iway.na

PO Box 97339, Maerua Mall
Dr Kenneth David Kaunda Street, Windhoek

ROADS AUTHORITY NAMIBIA

ENVIRONMENTAL ASSESSMENT REPORT FOR: CONTRACT NO. W/DP/RA-22/2020 DESIGN AND CONTRACT DOCUMENTATION TO UPGRADE 145KM OF MO119 (TO602 TO TALISMANUS) TO LOW VOLUME SEAL

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ACRONYMS / ABBREVIATIONS

BID	Background Information Document
DEA	Directorate of Environmental Affairs
EMCN	Enviro Management Consultants Namibia
EMP	Environmental Management Plan
IAPs	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism

ROADS AUTHORITY OF NAMIBIA

ENVIRONMENTAL ASSESSMENT REPORT FOR: CONTRACT NO. W/DP/RA-22/2020 DESIGN AND CONTRACT DOCUMENTATION TO UPGRADE 145KM OF MO119 (TO602 TO TALISMANUS) TO LOW VOLUME SEAL

1. INTRODUCTION

Enviro Management Consultants Namibia (EMCN) is appointed to undertake the Environmental Assessment relating to the proposed project – CONTRACT NO. W/DP/RA-22/2020 DESIGN AND CONTRACT DOCUMENTATION TO UPGRADE 145KM OF MO119 (TO602 TO TALISMANUS) TO LOW VOLUME SEAL.

2. BACKGROUND INFORMATION

Tulipamwe Consulting Engineers has been appointed for the Emergency Consulting Services for the Design and Contract Documentation for Upgrading 145km of M0119 (T0602 to Talismanus) to Low Volume Seal.

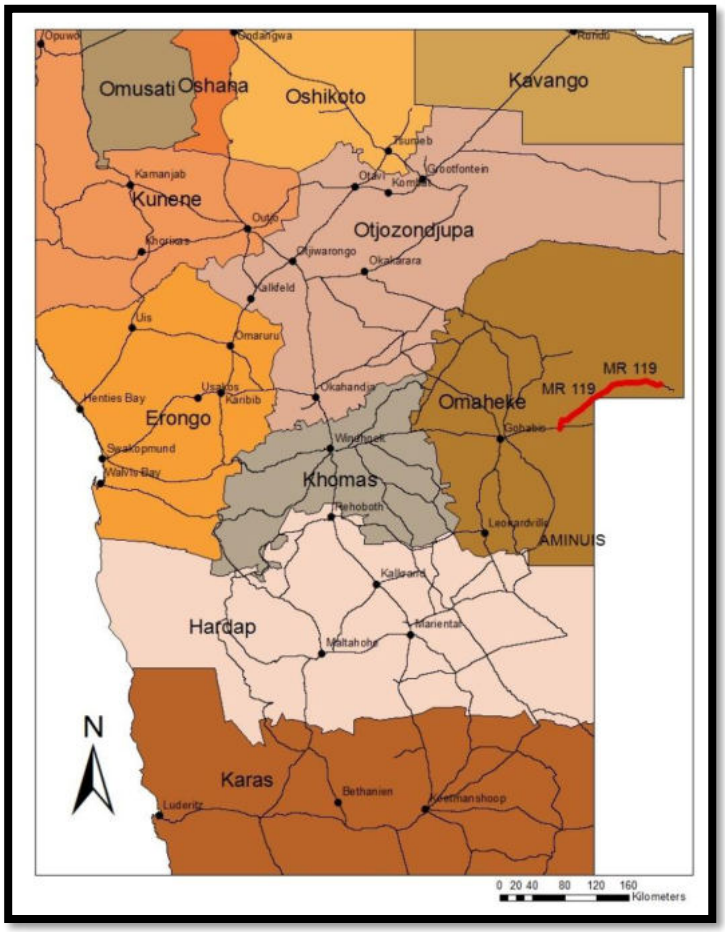


Figure 1: Locality of the MR119 project.

As part of its mandate, the Roads Authority must ensure that the marginalized communities are served by the national road network. Main Road 119 provides access, to essential services like schools and medical facilities, to the Talismanus community. Maintaining the existing gravel road has become costly due to the excessive deterioration and upgrading the road is more feasible.

The pavement design is done in accordance with the SATCC Guideline for Low-volume Sealed Roads in conjunction with the *Structural Design of Interurban and Rural Road Pavements (TRH 4)* and the *SATCC Code of Practice for the Design of Road Pavements.* Material specifications will be done in accordance with COLTO standard specifications. The upgrade to low volume seal will be done mainly on the existing gravel road (MR 119) to Talismanus with a few re-alignments as to accommodate higher speeds associated with a bitumen road.

3. DETAILS OF THE APPLICANT AND CONSULTANT

3.1 Details of the Applicant

Applicant	Roads Authority of Namibia
Contact Person	Mr. Vernon du Preez Regional Engineering Manager Windhoek Region
Contact Numbers Email:	+264 61 284 7054 dupreezv@ra.org.na

3.2 Details of the Environmental Consultants

The environmental project team from EMCN is led by Mr. Rian du Toit, an Environmental Assessment Practitioner with more than 19 years of working experience in the field of Environmental Management. Table 1 highlights the experience and qualifications of the environmental team.

Table 1: Capability Statement for the Environmental Project Team

Name	**Role in the Project**	**Qualifications and Experience**
Rian du Toit	Environmental Assessment Practitioner and Project Manager	Master's degree in the Environmental and Social fields. Mr. du Toit has more than 19 years' experience in the field of environmental management, mostly related to roads, services, transmission lines and mining right applications.

4. ROAD CONSTRUCTION DESCRIPTION

Road construction actions depend on the technically and economically viable/feasible options identified which include some degree of layer works (fill, wearing course, sub-base and base layers). Due to the low volume seal, a bitumen surface will be added on top of the layer works.

The following briefly describes the various layers:

Sub Base:

- It is a layer of granular material provided above the selected layer generally natural gravel. This material is obtained from borrow pits alongside the planned route.

Base course:

- It is the layer immediately under the surface treatment or bitumen seal / asphalt.
- As base course lies close under the pavement surface which is subjected to severe loading. The material in a base course must be of high quality compared to the underlying layers and its construction must adhere to design standards.
- This material is obtained from borrow-pits but may have to be screened, crushed and screened, modified by addition of lime material or stabilized to conform to specifications. The material may also have to be obtained from stone quarries opened by the contractor or from commercial sources.

Bituminous Pavement:

For good service throughout the full life cycle of the bituminous pavement, the bituminous surface treatment must have the following qualities:

- Resistance to cracking or ravelling.
- Resistance to weather including the effect of surface water heat and cold.
- Resistance to internal moisture, particularly to water vapours.
- Tight impermeable surface.
- Smooth riding and none skidding surface.

The design aims to meet the above requirements for considerable number of years (need proper design, good construction supervision and maintenance during the life of the road).

4.1 Borrow Pits

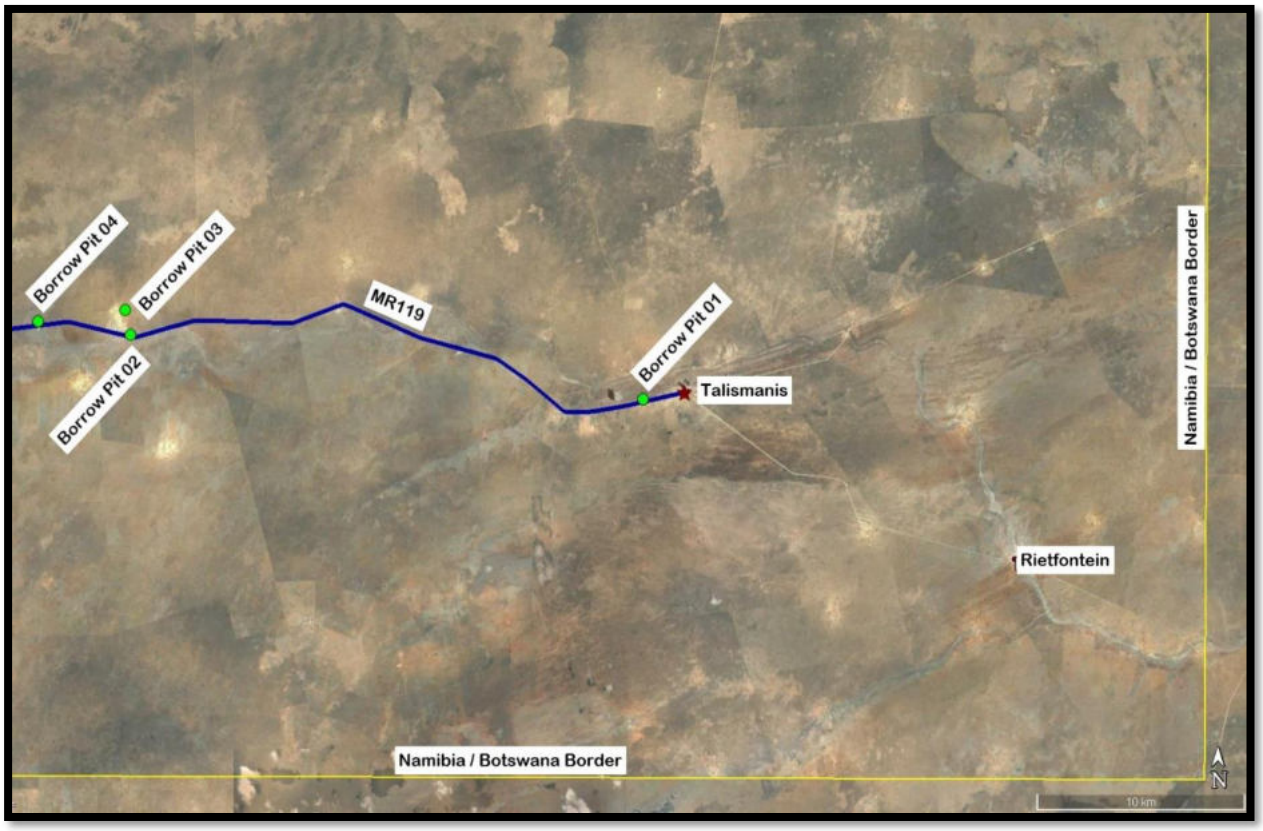
Suitable materials are needed for the construction of the selected layer, subbase, shoulder, gravel wearing course and base course. Fill material is also required to ensure a vertical alignment appropriate for the chosen design speed.

To achieve the abovementioned, suitable material is required from borrow pits. These pits are opened using various heavy-duty machines and the material is hauled from the pit to the required sections of the road where the material is needed. It is imperative that the material excavated complies with the

engineering standards required for the construction of the road and is therefore tested on a regular basis.

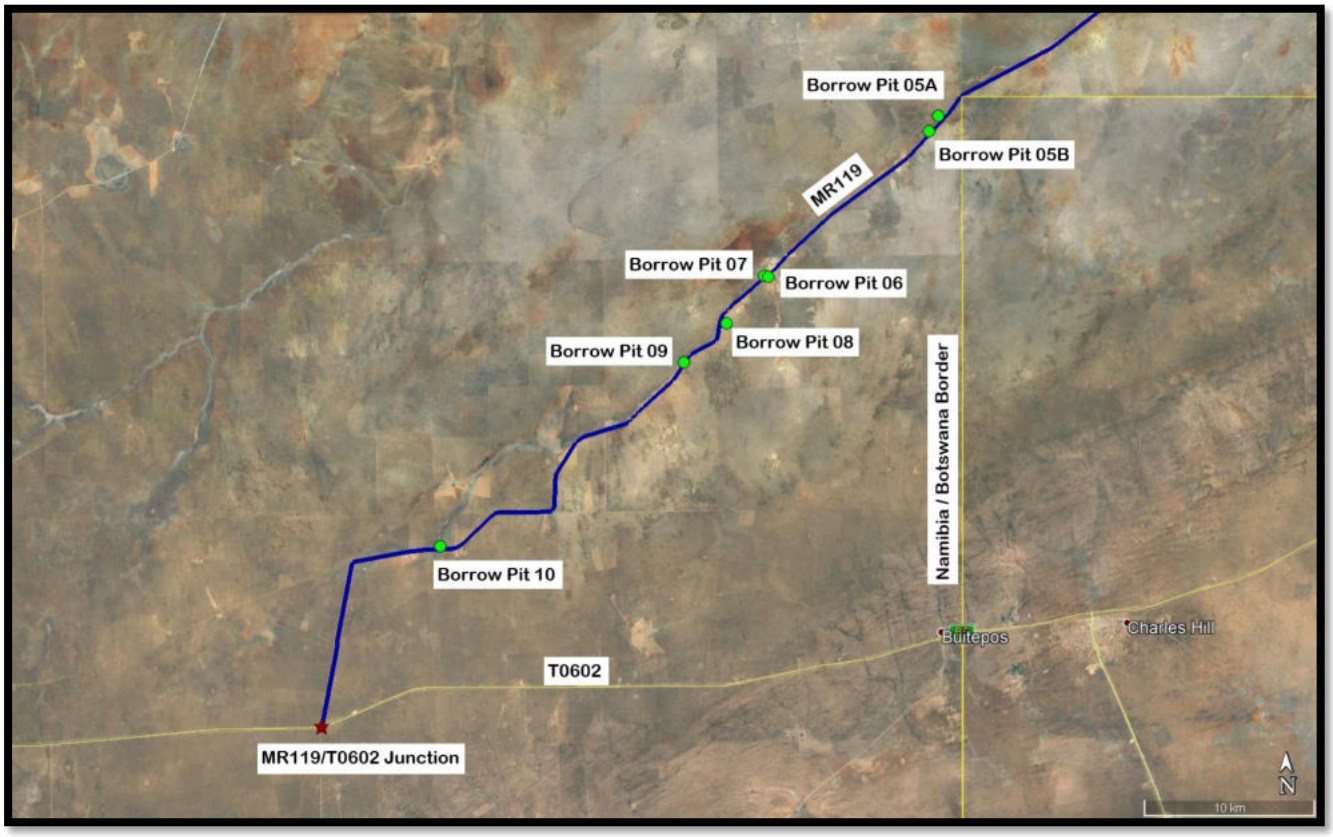
Another important issue is hauling distance. The borrow pits cannot be situated too far from the section of the road where the material is needed, therefore borrow pits cannot be located too far apart (incurring costs due to hauling).

It is anticipated that a total of eleven (11) borrow pits will be used for this project. The following table depicts the relevant information of each:



Borrow Pit :	**01**	
Location :	142+600 km	LHS
Distance to CL :	150	m
Coordinate (Lat and Long)	21° 50' 46.5215" S	20° 44' 13.6464" E
Lo 22/19 (Y and X)	-179698.8357	-16059.10041
Borrow Pit :	**02**	
Location :	116+600 km	LHS
Distance to CL :	100	m
Coordinate (Lat and Long)	21° 49' 13.4580" S	20° 29' 54.8700" E
Lo 22/19 (Y and X)	-155060.2343	-19181.45664
Borrow Pit :	**03**	
Location :	116+600 km	LHS
Distance to CL :	1150	m
Coordinate (Lat and Long)	21° 48' 36.8820" S	20° 29' 44.1528" E
Lo 22/19 (Y and X)	-154763.2817	-20309.70922

Borrow Pit :	**04**	
Location :	112+600 km	LHS
Distance to CL :	200	m
Coordinate (Lat and Long)	21° 48' 54.7344" S	20° 27' 19.8108" E
Lo 22/19 (Y and X)	-150611.3565	-19800.17183
Borrow Pit :	**05A**	
Location :	55+900 km	LHS
Distance to CL :	350	m
Coordinate (Lat and Long)	22° 00' 37.7028" S	19° 59' 08.0700" E
Lo 22/19 (Y and X)	-101876.5133	1439.129951
Borrow Pit :	**05B**	
Location :	54+900 km	LHS
Distance to CL :	150	m
Coordinate (Lat and Long)	22° 01' 04.1448" S	19° 58' 51.1644" E
Lo 22/19 (Y and X)	-101386.3633	2249.403934



Borrow Pit :	**06**	
Location :	42+000 km	LHS
Distance to CL :	100	m
Coordinate (Lat and Long)	22° 05' 37.7304" S	19° 53' 12.1272" E
Lo 22/19 (Y and X)	-91612.91606	10605.73868

Borrow Pit :	**07**	
Location :	42+100 km	RHS
Distance to CL :	100	m
Coordinate (Lat and Long)	22° 05' 40.3476" S	19° 53' 19.1940" E
Lo 22/19 (Y and X)	-91815.03178	10687.42726
Borrow Pit :	**08**	
Location :	38+300 km	RHS
Distance to CL :	100	m
Coordinate (Lat and Long)	22° 07' 13.1916" S	19° 51' 40.7448" E
Lo 22/19 (Y and X)	-88976.63076	13527.18897
Borrow Pit :	**09**	
Location :	34+800 km	LHS
Distance to CL :	100	m
Coordinate (Lat and Long)	22° 08' 25.1988" S	19° 50' 25.5012" E
Lo 22/19 (Y and X)	-86807.78519	15730.13935
Borrow Pit :	**10**	
Location :	15+000 km	LHS
Distance to CL :	200	m
Coordinate (Lat and Long)	22° 14' 06.6660" S	19° 42' 07.5816" E
Lo 22/19 (Y and X)	-72490.19526	26161.43378

4.2 Construction Water Requirements

Contractors must obtain the consent of relevant landowners prior to utilizing a water source and Clause B1219 of the Project Specifications (COLTO)[1] contains requirements and standards related to the quality of water used for construction purposes. A water extraction license is required according to the Water Resources Management Act N0.11 of 2013.

4.3 Residues and Emissions During Construction

Due to the type of activities that are associated with the construction of roads it is very unlikely that any toxic materials will be present on site. The only risk might be hazardous hydrocarbon substances such as fuels (diesel and petrol) and oils used by the construction machines.

Bitumen might be used for sealing the newly constructed road (dependent on the chosen alternative to be followed). Bitumen in itself is a stable hydrocarbon substance, but the "prime" medium is very volatile and should be considered as a hazardous liquid. The cleaning of bitumen tanker nozzles and cleaning of the bitumen trucks always poses a challenge when it comes to environmental management.

Domestic and camp construction wastes generated at the contractor camps can very easily be managed due to the close proximity to the existing towns of Talismanus. Proper waste management principles should be enforced as stipulated by the Environmental Management Plan.

[1] Standard Specifications for Bridge Works for State Road Authorities - COLTO

Sewage management is also a great concern at any construction camp. Proper planning of the sewage facilities should be done at the start of such a project to prevent sewage overflow and the contamination of soils and water. The number of workers should be determined, and the sewage facilities planned accordingly.

5. ASSUMPTIONS AND LIMITATIONS

It is assumed that the information provided by Consulting Team and the information in the Inception Report and other relevant documentation used for the compilation of this Environmental Report is accurate and relevant to this date. It is also assumed that the secondary data collected for the bio-physical and socio-economic environments are true and correct. These include data sources associated with printed books, data available on the internet and other studies as indicated in this report.

The Contract determined the available time and funds available to complete this project. Communication between the various team members was assured trough regular meetings.

6. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

This section deals with the regulatory requirements that are applicable to this project.

THE NAMIBIAN LEGISLATIVE FRAMEWORK

During the preparation of the Scoping Report, the following legislation and policies were considered:

- Environmental Management Act 7 of 2007 ;
- Environmental Regulations of 2012;
- Roads Authority Environmental Manual of 2014
- Road Ordinance 17 of 1972

The activities listed in Table 2, as contained in Appendix B of the Republic of Namibia's Environmental Regulations, may be applicable and will require Environmental Clearance.

Table 2: Listed Activities in Terms of the Environmental Management Act

Activity No.	Activity Description
10.2	The route determination of roads and design of associated physical infrastructure where - (a) it is a public road; (b) the road reserve is wider than 30 meters; or (c) the road caters for more than one lane of traffic in both directions.

Currently, Environmental Impact Assessments are guided and reviewed by the Directorate of Environmental Affairs (DEA) in the Ministry of Environment and Tourism. Guidelines for various projects have been compiled to help improve EIA practice in Namibia.

There are a number of sector laws in Namibia that have relevance to Scoping and EIAs. The following table provides a summary of the relevant sector legislation.

Statute	Provisions	Project Implications
Forest Act 12 of 2001	Provision for the protection of natural vegetation. No regulations promulgated yet. Section 22(1): It is unlawful for any person to "*cut, destroy or remove:* • any living tree, bush or shrub growing within 100 meters from a river, stream or watercourse on land that is not part of a surveyed erf or a local authority area without a license. • Vegetation which is on a sand dune or drifting sand or on a gully unless the cutting, destruction or removal is done for the purpose of stabilizing the sand or gully.	• Permits should be obtained from Department of Forestry for the removal of protected trees.
National Heritage Act 27 of 2004	Heritage resources to be conserved in development.	All archaeological sites to be identified and protected.
Nature Conservation Ordinance 4 of 1975	Requires a permit for picking (the definition of "picking" includes damage or destroy) protected plants without a permit.	In case there is an intention to remove protected species, then permits will be required.
Preservation of Trees and Forests under the Forest Act, 2001.	Protection to tree species.	The Contractor will require a permit to remove any protected trees.
Soil Conservation Act 76 of 1969	Prevention and combating of soil erosion; conservation, improvement and manner of use of soil and vegetation, and protection of water sources. The Minister may direct owners or land occupiers in respect of *inter alia* water courses. No Regulations exist to this effect.	Removals of vegetation cover to be avoided and minimized at all costs. Soil pollution to be avoided.
Water Resources Management Act 11 of 2013	Section 44 states that no person may abstract or use water, except in accordance with a license issued under this Act. Abstraction of water including open waters, aquifer, brackish or marine water. Section 566 states that any drilling to be conducted or enlargement of an existing borehole can only be conducted under a permit issued under the Act. Section 66 states that a person may not discharge any effluent directly or indirectly to any water resource on or under the ground or construct any effluent treatment facility or disposal site unless in compliance with a permit issued under Section 70 of	Obligation not to pollute surface water bodies. The following permits are required in terms of the Water Act: • water abstraction license that will form part of the contract obligations.

Statute	Provisions	Project Implications
	the Act. Where "effluent" means any liquid discharge as a result of domestic, commercial, industrial or agricultural activities.	
Public Health Act 36 of 1919	Provides for the prevention of pollution of public water supplies.	A general obligation for the Contractor not to pollute the water bodies in the area.
Government Notice No 121 of 1969 as amended as well as Government Notice No. 156 of 1 Aug 1997	This is the general health regulations applicable to this project.	The Contractor will enforce the conditions required to ensure the health and safety of the workers.

An important section 30 from the Road Ordinance 17 (1972) clarify the obtainment of material required for the construction of the roads in Namibia. It states the following:

For the purpose of the construction, maintenance or repair of a proclaimed road the President of Namibia may through his representatives, officers or contractors enter upon any land with any vehicle, tool, material or animal and after the expiry of a period of fourteen days after a written notice of his intention to do so –

(i) has been handed to the owner, lessee or occupier of such land; or
(ii) has been sent to the last known address of such owner, lessee or occupier by registered post; or
(iii) has been left at a conspicuous place on such land

he may without any compensation to the owner, lessee or occupier of the land, remove any material which may be necessary for such construction, maintenance or repair from such land or process it on such land and thereafter remove it there from and for this purpose he may build and maintain any access roads which he may consider necessary: Provided that –

(a) nothing shall be removed from any garden or other land usually cultivated, nor within two hundred and fifty metres of any house nor within fifty metres of any kraal;

(b) every excavation, including an excavation for a sample and an experimental pit, shall as soon as possible be filled up or fenced off or shall otherwise be made safe for human beings and animals again to the satisfaction of the owner, lessee or occupier of such land or as the President of Namibia directs;

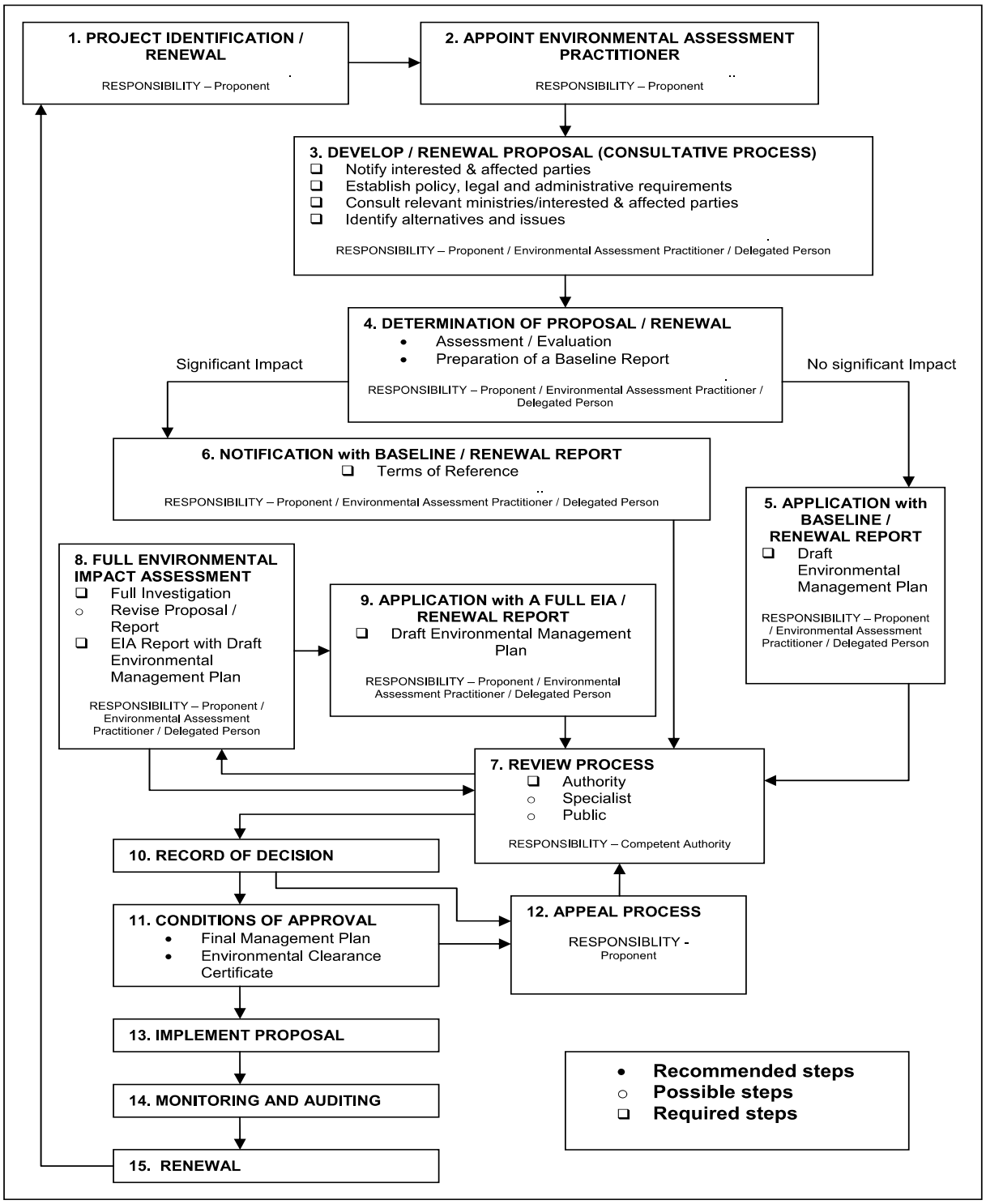
(c) any road provided for this purpose shall be ripped up in such a way that it cannot be washed away should the owner, lessee or occupier so desire;

(d) the President of Namibia, his representatives, officers or contractors shall, in exercising these powers take every care to prevent damage, injury, loss or inconvenience to the owner, lessee or occupier concerned:

Provided further that the powers granted to the President of Namibia in terms of this section shall only be exercised within the area of a local authority in consultation with the local authority

A flowchart indicating the entire Scoping/EIA process is shown in *Figure 2 below:*

Figure 2: EIA Process



7. DESCRIPTION OF BASELINE CONDITIONS

This section describes the bio-physical aspects of the study area to allow for identification of elements of environmental sensitivity and to provide the context for the assessment of significance of impacts related to the proposed project. Data sets are not available specifically for Talismanus, but relevant data was obtained from surrounding areas.

7.1 Climate

Arid and semiarid climates cover about a quarter of Earth's land surface, mostly between 50° N and 50° S, but they are mainly found in the 15–30° latitude belt in both hemispheres. They exhibit low precipitation, great variability in precipitation from year to year, low relative humidity, high evaporation rates (when water is available), clear skies, and intense solar radiation.

According to Köppen and Geiger, the climate of the Talismanus area is classified as BSh characterised as hot semi-arid climates (type "BSh") tend to be located in the 20s and 30s latitudes of the (tropics and subtropics), typically in proximity to regions with a tropical savanna or a humid subtropical climate. These climates tend to have hot, sometimes extremely hot summers and warm to cool winters, with some to minimal precipitation.

7.1.1 Rainfall and Temperature

Data is received from SASSCAL Weather Net. This climatic data is up-to-date and very accurate.
The following data for Sandveld (situated approximately 120km east of Talismanus) is derived from figures received from 2020:

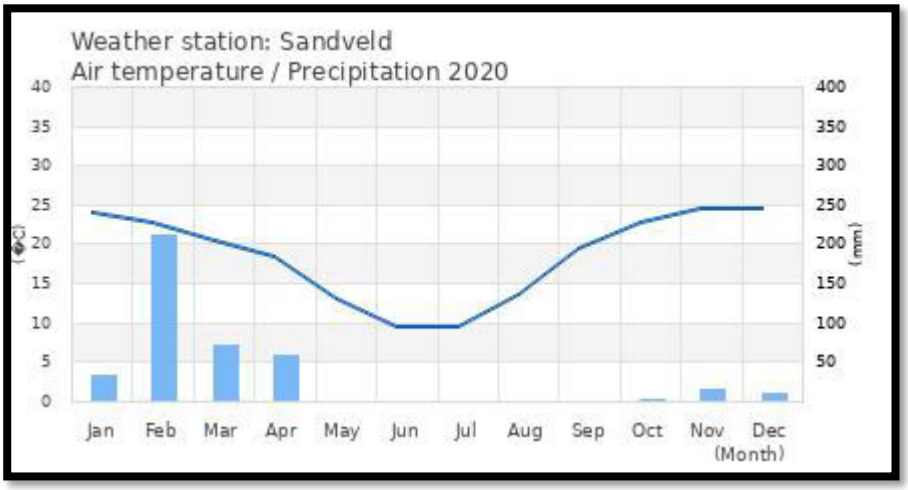


Figure 3: Temperature and Precipitation – Sandveld 2020

Talismanus is situated in the summer month rainfall areas where precipitation mostly occur from October to April. The months of February, March and April records the most rainfall. The average rainfall for these two areas is normally around 375mm per annum. During 2020 above average of 401.8mm of rainfall was recorded at Sandveld[2].

[2] http://www.sasscalweathernet.org/weatherstat_monthly_we.php

7.2 Air quality

7.2.1 Existing Sources of Air Pollution

The proposed project site is located in rural areas where the air quality is not affected by large scale anthropogenic activities. The following sources of air contamination have been identified:

- Vehicle dust and exhaust gas emissions
- Wind-blown dust from sparsely vegetated surfaces
- Veld fires

7.2.2 Sensitive Receptors

The proposed project is located in a sparsely populated area; therefore, no potential sensitive receptors have been identified.

7.3 Topography

The proposed project traverse over a very flat area with a gentle slope downwards from west to east. The average height above sea level is ranges between 1400 and 1200m.

7.4 Geology

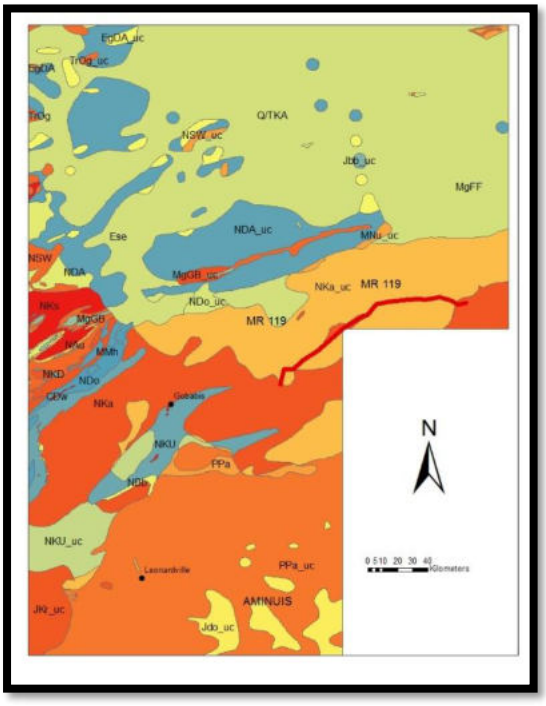


Figure 4: Geology of the project area

The major geological feature occurring in the Study Area results from the Tertiary to Quaternary Isotopic Ages (24 – 0 Ma). This area is situated partially on the Nama as well as the Nosib group, which forms part of the Damara Super group, and has a complex geology and structure. The oldest rocks are Mokolian intrusive rocks. Other pre-Damara metamorphic and intrusive formations belong to the Sinclair and Rehoboth sequences as well as the Abbabis and Hohewarte Metamorphic Complexes.

The Damara Sequence however predominates in the area and consists mostly of Khomas rocks with Kuiseb Formation quartz-biotite schists, interbedded marble, amphibolite (Matchless Suite) and amphibolite schists. The Hakos Group, which is part of the Damara super group, shows similar lithologies with notable exception of the Auas and Otjivero quartzites and Corona marbles at the base of the group.

The Nosib Group mainly consists of nitic rocks such as sandstones, quartzites, conglomerates and subordinate schists. The eastern half of the area is dominated by rocks belonging to the Nosib Group, with outcrops of Nama Group sedimentary rocks filling synclines, (Miller, 2008:191).

Gobabis (to the south of the project area) is situated on the contact of the Nosib and Nama group sediments. The isolated low hills in the surroundings of the town comprise Nosib Group lithologies, with Nama group sediments forming a syncline and the road eastwards continues along the northern limb of this syncline.

The lithostratigraphic units underlying the Study Area are the Kalahari Group. It comprises undifferentiated superficial deposits, mainly consisting of windblown sand and gravel of the Kalahari Group. Towards Buitepos the road overlooks the wide valley of the Chapman River to the south. To the north the road overlooks the valley of the Rietfontein River. Geomorphology of the area consists of a plain to the north and north-west of the Ghanzi Ridge descending to a plain to the south and south-east. The two plains consist of fairly deep sand deposits on a quartzitic basalt layer, approximately 10m and 50m deep respectively. Substantial rocky outcrops occur in the Ghanzi Ridge, interspersed with shallow sand deposits.

7.5 Soils

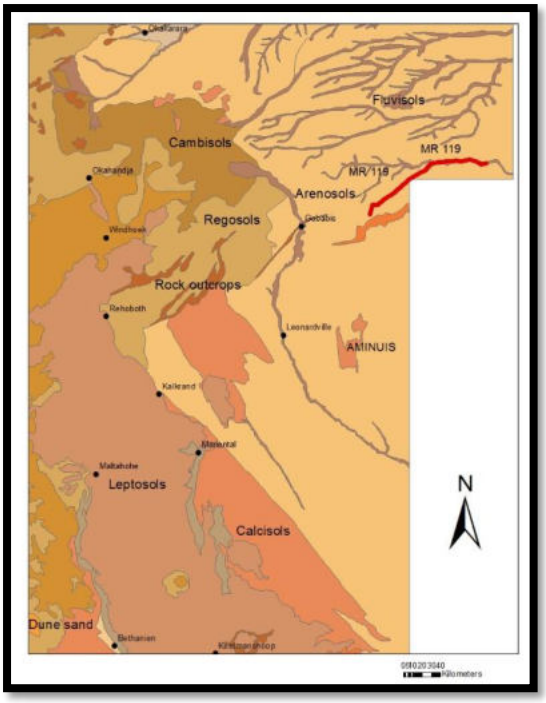


Figure 5: Soils of the project area

Namibian soils vary greatly and different forces impact on the development of the various soils. The area of the propose project is characterised by the following soil types:

Arenosols (high sad stratum, low nutrient content, low organic content, alkaline pH-conditions, typical for arid climate conditions with high evaporation rates and salinity)) soil group (Christelis 2001). These soils are the dominant soil type in the north-eastern part of Namibia. These soils are formed from wind-blown sand and usually extend to a depth of at least one meter, with sand generally making up more than 70% of the soil. The rest of the soil comprises of clay and silt. The sandy texture allows water to drain through the soil rapidly resulting in low moisture available for plants and poor nutrient concentrations. The loose structure of the soil means there is little run-off and water erosion, but wind erosion dominates (Mendelsohn 2009).

Soils along the margins and valleys of larger river courses in eastern Namibia are called **Fluvisols**. Some are flooded regularly, especially those in the Zambezi Region, while others along the dry omurambas probably last saw hundreds of years ago. Some Fluvisols provide nutrient-rich soils for crop cultivation.

7.6 Land Use

The proposed project area is located in commercial and communal agricultural land and the project area is predominantly used for livestock farming. Tourism plays a secondary economic role in this area and therefore some land use changed from agricultural to tourism or a combination of both.

7.7 Surface and Groundwater

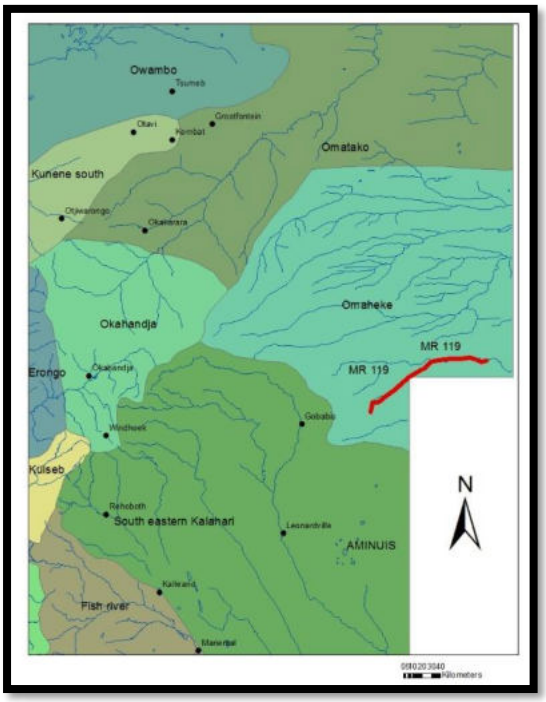


Figure 6: Surface water drainage

The project lies in the Eiseb -Epukiro River Basin. The area between Eiseb and Epukiro is one of eleven water basins in Namibia. It has a total surface area of 10,665 square kilometres (4,118 sq mi) and borders Botswana in the east, reaches southwards up to Gobabis, and covers parts of the Omaheke and Otjozondjupa Regions. The total annual water yield of the basin is 20 million cubic metres (710×106 cu ft), mainly ground water[3].

Groundwater is known as the Okavango – Epukiro Basin located in huge flat areas around Gam. Most of the area belongs to the Okavango drainage system, including the dormant, usually dry riverbeds draining east towards the central Kalahari.

Groundwater within the area is hosted in two distinct aquifers and fractured bedrock aquifers. In northern Omaheke, the Kalahari is generally non-saturated, but ground water may be present in fractures in the underlaying bedrock. Adjacent to the Botswana border, from Gam in the South to the Kaudom Park in the north, bedrock formations crop out and groundwater occurs in fractures aquifers.

Drilling success rates, defined as the percentage of borehole yielding more than 1m3/h are commonly 100% in areas of known Kalahari aquifers, whilst the lowest success rates, of less than 25%, are common for fractured aquifers beneath thick unsaturated Kalahari layers[4].

7.8 Fauna

A variety of small and larger animal species are found in the project area. Wild dog (*Lycaon pictus*) and the Elephant (Loxodonta Africana) are found on rare occations. Other small antelope is found in the area and include the Duiker (*Sylvicapra grimmia*), Steenbok (*Raphicerus campestris*) and larger animals such as the Eland (*Taurotragus oryx*), the Gemsbok (*Oryx gazelle*), Kudu (*Tragelaphus strepsiceros*) and Warthog (*Phacochoerus africanus*).

[3] *"Integrated Water Resources Management"* (PDF). *Ministry of Agriculture, Water and Forestry. p. 4.* Retrieved 30 January 2018

[4] Christelis G. Struckmeier W. 2001. Groundwater in Namibia. Department of Water Affairs. Namibia

7.9 Flora

Figure 7: Typical vegetation cover of the project area

The largest part of the project is in the Kalahari Forest Savanna and Woodland vegetation classification. Taller trees are mainly confined to low sand ridges and are dominated by Silver Cluster Leaf (T*erminalia sericea),* Musheshe *(Burkea Africana),* Muparara (*Peltophorum africanum),* Lavender-croton (*Croton gratissimus),* Kalahari-currant (*Rhus tenuinervis),* Camelthorn (*Acacia giraffe / erioloba),* Sand-veld acacia (*A. fleckii),* Kalahari acacia *(A. luederitzii),* Large-fruited combretum (*Cobretum zeyheri),* Kudu-bush (*C. apiculatum),* and Buffalo-thorn (*Ziziphus mucronate).*

A shrub savanna occurs on the gently rolling plains between the sand ridges and is mainly composed of Sickle bush (*Dichrostachys cinereal),* Velvet raison bush (*Grewia flava),* Sandpaper raison bush (*G. flavescens),* Black-thorn (*Acacia mellifera),* White bauhinia (*Bauhinia macrantha),* Large sour-plum (*Ximenia caffra),* and Fire-thorn corkwood (*Commiphora pyracanthoides).*

The grass cover includes Silky bushman grass (Stipagrostis uniplumis), Coppery three-awn (Aristida meridionalis), Tassel three-awn (A. congesta), Broom love grass (Eragrostis pallens), Saw-tooth love grass (E. superba), Spear grass (Heteropogon contortus), Broad-leaved turpentine grass (Cymbopogon excavates), and Common finger grass (Digitaria eriantha).

Northeast Namibia, the tree savanna becomes dominated by Zambezi teak *(Baikiaea plurijuga)*, with varying proportions of Mopane (*Colophospermum mopane)* and False ash *(Burkea africana)*. With fire protection, a dense shrub layer develops and Jasmine pea *(Baphia massaiensis), Bauhinia petersiana, and Paropsia brazzeana* are all common. The grass layer is sparse when the shrubby understory is well developed, but when it is more open, species such as *Aristida meridionalis, A. congesta, Eragrostis pallens,* and Lehmann lovegrass *(E. lehmanniana)* are found. *Baikiaea plurijuga (Caesalpinaceae)* is fire sensitive and when fire damage is severe, it can disappear

completely. *Baikiaea plurijuga* may have dominated a larger area of the ecoregion prior to the anthropogenic influences of fire, cultivation and woodcutting.[5]

7.10 Archaeological and Anthropological Resources

No archaeological or anthropological assessment was done. It is predicted that no archaeological or anthropological resources will be found in either the existing road reserve. Where new borrow pits are to be opened it is important to note that any archaeological or anthropological resources found should be reported to the Engineer for further actions.

7.11 Noise

Even though tourism plays an important economic role in this area it is anticipated that noise will not be an important aspect to consider due to the current movement of traffic on the gravel roads. No other source of noise is anticipated.

7.12 Visual Impacts

Visual impacts associated with a bitumen road was considered during the project phase and argued during the public participation meetings. It seems that there will not be a substantial difference in visual perception from the existing gravel road and the planned bitumen road. What is of importance is the aesthetic experience from the tourist when he/she is driving through the landscape.

7.13 Socio-economic background

The project is exclusively situated in the Omaheke Region of Namibia. The propose project is situated in two different Constituencies namely Kalahari and Otjombinde. The Kalahari Constituency has a total population of only 7 611 people and the Otjombinde Constituency has a total of only 6 851 people (2011 Census data).

This section presents current demographic and social development indicators for Omaheke Region as indicated in Table 3 below. These include population size, annual growth rates, literacy rates and access to safe water and sanitation, amongst others, using data from the Namibian Population and Housing Survey of 2011.

[5] Curtis and Mannheimer. 2005. Trees Atlas of Namibia. Windhoek. NBRI

Demographic composition	Omaheke	Namibia
Total population	71 233	2 113 077
Ratio of males per 100 females	109	94
Population Density (persons/km^2)	0.8	2.6
Annual population growth rate (%)	0.5	1.4
Urbanisation level (%)	29.8	49.6
Median age	21	21
Socio-economic status		
% Households with Electricity for Lighting	33.4	42.3
% Households with access to Safe water	85.1	80
% Households with access to Toilet (private and flushing)	23.3	24.8
Literacy rate (for population aged 5 and above)	70.7	85.3
# total schools	41	1700

Table 3: Current Demographic and social development indicators for Omaheke

According to the Namibian 2011 population and housing census, the population of Omaheke Region was estimated to be 71 233, which is only 3.4% of the total population of Namibia. The population density is also very low at only 0.8 persons/km^2, compared to a national average of 2.6 persons/km^2. The Omaheke region has the lowest population growth rate in the country, at 0.5%, whereas the national annual population growth rate is at 1.4%.The urbanization level in Omaheke Region (29.8%), is also lower than the national average (49.6%).

With 109 males for every 100 females, there are slightly more men than women in the region. The national average proportion of males to 100 females is 94. The median age in Omaheke region is the same as the national median age, which is 21 years old, according to the Population and Housing Census of 2011. In Omaheke, the literacy rate (for population aged 5 years and above) is lower (at 70.7%) than the national average of 85.3%.

Only 33.4% of all households use electricity for lighting in Omaheke region, compared to a national average of 42.3%. In terms of water and sanitation, 85.1% of all households in Omaheke region have access to safe water, and 23.3% of all households have private flushing toilets. The national statistics for households with safe water and private flushing toilets are 80.0% and 24.8%, respectively.
Road safety statistics for Omaheke region are a cause for concern. According to the 2012 Road Accidents Statistics Report, the overall risk of a person dying in a road crash in Omaheke region is about 1.82 people per 10 000 people. Table 3 shows the regional distribution of road deaths per 10 000 people.

Region	Road fatalities per 10 000 people
Karas	0.48
Omusati	0.88
Oshana	1.09
Ohangwena	1.27
Hardap	1.56
Omaheke	1.82
Zambezi	2.02
Khomas	2.09
Kavango East/Kavango West	2.13
Oshikoto	2.28
Kunene	2.82
Otjozondjupa	3.21
Erongo	3.50

Table 4: Regional distribution of road deaths per 10000 populations

The fatality rate for Omaheke region is in the mid-range, whereby the lowest road fatality of 0.48 people per 10 000 people was recorded in Karas region, and the highest fatality rate of 3.5 people per 10 000 people was recorded in Erongo region.

8. PUBLIC PARTICIPATION PROCESS

A comprehensive Public Participation process was conducted for this project which are in guidance with the requirements of the Environmental Management Act no.7 of 2007.

The methodology followed during the public participation process was to make use of existing communications between Tulipamwe Consulting Engineers and the relevant stakeholders and interested and affected parties, as well as personal interviews conducted by Enviro Management Consultants Namibia.

The objectives of the meetings were to inform the various Stakeholders and the general Public about the project and to receive any comments or concerns with regards to the design of the proposed route, the natural environment that will be affected by the project as well as the social impact this project might have.

The project was advertised in both the Republikein and the Namibian on two separate occasions:

13th August 2021 in the Republikein, Daily Sun and Algemeine Zeitung, and;
20th August 2021 in the Republikein, Daily Sun and Algemeine Zeitung.

The public consultation meetings were scheduled for the following dates and times:

Date:	2 September 2021
Time:	09:00
Venue:	Vergenoeg Opstal
Date:	2 September 2021
Time:	14:00
Venue:	Talismanus Settlement Office

Please find attached the Advertisement that was placed in the various newspapers:

PROOF OF PLACEMENT OF NOTICES

Newspaper Adverts – 13 August 2021:

Vrydag 13 Augustus 2021

Republikein

Jou land. Jou taal. Jou koerant.

INENTINGS TEEN COVID-19

ENTSTOWWE 522 200 ONTVANG

VOORRAAD 277 298 VERVAL 22 244 880 GEBRUIK

BESTEL & BELOOF 662 133

STERFTES 3 244

1STE DOSIS 43 1,33%

Lorriedrywers se lewens steeds by grens versuur

Yandi du Plessis

Langafstand-lorriedrywers sê die vergunning dat hulle nie 'n Covid-19-toetsuitslag hoef te toon wat 72 uur of korter gelede gedoen is wanneer hulle na die land terugreis nie, word nie in die praktyk toegepas nie.

Volgens 'n bekommerde voormalige lorriedrywer wat na *Republikein* uitgereik het, word in dié geval nie daad by woord gevoeg nie.

"Die roël dat die PCR-toets vir enige dae geldig is vir lorriedrywers, word glad nie op die Ariamsvlei-grenspos gevolg nie. Daar moet ons steeds oor 72 uur getoets word," sê nog 'n langafstand-lorriedrywer.

"Hulle sê die gewysigde reëls is nog nie vir hulle gestuur nie. Volgens die gesondheidsowerhede se kantoor by die grenspos, weet hulle van niks."

Elke derde dag as Namibië binnekom, moet drywers getoets word en N$750 betaal, vertel hy.

"Dit is vir lorriedrywers 'n bittere saak. Hulle is baie ongelukkig, want die reëls sê duidelik lorriedrywers hoef net elke sewe dae getoets te word.

"Ek is op 6 Augustus getoets en het my uitslag die volgende dag gekry. Ek is Namibië toe om 'n vrag te gaan aflaai, en hei daarna teruggehaas na Suid-Afrika. Toe ek op 10 Augustus Namibië weer wou binnekom, het my toets volgens hulle klaar verval."

Volgens hom stuur lorriedrywers op nóg 'n staking af as dinge nie binnekort regkom nie. Die hele land se drywers gaan staak oor dié onregverdigheid op die grenspos, sê hy.

"Dit veroorsaak 'n groot vertraging. As jy op die grens aankom, wag daar 'n lang toustaan. Wanneer jy getoets word, moet jy 24 uur op die grens staan en wag vir die uitslag.

"Intussen is jou dokumente klaargemaak en jy is onder druk om af te laai. Dit veroorsaak baie stres vir lorriedrywers, want jy kry boonop moeilikheid van die base se kant af. Daar is van hulle wat weier om elke 72 uur vir 'n PCR-toets te betaal."

- yandi@republikein.com.na

VISION To be a SMART and Caring

Dr. Pandu-leni Itula van die IPC, die PDM-leier

4 Republikein Sun Allgemeine Zeitung Market Watch FRIDAY 13 AUGUST 2021

Benguela CURRENT CONVENTION

Invitation to Tender

The Benguela Current Convention (BCC) is a multi-sectoral Inter-Governmental Organization by Angola, Namibia and South Africa (Parties) ... collaboration for integrated management, sustainable development and protection of the environment using an ecosystem approach to ocean governance for the Benguela Current Large Marine Ecosystem (BCLME).

CANCELLED

The Benguela Current Convention ... applicable ... competent company/ consultancy firms to tender the following construction:

- To erect the ... greenhouses (300m2) in Luderitz with full ... installation including automatic irrigation and a climate control

Detailed terms of reference is available at: https://www.benguelacc.org and/or from ... Brown, (fairny@benguelacc.org, Tel: + 264 64 406 901). Entries must be submitted before 16:00 p.m., on 15 June 2021, local time in Namibia.

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT FOR THE DESIGN AND CONTRACT DOCUMENTATION TO UPGRADE 145KM OF M0119 (T0602 TO TALISMANUS) TO LOW VOLUME SEAL

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All Interested and Affected Parties (I&AP's) are hereby invited to register their interest in the project as stakeholders, in terms of the environmental assessment process, and to give their input, comments or opinions regarding the intended access road upgrades. These must be submitted in writing to Enviro Management Consultants by no later than 16th of September 2021.

Public Consultation Meetings

Date: 2 September 2021
Time: 09:00
Venue: Vergenoeg Opstal

Date: 2 September 2021
Time: 14:00
Venue: Talismanus Settlement Office

For further information, and to register as an I&AP please contact:

Enviro Management Consultants
Ms Maike Prickett or Mr Rian Du Toit
enviromanagements@gmail.com

ENVIRO

TULIPAMWE Consulting Engineers

The Gateway to Endless Opportunities

City of Windhoek

Vision: To be a SMART and Caring City by 2022

TOGETHER WE CAN BEAT THE VIRUS

PUBLIC NOTICE

Procurement Management Unit (PMU)

PO Box 59 – 80 Independence Avenue, Windhoek, NAMIBIA
Tel: (+264) 61 290 2270 / 2614 • Fax: (+264) 61 290 2831
E-mail: pmu@windhoekcc.org.na
Procurement Management Unit Portal | Website: www.windhoekcc.org.na

Invitation for Bids (IFB)

BID NO: G/ONB/COW-128/2021			
Description:	CELL PHONE CONTRACT (PROVISION OF CELLULAR PHONE, VOICE AND DATA PACKAGES TO THE MUNICIPAL COUNCIL OF WINDHOEK FOR A PERIOD OF TWO (2) YEARS)		
Bid Documents:	The bid documents will be available as from Friday, 13 August 2021, from 14:30 at the Customer Care Centre, Counter No. 3 at the Municipal Council of Windhoek Head Office, No. 80 Independence Avenue.		
Closing Date:	Tuesday, 14 September 2021 at 10H00 (Namibian Time)		
Levy:	N$300.00 (NON-REFUNDABLE)		
Technical Enquiries:		Ms. Nicolene Joseph	Ms Kuwaba Shivolo
	Tel.:	+264 (61) 290 2976	+264 (61) 290 2126
	E-mail:	Nicolene.Joseph@windhoekcc.org.na	Kuwaba.Shivolo@windhoekcc.org.na
Clarification closing date: Wednesday, 01 September 2021 at 10H00			

BID NO: EOI/ONB/COW-133/2021	
Description:	WINDHOEK ECONOMIC RECOVERY INITIATIVE (WERI) THE WERI WAS APPROVED BY MUNICIPAL COUNCIL OF WINDHOEK TO PROVIDE AN OPPORTUNITY FOR WINDHOEK'S ECONOMIC RECOVERY BY SOLICITING EXPRESSIONS OF INTEREST FROM A SELECTION OF PROPONENTS(ORGANISATIONS, BUSINESS ENTITIES AND INDIVIDUAL RESIDENTS) WITH INNOVATIVE IDEAS BASED ON CREATIVE COST-RECOVERY BUSINESS MODELLING IN AGRICULTURE AND AGRO-PROCESSING, MSME DEVELOPMENT, TOURISM, INFORMAL SECTOR, TRANSPORT AND LOGISTICS AND SOCIAL DEVELOPMENT THAT CAN LEAD TO THE REVIVAL OF THE CITY'S ECONOMY AND CREATE MUCH-NEEDED EMPLOYMENT. THE MUNICIPAL COUNCIL OF WINDHOEK WILL BE CONSIDERING INNOVATIVE IDEAS THAT ARE FINANCIALLY SELF-SUSTAINING AND ADD VALUE TO THE LOCAL ECONOMY AS WELL AS CONTRIBUTE TO COUNCILS VISION TO BE A SMART AND CARING CITY.
Bid Documents:	The bid documents will be available at no cost as from Friday, 13 August 2021, from 14h00 from the Municipal Council of Windhoek website (PMU portal) and upon email request from: pmu@

GREEN Solar Academy

Africa's Premier Training Institute for Solar Power

Your entry into the Solar industry

5-day practical training

TODAY | OVER 17 000 VACCINATED IN ERONGO - PAGE 5

Namibian Sun — Tells it all

53 Ndonga Unene spoilt ballots disappear 3

Bigger challenges than infighting 4

Pandemonium at NFA 8

FRIDAY 13 AUGUST 2021

N$5

VACCINATION STATISTICS

VACCINES 522 200 RECEIVED

'Aging' Ndeitunga didn't mean his City threats literally

WINDHOEK

Police inspector-general Sebastian Ndeitunga has clarified his out-of-character agitated remarks during a land grab incident this week when he threatened to take over the affairs of the Windhoek city council, which he blamed for the chaotic land confrontations.

Ndeitunga, usually a calm and collected police chief, said he was disturbed because the situation was getting out of hand while 'some people' were spending their time on issues that had nothing to do with the interest of the public – in an apparent dig at the Job Amupanda-led city council.

Continued on page 2

DON'T GET ME WRONG: Police inspector-general Sebastian Ndeitunga.

4 Republikein Sun Allgemeine Zeitung — Market Watch

Benguela Current Convention

Invitation to Tender

CANCELLED

City of Windhoek

Vision: To be a SMART and Caring City by 2022

PUBLIC NOTICE

Procurement Management Unit (PMU)

Invitation for Bids (IFB)

BID NO: G/ONB/COW-128/2021

BID NO: EOI/ONB/COW-133/2021

Notice No.: 18/2021

BIDS TO BE DEPOSITED IN THE MARKED BID BOX

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT FOR THE DESIGN AND CONTRACT DOCUMENTATION TO UPGRADE 145KM OF M0119 (T0602 TO TALISMANUS) TO LOW VOLUME SEAL

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All Interested and Affected Parties (I&APs) are hereby invited to register their interest in the project as stakeholders, in terms of the environmental assessment process, and to give their input, comments or opinions regarding the intended access road upgrades. These must be submitted in writing to Enviro Management Consultants by no later than 30th of September 2021.

Public Consultation Meetings

Date: 2 September 2021
Time: 09:00
Venue: Vergenoeg Opstal

Date: 2 September 2021
Time: 14:00
Venue: Talismanus Settlement Office

For further information, and to register as an I&AP please contact:

Enviro Management Consultants
Ms Maike Prickett or Mr Rian Du Toit

ENVIRO — TULIPAMWE

GREEN Solar Academy

Africa's Premier Training Institute for Solar Power

Your entry into the Solar industry

5-day practical training with experienced trainers

SuperSolarSchool

Internationally accredited (South Africa & Germany)

course outline basics | installation | design

dates 13-17 September | place Otjiwarongo

price N$12,500 · All prices excluding VAT

contact Vivian · 081 318 9085 or namibia@solar-training.org

more info on solar-training.org/namibia

Economic Indicators — Exchange Rates

Business

Commodities

Selected NSX

JSE Top

AZ Allgemeine Zeitung

AKTUELL MITTENDRIN FÜR DICH

FREITAG, 13. AUGUST 2021

SEIT 1916

105. JAHRGANG, NUMMER 154

ISSN 1560-9421

Corona-Impfung

Eurowings

Wazon

IMPFZAHLEN

IMPFUNGEN 522 200 VERABREICHT

VORRAT 277 298

244 880 VERBRAUCHT

BESTELLT / VERSPROCHEN 662 133

VERSTORBEN

Koalition jetzt formalisiert

• Vier Oppositionsparteien einigen sich nach acht Monaten auf Konzept

Nach langen Monaten von

4 Republikein Sun Allgemeine Zeitung

Market Watch

Benguela CURRENT CONVENTION

Invitation to Tender

CANCELLED

City of Windhoek

Vision: To be a SMART and Caring City by 2022

PUBLIC NOTICE

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Venue: Talismanus Settlement Office

Enviro Management Consultants

TULIPAMWE

GREEN Solar Academy

Africa's Premier Training Institute for Solar Power

Your entry into the Solar industry

5-day practical training with experienced trainers

Newspaper Adverts – 20 August 2021:

TODAY | LPM ALLEGES RACISM AT ROSH PINAH SME PARK - PAGE 6

Namibian Sun Tells it all

NEWS
Councillors slam Nored's dividend payments 3

TIHL
Casting call for fashion models 5

SPORT
World Athletics in hot water 12

FRIDAY
20 AUGUST 2021
N$5

VACCINATION STATISTICS
VACCINES
522 200
RECEIVED

• DELIVERY UNIT TO KEEP HAWK'S EYE ON PROJECTS

Government 'handpicks' monitoring firm

The appointment of a local ... bee Prosperity Plan. ... The appointed engineers ...

FRIDAY 20 AUGUST 2021 — Market Watch — Republikein Sun Allgemeine Zeitung — 15

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enviromanagementc@gmail.com

ENVIRO
TULIPAMWE

MINISTRY OF WORKS AND TRANSPORT

MINISTRY OF WORKS AND TRANSPORT WILL HOLD A PUBLIC AUCTION GOVERNMENT AUCTION - DAY 1

Office of the Mayor

Mariental Municipality

NOTICE OF PUBLIC MEETINGS
(This notice is issued in terms of Section 88 of the Local Authorities Act, 23 of 1992)

The Chairperson of the Local Authority Council of Mariental is hereby giving notice of public meetings for the purpose of discussion of matters of public interest.

The public meetings will be held on the following dates:

Mariental Town
Tuesday, 7 September 2021, at 18:00 hours
Persianer Hall

Empelheim
Wednesday, 8 September 2021, at 18:00 hours
Empelheim Pre-Primary School Hall

Aimablaagte
Thursday, 9 September 2021, at 18:00 hours
Aimablaagte Community Hall

Informal Settlements
Monday, 13 September 2021, at 18:00 hours
Aimablaagte Community Hall

MEETINGS AGENDA

1. Build Together Programme
2. Provision of toilets in the informal settlements
3. Roll-out of pre-paid water meters
4. Services in the informal settlements
5. Land delivery
6. Tariff rebate for senior citizens

NB: Any person who intends to discuss any other issue at the above-mentioned meetings, shall notify the Chairperson of Council in writing thereof at least 7 days prior to the date of the meeting.

AZ
AKTUELL MITTENDRIN FÜR DICH

FREITAG, 20. AUGUST 2021

7.00 N$

Allgemeine Zeitung

SEIT 1916

105. JAHRGANG, NUMMER 159

ISSN 1560-9421

Entlastung

TASA setzt sich für eine finanzielle Entlastung bezüglich der Erneuerung von Autolizenzen für Reiseunternehmen ein. Seite 3

Steytler

Der Ökonom Dr. John Steytler spricht sich dafür aus, dass alle Namibier Zugang zu ordentlicher Behausung haben. Seite 4

Junge Start-Ups

In einem Wettbewerb erarbeiteten Teams Kampagnen und Geschäftsideen für Corona-Zeiten. Gewinner erhielten Zuschüsse. Seite 9

IMPFZAHLEN

IMPFUNGEN VERABREICHT 522 200

VORRAT 241 939

VERDORBEN 22 280 239 VERBRAUCHT

BESTELLT / VERSPROCHEN 1 212 133

VERSTORBEN 3 316

BEATRICE MASILINGI HÄNGT SICH IN NAIROBI SILBER UM

Die namibische Top-Sprinterin Beatrice Masilingi hat auf der 100-Meter-Strecke bei der U20-Weltmeisterschaft im Kasarani Stadium in Nairobi, Kenia, silbernes Edelmetall gewonnen. Beim Triumph der Jamaikanerin Tina Clayton...

FRIDAY 20 AUGUST 2021 | Market Watch | Republikein | Sun | Allgemeine Zeitung | 15

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enviromanagements@gmail.com

ENVIRO

TULIPAMWE

MINISTRY OF WORKS AND TRANSPORT

MINISTRY OF WORKS AND TRANSPORT WILL HOLD A PUBLIC AUCTION GOVERNMENT AUCTION - DAY 1

KHOMAS REGION
WINDHOEK - LOOSE ITEMS AUCTION

VIEWING DATE:	MONDAY 23 AUGUST 2021 from 09H00 to 16H00
AUCTION DATE:	TUESDAY 24 AUGUST 2021 AT 10H00
VENUE:	MINISTRY OF WORKS AND TRANSPORT: (CENTRAL GOVERNMENT STORES - OPPERSITE AUAS DELTA)

Items to be sold
FILING CABINETS, AIRCON, COMPUTERS, FAX MACHINES, SCANNERS, CHAIRS, WOODEN TABLES, WOODEN SCREP AND MUCH MORE...

Registration: N$ 500.00
Terms and Conditions apply, No VAT
Details are subject to change without prior notice

Office of the Mayor

Mariental Municipality

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Adam Kashlmann
Chairperson of Council
Mariental Municipality
PO Box 110, Mariental
Email: akuhlman@marimun.org.na

T +264-(0)65-220 229
F +264-(0)65-222 688
E info@ope.com.na

Erf 3175, Oshakati East
PO Box 1594, Oshakati, Namibia

www.ope.com.na

TENDER

PUBLIC PARTICIPATION PICTURES:

Pictures taken at the public meeting – Talismanus

Pictures taken at the public meeting – Vergenoeg

The following summary of comments were received during the public participation meeting:

The full minutes of the meeting is attached in APPENDIX D.

These comments were received during the public meeting held at Talismanus Community Hall.

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
1	Welcome to the team. Despite the long wait we see from the presentation that this road is Low Volume Seal, is that what the road between Gobabis and Buitepos is? The road is already full of potholes. I have read that the government is building low-cost roads. Will it be worth the effort? Regarding the permit applications, when I come from my farm at Helena, do I need to apply for an access road? Why don't I get a signboard to Helena? Can this be included when the tar road is being built? There are 3 places that come together at the same place. The Otjinene – Gobabis road looks good and is nicely cleaned up, that is what we want.	**E Killion**	A traffic count was done on this road, only small cars and a few trucks were counted. This road will not be the same as the Buitepos road. The road junctions will be provided with access roads and signs. During this exercise the local community will be engaged. At this stage we are still busy with the design, it is difficult to say when we can commence. Once it has been submitted to and accepted by the RA, then it will go out on tender.	Eikki Shidiwe
2	What factors determine that a road is a Low Volume Seal? Will the tar road go past Talismanus? The people that are living in the road reserve, will they be compensated? Will residents of Otjombinde be favoured with employment?	**Ismael Katiko**	The road will stop at Talismanus, but it is difficult to say where exactly. Properties that are in the road reserve, the engineers will go out and measure to see which part is in the road reserve – house, fence or field, this will get submitted to the RA for compensation, these rates are fixed. For employment, priority should be given to the local community and usually the Office of the Councillor assists with this.	Eikki Shidiwe
3	The access roads need to be explained, it is confusing. The road to my office at Kalahari was pointed out which is 8km, but it was rejected for upgrade. It should be considered to extend the road past Talismanus.	Hon Ignatius Kahriseb	Access roads – are roads that are sealed for 100m like the start of district roads. There are other roads that might not be sealed or only for a shorter distance. Once a road becomes 10km or more it becomes a project on its own. RA usually identifies these roads that sometimes get added to the project. Tulipamwe is the consultant and cannot decide to extend the road, these are the decisions of the RA.	Eikki Shidiwe

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
4	Who will be considering the contractors? We have people here that have lorries, graders, etc. The lengths of the access roads, please clarify that.	Nande Hengari	There is confusion with the term access road, we call these short tar sections bellmouths, these are 50m sections. A request for a road to be upgraded should go through the RA's Network Planning Department. Anyone with a registered company may tender, but there are certain requirements that need to be met. The application that was referred to is for an access point and not a road. It is just a misunderstanding because of the question that Hon Khariseb was asking about the road to his office.	Eikki Shidiwe Bruno Mokhatu E Killion
5	I am concerned about the traffic numbers. I live at Bolands and one night I counted 5 trucks that came past. The Low Volume Seal of the road is a concern. Where is the road going to end, can it not be extended past Talismanus to Rietfontein?	Moses Mberira	Trucks will still be able to drive on the road. There are some differences to High Volume Seal roads, like the road shoulder that is not going to be sealed. The end of the road, I understand the concern, if I go to the RA it will not help. I request the two Councillors to sit together and write a letter to the RA, but we will pass on the message. But the RA is present here, they need to take note of this request.	Eikki Shidiwe Hon Igantius Khariseb
6	It is not true that the Low Volume Seal Road is similar to the High Volume Seal Road, I can show you the difference in a second, it is not only the road shoulder. High Volume Seal Roads have more layers.	Nande Hengari	This is not a bad road; the community is in a fortunate position to receive a tar road. Consider the benefits that the road will bring to the community.	Maike Prickett
7	The community needs a clearer understanding of the term Low Volume Seal.	Community Member	I suggest that RA brings someone to explain to the community what is meant by Low Volume Seal. RA representatives, take note.	Hon Ignatius Khariseb
8	I am here to accept that we get a tar road so that we can get rid of the accidents on this road.	Erika Sambo		
9	The road from DeHoek, let's not say there is no money. We as a community should use our own efforts to find money so that we can build that road. There are bilateral agreements between Botswana and Namibia which will be to our benefit.	Moses Mberira	Noted.	Hon Wenzel Kavaka

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
10	Please go back to Windhoek and say that we accept the tar road, the EIA and the design.	Ismael Katiko		
11	Please take note that copper was discovered in Otjombinde and we don't know where the refinery will take place. That might mean that there will be more trucks on the road.	Community Member		
12	The road will bring opportunities, social and economic, we will benefit from this road. Let us get your things in order so that we are not caught off guard. Let us prepare our youth and others that they make their skills available. Our people should receive priority and let's not be greedy when these opportunities come, let's share and let's capitalise.	Hon Ignatius Khariseb		

The following comments were received during the public meeting held at Vergenoeg:

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
1	I would like some clarity on animals being tracked or on the road. What if my car hits an animal on the road? What does the law say?	Charles Tjijenda	We usually tell the person to put in a claim against the owner of the animal. Take the ear tags and find out who the animal belongs to at Veterinary Services. Animals may only be on the tracked between 07:00 – 19:00 and no other animals may be on the road, that's what the law says.	Bruno Mokhatu
2	I am from the media and the Civil Society Organisation. There are usually problems with employment, and I would like to ask that people from the area need to be employed, don't bring people from other areas.	Moses Mberira	That will be addressed once the contractor has been appointed and another meeting will be held with the contractor and the community.	Eikki Shidiwe
3	Are the boreholes that are drilled during the construction going to be handed over to the community or are they going to be closed upon completion of the project?	Wanoo Kambato	Usually, boreholes that are drilled for the project are sealed and handed over to the Roads Authority, they are the property of the RA, but if there are communities that are in need of water, the office of the Councillor can make arrangements with the RA that the community can benefit from these boreholes	Eikki Shidiwe

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
4	I have a few questions about and how the community is going to be involved or can be involved in this project? Boreholes, Material, Labour, Compensation. I know there is a lot of gravel, but we live in a sandy area so where is the stone going to be sourced from? I am asking, because we know of areas where stone can be sourced from, can we get involved? I know there is usually one big tender for the road construction, but will there be smaller tenders for say sourcing for water trucks, excavators, tipper trucks, etc where we could get involved? We do have boreholes from which water can be obtained, how will we be compensated?	Jay-Jay Odendaal	I suggest that you submit this in writing so that it can be shared with the Engineer and that the contractor can be made aware of the resources available in the area. *See point 5 for response to other queries.*	Maike Prickett
5	Kalahari Prag, Vergenoeg, Dankbaar and another farm are along the same line. I would like to request that an intensive sighting to be done on this area and on this line, so that if we get water/boreholes that the communities can benefit from these boreholes in the future.	Hon Ignatius Khariseb	Usually once the contractor has been appointed, they will come and drill boreholes, and I suggest that if you have boreholes that can be used by the contractor that you indicate them so that the contractor can be made aware, and you can enter into an agreement with the contractor. We cannot say how many boreholes will be drilled, that will only be determined once the contractor is on site. There are certain instances where water is being paid for, but there are predetermined tariffs for this. You cannot determine what you can charge for water. If you have a borehole without a pump and we need to bring our own pump, the water will automatically become cheaper. If you have a borehole with a pump available to pump construction water, we will request you to install a meter so that we can keep track of how much water is pumped and then compensate accordingly. Construction water needs to be strong. Boreholes that are drilled belong to the government; they need to be registered. What we have done on previous projects is that we give people permission to use the boreholes, but sometimes individuals install pumps and do not want to share this with other community members, then we take them back.	Maike Prickett Bruno Mokahtu

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
6	If we have old boreholes that need to be cleaned before they can be used, would they make use of this?	Hiskia	If there is water, the contractor may consider it, but it is up to the contractor.	Maike Prickett
7	How far is water transported?	Charles Tjienda	Water not more than 10km and gravel not more than 5km. So every 10km there should be a borehole. We don't want to damage the road.	Bruno Mokhatu
8	The Ministry of Mines and Energy have drilled a borehole at Bolands. That borehole might be available for use during construction.	Moses Mberia	I think what needs to be understood that the information will be passed on to the relevant authorities and that they can come and have a look and to make their decisions. The team will convey this. I am sure that we will get water around here and that this community can benefit.	Hon Ignatius Khariseb
9	I would like to ask the Councillor, since we know of those 3 areas that you indicated that are always struggling with water, will it be possible to bring water closer to these communities? Can we help them? I think we have exhausted the point. Once the contractor comes, they will determine what boreholes can be used and where boreholes will need to be drilled. We would like to request that we will be informed in time once that contractor has been appointed so that the community can also be informed, not only once they are on site.	Hiskia Frieda Hon Iganatius Khariseb	What normally happens, once the contractor has been appointed, we will have another meeting with the Councillor and the community to brief them that the road construction is about to start and the way forward.	Eikki Shidiwe
10	When the MME borehole was drilled the community was not informed. The Civil Society Organisation can assist with sharing information with the people on the ground.	Moses Mberia	We understand, and we need to communicate in time. The same goes for the borrow pits and labour. We have a standing that the locals need to get priority to get employment, but we must also understand that requirements need to be met, you cannot expect to be employed as a truck driver if you don't have the correct driver's license or if they need someone to work in a laboratory and no one here has the knowledge, they need to employ someone from elsewhere. Now is the time to get all our things in order so that when the time comes, we stand a chance to get some work from this project. Another important thing to note is, not everyone will be	Hon Ignatius Khariseb

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
			able to get employment on this project, and not all employment will happen at once. Let's make sure that employment benefits multiple households and not only one so that the community can benefit. I would like to emphasise what the councillor has said. Get your things in order so that you stand a chance when the time comes. The employment will also be handled through the Office of the Councillor.	Frieda
11	I represent gender, where do women feature in these projects?	Anna-Martha	There usually is provision for gender balance. We are working on that. From previous projects that is a condition that is standard. It will be handled through the Office of the Councillor.	Frieda Hon Igantius Khariseb
12	I would like to find out about the fencing. Our farms have game fence, will this be removed and replaced with normal fence, and do we need to rebuild it to game fence ourselves? When the contractor comes in, will they teach our local people skills which can be used for future employment? Will skills transfer take place?	Hiksia	Skills transfer will need to take place, the long-term aim is to leave skills. We also need to understand that there are certain instances where only machines can do the work because of timing etc. The contractor will not come with general labour, that can be sourced from here. Sub-contractors are expected to produce a certain quality, so it becomes the risk of the main contractor. If you are done with the activity the engineer will inspect your work and if they are not happy and you need to redo your work, moust sub-contractors don't have the money to do that. Fencing - there are 3 types of fences: jackal, stock, and game proof fence. Normally when a fence needs to be relocated it will be inspected beforehand and it will then be rebuilt according to the type of the existing fence.	Hon Ignatius Khariseb Frieda Eikki Shidiwe
13	There are a lot of houses in the road reserve. Will the houses need to be moved? Will fencing need to be constructed?	Wanoo Kambato	There is a policy that will guide this. If they are in the road reserve they will need to be moved. The surveyor will come and set out the centreline, then 30m of either side of the centreline the road reserve will be indicated. You cannot now go and build your house in the road reserve, the surveyor has picked up all houses and fences in the road reserve, so it is easy to identify new structures.	Eikki Shidiwe

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
14	I would like to know if the road alignment has been finalised yet and is it going into our farms? I would like to know if it does go into our farms, do we need to move our structures. There is a pipeline here, but I am not sure if it is 600mm deep, do we need to move it. There is a Primary School here, I would like to request that speed humps be set up, the cars come with high speed and it is on a slight hill. When will this project commence?	Conrad Eiseb	The project has already started, but there are many aspects to this process, and it is a long process. The things that are currently taking place all build up to the construction. When the road is being upgraded to tar the design speed increases and some of the curves on this road will need to be straightened, that means that the new alignment will go into some farms. This will be communicated with the farmers before construction starts. It is currently still in the design phase. Pipeline: The pipeline will remain there, but once road construction takes place it needs to be put into a sleeve. The community will need to assist on where these pipelines are. When the road is tarred, when approaching a community, signboards to reduce speed (120km/h to 60km/h) need to be put up. It is difficult to put up speed humps on a main road.	Hon Ignatius Khariseb Eikki Shidiwe
15	I am concerned that the pipeline that was mentioned before is not done according to the standard, it was done as an emergency. It is the only way that the community on the other side receives water.	Anna-Martha		
16	It should be made clear what the criteria for relocation and compensation with regards to the houses in the road reserve are. What about the legality? There are some buildings in these areas here that are considered illegal.		When the construction starts, it will be looked at what part is in the road reserve: house, fence, kraal or what the land use is. This will determine what you will be compensated for and what amount. The compensation is done according to government regulations and rates. It also depends on the size of area within the road reserve. In commercial areas it is easy because you have one landowner. In communal areas it is difficult to prove to an individual that you are here illegally. We will engage the traditional leaders in this regard. Response (Moses Mberira): Many people do not realise that they are there illegally. Response (Ignatius Khariseb): The Ministry of Land Reform should be engaged together with the Office of the Councillor, the Traditional Leaders, Roads Authority, and the Engineers to resolve this.	Eikki Shidiwe Moses Mberira Hon Ignatius Khariseb

No.	ISSUE	RAISED BY	RESPONSE PROVIDED	PROVIDED BY
17	Let us also look at the status of our settlement.	Charles Tjijenda		
18	There are certain people that disregard the rules of the road. Let us be prepared that some of the houses will need to be moved. People must not go and build in the road reserve now.	Frieda	With regards to the houses within the road reserve, what happens sometimes when the design is done and we see that there are a lot of house,s sometimes the alignment can be shifted so that the houses don't need to be moved.	Eikki Shidiwe
19	Some of the people don't have access to e-mail, can we submit correspondence through the Office of the Councillor?	Hiskia	Yes.	Maike Prickett
20	Some farmers are not present, could I ask that we create a communication group on which we can discuss this project going forward?	Frieda	Frieda, will you please establish this group so that we can share the information that our office receives.	Hon Igantius Khariseb

9. ENVIRONMENTAL IMPACTS

The Scoping Report will look at the Construction and Operational Phases of the project to determine the significance of the expected environmental impacts associated with the upgrade of the existing gravel road to a low volume seal. The following activities are generally associated with the construction of a road. These activities are kept in mind during the environmental impact assessment process.

- **Camp site establishment**
  - Demarcation of the camp site
  - Protection of vegetation and natural features
  - Protection of fauna
  - Protection of cultural historical aspects
  - Topsoil conservation
  - De-bushing and de-stumping
  - Structures construction: bulk water, sewage, electricity and accommodation
  - Parking and other required demarcated areas

- **Site infrastructure**
  - Batching plants
  - Crusher plants
  - Sand washing plants
  - Nurseries
  - Construction of service, haul and access roads
  - Gates and fences

- **Site management**
  - Rubble and waste rock
  - Solid waste
  - Liquid waste
  - Hazardous waste
  - Pollution control
  - Implements and equipment
  - Blasting
  - Air quality
  - Noise control
  - Fire control
  - Health and Safety

- **Earthworks**
  - Prospecting boreholes and test pits
  - Excavations and trenches
  - Cut and fill
  - Shaping and trimming
  - Construction of pavement layers

- **Stockpiles, storage and handling**
  - Topsoil
  - Spoil
  - Vehicles and equipment
  - Fuel
  - Hazardous substances

9.1 Environmental Impact Assessment Process Methodology

One of the objectives of this study is to identify and quantify the potential positive and negative impacts which the proposed road will have on the receiving biophysical and socio-economic environment. A checklist is designed to help users identify the likely significant environmental effects of proposed projects during scoping. It is to be used in conjunction with the Checklist of Criteria for Evaluating the Significance of Impacts. There are two stages:

- **First**, identifying the potential impacts of projects;
- **Second** selecting those which are likely to be significant and therefore require most attention in the assessment.

A useful way of identifying the potential impacts of a project is to identify all the activities or sources of impact that could arise from construction, operation or decommissioning of the project, and to consider these alongside the characteristics of the project environment that could be affected, to identify where there could be interactions between them. The two parts of the Scoping Checklist have been developed to assist in this process.

Start with the checklist of questions set out below. Complete Column 2 by answering:

- yes - if the activity is likely to occur during implementation of the project;
- no - if it is not expected to occur;
- ? - if it is uncertain at this stage whether it will occur or not.

For each activity for which the answer in Column 2 is “Yes” or “?”, refer to the second part of the Scoping Checklist which lists characteristics of the project environment which could be affected, and identify any which could be affected by that activity. Information will be used about the surrounding environment in order to complete this stage. Note the characteristics of the project environment that could be affected, and the nature of the potential effects in Column 4.

Finally, use Checklist of Criteria for Evaluating the Significance of Impacts to help complete Column 5. This will identify those impacts which are expected to be significant. The questions are designed so that a “yes” answer will point towards a significant impact. It is often difficult to decide what is or is not significant but a useful simple check is to ask whether the effect is one that is of sufficient importance that it ought to be considered and have an influence on the development consent decision.

Table 5: Environmental Scoping Checklist

PART 1 OF THE SCOPING CHECKLIST: QUESTIONS ON PROJECT CHARACTERISTICS				
1. Will construction, operation or decommissioning of the Project involve actions that will cause physical changes in the locality (topography, land use, changes in water bodies, etc)?				
No.	**Questions to be considered in the Scoping**	**Yes/No/?**	**Which Characteristics of the Project Environment could be affected and how?**	**Is the effect likely to be significant? Why?**
1.1	Permanent or temporary change in land use, land cover or topography including increases in intensity of land use?	Yes	The borrow pit operations will temporarily alter the land use, land cover and, for the borrow pits - topography of the area.	Low significance because of possible mitigation measures that can be implemented. Rehabilitation of borrow pits normally return the land use to its original state.
1.2	Clearance of existing land, vegetation and buildings?	Yes	Clearing of vegetation for construction operations influencing the vegetation, soils and topography. It is very unlikely that any buildings will be cleared.	Clearing of vegetation is always regarded as significant when it comes to road construction. However, mitigation measures can reduce the significance of the impact.
1.3	Creation of new land uses?	No	The new road will be built mostly on the existing alignment.	Low significance.
1.4	Pre-construction investigators eg boreholes, soil testing?	Yes	Materials testing are required to obtain construction materials which will affect the topography and vegetation cover.	The areas of disturbance are very small. Holes are dug to excavate samples and closed after sampling. Low significance.
1.5	Construction works?	Yes	During construction aspects such as social, soil, surface water, vegetation and geology can be affected.	The existing alignment will be used therefore there are no significant impacts anticipated.
1.6	Demolition works?	Yes	The removal of old culverts and bridges.	Very low or significance due to the low pollution risk and can be successfully mitigated.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	A temporary construction camp will probably be constructed where water and waste management are the most important activities that need to be mitigated.	Should these activities not be managed, it might have a negative impact on the soils, water and health and safety of the contractor workers. No permanent changes to the area are predicted.
1.8	Above ground buildings, structures or earthworks including linear structures cut and fill or excavations?	Yes	The above ground earthworks will be regarded as primarily for the road construction.	It is anticipated that the impact will not be significant due to the flat topography of the existing road.
1.9	Underground works including mining or tunnelling?	No		

1.10	Reclamation works?	No		
1.11	Dredging?	No		
1.12	Coastal structures egg seawalls, piers?	No		
1.13	Offshore structures?	No		
1.14	Production and manufacturing processes?	No		
1.15	Facilities for storage of goods or materials?	Yes	The storage of machines, gravel, crushed stone, sand, cement, bitumen and bulk fuel.	The storage of goods or materials can be mitigated therefore limiting the significance.
1.16	Facilities for treatment or disposal of solid wastes or liquid effluents?	Yes	Sewage effluent from the camp sites need to be treated or disposed.	This might have a significant negative impact on Health / Safety as well as soils and water if not managed effectively.
1.17	Facilities for long term housing of operational workers?	No		
1.18	New road, rail or sea traffic during construction or operation?	Yes	Construction of a bypass and traffic increase due to movement of construction vehicles.	Medium significance due to the popular tourist route.
1.19	New road, rail, air, water borne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	The current alignment will be followed.	The significance will be low due to the width and current alignment to be used.
1.20	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	Yes	There will be temporary bypasses constructed.	The significance is likely to be low due to the temporary nature of the activities.
1.21	New or diverted transmission lines or pipelines?	No		
1.22	Impoundment, damming, culverts, realignment or other changes to the hydrology of watercourses or aquifers?	Yes	New culverts will be constructed.	Should proper planning and consultation with local communities be applied, negative impacts on the hydrology of the rivers and tributaries should be limited therefore reducing the significance. Construction of new culverts will have a positive impact.
1.23	Stream crossings?	No		

1.24	Abstraction or transfers of water from ground or surface waters?	Yes	Water will be extracted for the construction phase of the project.	Water from boreholes will be used and the significance will be medium due to the scarcity of available water.
1.25	Changes in water bodies or the land surface affecting drainage or run-off?	Yes	The existing road impact on the drainage patterns.	The significance will be Low positive due to improved capacity of the drainage structures
1.26	Transport of personnel or materials for construction, operation or commissioning?	Yes	Surface characteristics.	No significance.
1.27	Long term dismantling or decommissioning or restoration works?	No		
1.28	Ongoing activity during decommissioning which could have an impact on the environment?	No		
1.29	Influx of people to an area is either temporarily or permanently?	?	It is uncertain what the impact might have on the migration of people in the region.	The significance is estimated to be low, but possible.
1.30	Introduction of alien species?	No		
1.31	Loss of native species or genetic diversity?	No		
1.32	Any other actions?	No		

2. Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
2.1	Land especially undeveloped or agricultural land?	Yes	During construction, geological materials will be used for the filling and layer works. Soils will be affected and might therefore impact negatively on the agricultural / communal land.	The significance is low. The existing alignment will be followed with some small adjustments.
2.2	Water?	Yes	Water is used for domestic and construction purposes.	The available water will be used for construction. The significance will be medium due to the low volumes available.

3. Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?				
No.	**Questions to be considered in Scoping**	**Yes/No/?**	**Which Characteristics of the Project Environment could be affected and how?**	**Is the effect likely to be significant? Why?**
3.1	Will the project involve use of substances or materials which are hazardous or toxic to human health or the environment (flora, fauna, and water supplies)?	Yes	Hydrocarbons always pose a risk to the environment.	Water and soils are normally affected by spillages of hydrocarbons. The significance might be medium without mitigation measures.
3.2	Will the project result in changes in occurrence of disease or affect disease vectors (eg insect or water borne diseases)?	No		
3.3	Will the project affect the welfare of people eg by changing living conditions?	?	There is always a risk of altered quality with regards to living conditions of the adjacent people and the environment. This is with reference to HIV/AIDS.	The significance of such risks can be mitigated, ensuring low impact significance.
3.4	Are there especially vulnerable groups of people who could be affected by the project eg hospital patients, the elderly?	Yes	The proposed route will impact positively on the vulnerable groups due to improved mobility network and increased safety.	Positive medium significance.
3.5	Any other causes?	No		

4. Will the Project produce solid wastes during construction or operation or decommissioning?				
No.	**Questions to be considered in Scoping**	**Yes/No/?**	**Which Characteristics of the Project Environment could be affected and how?**	**Is the effect likely to be significant? Why?**
4.1	Spoil, overburden or mine wastes?	Yes	Spoils will be generated during construction affecting the aesthetics appeal of the area.	No. This activity can be mitigated very successfully. Low significance.
4.2	Municipal waste (household and or commercial wastes)?	Yes	Domestic waste will be generated.	Medium significance should it not be properly managed.
4.3	Hazardous or toxic wastes (including radioactive wastes)?	Yes	Used oils and old batteries.	Mitigation measures are important to manage the handling and disposal of used oils and old batteries.
4.4	Other industrial process wastes?	No		
4.5	Surplus product?	No		

4.6	Sewage sludge or other sludge from effluent treatment?	Yes	Sewage is produced at the construction camp.	Sewage is always a very important impact that might have a negative impact on soils, water and health and safety.
4.7	Construction or demolition wastes?	No		
4.8	Redundant machinery or equipment?	No		
4.9	Contaminated soils or other material?	Yes	There is always a possibility that contamination of soils can occur during operation due to spillage of oils / diesel.	No. The scale of contamination is very limited and can be mitigated.
4.10	Agricultural wastes?	No		
4.11	Any other solid wastes?	No		
5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air?				
No.	**Questions to be considered in Scoping**	**Yes/No/?**	**Which Characteristics of the Project Environment could be affected and how?**	**Is the effect likely to be significant? Why?**
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources?	Yes	Gasses such as Nox and Sox are deposited in the air from the machines.	The quantity of these gasses will not impact significant negatively on the environment.
5.2	Emissions from production processes?	No		
5.3	Emissions from materials handling including storage or transport?	No		
5.4	Emissions from construction activities including plant and equipment?	Yes	Construction vehicles, power plants and the crusher plant will generate gaseous emissions.	The impacts might be low significant and can mitigated.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste?	Yes	Dust from material handling and transport.	Yes. Dust might be a nuisance to receptors.
5.6	Emissions from incineration of waste?	No		
5.7	Emissions from burning of waste in open air (eg slash material, construction debris)?	Yes	Burning of waste will negatively affect the air quality.	The significance will be low negative.
5.8	Emissions from any other sources?	No		

6. Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?				
No.	**Questions to be considered in Scoping**	**Yes/No/?**	**Which Characteristics of the Project Environment could be affected and how?**	**Is the effect likely to be significant? Why?**
6.1	From operation of equipment eg engines, ventilation plant, crushers?	Yes	The mining of borrow pits and production equipment produces noise and vibrations	No. The ambient receptors are minimal. The Health and Safety within close distance must be noted.
6.2	From industrial or similar processes?	No		
6.3	From construction or demolition?	Yes	Construction will produce noise.	Low significance due to low receptor density.
6.4	From blasting or piling?	No		
6.5	From construction or operational traffic?	Yes	The hauling trucks will produce noise and vibration.	No. The impact is very local and is not significant.
6.6	From lighting or cooling systems?	No		
6.7	From sources of electromagnetic radiation (consider effects on nearby sensitive equipment as well as people)?	No		
6.8	From any other sources?	No		

7. Will the Project lead to risks of contamination of land or water from releases of pollutants on the ground water into sewers, surface water, groundwater, coastal waters or the sea?				
No.	**Questions to be considered in Scoping**	**Yes/No/?**	**Which Characteristics of the Project Environment could be affected and how?**	**Is the effect likely to be significant? Why?**
7.1	From handling, storage, use or spillage of hazardous or toxic materials?	Yes	Spillage of oils and other hydrocarbon may affect the water and soil.	With no mitigation the significance might be medium.
7.2	From discharge of sewage or other effluents (whether treated or untreated) to water or the land?	Yes	Effluent at the construction site might impact negatively on the surface water, soils and health and safety of the workforce.	Should the sewage not be properly managed the negative impact might be significant.

7.3	By deposition of pollutants emitted to air, onto the land or into water?	Yes	Gasses from the machines.	No. The volumes of emissions are limited.
7.4	From any other sources?	No		
7.5	Is there a risk of long term build-up of pollutants in the environment from these sources?	No		

8. Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?

No.	Questions to be considered in Scoping	Yes/No/ ?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous or toxic substances?	No		
8.2	From events beyond the limits of normal environmental protection eg failure of pollution controls systems?	No		
8.3	From any other causes?	Yes	The health and safety of road users might be affected by construction vehicles.	Might be significant if proper road traffic management is not conducted during the construction phase.
8.4	Could the project be affected by natural disasters causing environmental damage (eg floods, earthquakes, landslip, *etc)?*	No		

9. Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?

No.	Questions to be considered in Scoping	Yes/No/ ?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
9.1	Changes in population size, age, structure, social groups etc?	No		
9.2	By resettlement of people or demolition of homes or communities or community facilities eg schools, hospitals, social facilities?	No		
9.3	Through in-migration of new residents or creation of new communities?	?	In-migration of people might be a possibility.	The significance is unsure.

9.4	By placing increased demands on local facilities or services eg housing, education, health?	No		
9.5	By creating jobs during construction or operation or causing the loss of jobs with effects on unemployment and the economy?	Yes	The local and larger community will benefit from the construction phase.	The significance might be positive medium due job creation and increased mobility.
9.6	Any other causes?	No		

10. Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project Environment could be affected and how?	Is the effect likely to be significant? Why?
10.1	Will the project lead to pressure for consequential development which could have significant impact on the environment eg more housing, new roads, new supporting industries or utilities, etc?	Yes	New road will be constructed which will benefit the communities. Lower vehicle operating costs will contribute to the National economy.	The significance will be positive but the extent uncertain.
10.2	Will the project lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment eg: • supporting infrastructure • housing development • extractive industries • supply industries • other?	Yes	Stimulating the tourism industry.	This might be a significant positive impact on the town of Talismanus.
10.3	Will the project lead to after-use of the site which could have an impact on the environment?	No		
10.4	Will the project set a precedent for later developments?	?	Unlikely	
10.5	Will the project have cumulative effects due to proximity to other existing or planned projects with similar effects?	No		

PART TWO OF THE SCOPING CHECKLIST: CHARACTERISTICS OF THE PROJECT ENVIRONMENT

For each project characteristic identified in Part 1 consider whether any of the following environmental components could be affected.

Question - Are there features of the local environment on or around the Project location which could be affected by the Project?

- There are no areas protected by law in the vicinity of the proposed site.
- There is a low possibility of features of high historic or cultural importance.
- Surface drainage patterns will be addressed through proper engineering design.

Question - Is the Project in a location where it is likely to be highly visible to many people?
This road is not used extensively; therefore, the location is not highly visible to many people.

Question - Is the Project located in a previously undeveloped area where there will be loss of Greenfield land?
No, the road will be constructed on the existing alignment.

Question - Are there existing land uses on or around the Project location which could be affected by the Project?

There will be one borrow pit that will be opened but will not affect the existing land uses significantly.

Question - Are there any plans for future land uses on or around the location which could be affected by the Project?
No. The area will probably remain agricultural / communal.

Question - Are there any areas on or around the location which are densely populated or built-up, which could be affected by the Project?
There are no densely populated areas around the project, only agricultural activities and dwellings found at Talismanus.

Question - Are there any areas on or around the location which are occupied by sensitive land uses which could be affected by the Project?

No.

Question - Are there any areas on or around the location which contain important, high quality or scarce resources which could be affected by the Project?

There are no scarce resources found around the project that could be influenced by the construction or operational phases of these projects, but there are some flora species (trees) that are protected by Forestry Legislation. There are also some protected animal species that will be encountered during construction and operational phases.

Question - Are there any areas on or around the location of the Project which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?
No. The area has been subject to agricultural and semi-urban activities.

Question - Is the Project location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems?
No. The area is very flat with limited floods, erosion or impacts on the climatic conditions.

Question - Is the Project likely to affect the physical condition of any environmental media?
No, the proposed project will be constructed on the existing alignment.

Question - Are releases from the Project likely to have effects on the quality of any environmental media?

- The air quality might deteriorate due to dust generation during construction but will improve during operation.
- The quality of soil might deteriorate without proper management.
- Acidification of soils or waters will probably not occur.
- There will be some noise generated during the construction and operational phase of the road but will be limited to the site. Noise levels will decrease during the operation phase of the project.
- The air quality will increase should the road be upgraded to bitumen standard.

Question - Is the Project likely to affect the availability or scarcity of any resources either locally or globally?

- The project will use fossil fuels in liquid (diesel).
- Water will be used for dust suppression, construction and domestic use.
- The quarrying activity extracts geological materials on a non-renewable basis.

Question - Is the Project likely to affect human or community health or welfare?

- The quality of air will be affected due to construction activities and hauling. Even though this is the case, human health might not be problematic.
- No mortality or morbidity might be experienced by human receptors.
- The project will have a positive impact on the social economic welfare of the region.

In the Scoping checklist, the significance must be indicated. To facilitate this procedure, the following questions were considered during the rating:

Questions that were considered to determine significance:

1. Will there be a large change in environmental conditions?
2. Will new features be out-of-scale with the existing environment?
3. Will the effect be unusual in the area or particularly complex?
4. Will the effect extend over a large area?
5. Will there be any potential for trans frontier impact?
6. Will many people be affected?
7. Will many receptors of other types (fauna and flora, businesses, facilities) be affected?
8. Will valuable or scarce features or resources be affected?
9. Is there a risk that environmental standards will be breached?
10. Is there a risk that protected sites, areas, features will be affected?
11. Is there a high probability of the effect occurring?
12. Will the effect continue for a long time?
13. Will the effect be permanent rather than temporary?
14. Will the impact be continuous rather than intermittent?
15. If it is intermittent will it be frequent rather than rare?
16. Will the impact be irreversible?
17. Will it be difficult to avoid, or reduce or repair or compensate for the effect?

9.2 Environmental Impact Assessment Summary

The following environmental impacts were identified during the assessment procedure as described above. The impacts are classified as either positive or negative and the significance ratings as low, medium and high.

Activity	Aspect / Impact	Positive / Negative	Significance
Land use / topography, and land use cover.	The quarry operations will permanently alter the land use, land cover and, for the borrow pits - topography of the area.	Negative	Low
	Areas zoned as undetermined or agricultural will change to transport (land use).	Negative	Low
Clearance of existing land, vegetation and buildings.	Clearing of vegetation for construction operations influencing the vegetation, soils and topography.	Negative	Low
Creation of new land uses.	The existing land use will change from agricultural to road (land use).	Negative	Low
Pre-construction investigators egg boreholes, soil testing?	Materials testing are required to obtain construction materials which will affect the topography and vegetation cover.	Negative	Low
Construction activities.	During construction aspects such as social, soil, surface water, vegetation and geology can be affected.	Negative	Low
Demolition works?	The possible removal of old culverts and bridges.	Negative	Low
Temporary sites used for construction works or housing of construction workers?	A temporary construction camp will probably be constructed where water and waste management are the most important activities that need to be mitigated.	Negative	Low
Above ground buildings, structures or earthworks including linear structures cut and fill or excavations.	The above ground earthworks will be regarded as primarily for the road construction. Permanent changes will take place (land use).	Negative	Low
Facilities for storage of goods or materials.	Pollution of soils and water.	Negative	Medium
Facilities for treatment or disposal of solid wastes or liquid effluents?	Sewage effluent from the camp sites need to be treated or disposed.	Negative	Medium
New road, rail or sea traffic during construction or operation?	Limited traffic increase due to movement of construction vehicles.	Negative	Low
Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	There will be temporary bypasses constructed.	Negative	Low

Impoundment, damming, culverts, realignment or other changes to the hydrology of watercourses or aquifers.	Water balancing is an important aspect to be evaluated. Improving the culverts on the road will be positive.	Positive	Low
Abstraction or transfers of water from ground or surface waters?	Water will be extracted for the construction phase of the project.	Negative	Medium
Changes in water bodies or the land surface affecting drainage or run-off?	Drainage will improve due to the increased structures (culverts) and widening of the bridges.	Positive	Medium
Influx of people to an area in either temporarily or permanently	Migration of people might impact on the socio-economic structure of the area. The risk of HIV/AIDS may increase due to the influx.	Negative	Low
Loss of native species or genetic diversity?	Surface disturbances always impact on the biodiversity of an area.	Negative	Low
Resources such as land and water.	Very limited agricultural land will be affected due to the construction of the road.	Negative	Low
	Water is used for domestic and construction purposes.	Negative	Medium
Will the project involve use of substances or materials which are hazardous or toxic to human health or the environment (flora, fauna, and water supplies)?	Hydrocarbons always pose a risk to the environment.	Negative	Medium
Will the project affect the welfare of people eg by changing living conditions?	The proposed route will impact positively on the vulnerable groups due to improved mobility network.	Positive	Medium
Spoil, overburden or mine wastes?	Spoils will be generated during construction affecting the aesthetics appeal of the area.	Negative	Low
Pollution on site (domestic and construction waste).	Pollution of the natural environment (soil and water).	Negative	Medium
Sewage sludge or other sludge from effluent treatment?	Sewage is produced at the construction camp.	Negative	Medium
Contaminated soils or other material.	There is always a possibility that contamination of soils can occur during operation due to spillage of oils / diesel.	Negative	Low
Emissions from combustion of fossil fuels from stationary or mobile sources.	Gasses such as Nox and Sox are deposited in the air from the machines.	Negative	Low
	The movement from vehicles will generate noise, dust and gaseous emissions.	Negative	Low
Will the project cause noise and vibration from blasting?	Blasting might be conducted which will impact on existing water sources, houses and other receptors in the area.	Negative	Low

Emissions from burning of waste in open air (eg slash material, construction debris)?	Burning of waste will negatively affect the air quality.	Negative	Low
By creating jobs during construction or operation or causing the loss of jobs with effects on unemployment and the economy?	The local community will benefit from the construction phase through additional employment opportunities.	Positive	Medium
Will the project lead to pressure for consequential development which could have significant impact on the environment eg more housing, new roads, new supporting industries or utilities, etc?	New road will be constructed which will benefit the communities by improving access to schools, clinics and churches.	Positive	Medium
	New road will be constructed which will benefit the communities. Lower vehicle operating costs will contribute to the National economy.	Positive	Medium
Will the project lead to development	Access improvement to facilities in the region will benefit the local and regional communities.	Positive	Medium

10. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Minimum Requirements for the Environmental and Social Management Programme (ESMP) are attached in this document. It sets out as the minimum generic standards applicable to such a project. A detailed site specific ESMP should be drafted before commencement of the Construction phase.

The ESMP is intended to bridge the gap between the Environmental Assessment (EA) and the implementation of the project, particularly with regards to implementing the mitigation measures recommended in the Environmental Assessment (EA). Monitoring, auditing and taking corrective actions during implementation are crucial interventions to successfully implement the ESMP.

The ESMP detail actions to ensure compliance with regulatory bodies and further ensures that environmental performance is increased through mitigation measures on impacts as they occur.

ESMP implementation is a cyclical process that converts mitigation measures into actions and through cyclical monitoring, auditing, review and corrective action, ensures conformance with stated ESMP aims and objectives. Through monitoring and auditing, feedback for continual improvement in environmental performance must be provided and corrective action taken to ensure that the ESMP remains effective.

10.1 ESMP Administration

The ESMP must be part of the Tender and Contract documentation. Copies of the ESMP shall be kept at the site office and will be distributed to all senior contract personnel. All senior personnel shall be required to familiarize themselves with the contents of this document.

10.2 Roles and Responsibilities

The implementation of the ESMP requires the involvement of several stakeholders, each fulfilling a different but vital role to ensure sound environmental management during each phase.

Engineer and Engineer's Representative (ER)

The Engineer shall delegate powers to the Engineer's Representative (ER) in respect of implementation of the ESMP. The Engineer has the responsibility to ensure that the Employer's responsibilities are executed in compliance with relevant legislation and the ESMP. The Engineer also has the responsibility to approve the Contractor's appointment of the Environmental Control Officer (ECO).

Any on-site decisions regarding environmental management are ultimately the responsibility of the Engineer. The ER shall have the following responsibilities in terms of the implementation of this ESMP:

- Controlling that the necessary environmental authorizations and permits have been obtained by the Contractor.
- Advising the Contractor and the Contractors ECO in finding environmentally responsible solutions to problems.
- Taking appropriate action if the specifications are not followed.

- Ordering the removal of person(s) and/or equipment not complying with the ESMP specifications.
- Issuing penalties for non-compliance to mitigation measures pertained in the ESMP.
- Advising on the removal of person(s) and/or equipment not complying with the specifications.
- Auditing the implementation of the ESMP and compliance with authorization on a monthly basis.
- Undertaking a continual review of the ESMP and recommending additions and/or changes to the document after completion of the contract.

Environmental Control Officer (ECO)

The Environmental Control Officer (ECO) will be a competent person from the staff of Contractor to implement the on-site environmental management of this ESMP by the Contractor. The ECO shall be on site daily and the ECO's duties will include the following:

- Regular site inspections of all construction areas with regard to compliance with the ESMP.
- Evaluate and verifying adherence to the ESMP.
- Advising the Contractor in finding environmentally responsible solutions to ESMP non-compliance activities.
- Organise and facilitate environmental awareness training for all new personnel coming onto site.

10.3 Environmental Awareness Training

Before any work is commenced on the Site, the Contractor shall ensure that adequate environmental awareness training of senior site personnel takes place and that all construction workers receive an induction presentation on the importance and implications of the ESMP. The Contractor shall liaise with the Engineer during establishment phase to fix a date and venue for the training and to agree on the training content.

The Contractor shall provide a suitable venue and ensure that the specified employees attend the course. The Contractor shall ensure that all attendees sign an attendance register and shall provide the ER with a copy of the attendance register. The presentation shall be conducted, as far as is possible, in the employees' language of choice.

As a minimum, training should include:

- Explanation of the importance of complying with the ESMP.
- Discussion of the potential environmental impacts of construction activities.
- The benefits of improved personal performance.
- Employees' roles and responsibilities, including emergency preparedness.

- Explanation of the mitigation measures that must be implemented when carrying out their activities.
- Explanation of the specifics of this ESMP and its specification (no-go areas, etc.)
- Explanation of the management structure of individuals responsible for matters pertaining to the ESMP.
- The contractor shall keep records of all environmental training sessions, including names, dates and the information presented.

10.4 Public Participation

An on-going process of public participation shall be maintained during construction to ensure the continued involvement of interested and affected parties (I&APs) in a meaningful way. Public meetings to discuss progress and any construction issues that may arise shall be held at least every two months and more regularly if deemed necessary by the ER. These meetings shall be arranged by the ECO and shall be facilitated by the Contractor. The Contractor shall present a progress report at each public meeting. All I&APs that participated in or were informed during the EIA shall be invited to each of the public meetings.

10.5 Environmental Auditing

Environmental auditing should be conducted at least once every three months during the construction phase. These environmental audits will be conducted by an environmental consultant with the required experience and sub-contracted by the Engineer.

Benefits derived from the audit process include:

- identification of environmental risks observed during a site visit;
- development or improvement of the environmental management system;
- suggested improvements to the ESMP;
- inspecting the required permits and licenses;
- increase in staff awareness with regards to the environment and the ESMP;
- inspect environmental incident reports, environmental monitoring and recording documentation. These documents will be compiled and filed by the ECO.

Commonly, the audit of a site will cover all environmental management procedures, operational activities & systems, and environmental issues.

10.6 Documentation, Record keeping and Reporting Procedures

The Contractor shall develop and implement an effective document handling and retrieval system for all ESMP documentation on site. This will ensure that there is adequate ESMP documentation control and will facilitate easy document access and evaluation. ESMP documentation should include (but are not limited to):

- ESMP implementation activity specifications;
- training records;

- site inspection reports;
- monitoring reports; and
- auditing reports.

The Environmental Control Officer is responsible for ensuring that the registration and updating of all relevant ESMP documentation is carried out. The ECO is responsible for ensuring that the latest versions of documents are used to conduct tasks which may impact the project environment.

10.7 Environmental Mitigation Measures / Environmental Management Plan

The following mitigation measures are sufficient to reduce or avoid negative impacts associated with the construction of a road. It is based on the activities mentioned in this report that will occur during the construction phase of the project:

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
10.7.1 MANAGEMENT AND MONITORING	To ensure that the provisions of the ESMP are implemented during construction.	The independent environmental consultant shall monitor that all aspects of the ESMP are implemented during the construction phase of the project. The environmental consultant shall conduct site inspections and attend meetings. The site meeting agenda shall make provision for reporting on non-compliance issues related to the ESMP.	Environmental consultant together with the ECO.
10.7.2 COMMUNICATION AND STAKEHOLDER CONSULTATION	To ensure that all stakeholders are adequately informed throughout construction and that there is effective communication with and feedback to the consultant and client.	a. The Contractor shall appoint an ECO from the construction team to take responsibility for the implementation for all provisions of this ESMP and to liaise between the contractor, community, and the Engineer. The ECO must be appointed at least 14 days after the site-handover. b. The Contractor shall at every site meeting report on the status of the implementation of all provisions of the ESMP. c. The contractor shall implement the environmental awareness training as stipulated in Section 10.3 above. d. The Contractor shall liaise with the social and environmental consultants regarding all issues related to community consultation and negotiation as soon as possible after construction commences.	Contractor/ Environmental Consultant to monitor.
10.7.3 HEALTH AND SAFETY	To ensure health and safety of workers and the public at all times during construction	a. The Contractor shall submit a strategy to ensure the least possible disruption to traffic and potential safety hazards during construction. b. The strategy should include a schedule of work indicating when and how road crossings (construction at existing intersections) will be made. The schedule should be updated and distributed to all stakeholders. c. The Contractor shall also liaise with the Traffic Authorities in this regard.	Contractor will ensure the mitigation measures are enforced at his own expense. The ECO will monitor.

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
		d. Proper traffic and safety warning signs must be placed at the construction site as required by the Road Traffic and Transport Act, 1999 (Act 22 of 1999) and the Road Traffic and Transport Regulations promulgated in terms of the Act. e. The Contractor must adhere to the regulations pertaining to Health and Safety, with special reference to the provision of protective clothing. Failing to issue workers with the proper PPE, the Contract may be suspended until corrective actions were taken. f. Dust protection masks shall be provided to task workers if they complain about dust. g. Surface dust will be contained by wetting dry surfaces periodically with a water bowser, sprinkler system or any suitable method. This applies to all individual construction areas on site and to the sections of the road affected. h. Potable water shall be available to workers to avoid dehydration. This water shall be of acceptable standards to avoid any illness. At least 3 liters of drinking water per person per day shall be made available during construction. i. The contractor shall enforce all relevant Health and Safety Regulations for the specific activities associated with this project. j. The Contractor shall implement a HIV/AIDS awareness programme as part of Health and Safety. k. Blasting may only be conducted by a qualified person and all laws and regulations will be enforced before and during blasting. Blasting shall be done in accordance with Clause 1222 of the Standard Specification of the Roads Authority and the Explosives Act 26 of 1956 (Regulations promulgated as amended by the Explosive Amendment Act, 1993).	
10.7.4 CONSERVATION OF THE NATURAL AND HISTORICAL ENVIRONMENT	To minimise damage to soil, vegetation and historical resources during the construction phase. This includes soil crusting, soil	a. The main contractor's camp shall not be constructed closer than 500m from any river, stream of tributary from any river / stream. b. At the outset of construction (or during construction as may be applicable), the ECO and the contractor shall visit all proposed borrow-pits, haul roads, access roads, camp sites, and other areas to be disturbed outside the road reserve.	Contractor will ensure the mitigation measures are enforced at his own expense.

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
	erosion and unnecessary vegetation destruction. Management of water (domestic and construction).	Areas to be disturbed shall be clearly demarcated, and no land outside these areas shall be disturbed or used for construction activities. c. Detailed instructions and final arrangements for protection of sensitive areas, keeping of topsoil and rehabilitation of disturbed areas shall be made, in line with the guidelines in this document. The ECO shall be consulted before any new areas are disturbed which have not yet been visited. d. No off-road driving shall be allowed, except on the agreed haul and access roads. e. Vegetation shall be cleared within the road reserve as necessary for the construction of the road, while trees with a trunk diameter exceeding 500 mm (1 meter above ground) shall be left intact or as directed by the Engineer. The areas on either sides of the road reserve may not be cleared of vegetation, unless permission is given to do so for detours or access roads. This measure is subject to the Roads Authority's specifications with regards to the road reserve. f. A prescribed penalty will be deducted from the Contractor's payment certificate for every mature tree removed without approval. g. No trees may be felled or live wood in the project area removed by any member of the construction team, including sub-contractors. Contravention of this arrangement is liable for a prescribed penalty. h. A prescribed penalty will be deducted from the Contractor's payment certificate if it is shown that trees and/or branches have been broken down wilfully and unnecessarily, or that any plants have been collected illegally, by any of the staff or sub- contractors. i. Trees that need to be trimmed should be done so with the right equipment and aesthetical acceptable. The use of a saw fit for its purpose is obligatory and the branches of trees will not be broken off by the use of other machinery. j. Where topsoil is available, this must be stockpiled separately in 1,00 m high piles and this used to cover the damaged areas outside the road reserve such as access roads to borrow pits, and clearing and grubbing areas.	The ECO will monitor.

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
		k. Where compaction has taken place in disturbed areas, these areas must be ripped and covered with topsoil separately kept for this purpose. This aspect shall be provided for in the schedule of quantities – covered by the Standard Specification of the contract. l. Poaching or collecting of wild animals is prohibited. m. The killing of any animal (reptile, bird or mammal) is prohibited, unless for legal hunting purposes. n. A prescribed penalty will be deducted from the contractor's payment certificate if it is shown that any of his staff or sub-contractors are involved in trapping, hunting or any kind of collecting of wild animals in the vicinity of the work sites. Such activities shall be reported to Nampol for prosecution. o. Pipelines for the pumping of construction water shall as far possible run within the road reserve and along existing tracks and other roads. p. Water will not be allowed to be wasted. This includes water required for construction and domestic purposes.	
10.7.5 BORROW PIT MANAGEMENT AND REHABILITATION	To ensure proper soil management (combat soil erosion and promote biological activities). Preserve and manage natural vegetation. To ensure health and safety around the borrow pits (decommissioning phase). To stimulate ecological processes after	a. The removal of material at borrow-pit sites shall be focused where the least significant vegetation exists. If material is only available around significant mature trees (more than 500 cm circumference – 1 meter above ground), clusters of trees should be preserved while suitable material is excavated around them. A 3-meter buffer must be conserved around the cluster of mature trees. The ER shall visit all proposed borrow-pit areas and indicate where and how material may be removed, before works commence. A **cluster constitutes 5 or more trees in proximity (within 20m radius).** b. The Contractor shall use safety tape to mark these tree clusters as to avoid confusion or miss-understandings. c. The Engineer shall draft a plan for each proposed borrow pit. Similarly, the Contractor shall draft such a plan for each borrow-pit proposed by him. This plan must indicate the required resources; borrow pit boundaries and sensitive areas that may not be mined (indication of the mature trees).	Contractor will ensure the mitigation measures are enforced at his own expense. The ECO will monitor.

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
	decommissioning (to stimulate vegetation and other biological activities). To establish borrow pits which is aesthetically pleasing after decommissioning.	d. The borrow pit areas will be clearly marked by using brightly painted markers. These markers will demarcate the area where materials might be removed and stored. e. All borrow-pits must be rehabilitated. f. The contractor shall liaise with the applicable local headmen OR residents regarding whether their borrow-pits shall be shaped as water reservoirs during rehabilitation. g. At those borrow-pits not to be shaped as reservoirs, topsoil (the top layer containing organic material) shall be stockpiled separately and the stockpile maintained for use at the end of the contract to rehabilitate the borrow pits. h. The topsoil shall be marked as to inform the machine operators that the material is top soil and should be left alone for rehabilitation purposes. i. The borrow pits shall be rehabilitated by trimming the sides to a slope not steeper than 20° (1:5) and evenly spreading the topsoil over the slopes to allow for the growth of new vegetation. j. All spoil material at the borrow pits shall be neatly shaped and covered with overburden (if available). k. Access to borrow pits shall be controlled (using gates or manned positions). l. The borrow pit floor shall be levelled evenly as part of rehabilitation. m. A Borrow Pit Rehabilitation Plan shall be compiled by the Contractor indicating the rehabilitation schedule (time-frames) for the various borrow pits to be rehabilitated. n. After the borrow pit has been rehabilitated, the Rehabilitation Checklist will be completed and signed by the relevant parties.	
10.7.6 WASTE AND POLLUTION MANAGEMENT	To avoid contribution to potential surface and groundwater pollution. To avoid contribution to potential soil pollution.	a. General waste generated during construction will be disposed of on a regular basis at an approved waste disposal site. A temporary waste site may be demarcated for temporary storage of waste, but this area will be identified and clearly marked. b. The temporary domestic waste site will be fenced off with access control to the area.	Contractor will ensure the mitigation measures are enforced at his own expense.

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
	To ensure that sound waste management practices are adhered to during construction.	c. Adequate separate containers for hazardous and domestic waste will be provided on site and at the construction camp. d. The workforce will be sensitised to dispose waste in a responsible manner and not to litter.	The ECO will monitor.
		e. Waste bins will be placed in and around the construction site to facilitate proper waste management. f. No hazardous or domestic waste may remain on site after completion of the project. g. The construction of properly designed sewage facilities is required at the camp site. The sewage should either be removed on a regular basis and dumped at an approved sewage facility or where it is not possible, the sewage should be managed to such an extent that is does not cause any negative effects on the bio-physical or social environments. Proof of disposal shall be kept as record in the ECO file for environmental performance assessment purposes. No free-flowing sewage is acceptable. h. Toilet facilities will be available in the following ratio: 2 toilets for every 20 females and one toilet for every 20 males. The toilets should be such that these can be transported for various site selections and to be emptied at an approved sewage site. No person should have to walk more than 1km for the use of a toilet. i. A demarcated vehicle service area will be provided. This area will have an impermeable floor, oil trap and dedicated wash bay area. All used water will first run through the oil trap before the effluent is allowed to exit. The oil trap will be cleaned on a regular basis to ensure its efficiency. j. Servicing of vehicles is only permitted in the demarcated vehicle service area, except for large immobile vehicles which may be repaired on site, on condition that oils and lubricants are prevented from spilling through the use of drip trays or other suitable containers. k. Drip trays will be available for all vehicles that are intended to be used during construction. These trays will be placed underneath each vehicle while the	

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
		vehicles are parked. The drip trays will be cleaned every morning and the spillage handled as hazardous waste. l. Machines operating during the day that show signs of excess leaking (verified by ECO or Engineer) should be withdrawn from the task and repaired by the contractor. m. Accidental spills will be cleaned immediately. The contaminated soil will be suitably disposed of in a container suitable for hazardous waste. n. Used oil / lubricants, and other hazardous materials shall be stored in separate containers (metal or plastic). These containers shall be stored in an area with an impermeable floor and bunded walls. The materials and used oils / lubricants shall be disposed of at an approved waste disposal site or for collection by an oil recycling company such as WESCO Salvage (this company collects significant quantities of oil from central locations throughout the country). o. Fuel tanks on site will be properly bunded. The volume of the bunded area will be enough to hold 1.5 times the capacity of the storage tanks. The floor of the bunded area will be impermeable (welded plastic sheets, concrete or clay) and the sides high enough to achieve the 1.5 times holding capacity. There will be a valve installed in the bunded area to allow rainwater drainage. p. Foam fire extinguishers will be near fuel kept on site. There will be trained personnel to handle this equipment. At least two extinguishers will be placed at every fuel storage area. q. Bitumen batching areas will make use of drip trays to prevent unnecessary spillage of any bitumen products. Cleaning of spray nozzles should be done on the bypass (if it is gravel) or any other section of the road that is in use. This serves as a dust suppressor. r. Bitumen cleaning pits shall be constructed that are effectively lined with an impermeable material. No leaks / seepage is allowed from these bitumen pits. s. Should large quantities of bitumen need to be disposed, it can be done at a borrow pit with the following mitigation measures: (i) the borrow pit shall not be closer than 100m from any river, drainage tributary or stream ; (ii) The aquifer level shall not be closer than 10 meters to the borrow pit floor; (iii) a plastic lining will be laid underneath the proposed dumping area and the spoiled bitumen	

COMPONENT	OBJECTIVE	MANAGEMENT MEASURES	RESPONSIBILITY/ PARTNERSHIPS
		shall be covered with the same plastic lining as to prevent leaching; (iv) at least three meters of material shall be placed on top of the plastic lining.	
10.7.7 REHABILITATION OF CONSTRUCTION SITE, SERVITUDES AND CLEARED AREAS (WHICH INCLUDES STOCKPILES)	To rehabilitate the site office, work sites, servitude areas, tracks and other areas disturbed during construction as close to their original state as reasonably possible.	a. All bunded areas, equipment, waste, temporary structures, stockpiles etc. must be removed from the camp and construction sites. b. All disturbed areas shall be reshaped to their original contours; as close as possible to the natural conditions before construction commenced, including the road reserve, detours, construction camps, and temporary access routes. c. All cuttings must be shaped with a slope to provide a natural appearance, without having to destroy significant vegetation on top of the slope (this applies to big trees as mentioned in the ESMP only).	Contractor will ensure the mitigation measures are enforced at his own expense. The ECO will monitor.

10.8 Non-Compliance

A) Procedures

The Contractor shall comply with the environmental specifications and requirements on an on-going basis and any failure on his part to do so will entitle the ER to impose a penalty. In the event of non-compliance, the following recommended process shall be followed:

- The Engineer shall issue a notice of non-compliance to the Contractor through the ECO, stating the nature and magnitude of the contravention.
- The Contractor shall act to correct the non-conformance within 24 hours of receipt of the notice, or within a period that may be specified within the notice.
- The Contractor, through the ECO, shall provide the ER with a written statement describing the actions to be taken to discontinue the non-conformance, the actions taken to mitigate its effects and the expected results of the actions.
- In the case of the Contractor failing to remedy the situation within the predetermined time frame, the Engineer shall impose a monetary penalty based on the conditions of contract.
- In the case of non-compliance giving rise to physical environmental damage or destruction, the Engineer shall be entitled to undertake or to cause to be undertaken such remedial works as may be required to make good such damage and to recover from the Contractor the full costs incurred in doing so.
- In the event of a dispute, difference of opinion, etc. between any parties with regard to or arising out of interpretation of the conditions of the ESMP, disagreement regarding the implementation or method of implementation of conditions of the ESMP, etc. any party shall be entitled to require that the issue be referred to specialists for determination.
- The Engineer shall at all times have the right to stop work and/or certain activities on site in the case of non-compliance or failure to implement remedial measures.

B) Offences and Penalties

Where the Contractor inflicts non-repairable damage upon the environment or fails to comply with any of the environmental Specifications, he shall be liable to pay a penalty fine over and above any other contractual consequence.

The Contractor is deemed NOT to have complied with this specification if:

- within the boundaries of the site, site extensions and haul/access roads there is evidence of contravention of these environmental Specification;
- environmental damage due to negligence;
- the Contractor fails to comply with corrective or other instructions issued by the Engineer within a specific time;

Penalties for the activities detailed below, will be imposed by the Engineer on the Contractor and/or his Subcontractors:

a.	Actions leading to erosion	A penalty equivalent in value to the cost of rehabilitation plus 20%
b.	Oil spills or hydrocarbon spillages	A penalty equivalent in value to the cost of clean-up operation plus an N$ 5000 fine.

c.	Damage to indigenous vegetation	A penalty equivalent in value to the cost of restoration plus N$ 5 000
d.	Damage to sensitive environments	A penalty equivalent in value to the cost of restoration plus N$ 5 000
e.	Damage to cultural sites	A penalty to a maximum of N$100 000 shall be paid for any damage to any cultural/ historical sites
f.	Damage to trees	A penalty to a maximum of N$15 000 shall be paid for each tree removed without prior permission, or a maximum of N$5 000 for damage to any tree, which is to be retained on site.
g.	Damage to natural fauna	A penalty to a maximum of N$5 000 for damages to any natural occurring animals.
h.	Any persons, vehicles, plant, or thing related to the Contractors operations within the designated boundaries of a “no-go” area	N$4 000
j.	Litter on site	N$5 000
k.	Deliberate lighting of illegal fires on site	N$ 5 000
l.	Any person, vehicle, item of plant, or anything related to the Contractors operations causing a public nuisance.	N$1 000
m.	Constant leakages from the sewage system.	N$ 15 000

Penalties may be issued per incident at the discretion of the Engineer. The Engineer will inform the Contractor of the contravention and the amount of the fine, and will deduct the amount from monies due under the Contract.

For each subsequent similar offence the fine may, at the discretion of the Engineer, be doubled in value to a maximum value of N$ 30, 000.

Payment of any fines in terms of the contract shall not absolve the offender from being liable from prosecution in terms of any law. In the case of a dispute in terms of this section, the Engineer shall determine as to what constitutes a transgression in terms of these Environmental Mitigation Measures and the Non-compliance section of this document.

11. CONCLUSION AND RECOMMENDATIONS

The environmental investigation to determine the sensitivity of the impacts associated with this project was done according the legal requirements of the Environmental Management Act No. 7 of 2007 and associated Regulations of 2012.

Even though there are some negative impacts are associated with upgrading to low volume seal standard, the significance of these impacts are considered to be low to medium and these negative impacts could further be reduced or avoided by proper implementation of the Environmental and Social Management Plan.

This project does not pose significant environmental risks because the existing alignment will be followed. Waste management, pollution prevention and control as well as effective borrow pit rehabilitation will prevent any significant long-term negative effects associated with this project during construction.

The upgrade to low volume seal standard will bring about the most positive impacts associated with the operational phase of the project. These include reducing the vehicle operating cost for the road user, improved road user safety.

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Mannheimer, C., Maggs-Kölling, G., Kolberg, H. & Rügheimer, S., 2008. *Wildflowers of the southern Namib*. Macmillan Namibia, Windhoek.

Mendelsohn, J., Jarvis, A., Roberts, A. & Robertson, T. 2002. Atlas *of Namibia. A portrait of the land and its people*. David Philip Publishers, Cape Town, RSA.

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Miller,R. McG. (1992). Regional Geology Series. *The Stratigraphy of Namibia.* Ministry of Mines and Energy. Geological Survey. Namibia

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http://www.namibweb.com/regions.htm

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http://environmentalcommons.org/cetos/criticalhabitat/imazapyr.pdf.

APPENDIX A

BASIC RULES OF CONDUCT

The following list represents the basic Do's and Don'ts towards environmental awareness, which all participants in this project must consider whilst carrying out their tasks. These are not exhaustive and serve as a quick reference aid.

NOTE: ALL new site personnel must attend an environmental awareness presentation. Please inform your foreman or manager if you have not attended such a presentation or contact the ECO.

DO:

- Use the toilet facilities provided;
- Report dirty or full facilities;
- Clear your work areas of litter and building rubbish at the end of each day;
- Use the waste bins provided and ensure that litter will not blow away;
- Report all fuel or oil spills immediately & stop the spill continuing;
- Dispose of cigarettes and matches carefully (littering is an offence);
- Confine work and storage of equipment to within the immediate work area;
- Use all safety equipment and comply with all safety procedures;
- Prevent contamination or pollution of soil, streams and water channels;
- Ensure a working fire extinguisher is immediately at hand if any "hot work" is undertaken e.g. Welding, grinding, gas cutting etc;
- Report any injury of an animal;
- Drive on designated routes only;
- Prevent excessive dust and noise.

DO NOT:

- Remove or damage vegetation without direct instruction;
- Make any fires;
- Injure, trap, feed or harm any animals - this includes birds, frogs, snakes, lizards etc;
- Enter any fenced off or marked area.
- Allow cement or cement bags to blow around;
- Speed or drive recklessly;
- Allow waste, litter, oils or foreign materials on the ground or in any steams;
- Swim in the dam;
- Litter or leave food laying around;
- Waste water;
- Use vehicles that are leaking oil or any hydrocarbon substance.

APPENDIX B

REHABILITATION CHECKLIST FOR THE FINALIZATION OF BORROW PITS

Borrow Pit Name and Number: _____ Date: _____

It is essential that a borrow pit meet the requirements set out in the approved EMP before closure. After the requirements are met, the borrow pit can be signed off and regarded as rehabilitated. After the borrow pit has been signed off, the contractor or any other party may not be allowed to engage in any activities in or around the signed off borrow pit. This includes, but is not limited to activities such as further excavations, dumping of overburden or spoils, sloping, etc.

Criteria for rehabilitation according to the EMP:

Item Number	Description	Comments	Complied Yes / No
1	Gradient of the borrow pit walls are less than 18 degrees (1:3).		
2	The walls is covered with overburden/top soil with a thickness of more than150 mm.		
3	The floor of the borrow pit is level and no material is found within the pit.		
4	The compacted areas are ripped to a minimum depth of 300mm.		
5	No man made topographical high or low points are found in or around the borrow pit. These might include berm walls, excavation holes, stock piles, etc.		
6	The site is clear of any illegal dumping of foreign or other materials in and around the borrow pit.		
7	All invasive vegetation has been removed from site.		

When the answer to **all of the above** statements are “Yes" then the R.E. or authorized person can sign off the borrow pit and regard it as closed.

Signed off by: Environmentalist: _____

_____ _____

Residing Engineer / Authorized Person Land- Owner

APPENDIX C

CURRICULUM VITAE OF COMPILER

1. **Proposed Position** : Environmental Consultant
2. **Name of Firm** : Enviro Management Consultants Namibia
3. **Name of Personnel** : Rian du Toit
4. **Date of Birth** : 02 February 1971
5. **Nationality** : Namibian

6. Education:

Years	Institution	Degree/Diploma
1994	University of Pretoria	B.A.
2001	University of South Africa	B.A. (Hons) Geography
2015	University of Pretoria	M.A. Environment and Society

7. Publications:

Investigate and classify the distribution and movement patterns of Oryx gazelle (Gemsbok) in the Greater Sossusvlei – Namib Landscape (GSNL), 2015. University of Pretoria.

8. Other Training:

Years	Institution	Certificate
2004	SGS	ISO 14 000 Lead Auditor
2004	SGS	FSC Auditor

9. Countries of Work Experience:

Years	Work Done	Country
1996 - 2001	Full time teacher in Geography Senior Grades (Gr 10-12)	South Africa and Namibia
2002 - Present	EIA's, EMPR's, Basic Assessments, Scoping Reports, Mining Right Applications, Project Management	South Africa
2007 – Present	EIA's, EMPR's, Scoping Reports, Mining Right Applications, Project Management	Namibia

10. Employment Record:

Years	Company	Position Held
1996 -1998	Moria Private School	Teacher
1999 - 2000	Omaruru Private School	Head Master
2001-2002	Eldoraigne High School	Teacher
July 2002 to present	Enviro Management Consultants South Africa	Owner
December 2009 to present	Enviro Management Consultants Namibia	Owner

11. Work undertaken that best illustrates capability to handle the tasks assigned:

Name of assignment or project:	Kghapamadi Road upgrade – 2002
Main project features:	EA – Scoping compilation for listed activity required Environmental Impact Assessment and Environmental Management Plan compilation.

Name of assignment or project:	Uitkyk Village – Road construction - 2002
Main project features:	EA – Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	D1417 – Road Construction - 2003
Main project features:	EA – Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Mafikeng – Extention 14 road upgrade - 2003
Main project features:	EA – Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Mantsa and Tshunyane Village, bulk water supply - 2003
Main project features:	EA – Scoping compilation for listed activity required Environmental Impact assessment.

Name of assignment or project:	Ledig Village, bulk water supply - 2003
Main project features:	EA – Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Langkloof, bulk water supply - 2004
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	North West Province Hospital bulk water supply and sewage management - 2004
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Delareyville Sewage Plant upgrade - 2004
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	One and Ten Village VIP toilets construction - 2005
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Mogogelo Village - VIP toilets construction - 2005
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.
Name of assignment or project:	Ledig Hospital sewage plant - 2005
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Nietverdient SAPS Sewage Treatment Plant - 2005
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact Assessment.

Name of assignment or project:	Mathukuthela Village 22kVA network - 2006
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Tweelaagte Village 33kVA network - 2006
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Taiwan Village 22kVA network - 2006
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Mmakaepea Village 22kVA network- 2007
Main project features:	Environmental Assessment: Scoping compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Rustenburg bulk fuel storage (200 000 liter) - 2007
Main project features:	Environmental Assessment: Basic Assessment compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Bultfontein bulk fuel storage (220 000 liter) - 2007
Main project features:	Environmental Assessment: Basic Assessment compilation for listed activity required Environmental Impact assessment and Environmental Management Plan compilation.

Name of assignment or project:	Upgrading for the ENGEN group of four bulk fuel depots: - Otjiwarongo, Usakos, Sesriem, Khorixas - 2008
Main project features:	Environmental Assessment and Environmental Management Plan compilation.

Name of assignment or project:	Mining Right Application – Dormell Properties – 2007 - 2008
Main project features:	Mining right application which involves the following: - Public Participation Process; Scoping Phase; EIA Phase; EMP Compilation; Specialist Project Management

Name of assignment or project:	Hernic Ferrochrome Mine Mining Right Application – 2006 - 2008
Main project features:	Mining right application which involves the following: - Public Participation Process; Scoping Phase; EIA Phase; EMP Compilation; Specialist Project Management

Name of assignment or project:	Kameeldrift Mining right application – 2006 - 2008
Main project features:	Mining right application which involves the following: - Scoping Phase; EIA Phase; EMP Compilation;

Name of assignment or project:	Boekenhoutkloof Mining right application – 2006 - 2008
Main project features:	Mining right application which involves the following: - Scoping Phase; EIA Phase; EMP Compilation;

Name of assignment or project:	Ngqura Brick – EMPR Revision – 2006 - 2008
Main project features:	Environmental Management Program revision and update.

Name of assignment or project:	Pretoria Bricks - 2008
Main project features:	Environmental Management Program revision and update.

Name of assignment or project:	Leeufontein Stene Mining Right Application - 2008
Main project features:	Mining right application which involves the following: - Public Participation Process; Scoping Phase; EIA Phase; EMP Compilation; Specialist Project Management

Name of assignment or project:	Corridor Stene Mining Right Application - 2009
Main project features:	Mining right application which involves the following: - Public Participation Process; Scoping Phase; EIA Phase; EMP Compilation; Specialist Project Management

Name of assignment or project:	Karibib Portland Cement Mining Right Application - 2009
Main project features:	Mining right application which involves the following: - Scoping Phase; EIA Phase; EMP Compilation;

Name of assignment or project:	Namibia China Mineral Resources Investment and Development – Uranium EPL - 2010
Main project features:	Compilation of the EIA and EMP for the prospecting operation.

Name of assignment or project:	Rundu- Nkurenkuru, upgrading of roads - 2010
Main project features:	EMP Compilation and Monitoring
Name of assignment or project:	WG WEARNE Group: Platkop Mining Right Application - 2010
Main project features:	Mining right application which involves the following: - Public Participation Process; Scoping Phase; EIA Phase; EMP Compilation; Specialist Project Management

Name of assignment or project:	Goedehoop Stene CC Mining Right Application - 2010
Main project features:	Mining right application which involves the following: - Public Participation Process; Scoping Phase; EIA Phase; EMP Compilation; Specialist Project Management

Name of assignment or project:	Navacab Gold Mine – Anomaly 16 extention of mine - 2011
Main project features:	- Risk assessment; EIA Compilation

Name of assignment or project:	Feasibility Study for the partial improvement of Trunk Road 2/1(the coastal road) and upgrading to bitumen surfaced standard of Main Road 44(the inland road) between Walvis Bay and Swakopmund - 2011
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Simanya Lodge - 2012
Main project features:	Environmental Assessment and EMP.

Name of assignment or project:	Construction of labour base roads – DR 3671 and DR 3672 - 2012
Main project features:	Compilation of the EIA and EMP as well as Performance Assessments on the EMP.

Name of assignment or project:	Review of the basic planning for TR9/1 & TR6/1Windhoek to Hosea Kutako Airport Future Southern Bypass and Freeway - 2012
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Upgrading of NBC infrastructure – Digital Terrestrial Television Infrastructure Rollout. - 2012
Main project features:	Compilation of the EIA's and EMP's as well as Performance Assessments on the EMP.

Name of assignment or project:	Construction of labour base roads – DR 3427, DR3448 and DR 3449 - 2013
Main project features:	Compilation of the EIA and EMP as well as Performance Assessments on the EMP.

Name of assignment or project:	Feasibility Study for the Aus – Bethanie – Walvis Bay road link. - 2013

Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Upgrading of the Roads Authority Environmental Manual - 2013
Main project features:	The revision of the current Roads Authority Environmental Manual to get in line with the current Namibian Environmnetal Law and procedures.

Name of assignment or project:	The construction of the Otjinene – Grootfontein road. Upgrading and re-alignment to bitumen standard. - 2013
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	Construction of labor base roads – DR 3657 and DR 3649 - 2014
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	Construction of 5 State Veterenary Offices: Outapi, Omuthiya, Eenhana, Okakarara and Epukiro. - 2014
Main project features:	- EIA; EMP; Performance Assessment

Name of assignment or project:	Construction of a water pipeline at Omuntele and King Kauluma – Oshana Region - 2014
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	The construction of DR3608 in the Northern Parts of Namibia. - 2014
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance

	Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	The construction of road between Gobabis and Aranos - 2014
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	The construction of road between Oranjemund and Rosh Pinah. - 2014
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	The construction of DR3508 in the Zambezi Region. - 2014
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	Okahandja – Karibib road construction (from km 77 – Karibib) - 2015
Main project features:	Compilation of the EIA and EMP as well as Performance Assessments on the EMP.

Name of assignment or project:	Township establishment for Many Hills and Baumgartsbrunn West. Khomas Region. - 2015
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Construction of Freeway between Windhoek and Okahandja – 2014 to 2015

Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	De-bushing and De-mining project for the northern border of Namibia between Bagani and Katima Mulilo. - 2015
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	Feasibility study for the possible rehabilitation options for the road between Gobabis and Buitepos. - 2016
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	The construction of road DR3524 – Zambezi Region - 2017
Main project features:	Conducting the EIA process and EMP compilation for this project. Conducting the Environmental Performance Assessment (Environmental Auditing) for the duration of the project.

Name of assignment or project:	Feasibility Study for the investigation for road preservation and rehabilitation of TR3/1 (179km): Grunau – Karasburg – Ariamsvlei. - 2017
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Feasibility Study for the upgrade to bitumen standard of MR 27 – Keetmanshoop – Aroab – Klein Menasse in the !Karas Region. - 2017
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Investigation for the road preservation and rehabilitation of TR8/4: Rundu – Divundu. - 2018
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Part of the team to oversee the National Re-seal and rehabilitation process of bitumen roads within Namibia together with Element Consulting Engineers. -2018
Main project features:	Conduct Environmental Performance Assessment site visits and reports for three seperate contracts within Namibia.

Name of assignment or project:	Support to AFD in Identifying a Road Sector Program and Soft Loan on Rehabilitation, Road Safety and Capacity Building Through Consultation With The Relevant Authorities - 2018
Main project features:	The appointed team sets out to support the Agence Francaise de Developpment (AFD) in identifying a road sector program and granting soft loans on rehabilitation, road safety and capacity building for projects within the Namibian road sector.

Name of assignment or project:	The construction of DR3524 in the Zambezi Region. - 2018
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	The construction of DR3546/7 in the Zambezi Region. - 2018
Main project features:	Conducting the EIA process and EMP compilation for this project.

Name of assignment or project:	Upgrading of the railway line between Walvis – Bay and Kranzberg. - 2020
Main project features:	Appointed as an external HSE consultant on the project. Facilitate all related Health, Safety and Environmental concerns on this project and conduct monthly visits as to ensure compliance.

12. References:

Contact person	Firm	Telephone	E-mail
Mr. H Klink	VKE Namibia	+264 (061) 237642	heiko.klink@vkenamibia.com
Mr. H Kotze	Element Cons Engineers	+264 (061) 309 416	hentie@element.com.na
Mr. A Vivier	WML Cons Engineers	+264 (61) 220 285	allan@wmleng.com

APPENDIX D

MINUTES OF THE PUBLIC PARTICIPATION MEETING

Environmental Impact Assessment for the Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

Meeting Minutes

Type of Meeting: **Public Consultation Meeting**
Venue: **Talismanus Community Hall**
Time: **14h16 – 16h30**

Agenda

1. Welcome – Hon. Wenzel Kavaka
2. Team Introduction – Maike Prickett
3. Environmental Impact Assessment (EIA) – Maike Prickett
4. RA Application Processes – Bruno Mokhatu
5. Project Scope – Eikki Shidiwe
6. Q&A
7. Prayer – Anna-Martha

1. Welcome — Hon. Wenzel Kavaka, Concillor Otjombinde Constituency

2. Team Introduction — Maike Prickett, Consulting Team

3. EIA Presentation *(see attached presentation document)* — Maike Prickett, Consulting Team

- *What is an EIA? It is a practical implementation to prevent negative and improve positive impacts.*
- *Environment defined - bio-physical (water, soil, plants, etc), social and legislation*
- *Impacts – what we do and how that changes the environment (cause and affect)*
    - *Building a road: what is needed to build the road (layer works, materials), how does that change the environment, during operation what are the positive or negative effects of the road on the environment*
- *Rules and Regulations/Legislation –* ***Constitution of Namibia, Environmental Management Act No.7 (2007)***
- *What is the ultimate objective of an EIA? To maintain sustainability - a balance between development and conservation*
- *Normal stakeholder concerns of road development projects:*
    - *Land – taken and no benefit to stakeholder*
    - *Water / Materials*
    - *Consider the gain of such a project: economic gain*

- *The objective of EMC is to:*
    - *Consult the public, stakeholders that know the area need to give their input (comments and concerns)*
    - *Consider the negative and positive impacts*
    - *Present and Submit EIA and application for Environmental Clearance Certificate (ECC) application to the Ministry of Environment, Forestry and Tourism (MEFT) – they grant or reject ECC*
    - *If ECC is granted, it is valid for 3 years. It is attached to the Environmental Management Plan (EMP) – measures that force whoever develops to work according to the Environmental Managament Act. The EMP needs to be adhered to during development/construction, to avoid/minismise/reduce the negative impacts and enhance the positive impacts. The EMP is a practical and important document.*
      We want to avoid – spillage, pollution (surface water/soil, etc), bad waste management practices, etc.
    - *Borrow pits: Borrow Pit Rehabilitation Project from the Roads Authority of Namibia (RA).*
    - *Examples of good practices (shown during presentation): construction camp, waste management, borrow pit rehabilitation (Whk/Okh road)*
- *We need to strike a balance between development and conservation – to ensure that someone does not lose to the cost of someone else winning.*
- *You are welcome to raise your comments and concerns, we will listen to what you have to say and gladly answer as far as we can.*

4. RA Application Processes — Bruno Mokhatu, Roads Authority of Namibia

RA requires that certain procedures be followed, rules adhered to, and application forms be submitted for certain activities and developments that are being planned within a proclaimed road reserve by landowners, especially when a tar road is being constructed.

1. Application for an access point. (Toegangspad tot plaas/huise etc)
2. Road removal of development with the road reserve of the proclaimed road.
3. Notification form of accident.
4. Welding of grid gate rails.
5. Grass cutting in proclaimed road reserve running across farm district as well as removal of trees.
6. Notice to owner/lessee that land will be entered upon.
7. Application to infringe on a proclaimed road.
8. Application for installation of a swing/grid gate.
9. Letter informing addressee of unauthorised advertising sign/structure outside road reserve visible from proclaimed road.
10. Letter instructing removal of advertising sign/structure inside proclaimed road reserve.
11. Indemnity against claims: Quarries on private property.
12. Application for re-opening, closing, deviation or construction of proclaimed road.
13. Application for erection, fencing off, conversion or improvement of fence along trunk, main or district roads.
14. Maintenance of road reserve fences.
15. Removal of animals present in road reserve.

All pipelines that cross the existing road that have not been indicated with signage or have been registered with RA are illegal and the contractor cannot be held responsible for damage

to these pipelines during road construction, if they have not been made aware of their location, regardless of how old these pipelines are, they need to be registered with the RA.

5. Project Scope — Eikki Shidiwe, Consulting Team

The road from the main road to Talismanus is going to be constructed as a tar road, the road will mostly run along the existing road, but at some places the alignment will divert from the old alignment for safety reasons, because there are curves which are very sharp and need to be wider when the road is being tarred.

Road construction is process that takes time to be completed because there are so many procedures that need to be followed. Also, when the road construction is taking place there will be material such as gravel that needs to be taken, but this will be communicated with the land owners beforehand. There are some houses that are already built in the road reserve, these will need to be moved, this will also be communicated with the owners.

If there are any questions about the road you are welcome to ask.

6. Questions & Answers

E Killion: Welcome to the team. Despite the long wait we see from the presentation that this road is Low Volume Seal, is that what the road between Gobabis and Buitepos is? The road is already full of potholes. I have read that the government is building low-cost roads. Will it be worth the effort? Regarding the permit applications, when I come from my farm at Helena, do I need to apply for an access road? Why don't I get a signboard to Helena? Can this be included when the tar road is being built? There are 3 places that come together at the same place. The Otjinene – Gobabis road looks good and is nicely cleaned up, that is what we want.

Response (Eikki): A traffic count was done on this road, only small cars and a few trucks were counted. This road will not be the same as the Buitepos road. The road junctions will be provided with access roads and signs. During this exercise the local community will be engaged. At this stage we are still busy with the design, it is difficult to say when we can commence. Once it has been submitted to and accepted by the RA, then it will go out on tender.

Ismael Katiko: What factors determine that a road is a Low Volume Seal? Will the tar road go past Talismanus? The people that are living in the road reserve, will they be compensated? Will residents of Otjombinde be favoured with employment?

Response (Eikki): The road will stop at Talismanus, but it is difficult to say where exactly. Properties that are in the road reserve, the engineers will go out and measure to see which part is in the road reserve – house, fence or field, this will get submitted to the RA for compensation, these rates are fixed. For employment, priority should be given to the local community and usually the Office of the Councillor assists with this.

Hon Ignatius Khariseb: The access roads need to be explained, it is confusing. The road to my office at Kalahari was pointed out which is 8km, but it was rejected for upgrade.
It should be considered to extend the road past Talismanus.

Response (Eikki): Access roads – are roads that are sealed for 100m like the start of district roads. There are other roads that might not be sealed or only for a shorter distance. Once a road becomes 10km or more it becomes a project on its own. RA usually identifies these roads that sometimes get added to the project. Tulipamwe is the consultant and cannot decide to extend the road, these are the decisions of the RA.

Nande Hengari: Who will be considering the contractors? We have people here that have lorries, graders, etc. The lengths of the access roads, please clarify that.

Response (Eikki): There is confusion with the term access road, we call these short tar sections bellmouths, these are 50m sections. A request for a road to be upgraded should go through the RA's Network Planning Department. Anyone with a registered company may tender, but there are certain requirements that need to be met.

Response (Bruno): The application that was referred to is for an access point and not a road.

Response (E Killion): It is just a misunderstanding because of the question that Hon Khariseb was asking about the road to his office.

Moses Mberira: I am concerned about the traffic numbers. I live at Bolands and one night I counted 5 trucks that came past. The Low Volume Seal of the road is a concern. Where is the road going to end, can it not be extended past Talismanus to Rietfontein?

Response (Eikki): Trucks will still be able to drive on the road. There are some differences to High Volume Seal roads, like the road shoulder that is not going to be sealed.

The end of the road, I understand the concern, if I go to the RA it will not help. I request the two Councillors to sit together and write a letter to the RA, but we will pass on the message.

Response (Hon Khariseb): But the RA is present here, they need to take note of this request.

Nande Hengari: It is not true that the Low Volume Seal Road is similar to the High Volume Seal Road, I can show you the difference in a second, it is not only the road shoulder. High Volume Seal Roads have more layers.

Response (Maike): This is not a bad road; the community is in a fortunate position to receive a tar road. Consider the benefits that the road will bring to the community.

Community Member: The community needs a clearer understanding of the term Low Volume Seal.

Response (Hon Ignatius Khariseb): I suggest that RA brings someone to explain to the community what is meant by Low Volume Seal. RA representatives, take note.

Erika Sambo: I am here to accept that we get a tar road so that we can get rid of the accidents on this road.

Moses Mberira: The road from DeHoek, let's not say there is no money. We as a community should use our own efforts to find money so that we can build that road. There are bilateral agreements between Botswana and Namibia which will be to our benefit.

Response (Hon Wenzel Kavaka): Noted.

Ismael Katiko: Please go back to Windhoek and say that we accept the tar road, the EIA and the design.

Community Member: Please take note that copper was discovered in Otjombinde and we don't know where the refinery will take place. That might mean that there will be more trucks on the road.

Hon Ignatius Khariseb: The road will bring opportunities, social and economic, we will benefit from this road. Let us get your things in order so that we are not caught off guard. Let us prepare our youth and others that they make their skills available. Our people should receive priority and let's not be greedy when these opportunities come, let's share and let's capitalise.

7. Prayer — Community Member

End of meeting 16:30

①

ATTENDANCE REGISTER

DATE: 02|09|21 VENUE: Talismanus

PROJECT: Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

NAME	EMAIL	CELL NR	SIGNATURE
HON W. KAVAKA	wenzelkavaka@yahoo	0813662500	[signature]
Erick Kaposambo	—	0812840627	[signature]
Witchyn Kavezepa	—	0812852165	[signature]
G.B. Kuua	chk0816161278@gmail	0816161278	[signature]
Uaarika Tjiho	ukarua@gmail.com	0813116720	[signature]
Moses MBERIRA	mosesmb@gmail.com	0812804771	[signature]
David Ijivava	djivava@yahoo.com.au	0811624060	[signature]
[illegible] Kanaiju	[illegible]@kanaiju.com	0812191827	[signature]
Nehemia Muranga	—	0814064888	[signature]
N. Kautjeno	—	0813068174	[signature]
E. Tjikamdee Kapuntaza	-	0813509307	[signature]
Ismael Katiti	MBANDERU T.A	0813484456	[signature]
Sylvia ndemua	mbanderu	0812860590	[signature]
Yor Hiuambi	O.T.A.	0814789864	[signature]
Gerson Kaungua	gkaungua@gmail.com	0811672700	
Kauaria Tukuakuuo	KNampol@iway.na	0812197072	[signature]

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ATTENDANCE REGISTER

DATE: 02|09|21 VENUE: Talismanus

PROJECT: Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

NAME	EMAIL	CELL NR	SIGNATURE
Kambato Wanongoandi	wanookambato@gmail.com	0814699895	[signature]
Laurentius Mbarachi	~~Laurentius Mbarachi~~	0816287480	[signature]
Marena Yemuu	princessyemuu97@gmail.com	0813086805	[signature]
Nehemia Muranga	—	0814064888	[signature]
Ukumba Dorkas Katjiteo	—	0816183429	[signature]
ALBERTA [illegible]		0816313373	[signature]
Ismael Tjatindi	—	0816308186	[signature]
Umuna Haveka	gloriahaveka@yahoo.co.uk	0814862064	[signature]
Adolfine Mengo	—		[signature]
Gerson Katjiuhe	—	0813228149	[signature]
Annie Tjituka	—	0813178784	[signature]
Charles Pollmann	pollmannc@ra.org.na	0817176735	[signature]
B.S. MOKHATU	MOKHATUB@RA.ORG.NA	0811664953	[signature]
Eikki SHIDIWE	eikki.shidiwe@tulipamwe.com	0812172643	[signature]
Maite Prockett			[signature]
Hon Ignatius Khariseb			

ENVIRO

TULIPAMWE Consulting Engineers

ROADS AUTHORITY

Environmental Impact Assessment for the Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

Meeting Minutes

Type of Meeting: **Public Consultation Meeting**
Venue: **Vergenoeg Opstal**
Date: **2 September 2021**
Time: **10h00 – 11h45**

Agenda

8. Welcome – Hon. Ignatius Khariseb
9. Team Introduction – Maike Prickett
10. Environmental Impact Assessment (EIA) – Maike Prickett
11. Project Scope – Eikki Shidiwe
12. RA Application Processes – Bruno Mokhatu
13. Q&A
14. Prayer – Anna-Martha

8. Welcome — Hon. Ignatius Khariseb, Concillor Kalahari Constituency

9. Team Introduction — Maike Prickett, Consulting Team

10. EIA Presentation *(see attached presentation document)* — Maike Prickett, Consulting Team

- *What is an EIA? It is a practical implementation to prevent negative and improve positive impacts.*
- *Environment defined - bio-physical (water, soil, plants, etc), social and legislation*
- *Impacts – what we do and how that changes the environment (cause and affect)*
    - *Building a road: what is needed to build the road (layer works, materials), how does that change the environment, during operation what are the positive or negative effects of the road on the environment*
- *Rules and Regulations/Legislation – **Constitution of Namibia, Environmental Management Act No.7 (2007)***
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- *Normal stakeholder concerns of road development projects:*
    - *Land – taken and no benefit to stakeholder*
    - *Water / Materials*

    - *Consider the gain of such a project: economic gain*
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    - *Borrow pits: Borrow Pit Rehabilitation Project from the Roads Authority of Namibia (RA).*
    - *Examples of good practices (shown during presentation): construction camp, waste management, borrow pit rehabilitation (Whk/Okh road)*
- *We need to strike a balance between development and conservation – to ensure that someone does not lose to the cost of someone else winning.*
- *You are welcome to raise your comments and concerns, we will listen to what you have to say and gladly answer as far as we can.*

11. Project Scope — Eikki Shidiwe, Consulting Team

The road will mostly run along the existing road, but at some places the alignment will divert from the old alignment because of the curves which need to be a little bit bigger when the road is tarred.

As you might be aware the Geologist was already in the area looking for borrow pits for materials for construction.
Once the construction starts, we will go back to the same people and indicate the area where we found good material, so that an agreement can be signed between the owner and the contractor.

In terms of water for construction, boreholes will be drilled to provide water for construction, these will be mostly drilled next to the road. We need the assistance of the community in this regard. If there is someone with a borehole in the area there is an arrangement that can be made to use that borehole with an agreement.

During the construction for the road, it is our obligation to look after the environment, so we will try by all means not to do anything that will damage the environment, but there are procedures in place that must be followed.

If there are any questions about the road you are welcome to ask.

12. RA Application Processes — Bruno Mokhatu, Roads Authority of Namibia

RA requires that certain procedures be followed, rules adhered to, and application forms be submitted for certain activities and developments that are being planned within a proclaimed road reserve by landowners, especially when a tar road is being constructed.

16. Application for an access point. (Toegangspad tot plaas/huise etc)
17. Road removal of development with the road reserve of the proclaimed road.
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30. Removal of animals present in road reserve.

All pipelines that cross the existing road that have not been indicated with signage or have been registered with RA are illegal and the contractor cannot be held responsible for damage to these pipelines during road construction, if they have not been made aware of their location, regardless of how old these pipelines are, they need to be registered with the RA.

13. Questions & Answers

Charles Tjijenda: I would like some clarity on animals being tracked or on the road. What if my car hits an animal on the road? What does the law say?

Response (Bruno): We usually tell the person to put in a claim against the owner of the animal. Take the ear tags and find out who the animal belongs to at Veterinary Services. Animals may only be on the tracked between 07:00 – 19:00 and no other animals may be on the road, that's what the law says.

Moses Mberira: I am from the media and the Civil Society Organisation. There are usually problems with employment, and I would like to ask that people from the area need to be employed, don't bring people from other areas.

Response (Eikki): That will be addressed once the contractor has been appointed and another meeting will be held with the contractor and the community.

Charl Schubert: According to the law no animals may be on the road, unless there is a person accompanying then with a red flag.

Wanoo Kambato: Are the boreholes that are drilled during the construction going to be handed over to the community or are they going to be closed upon completion of the project?

Response (Eikki): Usually boreholes that are drilled for the project are sealed and handed over to the Roads Authority, they are the property of the RA, but if there are communities that are in

need of water, the office of the Councillor can make arrangements with the RA that the community can benefit from these boreholes

Jay-Jay Odendaal: I have a few questions about and how the community is going to be involved or can be involved in this project? Boreholes, Material, Labour, Compensation. I know there is a lot of gravel, but we live in a sandy area so where is the stone going to be sourced from? I am asking, because we know of areas where stone can be sourced from, can we get involved? I know there is usually one big tender for the road construction, but will there be smaller tenders for say sourcing for water trucks, excavators, tipper trucks, etc where we could get involved? We do have boreholes from which water can be obtained, how will we be compensated?

Response (Maike): I suggest that you submit this in writing so that it can be shared with the Engineer and that the contractor can be made aware of the resources available in the area.

Hon Ignatius Khariseb: Kalahari Prag, Vergenoeg, Dankbaar and another farm are along the same line. I would like to request that an intensive sighting to be done on this area and on this line, so that if we get water/boreholes that the communities can benefit from these boreholes in the future.

Response (Maike): Usually once the contractor has been appointed, they will come and drill boreholes, and I suggest that if you have boreholes that can be used by the contractor that you indicate them so that the contractor can be made aware and you can enter into an agreement with the contractor. We cannot say how many boreholes will be drilled, that will only be determined once the contractor is on site.

Response (Bruno): There are certain instances where water is being paid for, but there are predetermined tariffs for this. You cannot determine what you can charge for water. If you have a borehole without a pump and we need to bring our own pump, the water will automatically become cheaper. If you have a borehole with a pump available to pump construction water, we will request you to install a meter so that we can keep track of how much water is pumped and then compensate accordingly. Construction water needs to be strong. Boreholes that are drilled belong to the government; they need to be registered. What we have done on previous projects is that we give people permission to use the boreholes, but sometimes individuals install pumps and do not want to share this with other community members, then we take them back.

Hiskia: If we have old boreholes that need to be cleaned before they can be used, would they make use of this?

Response (Maike): If there is water, the contractor may consider it, but it is up to the contractor.

Charles Tjienda: How far is water transported?

Response (Bruno): Water not more than 10km and gravel not more than 5km. So every 10km there should be a borehole. We don't want to damage the road.

Moses Mberia: The Ministry of Mines and Energy have drilled a borehole at Bolands. That borehole might be available for use during construction.

Response (Ignatius Khariseb): I think what needs to be understood that the information will be passed on to the relevant authorities and that they can come and have a look and to make their decisions. The team will convey this. I am sure that we will get water around here and that this community can benefit.

Hiskia: I would like to ask the Councillor, since we know of those 3 areas that you indicated that are always struggling with water, will it be possible to bring water closer to these communities? Can we help them?

Frieda: I think we have exhausted the point. Once the contractor comes, they will determine what boreholes can be used and where boreholes will need to be drilled.

Hon Ignatius Khariseb: We would like to request that we will be informed in time once that contractor has been appointed so that the community can also be informed, not only once they are on site.

Response (Eikki): What normally happens, once the contractor has been appointed, we will have another meeting with the Councillor and the community to brief them that the road construction is about to start and the way forward.

Moses Mberia: When the MME borehole was drilled the community was not informed. The Civil Society Organisation can assist with sharing information with the people on the ground.

Response (Hon Ignatius Khariseb): We understand, and we need to communicate in time. The same goes for the borrow pits and labour. We have a standing that the locals need to get priority to get employment, but we must also understand that requirements need to be met, you cannot expect to be employed as a truck driver if you don't have the correct driver's license or if they need someone to work in a laboratory and no one here has the knowledge, they need to employ someone from elsewhere. Now is the time to get all our things in order so that when the time comes, we stand a chance to get some work from this project. Another important thing to note is, not everyone will be able to get employment on this project, and not all employment will happen at once. Let's make sure that employment benefits multiple households and not only one so that the community can benefit.

Response (Frieda): I would like to emphasise what the councillor has said. Get your things in order so that you stand a chance when the time comes. The employment will also be handled through the Office of the Councillor.

Anna-Martha: I represent gender, where do women feature in these projects?

Response (Frieda): There usually is provision for gender balance. We are working on that.

Response (Ignatius Khariseb): From previous projects that is a condition that is standard. It will be handled through the Office of the Councillor.

Hiskia: I would like to find out about the fencing. Our farms have game fence, will this be removed and replaced with normal fence, and do we need to rebuild it to game fence ourselves?

When the contractor comes in, will they teach our local people skills which can be used for future employment? Will skills transfer take place?

Response (Ignatius Khariseb): Skills transfer will need to take place, the long-term aim is to leave skills. We also need to understand that there are certain instances where only machines can do the work because of timing etc.

Response (Frieda): The contractor will not come with general labour, that can be sourced from here.

Response (Eikki): Sub-contractors are expected to produce a certain quality, so it becomes the risk of the main contractor. If you are done with the activity the engineer will inspect your work and if they are not happy and you need to redo your work, moust sub-contractors don't have the money to do that.

Fencing - there are 3 types of fences: jackal, stock, and game proof fence. Normally when a fence needs to be relocated it will be inspected beforehand and it will then be rebuilt according to the type of the existing fence.

Wanoo Kambato: There are a lot of houses in the road reserve. Will the houses need to be moved? Will fencing need to be constructed?

Response (Eikki): There is a policy that will guide this. If they are in the road reserve they will need to be moved. The surveyor will come and set out the centreline, then 30m of either side of the centreline the road reserve will be indicated. You cannot now go and build your house in the road reserve, the surveyor has picked up all houses and fences in the road reserve, so it is easy to identify new structures.

Conrad Eiseb: I would like to know if the road alignment has been finalised yet and is it going into our farms? I would like to know if it does go into our farms, do we need to move our structures.
There is a pipeline here, but I am not sure if it is 600mm deep, do we need to move it. There is a Primary School here, I would like to request that speed humps be set up, the cars come with high speed and it is on a slight hill. When will this project commence?

Response (Ignatius Khariseb): The project has already started, but there are many aspects to this process, and it is a long process. The things that are currently taking place all build up to the construction.

Response (Eikki): When the road is being upgraded to tar the design speed increases and some of the curves on this road will need to be straightened, that means that the new alignment will go into some farms. This will be communicated with the farmers before construction starts. It is currently still in the design phase.

Pipeline: The pipeline will remain there, but once road construction takes place it needs to be put into a sleeve. The community will need to assist on where these pipelines are.

When the road is tarred, when approaching a community, signboards to reduce speed (120km/h to 60km/h) need to be put up. It is difficult to put up speed humps on a main road.

Anna-Martha: I am concerned that the pipeline that was mentioned before is not done according to the standard, it was done as an emergency. It is the only way that the community on the other side receives water.

Karel Schubert: It should be made clear what the criteria for relocation and compensation with regards to the houses in the road reserve are. What about the legality? There are some buildings in these areas here that are considered illegal.

Response (Eikki Shidiwe): When the construction starts, it will be looked at what part is in the road reserve: house, fence, kraal or what the land use is. This will determine what you will be compensated for and what amount. The compensation is done according to government regulations and rates. It also depends on the size of area within the road reserve.

In commercial areas it is easy because you have one landowner. In communal areas it is difficult to prove to an individual that you are here illegally. We will engage the traditional leaders in this regard.

Response (Moses Mberira): Many people do not realise that they are there illegally.

Response (Ignatius Khariseb): The Ministry of Land Reform should be engaged together with the Office of the Councillor, the Traditional Leaders, Roads Authority, and the Engineers to resolve this.

Charles Tjijenda: Let us also look at the status of our settlement.

Frieda: There are certain people that disregard the rules of the road. Let us be prepared that some of the houses will need to be moved. People must not go and build in the road reserve now.

Response (Eikki Shidiwe): With regards to the houses within the road reserve, what happens sometimes when the design is done and we see that there are a lot of house,s sometimes the alignment can be shifted so that the houses don't need to be moved.

Maike Prickett: The public consultation process ends on the 16th of September 2021.

Response (Hiskia): Some of the people don't have access to e-mail, can we submit correspondence through the Office of the Councillor?

Response (Maike): Yes.

Community Member: Thank you for the meeting, I would like to see that our community can benefit from this project.

Frieda: Some farmers are not present, could I ask that we create a communication group on which we can discuss this project going forward?

Response (Ignatius Khariseb): Frieda, will you please establish this group so that we can share the information that our office receives.

14. Prayer — Anna-Martha, Community Member

End of meeting 11:45

ATTENDANCE REGISTER

DATE: 02/09/21 VENUE: Vergenoeg Opstal Ada Ilgubasen

PROJECT: Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

NAME	EMAIL	CELL NR	SIGNATURE
JJ Obadeal	jay-jay@iway.na	081 227 3610	
Margaretha Jacobs	–	0818190127	
Cilothilde Roman	–	0814033195	Roman
Josef Jacobs	–	0817537258	JOSEF
Dina Geitnomses	–	0816246161	
Anna Jacobs	–	0818491655	AJ
Anna Martha Ceres	–	0812058272	Ceres
Fransina Geitnomses	–	0816246161	Fransina
Petrina Amses	–	–	P.A
Franseska Van Rooi	–	–	
Sara Kaizer	–		
Maria Koos	–	0812449204	M. Koos
Katrina Kempell	–	0813446844	K. Kempell
August Banda	–	0812323372	
Bonita Koos	–	0817906790	B. Koos
Anna Jacobs	–	0818190127	A. Jacobs
Laurentius Mjandi	–	0816281480	Mjandi

ENVIRO TULIPAMWE Consulting Engineers ROADS AUTHORITY

ATTENDANCE REGISTER

DATE: 02-09-2021 VENUE: Vergenoeg Ada & Ilgubasen

PROJECT: Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

NAME	EMAIL	CELL NR	SIGNATURE
Esme Jacobs	–	0818190127	E. Jacobs
Ida Benda	–	0816482851	I Benda
Fransina Willem	–	–	
Erna Hoxbes			
Excellent el. April		0818265715	
Giovanni B-R Geiseb		0812055272	
Ronchales Koos	–	0817012232	
Alexander Koos	–	081 414 0661	
Elizabeth Balla	–	0811221614	
Jenneth Goagoses	reczam@yahoo.com	0811221614	reczam@yahoo.com
Piet Phillander		0813497701	
Mendos Banda		0815779403	
Raymond Koos		0814140661	
Gosbert Koos		0814140661	
Johannes Libbert		0818190127	
Albertus Amses		0814033195	

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NAME	EMAIL	CELL NR	SIGNATURE
Benjamin Sorel//ob		0814857346	
Cicilie Bampo		0817403130	
Maria Geelbooi	-	-	
Lucia Jacobs	-	-	
Augustinus Banda		0814144669	
Vicario B.M Dax	Vicario.Bbndax agmail.Com	0812923 7645	
Abram Goagoseb	-	0812923765	
Veronica Hoxobes	-	0818316563	
Thomas ǂEixab	-	0812185466	
Johannes Gariseb		0814125226	
B.S Mokhatu	mokhatub@ra.org.na	0811664953	
Charles Pollmann	pollmanc@ra.org.na	0817176735	
Bendos ||Garuteb		0818315563	
Hastig Jacobs		0812323372	
Martha Jonas		0818350787	
Katrina Gaitsamses		0817348786	

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PROJECT: Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

NAME	EMAIL	CELL NR	SIGNATURE
Hendrik Jacobs	-	0816191733	
Frans Jacobs	-	0816191733	
Gert Jacobs		0816191733	
Hans Cloete		0812403 3195	
Petrus Josef		0816677357	
Ignatius Kariseb	Victory Kariseb	0811464177	
Eikky SHIDIWE	eikki.shidiwe@tulipamwe.com	0812172643	
Charles Tjijenda.	charlestjijenda@gmail.com	0811287378	
Moses UBERIRA	mosesmb@gmail.com	0812804771	BERIRA - 0817191133
VERGENOEG HOLDING		0816166887	
NOORDBURG FARMING		0812871271	
CONRAD Eiseb	ceiseb@iway.na	0812174096	
Roy Albert	-	0812134969	
Wanda Kambato	wandakambato@gmail.com	0814699895	
SCHUBERT CHARL CARL	ceschubert1@gmail.com	0812655801	
Benjamin		0813815318	

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PROJECT: Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

NAME	EMAIL	CELL NR	SIGNATURE
Magdalena //Naobes		0817463139	Naobes
Sunubia Zikuer		0816010288	
Aloys //Uitkhab		0813860555	[signature]
~~Gosbert Koos~~		~~0813882340~~	~~[signature]~~
Lucia Kuhanga		0818197742	L.Kuhanga
KAVARI TJATJARA		0818379103	
EDISON KAMBATO		0813460061	
DEVAN //HOABED	www.kooper101@gmail.com	0812932119	[signature]
Mornal Malohe	/	0815779403	M.Malohe
Melvin Goreseb	/		
Simon Amses	/	081	
David Geneb	/	0816672310	
Theresia Malohe	/	0815779403	
Sussana Swait	/	0815779403	
Elizabeth Gootkombes	/	0817642899	
Erna Jacobs	/	0817642899	

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PROJECT: Design and Contract Documentation to Upgrade 145km of M0119 (T0602 to Talismanus) to Low Volume Seal

NAME	EMAIL	CELL NR	SIGNATURE
Rodney Phillander	/	0818085422	
Maria Josef	/	0817642899	
Maria Amses		0816915567	
Erika John		0816915564	
Alex Jacobs		0817642899	
Thomas Amseb		0817067181	
Mathilde Malohe	/	0815779403	
Willem Roman	/	0814033195	
Katrina Garises	/	0817819021	
ANTHONY GOAGOSEB	/	0813316206	
Baykie Maro	/	0814033195	
Timmy Kakurimire	/	0812248521	
Clemens Hambira	/	0817903179	
Ross Geukes	/	0816645005	
Haufiku Amseb	/	0818281444	
McBride Isavari	/	0812686935	

Immanuel Goaseb 0818336333

Maike Pickett

ENVIRO

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