

BASIC ASSESSMENT REPORT

for the

Extension of a servitude road in order to connect
the Road D2170 to Roads D345 and R566,
including the necessary river crossings.

Submitted to:

NORTH WEST PROVINCIAL GOVERNMENT:
DEPARTMENT OF ECONOMIC DEVELOPMENT,
ENVIRONMENT, CONSERVATION AND TOURISM.

JULY 2012

Submitted by:



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Basic Assessment Report for the extension of a servitude road in order to connect the Road D2170 to Roads D345 and R566, including the necessary river crossings, submitted to North West Provincial Government: Department of Economic Development, Environment, Conservation and Tourism, July 2012.

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the DEDECT

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(For official use only)

File Reference Number:
Application Number:
Date Received:

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Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

- 1. This basic assessment report is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable tick the boxes that are applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

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

YES	NO
X	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail¹:

The purpose of the proposed project is to extend and formalize the existing servitude road in order to connect the road D2170 to roads D345 and R511. Due to the upgrade of the N4 highway, access to the properties on the farm Buffelsfontein will be constrained. The upgrade and extension of the said road will take place on portions 118, 119, 120 & 128 of the farm Buffelsfontein 465 JQ as well as the farm Modderspruit 461 JQ located within the jurisdiction of the Madibeng Local Municipality. In addition, this road will minimize the movement of heavy vehicle loads through the local community of Bapong, Modderspruit and Majakaneng.

2. FEASIBLE AND REASONABLE ALTERNATIVES

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

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

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Alternatives have not been considered due to the existing servitude road as well as the predetermined routes that have already been in use by the local community, thereby limiting the environmental impact.

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

¹ Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative: River Crossings

Latitude (S):

Longitude (E):

River Crossing S1²
 River Crossing S2
 River Crossing S3

25°	43.3991'	27°	37.7248'
25°	42.7859'	27°	38.5444'
25°	42.6908'	27°	38.6602'

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative A1 (preferred or only route alternative)

- Starting point of the activity
- Split point of the activity
- End point A of the activity
- End point B of the activity

25°	43.8806'	27°	37.0393'
25°	42.6098'	27°	38.6901'
25°	42.6945'	27°	38.9596'
25°	42.3482'	27°	38.6024'

Alternative A2 (if any)

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

0	'	0	'
0	'	0	'
0	'	0	'

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

Refer to Addendum G for co-ordinates taken every 250 meters.

4. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative: River Crossings

Size of the activity:

River Crossing S1³
 River Crossing S2
 River Crossing S3

160 m ²
240 m ²
160 m ²

or, for linear activities:

Alternative:

Length of the activity:

Alternative A1 (preferred activity alternative)

- *Starting point to Split Point*
- *Split point to End Point A*
- *Split point to End Point A*

4,760 m
3,660 m
530 m
570 m
m

Alternative A2 (if any)

² "Alternative S.." refer to site alternatives.

³ "Alternative A.." refer to activity, process, technology or other alternatives.

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

Alternative:

Size of the site/servitude:

Alternative A1⁴ (preferred activity alternative)

38 080 m²

Alternative A2 (if any)

m²

5. SITE ACCESS

Does ready access to the site exist?

YES	NO
X	
m	

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

Describe the type of access road planned:

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

6. SITE OR ROUTE PLAN

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

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.11 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

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

8. FACILITY ILLUSTRATION

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

⁴ "Alternative A.." refer to activity, process, technology or other alternatives.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

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

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

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

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

What percentage of this will accrue to previously disadvantaged individuals?

R	
R	
YES	NO
YES	NO
R	
%	
R	
%	

9(b) Need and desirability of the activity

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

NEED:			
1.	Was the relevant provincial planning department involved in the application?	YES X	NO
2.	Does the proposed land use fall within the relevant provincial planning framework?	YES X	NO
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

DESIRABILITY:			
1.	Does the proposed land use / development fit the surrounding area?	YES X	NO
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES X	NO
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES X	NO
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
5.	Will the proposed land use / development impact on the sense of place?	YES	NO X
6.	Will the proposed land use / development set a precedent?	YES	NO X
7.	Will any person's rights be affected by the proposed land use / development?	YES	NO X
8.	Will the proposed land use / development compromise the "urban edge"?	YES	NO X
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES X	NO
2.	Explain: The existence of the proposed road extension will minimize the movement of heavy vehicle loads through the local communities of Bapong, Modderspruit and Majakaneng.		

3.	Will the land use / development have any benefits for the local communities where it will be located?	YES X	NO
4.	Explain: The existence of the proposed road extension will minimize the movement of heavy vehicle loads through the local communities of Bapong, Modderspruit and Majakaneng..		

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act No. 107 of 1998	National & Provincial	27 November 1998
Regulation 544, as described in regulations 21 to 25 of the Environmental Impact Assessment Regulations published in terms of section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998). <ul style="list-style-type: none"> Activity 11: The construction of infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse. Activity 47: The lengthening of a road by more than 1 kilometre where no reserve exists, where the existing road is wider than 8 metres. 	Department of Environmental Affairs and Tourism and Department of Economic Development, Environment, Conservation and Tourism	18 June 2010
National Water Act, Act No. 36 of 1998 <ul style="list-style-type: none"> 21(c): Impeding or diverting the flow of water in a watercourse; and 21(i): Altering the bed, banks, course or characteristics of a watercourse 	Department of Water Affairs and Forestry	20 August 1998
National Heritage Resources Act, Act 25 of 1999	Resources Agency (SAHRA)	April 1999
Environment Conservation Act 73 of 1989	Department of Environmental Affairs and Tourism	9 June 1989
National Environmental Management: Biodiversity Act 10 of 2004	Department of Environmental Affairs and Tourism	7 June 2004
National Environmental Management: Air Quality Act 39 of 2004.	Department of Environmental Affairs and Tourism	24 Feb 2005
Government Notice No 248, Section 13 in terms of the National Environmental Management: Air Quality Act 39 of 2004.	Department of Environmental Affairs and Tourism	31 March 2010
Mineral and Petroleum Resources Development Act 28 of 2002	Department of Minerals and Energy	10 Oct 2002
Hazardous Substances Act 15 of 1973	Department of Health	26 March 1973
National Veld and Forest Fire Act 101 of 1998	Department of Water Affairs and Forestry	1 April 1999
Environmental Management Policy	Department of Environmental Affairs and Tourism	

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

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

YES X	NO
100 m ³	

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

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

The minimum building rubble generated during construction will be used on-site as fill material or disposed of in an approved dump site. Waste collection points will be established along the site. All waste will be removed by appropriate contractors.

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

Construction solid waste will be removed and used as fill material. Surplus material will be disposed of at a registered municipal waste disposal site (Brits Municipal Waste Site).

Will the activity produce solid waste during its operational phase?

YES	NO X
m ³	

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? If yes, inform the competent authority and request a change to an application for scoping and EIA.

YES	NO X
-----	---------

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

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

YES	NO X
-----	---------

11(b) Liquid effluent

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

YES	NO X
m ³	

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

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

YES	NO X
-----	---------

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

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

YES	NO X
-----	---------

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

There will be no waste water running from the site. All possible runoff water will be diverted into stormwater drains along the road.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO
	X
YES	NO

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

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

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

11(d) Generation of noise

Will the activity generate noise?

YES	NO
X	
YES	NO
	X

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

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

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

Noise will be generated during normal operating hours. The operational noise level will be within the prescribed zone sound level for the Rustenburg Municipality or within 7dB of the ambient noise level (whichever is lowest), and will therefore not be defined as a "disturbing noise" as defined in the Noise control Regulations as promulgated under Section 25 of the Environmental Conservation Act 73 of 1989 on 10 January 1992 in Government Notice R154.
--

12. WATER USE

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

Municipal	water board	groundwater	river, stream, dam or lake	Other	the activity will not use water
				X	

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

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

	litres
YES	NO
X	

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

An application for the river crossing will be submitted to the Department of Water Affairs for Section 21(c) and 21(i) water uses in terms of the National Water Act of 1998. Proof of the submission to the Department of Water Affairs are provided in Appendix G

13. ENERGY EFFICIENCY

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

The design of the road has been made to such an extent to minimise the number of uphill or downhill slopes which will minimise the amount of fuel/energy used to travel on these roads.

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

SECTION B: SITE/AREA/PROPERTY DESCRIPTION – River Crossings (S1,S2 & S3)

Important notes:

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

Section B Copy No.

A

(e.g. A):

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

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

YES	NO
X	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:

Portions 118, 119, 120 & 128 of the farm Buffelfontein 465 JQ and the farm Modderspruit 461 JQ (Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.
--

Nearest Town(s) or Settlement:

Mooi-nooi (between Brits and Rustenburg) in the district of Bojanala under Madibeng Municipality In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.
--

Current land-use zoning:

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

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

YES	NO
	X
YES	NO
	X

Must a building plan be submitted to the local authority?

Locality map: An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

River Crossing S1

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

River Crossing S2

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

River Crossing S3

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

2. LOCATION IN LANDSCAPE

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

NB: Indicate by highlighting/ticking

River Crossing S1

2.1	Ridgeline	2.2	Plateau	2.3	Side slope of hill/mountain	
2.4	Closed valley	2.5	Open valley	X	2.6	Plain
2.7	Undulating plain / low hills	2.8	Dune	2.9	Seafront	

River Crossing S2

2.1	Ridgeline	2.2	Plateau	2.3	Side slope of hill/mountain	
2.4	Closed valley	2.5	Open valley	X	2.6	Plain
2.7	Undulating plain / low hills	2.8	Dune	2.9	Seafront	

River Crossing S3

2.1	Ridgeline	2.2	Plateau	2.3	Side slope of hill/mountain	
2.4	Closed valley	2.5	Open valley	X	2.6	Plain
2.7	Undulating plain / low hills	2.8	Dune	2.9	Seafront	

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	River Crossing S1		River Crossing S2		River Crossing S3	
Shallow water table (less than 1.5m deep)	YES	NO X	YES	NO X	YES	NO X
Dolomite, sinkhole or doline areas	YES	NO X	YES	NO X	YES	NO X
Seasonally wet soils (often close to water bodies)	YES	NO X	YES	NO X	YES	NO X
Unstable rocky slopes or steep slopes with loose soil	YES	NO X	YES	NO X	YES	NO X
Dispersive soils (soils that dissolve in water)	YES	NO X	YES	NO X	YES	NO X
Soils with high clay content (clay fraction more than 40%)	YES X	NO	YES X	NO	YES X	NO

	River Crossing S1		River Crossing S2		River Crossing S3	
Any other unstable soil or geological feature	YES	NO X	YES	NO X	YES	NO X
An area sensitive to erosion	YES X	NO	YES X	NO	YES X	NO

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

4. GROUND COVER

Indicate the types of groundcover present on the site:

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

River Crossing S1

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

River Crossing S2

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

River Crossing S3

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

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

5. LAND USE CHARACTER OF SURROUNDING AREA

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

NB: Indicate by highlighting/ticking

River Crossing S1:

5.1 Natural area X	5.2 Low density residential	5.3 Medium density residential	5.4 High density residential	5.5 Informal residential ^A
5.6 Retail commercial & warehousing	5.7 Light industrial	5.8 Medium industrial ^{AN}	5.9 Heavy industrial ^{AN}	5.10 Power station
5.11 Office / consulting room	5.12 Military or police base/station/compound	5.13 Spoil heap or slimes dam ^A X	5.14 Quarry, sand or borrow pit	5.15 Dam or reservoir
5.16 Hospital/medical centre	5.17 School	5.18 Tertiary education facility	5.19 Church	5.20 Old age home
5.21 Sewage treatment plant ^A	5.22 Train station or shunting yard ^N	5.23 Railway line ^N	5.24 Major road (4 lanes or more) ^N	5.25 Airport ^N
5.26 Harbour	5.27 Sport facilities	5.28 Golf course	5.29 Polo fields	5.30 Filling station ^H
5.31 Landfill or waste treatment site	5.32 Plantation	5.33 Agriculture	5.34 River, stream or wetland X	5.35 Nature conservation area
5.36 Mountain, koppie or ridge	5.37 Museum	5.38 Historical building	5.39 Protected Area	5.40 Graveyard
5.41 Archaeological site X	5.42 Other land uses: Mining X			

If any of the features marked with an "N" are highlighted or ticked, how this impact will / be impacted upon by the proposed activity?



If any of the features marked with an "A" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain: The proposed river crossing will have no impact and will not be influenced by the slimes dam that is located downstream from the proposed river crossing. No additional studies will be required.

If any of the features marked with an "H" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?



River Crossing S2.

5.1 Natural area X	5.2 Low density residential	5.3 Medium density residential	5.4 High density residential	5.5 Informal residential ^A X
5.6 Retail commercial & warehousing	5.7 Light industrial	5.8 Medium industrial ^{AN}	5.9 Heavy industrial ^{AN}	5.10 Power station
5.11 Office / consulting room	5.12 Military or police base/station/compound	5.13 Spoil heap or slimes dam ^A	5.14 Quarry, sand or borrow pit	5.15 Dam or reservoir
5.16 Hospital/medical centre	5.17 School	5.18 Tertiary education facility	5.19 Church	5.20 Old age home
5.21 Sewage treatment plant ^A	5.22 Train station or shunting yard ^N	5.23 Railway line ^N	5.24 Major road (4 lanes or more) ^N	5.25 Airport ^N
5.26 Harbour	5.27 Sport facilities	5.28 Golf course	5.29 Polo fields	5.30 Filling station ^H
5.31 Landfill or waste treatment site	5.32 Plantation	5.33 Agriculture	5.34 River, stream or wetland X	5.35 Nature conservation area
5.36 Mountain, koppie or ridge	5.37 Museum	5.38 Historical building	5.39 Protected Area	5.40 Graveyard
5.41 Archaeological site	5.42 Other land uses (specify)			

If any of the features marked with an "N" are highlighted or ticked, how this impact will / be impacted upon by the proposed activity?



If any of the features marked with an "A" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain: The proposed river crossing will have no impact on the upstream information residential area. The residential area might have an impact with regards to litter and debris that gets washed down the river during heavy rainfalls, which may impact on the structure and integrity of the river crossing.

No additional studies will be required.

If any of the features marked with an "H" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity.



River Crossing S3:

5.1 Natural area X	5.2 Low density residential	5.3 Medium density residential	5.4 High density residential	5.5 Informal residential ^A X
5.6 Retail commercial & warehousing	5.7 Light industrial	5.8 Medium industrial ^{AN}	5.9 Heavy industrial ^{AN}	5.10 Power station
5.11 Office / consulting room	5.12 Military or police base/station/compound	5.13 Spoil heap or slimes dam ^A	5.14 Quarry, sand or borrow pit	5.15 Dam or reservoir
5.16 Hospital/medical centre	5.17 School	5.18 Tertiary education facility	5.19 Church	5.20 Old age home
5.21 Sewage treatment plant ^A	5.22 Train station or shunting yard ^N	5.23 Railway line ^N	5.24 Major road (4 lanes or more) ^N	5.25 Airport ^N
5.26 Harbour	5.27 Sport facilities	5.28 Golf course	5.29 Polo fields	5.30 Filling station ^H
5.31 Landfill or waste treatment site	5.32 Plantation	5.33 Agriculture	5.34 River, stream or wetland X	5.35 Nature conservation area
5.36 Mountain, koppie or ridge	5.37 Museum	5.38 Historical building	5.39 Protected Area	5.40 Graveyard
5.41 Archaeological site	5.42 Other land uses (specify)			

If any of the features marked with an "N" are highlighted or ticked, how this impact will / be impacted upon by the proposed activity?



If any of the features marked with an "A" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain: The proposed river crossing will have no impact on the upstream information residential area. The residential area might have an impact with regards to litter and debris that gets washed down the river during heavy rainfalls, which may impact on the structure and integrity of the river crossing.

No additional studies will be required.

If any of the features marked with an "H" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity.



6. CULTURAL/HISTORICAL FEATURES

River Crossing S1:

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or palaeontological sites, on or close (within 20m) to the site?	YES	NO X
If YES, explain:	Uncertain	
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:		
Will any building or structure older than 60 years be affected in any way?	YES	NO X
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO X
If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.		

River Crossing S2:

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or palaeontological sites, on or close (within 20m) to the site?	YES	NO X
If YES, explain:	Uncertain	
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:		
Will any building or structure older than 60 years be affected in any way?	YES	NO X
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO X
If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.		

River Crossing S3:

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or palaeontological sites, on or close (within 20m) to the site?	YES	NO X
If YES, explain:	Uncertain	
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:		
Will any building or structure older than 60 years be affected in any way?	YES	NO X
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO X
If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.		

SECTION B: SITE/AREA/PROPERTY DESCRIPTION – Proposed Road (A1)

Important notes:

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

Section B Copy No.

B

(e.g. A):

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

- Has a specialist been consulted to assist with the completion of this section?

YES	NO
X	

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:

Portions 118, 119, 120 & 128 of the farm Buffelfontein 465 JQ and the farm Modderspruit 461 JQ (Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.
--

Nearest Town(s) or Settlement:

Mooi-nooi (between Brits and Rustenburg) in the district of Bojanala under Madibeng Municipality In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.
--

Current land-use zoning:

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

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

YES	NO
	X

Must a building plan be submitted to the local authority?

YES	NO
	X

Locality map: An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative A1

Flat X	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative A2

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

NB: Indicate by highlighting/ticking

Alternative A1

2.1	Ridgeline	2.2	Plateau	2.3	Side slope of hill/mountain	
2.4	Closed valley	2.5	Open valley	2.6	Plain	X
2.7	Undulating plain / low hills	2.8	Dune	2.9	Seafront	

Alternative A2

2.1	Ridgeline	2.2	Plateau	2.3	Side slope of hill/mountain	
2.4	Closed valley	2.5	Open valley	2.6	Plain	
2.7	Undulating plain / low hills	2.8	Dune	2.9	Seafront	

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative A1		Alternative A2	
Shallow water table (less than 1.5m deep)	YES	NO X	YES	NO
Dolomite, sinkhole or doline areas	YES	NO X	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO X	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO X	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO X	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES X	NO	YES	NO
Any other unstable soil or geological feature	YES	NO X	YES	NO
An area sensitive to erosion	YES X	NO	YES	NO

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

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

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

Alternative A1

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

Alternative A2

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

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

5. LAND USE CHARACTER OF SURROUNDING AREA

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

NB: Indicate by highlighting/ticking

Alternative A1

5.1 Natural area X	5.2 Low density residential	5.3 Medium density residential	5.4 High density residential	5.5 Informal residential X
5.6 Retail commercial & warehousing	5.7 Light industrial	5.8 Medium industrial AN	5.9 Heavy industrial AN	5.10 Power station
5.11 Office / consulting room	5.12 Military or police base/station/compound	5.13 Spoil heap or slimes dam ^A X	5.14 Quarry, sand or borrow pit	5.15 Dam or reservoir
5.16 Hospital/medical centre	5.17 School	5.18 Tertiary education facility	5.19 Church	5.20 Old age home
5.21 Sewage treatment plant ^A	5.22 Train station or shunting yard ^N	5.23 Railway line ^N	5.24 Major road (4 lanes or more) ^N	5.25 Airport ^N
5.26 Harbour	5.27 Sport facilities	5.28 Golf course	5.29 Polo fields	5.30 Filling station ^H
5.31 Landfill or waste treatment site	5.32 Plantation	5.33 Agriculture	5.34 River, stream or wetland X	5.35 Nature conservation area
5.36 Mountain, koppie or ridge	5.37 Museum	5.38 Historical building	5.39 Protected Area	5.40 Graveyard
5.41 Archaeological site X	5.42 Other land uses: Mining			

If any of the features marked with an "N" are highlighted or ticked, how this impact will / be impacted upon by the proposed activity?

If any of the features marked with an "An" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain: The proposed river crossing and road will have no impact and will not be influenced by the slimes dam that is located downstream from the proposed river crossing/road. The proposed river crossings and road will have no impact on the upstream information residential area. The residential area might have an impact with regards to litter and debris that gets washed down the river during heavy rainfalls, which may impact on the structure and integrity of the river crossings.

No additional studies will be required.

If any of the features marked with an "H" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity.

Alternative A2

5.1 Natural area	5.2 Low density residential	5.3 Medium density residential	5.4 High density residential	5.5 Informal residential
5.6 Retail commercial & warehousing	5.7 Light industrial	5.8 Medium industrial AN	5.9 Heavy industrial AN	5.10 Power station
5.11 Office / consulting room	5.12 Military or police base/station/compound	5.13 Spoil heap or slimes dam ^A	5.14 Quarry, sand or borrow pit	5.15 Dam or reservoir
5.16 Hospital/medical centre	5.17 School	5.18 Tertiary education facility	5.19 Church	5.20 Old age home
5.21 Sewage treatment plant ^A	5.22 Train station or shunting yard ^N	5.23 Railway line ^N	5.24 Major road (4 lanes or more) ^N	5.25 Airport ^N
5.26 Harbour	5.27 Sport facilities	5.28 Golf course	5.29 Polo fields	5.30 Filling station ^H
5.31 Landfill or waste treatment site	5.32 Plantation	5.33 Agriculture	5.34 River, stream or wetland	5.35 Nature conservation area
5.36 Mountain, koppie or ridge	5.37 Museum	5.38 Historical building	5.39 Protected Area	5.40 Graveyard
5.41 Archaeological site	5.42 Other land uses: Mining			

If any of the features marked with an "N" are highlighted or ticked, how this impact will / be impacted upon by the proposed activity?

If any of the features marked with an "An" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

If any of the features marked with an "H" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity.

6. CULTURAL/HISTORICAL FEATURES

Alternative A1

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

If YES, explain:

Three sites with Late Iron Age features and artefacts were identified in the area, with one of them containing the remnants of a stone walled settlement similar to the one investigated and demarcated in 2007 on the farm. Two of the sites are located on and near low dolomite outcrops in the area, and consist of grinding hollows on the outcrops with associated grinding stones and fragments of undecorated potsherds. All three sites are located a few meters (either to the left or right) from the edge of the existing dirt track and might possibly be impacted by the development of the planned road. Mitigation measures will have to be implemented. These sites are possibly related and originally would have formed part of a larger settlement complex.

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

Briefly explain the findings of the specialist:

In conclusion it is possible to say that the Impact Assessment for the proposed IFMSA Road Extension development, crossing of various portions of the farm Buffelsfontein 465 JQ, near Mooinooi and Modderspruit in the Northwest Province, was conducted successfully. The development follows an existing vehicular dirt track and as a result the impact will be fairly minimal. However, some Late Iron Age related sites and features were recorded during the assessment and these sites might be negatively impacted by the proposed road extension and upgrade. It is therefore recommended that these sites be recorded through mapping and drawing and detailed photographic recording before the development continues.

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

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

Alternative A2

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

If YES, explain:

[Redacted]

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

Briefly explain the findings of the specialist:

[Redacted]

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

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (iv) the manner in which and the person to whom representations in respect of the application may be made

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

List of authorities informed:

National Department of Agriculture: Land Use and Soil Management
National Department of Environment and Tourism: Pollution & Waste Management
National Department of Environment and Tourism: Environmental Impact Evaluation
National Department of Water Affairs
National Department of Environment and Tourism: Air Quality Management & Climate Change
National Department of Environment and Tourism: Biodiversity And Conservation
South African Heritage Resource Agency
National Department of Environment and Tourism: Waste Management
North West Department of Agriculture, Conservation and Environment
Department of Agriculture, Conservation and Environment
North West Department of Minerals and Energy
North West Department of Health: Brits District
North West Department of Transport, Roads and Community Safety: Director: Eastern Region
North West Department of Water Affairs and Forestry
North West Department: Agriculture, Forestry & Fisheries
North West : SAHRA

List of authorities from whom comments have been received:

Mr Reuben Moatshe, Madibeng Local Municipality

7. CONSULTATION WITH OTHER STAKEHOLDERS

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

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?

YES	NO
X	

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

Please refer to Appendix E for a detailed description of the Stakeholder Consultation Process

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Please refer to Appendix E for a detailed description of the Stakeholder Consultation Process

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

Please refer to Appendix E for a detailed description of the Stakeholder Consultation Process

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

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Alternative: River Crossings: S1, S2 and S3

Direct impacts:

Planning and design phase:

No direct impacts will be incurred during the planning and design phase

Construction phase:

- *Crime, safety and security*
- *Dust*
- *Increased potential for erosion on-site*
- *Increased run-off*
- *Noise*
- *Increased traffic impact*
- *Job creation (positive)*
- *Solid waste accumulation*

Operational phase:

- *Increased potential for erosion on-site*
- *Increased run-off*

Decommissioning and Closure phase:

No direct impacts will be incurred during the decommissioning and closure phase

Indirect impacts:

Planning and design phase:

No indirect impacts will be incurred during the planning and design phase

Construction phase:

- *Increased flow to the stream(s)*
- *Increased potential for crime*
- *Visual impact*
- *Waste impact*

Operational phase:

- *Increased flow to the stream(s)*
- *Increased traffic and potential for accidents*
- *More people and more structures increases the ecological footprint*
- *Visual impact*

Decommissioning and Closure phase:

No indirect impacts will be incurred during the decommissioning and closure phase

Cumulative impacts:

Planning and design phase:

No cumulative impacts will be incurred during the planning and design phase

Construction phase:

- *The bulk of the impacts during this phase will have immediate effect (e.g. noise-, dust- and water pollution). If the site is monitored on a continual basis during this phase, it is possible to identify these impacts as they occur. These impacts will then be mitigated through the contingency plans identified in the planning phase, together with a commitment to sound environmental management from the mine.*

Operational phase:

No cumulative impacts will be incurred during the operational phase

Decommissioning and Closure phase:

No cumulative impacts will be incurred during the decommissioning and closure phase

Mitigation Measures

The management responses contained in the mitigation measures are measures prescribed to minimise the impacts associated with the installation of river crossings as part of the upgrading and extension of the current servitude road. The management responses contained in the mitigation measures have been formulated with the holistic view to minimise any potential direct and indirect impacts to adjoining habitats and ecosystems linked to this site. These measures must be used on site during the planning and construction phases of the development.

The point of departure for these measures is to take a pro-active route by addressing potential problems before they occur.

This should limit corrective measures required during the construction phase of the development. Additional mitigation will be included throughout the project's various phases, as required and if necessary.

- *An independent Environmental Control Officer (ECO) needs to be appointed who must monitor the contractor's compliance with the mitigation measures.*
- *All contractors and sub-contractors needs to be supplied with a copy of the mitigation measures.*
- *The priority of the ECO is to maintain the integrity of the development conditions outlined in the mitigation measures.*
- *The ECO must form part of the project management team and attend all relevant project meetings*
- *The contractor must appoint an Environmental Liaison Officer (ELO). This person will be required to monitor the development with a direct hands-on approach, and ensure compliance and co-operation of all personnel. He/She should preferably be fluent in the languages of the employees.*
- *The mitigation measures must be made binding to the main contractor as well as individual contractors and should be included in tender documentation for the construction contract.*
- *The contractor must take corrective action to mitigate an incident appropriate to the nature and scale of the incident and must also rehabilitate any residual environmental damage caused by the incident or by the mitigation measures themselves.*
- *If possible, construction activities should be scheduled for the dry winter months to decrease the risk of erosion during heavy thunderstorms.*
- *Prior to establishment of the site camp(s), the Contractor shall produce a plan showing the positions of all buildings, laydown yards, and other infrastructure for approval by the ECO. Thus no construction activities must commence on site prior to obtaining the necessary approval from the Local Authority.*
- *The developer must determine which security system should be used for the site.*
- *The entrance point of the construction road must be secured.*
- *The planning of construction activities (construction site) must endeavour to minimise the noise impact on adjacent landowners.*

Air pollution:

- *Air filters on all mechanized equipment must be properly designed and maintained.*
- *Burning of waste is not permitted.*
- *Construction activities may be the source of dust. Continual watering of the site should be carried out to prevent dust production during windy and dry conditions. There must be a continuous dust monitoring process throughout construction. The impact of dust emission must be minimal and must not be allowed to cause a nuisance to motorists or residents of surrounding areas.*
- *Limit the speed of construction vehicles on dirt roads to limit dust emissions.*
- *Cover haul vehicles, during transport of soil materials.*
- *The access route and the site to be frequently sprayed with water and compounds to control the dust.*

Impact on fauna and flora:

- *Fires will only be allowed in a facility especially constructed for the purpose of keeping warm and or cooking as required by the guard/s overnight and at weekends. The ECO is to be informed as to the type of cooking facilities that will be used by guard before construction begins.*
- *Wood for the fire must be supplied by the contractor and not taken from the surrounding area.*

- No indigenous vegetation may be collected, or used for firewood.
- Existing road structures must be utilised, when this is not possible the areas to be cleared for roads shall be restricted only to those that are essential for the operation, and should be clearly demarcated. Construction vehicles and workers should not stray from these areas.
- Under no circumstances shall any animals (wildlife and domestic animals) be handled, removed, killed or interfered with by the Contractor, his employees, his Sub-Contractors or his Sub-Contractors' employees.
- Should surface water in the surrounding area be polluted, and fauna and indigenous flora show signs of deterioration or death, specialist hydrological or ecological advice must be sought for the appropriate treatment and remedial procedures to be followed. The requirements for such input shall be agreed with the engineer. If liability is found to rest with the contractor, the costs of containment and rehabilitation shall be on the contractor's account, including the costs of specialist input.
- Only vegetation indigenous to the area should be used during rehabilitation of the site.

Noise pollution:

- Construction will be limited to day light hours.
- Silencers on diesel-powered equipment must be properly designed and maintained.
- Construction noise to be limited to daylight and working hours only.

Safety and security:

- No rubble or discarded building materials must remain on the construction site for more than two weeks.
- The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act, 1993 (Act No.85 of 1993) and the National Building Regulations.
- Limit access to the construction crew camp only to the workforce.
- Building contractor and subcontractor must transport their workers to and from the site.

Soil pollution:

- On completion of Works, the Contractor shall clear away and remove from the site all construction paint, surplus materials, foundations, plumbing and other fixtures, rubbish and temporary works of every kind.
- The construction crew must adhere to all the relevant laws and regulations applicable to the disposal of construction waste and rubble. The contractor shall provide a waste management strategy to the ECO and the ECO shall monitor the implementation thereof.
- No solid waste or any materials used may be disposed of on site.
- No uncontrolled discharges from the site / working area to depressions shall be permitted. All discharge points will require approval e.g. wastewater discharges include concrete mixing, vehicle washing etc.
- To prevent erosion of material that is stockpiled for long periods, the material must be retained in a bunded area.
- The temporary storage of topsoil, inert spoil, fill, etc. should be away from storm water management systems
- A dedicated storage container shall be used to accommodate chemicals such as fuel, oil, paint, herbicide and insecticides, as appropriate.
- Storage of potentially hazardous materials should be above the 1:100-year flood line, or as agreed with the ECO. These materials include fuel, oil, cement, bitumen, etc. The container should be stored on a concrete bunded platform.

- Concrete shall be mixed on mixing trays only, not on exposed soil. Concrete shall be mixed only in areas, which have been specially demarcated for this purpose.
- All concrete that is spilled outside these areas shall be promptly removed by the Contractor and taken to an approved dumpsite.
- After all the concrete mixing is complete all waste concrete shall be removed from the batching area and disposed of at an approved dumpsite.
- Storm water shall not be allowed to flow through the batching area. Cement sediment shall be removed from time to time and disposed of in a manner as instructed by the Site Engineer.
- All construction materials liable to spillage are to be stored in appropriate structures with impermeable flooring.
- Underground services should be designed in such a way so as to require minimum maintenance to avoid disturbance of the underground environment.

Social Impact:

- Make use of local labour.
- Introduce a skills development program, to promote skills development within the local community.

Traffic:

- Construction phase traffic and impacts on roads would be controlled via the contract specifications and the construction management plan.

Visual Impacts:

- Avoid shiny metals in structures. If possible shiny metal structures should be darkened or screened to prevent glare.
- Night time light sources must be directed away from roads and residents in the vicinity.

Water pollution:

- Care should be taken that water points do not turn into mud baths or form open pools of standing water.
- Storm water to be temporarily controlled with sandbag berms, soil curtains, cut-off trenches and berms.
- A sufficient number of portable chemical toilets should be placed within easy access of the workforce, to ensure that the surrounding environment is not used instead. These should be kept in a hygienic state with toilet paper supplied for the workforce.
- Placement of toilets should avoid the possibility of the area surrounding the toilet becoming flooded.
- The contractor must provide sufficient potable water and washing facilities on site at all times to prevent a situation where construction workers have to resort to fetching water from natural water courses or washing in water courses.
- The contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses. The contractor shall ensure that at least the site foreman and ELO have received formal training in the use of the spill control kit.
- The construction crew must adhere to all the relevant laws and regulations applicable to the disposal of construction waste and rubble. The contractor shall provide a waste management strategy to the ECO and the ECO and ELO shall monitor the implementation thereof.

- *Should surface water in the surrounding area be polluted, and fauna and indigenous flora show signs of deterioration or death, specialist hydrological or ecological advice must be sought for the appropriate treatment and remedial procedures to be followed. The requirements for such input shall be agreed with the engineer. If liability is found to rest with the contractor, the costs of containment and rehabilitation shall be on the contractor's account, including the costs of specialist input.*
- *Construction vehicles shall be maintained in good working order, to reduce the probability of leakage of fuels and lubricants. Drip trays must be made readily available for vehicles that leak and for the vehicles standing overnight*
- *No uncontrolled discharges from the site / working area to depressions shall be permitted. All discharge points will require approval e.g. wastewater discharges include concrete mixing, vehicle washing etc.*
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- *The temporary storage of topsoil, inert spoil, fill, etc. should be away from storm water management systems*
- *The contractor shall provide and maintain portable chemical toilets for construction crews. Maintenance must include their regular removal without sewage spillage.*
- *In the case of any water pollution incident, the Regional Representative of the Department of Water Affairs must be informed immediately.*
- *Storm water at the construction camps must be managed so as to reduce potential silt loads in storm water run-off. Measures must be implemented to distribute storm water as evenly as possible to avoid point sources of erosion.*
- *Appropriate flow diversion and erosion control structures i.e. earth embankments must be put in place where soil may be exposed to high levels of erosion due to steep slopes, soil structure, etc. Should a storm displace the temporary earth embankments or other erosion control structures, a visual inspection of the drainage line must be made and any damage be recorded. Any damage and loss of soil resulting from a storm is to be remedied immediately. Should the walls collapse due to construction error, the contractor is to fund the remediation process.*
- *All trenches and excavations to be properly bench filled according to required specifications. The contractor must ensure that all backfilling follows the line present in the landscape, ensuring the topsoil layer forms a convex shape so as not to create a man-made funnel for storm water flow. All construction areas should be suitably top soiled and vegetated as soon as is possible after construction.*

The mitigation measures in this Section offer an ideal opportunity to incorporate pro-active environmental management measures with the goal of attaining sustainable development.

Pro-active environmental measures minimize the chance of impacts taking place during the construction and operational phase. There is still the chance of accidental impacts taking place; however, through the incorporation of contingency plans during the planning phase, the necessary corrective action can be taken to further limit potential impacts.

Alternative A1 – Proposed Road

Direct impacts:

Planning and design phase:

No direct impacts will be incurred during the planning and design phase

Construction phase:

- *Air pollution*
- *Crime, safety and security*
- *Dust*
- *Noise*
- *Increased potential for erosion on-site*
- *Increased run-off*
- *Increased traffic impact*
- *Job creation (positive)*
- *Solid waste accumulation*

Operational phase:

- *Air pollution*
- *Increased potential for erosion on-site*
- *Increased run-off*
- *Increased traffic impact*

Decommissioning and Closure phase:

No direct impacts will be incurred during the decommissioning and closure phase

Indirect impacts:

Planning and design phase:

No indirect impacts will be incurred during the planning and design phase

Construction phase:

- *Increased flow to the stream(s)*
- *Increased potential for crime*
- *Visual impact*
- *Waste impact*

Operational phase:

- *Increased flow to the stream(s)*
- *Increased traffic and potential for accidents*
- *More people and more structures increases the ecological footprint*
- *Visual impact*

Decommissioning and Closure phase:

No indirect impacts will be incurred during the decommissioning and closure phase

Cumulative impacts:

Planning and design phase:

No cumulative impacts will be incurred during the planning and design phase

Construction phase:

- *The bulk of the impacts during this phase will have immediate effect (e.g. noise-, dust- and water pollution). If the site is monitored on a continual basis during this phase, it is possible to identify these impacts as they occur. These impacts will then be mitigated through the contingency plans identified in the planning phase, together with a commitment to sound environmental management from the mine.*

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No cumulative impacts will be incurred during the operational phase

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Mitigation Measures

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- *Only vegetation indigenous to the area should be used during rehabilitation of the site.*

Noise pollution:

- *Construction will be limited to day light hours.*
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- *No rubble or discarded building materials must remain on the construction site for more than two weeks.*
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- *All construction materials liable to spillage are to be stored in appropriate structures with impermeable flooring.*
- *Underground services should be designed in such a way so as to require minimum maintenance to avoid disturbance of the underground environment.*

Social Impact:

- *Make use of local labour.*
- *Introduce a skills development program, to promote skills development within the local community.*

Traffic:

- *Construction phase traffic and impacts on roads would be controlled via the contract specifications and the construction management plan.*

Visual Impacts:

- *Avoid shiny metals in structures. If possible shiny metal structures should be darkened or screened to prevent glare.*
- *Night time light sources must be directed away from roads and residents in the vicinity.*

Water pollution:

- *Care should be taken that water points do not turn into mud baths or form open pools of standing water.*
- *Storm water to be temporarily controlled with sandbag berms, soil curtains, cut-off trenches and berms.*
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stored on a concrete banded platform

- *The temporary storage of topsoil, inert spoil, fill, etc. should be away from storm water management systems*
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- *Storm water at the construction camps must be managed so as to reduce potential silt loads in storm water run-off. Measures must be implemented to distribute storm water as evenly as possible to avoid point sources of erosion.*
- *Appropriate flow diversion and erosion control structures i.e. earth embankments must be put in place where soil may be exposed to high levels of erosion due to steep slopes, soil structure, etc. Should a storm displace the temporary earth embankments or other erosion control structures, a visual inspection of the drainage line must be made and any damage be recorded. Any damage and loss of soil resulting from a storm is to be remedied immediately. Should the walls collapse due to construction error, the contractor is to fund the remediation process.*
- *All trenches and excavations to be properly bench filled according to required specifications. The contractor must ensure that all backfilling follows the line present in the landscape, ensuring the topsoil layer forms a convex shape so as not to create a man-made funnel for storm water flow. All construction areas should be suitably top soiled and vegetated as soon as is possible after construction.*

The mitigation measures in this Section offer an ideal opportunity to incorporate pro-active environmental management measures with the goal of attaining sustainable development.

Pro-active environmental measures minimize the chance of impacts taking place during the construction and operational phase. There is still the chance of accidental impacts taking place; however, through the incorporation of contingency plans during the planning phase, the necessary corrective action can be taken to further limit potential impacts.

3. ENVIRONMENTAL IMPACT STATEMENT

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

Alternative S1, S2 & S3 – River Crossings

<u>Impact</u>	<u>Duration</u>	<u>Likelihood</u>	<u>Significance</u>
Dust	Short term	Good	Moderate
Crime, safety and security	Short Term	Possible	Minor
Fauna & Flora impact	Short Term	Possible	Minor
Increased run-off & erosion	Short Term	Good	Moderate
Increased traffic flow	Long Term	Good	Minor
Noise	Long Term	Good	Moderate
Visual	Long Term	Good	Minor

The purpose of this summary is to summarise the impact of the proposed development on the environment, of which we are part, and the probability of the impacts manifesting themselves. Ultimately this should allow the relevant authority the opportunity to make an informed decision regarding the development and the various options.

All impacts can be suitably mitigated against to ensure they have a low significance rating. If management measures as set out in this document are adhered to, the significance of the impacts will be reduced to low.

The major environmental impact which is likely to result from this development is the pollution of air through dust as well as noise impact during the construction phase due to movement of earthmoving vehicles, which will effect adjacent and nearby landowners. This impact can, however be mitigated simply through dust suppression measures and close monitoring of any possible noise impact .

Water pollution may also occur, due to the presence of two streams traversing the construction site. This impact is unlikely, due to sufficient management measures in place to prevent any contaminated water reaching the stream and the fact that there is no flow in the streams as they are seasonal streams.

Alternative A1 – Proposed Road

<u>Impact</u>	<u>Duration</u>	<u>Likelihood</u>	<u>Significance</u>
Air pollution & Dust	Short term	Good	Moderate
Crime, safety and security	Short Term	Possible	Minor
Fauna & Flora impact	Short Term	Possible	Minor
Increased run-off &	Short Term	Good	Moderate

<i>erosion</i>			
<i>Increased traffic flow</i>	<i>Long Term</i>	<i>Good</i>	<i>Minor</i>
<i>Noise</i>	<i>Long Term</i>	<i>Good</i>	<i>Moderate</i>
<i>Visual</i>	<i>Long Term</i>	<i>Good</i>	<i>Minor</i>

The purpose of this summary is to summarise the impact of the proposed development on the environment, of which we are part, and the probability of the impacts manifesting themselves. Ultimately this should allow the relevant authority the opportunity to make an informed decision regarding the development and the various options.

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Water pollution may also occur, due to the presence of two streams traversing the construction site. This impact is unlikely, due to sufficient management measures in place to prevent any contaminated water reaching the stream and the fact that there is no flow in the streams as they are seasonal streams.

<i>No-go alternative (compulsory)</i>			
<u><i>Impact</i></u>	<u><i>Duration</i></u>	<u><i>Likelihood</i></u>	<u><i>Significance</i></u>
<i>No land transformation</i>	<i>Long Term</i>	<i>Good</i>	<i>Significant</i>
<i>Erosion sedimentation</i>	<i>Long Term</i>	<i>Good</i>	<i>Significant</i>
<i>Invasive plant species</i>	<i>Long Term</i>	<i>Good</i>	<i>Significant</i>
<i>No job creation</i>	<i>Long Term</i>	<i>Good</i>	<i>Significant</i>

One of the options to be considered for this report is one of not upgrading the current servitude road at all. This would entail leaving the site in its present state. This would result in the site being unattended, uncontrolled and unmanaged which could subject the site to erosion and degradation, as no control mechanisms will be in place to ensure that environmental consequences are kept to a minimum.

Due to the fact that the site is ideally located to form part of the mining development in the area, it is envisaged that the property value will demand site development in the short term if the site is not developed.

The upgrading of the servitude road is classified as an activity which may have a detrimental effect on the environment. However, in this particular case, if all the mitigation measures are adhered to, the risk of negative environmental impacts will be greatly reduced and managed. Therefore the consideration of the no-go option can be justifiably dismissed as an alternative.

SECTION E. RECOMMENDATION OF PRACTITIONER

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

YES	NO
X	

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

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

<p>Our recommendation, based on the assessment of the available information, is that application for the proposed development should be authorised provided that sensitive planning, design and good environmental management be carried out by the proponent during all phases of development.</p> <p>A variety of mitigation measures have been identified that will serve to mitigate the scale, intensity, duration or significance of the impacts that have a medium and high significance rating. These include guidelines to be applied during the construction phase of the project.</p> <p>It is submitted that the proposed mitigatory measures, if implemented, will reduce the significance of the majority of the identified impacts to "low", and that the proposed project should proceed.</p> <p>It is also advised that surface water monitoring and bio-monitoring is done on an annual basis to monitor the impact of the surfaced road on the streams traversing the property.</p>
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Is an EMPr attached?

YES	NO
X	

The EMPr must be attached as Appendix F.

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information