environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

(For official use only)

File Reference Number:	
Application Number:	
Date Received:	

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

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.

11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.

15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	YES	NO
		X

1. PROJECT DESCRIPTION

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

INTRODUCTION

The KZN Department of Transport (DOT) proposes to upgrade the existing access road to a gravel road (6m in width and 8.1 km in length) that conforms to DOT standards. The existing road will be upgraded in one of the Bergville villages along D1376. There is an urgent need to ensure safe and reliable means of access for the local community. The existing access road is not suitable, and erosion is evident as a direct result of poor drainage. The upgrading of the existing track to a gravel road will address such issues, and improve access for the local community to basic amenities. The road transverses a watercourse, therefore DOT proposes to construct a low level bridge crossing. For the establishment of this gravel road a low level bridge will be constructed and is included as listed activity in this application.

Photo 1: showing proposed access road to Emaswazini

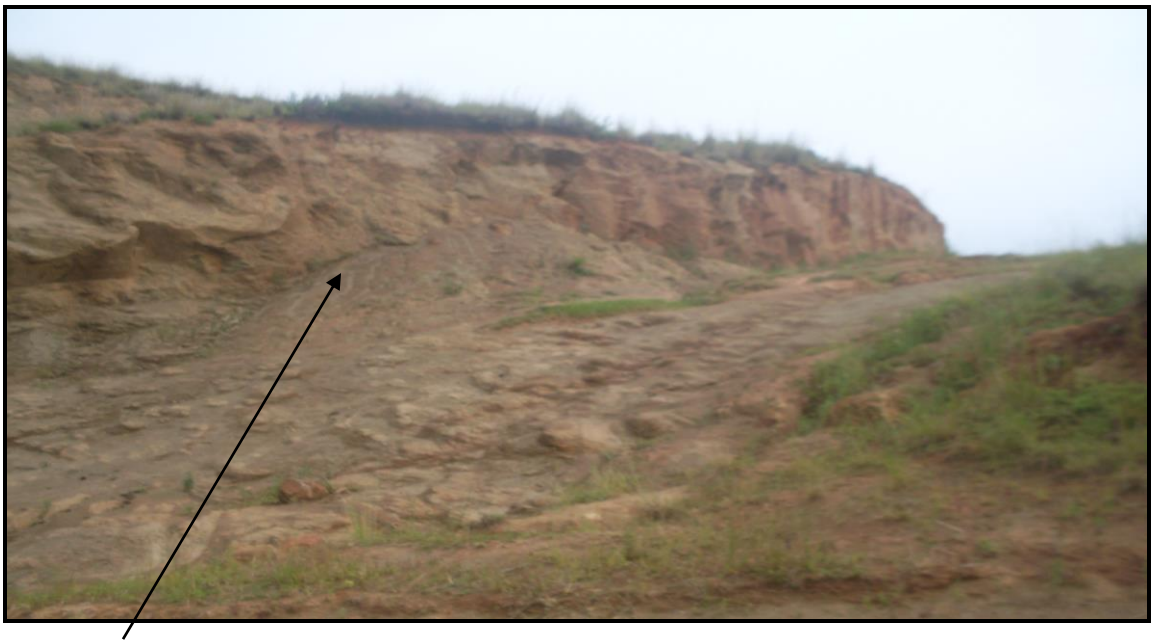


Photo 2: showing erosion as a result of poor drainage of the existing road

Photo 3: showing the watercourse and proposed bridge crossing

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

Listed activity as described in GNR 983 (Listing Notice 1)	Description of project activity
Listing Notice 1 of 2014, Listed Activity 24. **The development of -** (i) a road for which an environmental authorization was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; **but excluding**- (a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or (b) roads where the entire road falls within an urban area.	The proposed construction of an access road from a mud track to a gravel road 6m in width, and a length of 8.1 km with a road reserve wider than 13.5m

Listing Notice 1 of 2014, Listed Activity 12 The development of: (iii) – bridges exceeding 100 square metres in size; (xii) infrastructure or structures with a physical footprint of 100 sq m or more; where such development occurs - (a) within a watercourse	A standard low level bridge will be constructed with a length of 30m and with piers having a height of approx 1.83m and will be supported on pad foundation founded on bedrock.
Listing Notice 1 of 2014, Listed Activity 19 The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from - (i) a watercourse;	The proposed activity will require the temporary removal of soil from the watercourse. The removed soil will be used for infilling and stabilizing the river banks. All top soil will be used in the rehabilitation of the site and **NO** soil will be removed off-site.

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.

a) Site Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred route was chosen based on the fact that an access road currently exists and no new road will be constructed minimizing the impact to the receiving environment. This alternative has shown to be the best practical option. The road design has taken numerous engineering methodologies into consideration which has a minimal impact on the environment, by improving drainage and reducing erosion along the road. The road has been designed according to DOT standards.	S 28°48´31″	E 29°12´13″
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A	N/A	N/A
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A	N/A	N/A

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
Alternative S1 (preferred)		
• Starting point of the activity	28°48´31″ S	29°12´13″ E
• Middle/Additional point of the activity	28°50´5.91″ S	29°12´31.95″E
• End point of the activity	28°48´36″ S	29°12´34″ E
Alternative S2 (if any)		
• Starting point of the activity	N/A	N/A
• Middle/Additional point of the activity	N/A	N/A
• End point of the activity	N/A	N/A

Alternative S3 (if any)

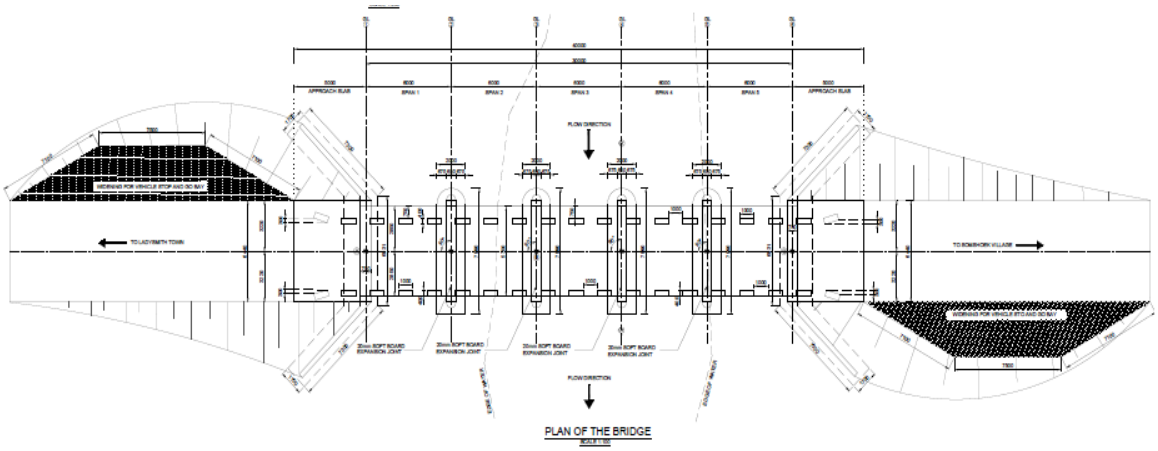
• Starting point of the activity	N/A	N/A
• Middle/Additional point of the activity	N/A	N/A
• End point of the activity	N/A	N/A

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
(a) The proposed construction of an access road from a mud track to a gravel road 6m in width, and a length of 8.1km. The road will be upgraded on an existing track, which has become prone to erosion and inundated during periods of high rainfall.	28°48´31˝ S	29° 12´ 13˝ E
(b) The proposed low level bridge will have an overall length of approx 30m and will be designed to clear the 1: 10yr flood return period. The bridge will have spans of 6m with wing walls on either ends of the approach. The piers will have an approx height of 1.1m to 1.83m and shall be supported on pad foundation founded on bedrock.	28°49´32˝ S	29°13´12˝ E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
No alternate road designs/routes have been investigated as the proposed/preferred designs/routes meet DOT standards for gravel roads, and the proposed construction is an upgrade of an existing track. Furthermore, the access road: 1. Is within the budget available from Department of Transport to establish a gravel road. 2. Have limited impact on the ecological environment as no new road will be constructed.	N/A	N/A

Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A	N/A	N/A

c) Technology alternatives

Alternative 1 (preferred alternative)
Figure 1 below: shows the cross section of the proposed low level bridge. Refer to the plan of the bridge in **Appendix C** - Facility Illustration for a more detailed design    Figure 1: showing the cross section of the bridge. The proposed low level bridge will have an overall length of approx 30m and will be designed to clear the 1: 10yr flood return period. The bridge will have spans of 6m with wing walls on either ends of the approach. The piers will have an approx height of 1.1m to 1.83m and shall be supported on pad foundation founded on bedrock. This is a standard DOT design for a low level bridge crossing; specifications may vary according to the width of the watercourse.
Alternative 2
N/A
Alternative 3
N/A

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

No alternate technologies and road routes have been investigated as the preferred design and routes meet the following requirements:

1. The current design for the low level bridge is in accordance with DOT standards.
2. Is within the budget available from Department of Transport to establish a Gravel road.
3. Have limited impact on the ecological environment as no new road will be constructed.
4. The best practical means approach has been adopted and the design favorably suits the ambience of the surrounding environment.

e) No-go alternative

No gravel road and bridge will be constructed, therefore there will be no negative impacts associated with construction activity. However, there will also be no positive impacts associated with the road construction such as the improved connectivity and access for local residents. Residents that make use of the road will continue to experience disruptions, as access is frequently overtopped by flood water, making access difficult at times of high flow. Erosion along the road is evident in areas as a direct result of poor drainage of the existing road. According to the ward councillor, members of the community are left stranded during periods of high rainfall as the existing road becomes impossible to use. The proposed route is .transformed by existing footpaths and highly degraded, most natural vegetation have been invaded by alien vegetation along the track.

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	**Size of the activity:**
Alternative A1[1] (preferred activity alternative)	171m²
Alternative A2 (if any)	N/A m²
Alternative A3 (if any)	N/A m²

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	8.1 km
Alternative A2 (if any)	N/A m
Alternative A3 (if any)	N/A m

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

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	N/Am²
Alternative A2 (if any)	N/Am²
Alternative A3 (if any)	N/Am²

[1] "Alternative A.." refer to activity, process, technology or other alternatives.

4. SITE ACCESS

Does ready access to the site exist?	YES x	NO
If NO, what is the distance over which a new access road will be built	N/A	

Describe the type of access road planned:

N/A

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

5. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES X	NO	Please explain
The access road is located off the D 1376 providing access to the local communities, and school children. The gravel road will be constructed to ensure safe access to pedestrians and motorists. This activity is in line with the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES X	NO	Please explain
The Bergville region is predominately rural and access to basic developmental areas is limited. Therefore the activity is in line with the PSDF.			

(b) Urban edge / Edge of Built environment for the area	YES X	NO	Please explain
The road is not in a built urban environment thus urban edge policies are not affected.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO X	Please explain
It has been identified by the IDP (2012-2017) that the construction of access to schools is a priority. This is as per the DOT three to five year planned programmes (IDP, 2012-2017, p99). The main aim of the municipality is to encourage more engagement with the Department of Rural Development and Land Reform; Department of Agriculture, Environmental Affairs and Rural Development in order to improve the state of the rural environment. The Okhahlamba Local Municipality have many projects that are to be implemented. There are numerous environmental applications that governs all projects that are planned or implemented; thus ensuring sustainable development at Okhahlamba. NEMA principles which involve EIA principles as well are followed in order to achieve sustainable development.			
(d) Approved Structure Plan of the Municipality	YES X	NO	Please explain
The ward councillor has expressed the communities' concerns w.r.t the need for an access route that is not inundated during high rainfall periods. He expressed these concerns to the local municipality which were documented. Therefore the activity is in line with the approved structure plan of the municipality.			

(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO X	Please explain
No existing environmental management priorities for the area will be compromised, as the activity will contribute to the EMF.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO X	Please explain
N/A			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES X	NO	Please explain
The proposed activity contributes to improved access routes within the local municipality, and therefore is in line with the IDP and SDF.			

4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES X	NO	Please explain
Community members are often left stranded during periods of high rainfall, therefore, the upgrading of the existing track to a gravel road will impact positively to members of the community. During the construction process local labour will be sourced (required/rooted) by the contractor, thus offering skilled training opportunities to members of the community. As a result of the construction process, employment will increase. It is therefore, a high societal priority for local community members. The road was to be constructed 2 years ago; hence the Mayor of Bergville has expressed the urgent need for the road to be constructed as soon as possible.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development?	YES X	NO	Please explain
All necessary services are available for the activity to commence.			
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?	YES	NO X	Please explain
No infrastructure planning is envisaged by the municipality w.r.t this project. The project costs are borne by the Department of Transport.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO X	Please explain
The proposed activity is site specific and is at a localized level.			

8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES X	NO	Please explain
The site is extremely degraded and banks along the road are highly eroded as a direct result of poor drainage of the existing track. The natural vegetation of the site is interrupted by the existence of alien vegetation. On completion of construction, the site will be rehabilitated. Therefore, the location factors favour this activity.			
9. Is the development the best practicable environmental option for this land/site?	YES X	NO	Please explain
The proposed site has been assessed and a favorable position for the road construction has been identified with all stakeholders. This will significantly decrease the overall costs of proposing to construct an entirely new gravel road.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES X	NO	Please explain
The proposed construction of the road will positively impact the local community by providing access to basic amenities, and minizing the negative impact of flooding, and soil erosion.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO X	Please explain
No precedent will be set in the area; however the upgrade of the road from a track to a gravel road will improve accessibility for community members.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO X	Please explain
During the Public Participation Process no person expressed the view that the proposed activity will directly affect them, all stakeholders fully supported the project proposal. No dwellings will be relocated as the existing track does not transverse any properties or infringe on the rights of the residents.			

13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO X	Please explain
The project is located in a rural area, and therefore the urban edge is not affected.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO X	Please explain
This is a localized site specific activity, and will benefit the local community members.			
15. What will the benefits be to society in general and to the local communities?			Please explain
There is an urgent need to ensure safe and reliable means of crossing the road for both vehicles and pedestrians. The proposed activity to upgrade the existing access road will encourage economic development in the area. The upgrade of the existing road will also make travelling for basic amenities, education and work feasible for local community members. The existing access road is prone to flooding particularly during periods of high rainfall, thus limiting the access to basic amenities. The local road may not have benefits as far reaching as to society in general, however, the upgrade of the existing access road lays the foundation for further and knock-on development which would lead to the upliftment of disadvantaged societies. The majority of the population has no formal education and is illiterate. Most community members are dependent on governmental social grants, pensions and even informal trading to earn a living. Therefore, the development of this area is of great importance. The proposed action of upgrading the existing road can be considered as the first step towards upliftment or development of the local community. Once construction is complete the road will allow for public transport modes to cater for local communities efficiently. The Major and the Ward Councilors have expressed the urgency of the road being upgraded within the current financial year (2015), as this project was "promised" two years ago.			

16. Any other need and desirability considerations related to the proposed activity?	Please explain
According to the IDP (2012 to 2017) there is a critical need to improve access roads within the local municipality. The area is predominately rural and developmental initiatives are limited w.r.t funding. The Department of Transport has funded the project and similar projects within the District. Communities expressed their excitement for the project, as they are of the view that the Government is taking their concerns of development seriously.	
17. How does the project fit into the National Development Plan for 2030?	Please explain
The National Development Plan for 2030 sets out strategic goals in terms of access to basic services and amenities. Although this project is site specific in nature, it contributes to the cumulative effect of developmental nodes of rural communities to the urban environments.	
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.	
According to section 23 of NEMA the appropriate environmental management tools were applied effectively. The EAP is an independent person, appointed by Nankhoo Engineers to determine all negative as well as positive impacts of the proposed activities might have on the environment. Mitigation measures were also proposed in this report. All the information compiled by the EAP was rated in a scoring matrix, taking environmental, cultural heritage and ecological issues into account. The BAR will be circulated into the public domain for a Public Participation Process as described in NEMA. All comments received during the entire BAR process will be recorded as part of the Issues and Responses Report. Particulars regarding this Process have been included in **Appendix D.** All impacts with regards to the construction and operation of the bridge have been identified in Section D. The impacts that have been identified must be managed and mitigated. These measures have been included in the Environmental Management Plan attached as **Appendix E**.	

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.
All principles of NEMA have been taken into consideration. The construction of the bridge will be socially sustainable due to the continuous access that will be provided to local community members. Access to basic amenities would be available at all times for community members. The proposed activity will ensure that community members gain access to schools at all times encouraging economic development. All factors mentioned in Section 2 (4) of NEMA were taken into consideration, assessed and discussed in Section D. Through Section 2 of NEMA it is understood that the principles as set out in this section have been taken into account through the proper application of a Basic Assessment Process as described by NEMA, and by assessing the predicted and actual impacts of the proposed activity in order to assist the Competent Authority in adequately making an informed decision.

6. 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	Applicability to the project	Administering authority	Date
National Environmental Management Act, 1998 (Act No 107 of 1998)	Environmental Authorisation is required in terms of Regulation R 983 of Dec 2014 (included within NEMA 107 of 1998)	Department of Environmental Affairs	1998
Environmental Impact Assessment Regulations (Notice No. R983 of 2014)	Guidelines with regards to the Environmental Impact Assessment Process to be undertaken	Department of Environmental Affairs	1998
Constitution of Republic of South Africa (Act No 108 of 1996)	The project falls within the boundaries of South Africa	Department of Environmental Affairs	1998
National Heritage Resources Act (Act No 25 of 1999)	Any possible artefacts which could be of cultural or historical significance must be identified	SAHRA	1999
National Environmental Biodiversity Act 10 of 2004	Damaging of, disturbance to or destroying of plant or animal species during the clearing of the site	Department of Environmental Affairs	2004
Integrated Environmental Management Guideline, Public Participation	Public Participation Process	Department of Environmental Affairs	2010

7. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES X	NO
If YES, what estimated quantity will be produced per month?	3 m^3	

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

All solid waste will be disposed at the registered local landfill site. This will be addressed in the EMPr. The ECO will audit the EMPr and submission will be made to the CA for review.

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

The construction solid waste will be disposed of at the registered landfill site by the contractor. This will be addressed in the EMPr. The ECO will audit the EMPR and submission will be made to the CA.

Will the activity produce solid waste during its operational phase?	YES	NO x
If YES, what estimated quantity will be produced per month?	N/A m^3	

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

N/A

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

N/A

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

N/A

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?	YES	NO X

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

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	NO X

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

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO X
If YES, what estimated quantity will be produced per month?		N/A m^3
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:

N/A

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities?	YES	NO X
If YES, is it controlled by any legislation of any sphere of government?	YES	NO

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

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

N/A

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?	YES	NO X

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

e) Generation of noise

Will the activity generate noise?	YES X	NO
If YES, is it controlled by any legislation of any sphere of government?	YES	NO X

Describe the noise in terms of type and level:

Noise will only be generated during the construction phase (machinery, generator etc.) The level of the noise is however low as there are no residents nearby. No noise will be generated during the operational phase, therefore the impact is temporary in nature.

8. 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

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:		N/A
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	YES	NO x

A Water Use Licence Application (WULA) has been lodged with the Department of Water and Sanitation in terms of Section 21 (c) and (i) of the National Water Act of 1998. The application will run concurrently with the EIA process.

9. ENERGY EFFICIENCY

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

N/A

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

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

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

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

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

2. 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 and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:	**Province**	Kwazulu Natal
	District Municipality	UThukela Municipality
	Local Municipality	Okhahlamba Municipality
	Ward Number(s)	Ward 4
	Farm name and number	N/A
	Portion number	N/A
	SG Code	N/A

Is a change of land-use or a consent use application required? YES NO

1. GRADIENT OF THE SITE

Alternative S1:

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
			X			

Alternative S2 (if any):

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

Alternative S3 (if any):

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

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:2.1 Ridgeline		2.4 Closed valley		2.7 Undulating plain / low hills	X
2.2 Plateau		2.5 Open valley		2.8 Dune	
2.3 Side slope of hill/mountain		2.6 Plain		2.9 Seafront	
2.10 At sea					

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		**Alternative S2 (if any):**		**Alternative S3 (if any):**	
Shallow water table (less than 1.5m deep)	YES	NO X	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO X	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO X	YES	NO	YES	NO

Unstable rocky slopes or steep slopes with loose soil	YES	NO X		YES	NO		YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO X		YES	NO		YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO X		YES	NO		YES	NO
Any other unstable soil or geological feature	YES	NO X		YES	NO		YES	NO
An area sensitive to erosion	YES X	NO		YES	NO		YES	NO

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).

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 X	Paved surface	Building or other structure	Bare soil X

5. SURFACE WATER

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

6. LAND USE CHARACTER OF SURROUNDING AREA

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station [H]
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential[A]	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant[A]	Nature conservation area
Medium industrial [AN]	Train station or shunting yard [N]	Mountain, koppie or ridge
Heavy industrial [AN]	Railway line [N]	Museum
Power station	Major road (4 lanes or more) [N]	Historical building
Office/consulting room	Airport [N]	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam[A]	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

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

N/A

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

N/A

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

N/A

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

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO x
Core area of a protected area?	YES	NO x
Buffer area of a protected area?	YES	NO x
Planned expansion area of an existing protected area?	YES	NO x
Existing offset area associated with a previous Environmental Authorisation?	YES	NO x
Buffer area of the SKA?	YES	NO x

7. CULTURAL/HISTORICAL FEATURES

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

No heritage permit is required. No objection was raised by AMAFA. However, should elements of significance be identified during the construction phase, all construction activities will stop immediately and an independent heritage specialist will be appointed to investigate. This is covered in more detail in the EMPr. A draft BAR document was sent to AMAFA for comments and uploaded onto the SAHRIS website.

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

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

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

Level of unemployment:

Unemployment is estimated at 65% of the total population, with an associated dependency ratio of 60%. The majority of economically active people are in the informal sector mainly subsistence agriculture.

Economic profile of local municipality:

Okhahlamba Municipality currently relies on subsistence agriculture, government services, government grants and migrant worker income to sustain its residents. There is extremely limited agricultural potential due to settlement pressure, traditional farming methods, poor bio-resource groupings and limited irrigation potential. Mos residents sustain their families though subsistence agriculture or wage work in factories in and around Bergville, Ladysmith, Estcourt and Weenen. One of the major economic issues facing the Municipality is the fact that there are no major markets for the delivery and resale of products in the municipal area, and development nodes are minimal.

Level of education:

There are no institutions of higher learning within the municipality. After matriculation, children either go to the Ladysmith Technical College to further their studies or move out of the UThukela District. The latter is not always practical and affordable as most people in the area cannot afford to provide their children with better education opportunities outside of the municipal area. The cost is simply too much. At primary and secondary levels the facilities are distributed all over the municipality and these are well utilized by the communities. There is, however, a need to extend or renovate most of the schools, as most are unsuitable for proper education purpose.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	To be determined	
What is the expected yearly income that will be generated by or as a result of the activity?	R N/A	
Will the activity contribute to service infrastructure?	YES X	NO
Is the activity a public amenity?	YES X	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20	
What is the expected value of the employment opportunities during the development and construction phase?	R 5 Million	
What percentage of this will accrue to previously disadvantaged individuals?	100 %	
How many permanent new employment opportunities will be created during the operational phase of the activity?	2	
What is the expected current value of the employment opportunities during the first 10 years?	N/A	
What percentage of this will accrue to previously disadvantaged individuals?	100 %	

9. BIODIVERSITY

Various sensitivity maps have been consulted during the desk studies, and no biodiversity issues were identified. The site is degraded and the presence of alien vegetation and existing footpaths have transformed the site, therefore the proposed activity will contribute to the rehabilitation of the site which has been outlined in the EMPr. A draft BAR has been submitted to KZN Wildlife for comments and forms part of the Public Participation Process. KZN Wildlife comments to be included in Final BAR.

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

Systematic Biodiversity Planning Category				**If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan**
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	N/A

b) Indicate and describe the habitat condition on site

Habitat Condition	**Percentage of habitat condition class (adding up to 100%)**	**Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).**
Natural	%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	%	
Degraded (includes areas heavily invaded by alien plants)	%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	100 %	The existing road has been utilized as an access road over a number of years, therefore the site has become degraded by footpaths and invaded by alien vegetation.

c) Complete the table to indicate:

(i) the type of vegetation, including its ecosystem status, present on the site; and

(ii) whether an aquatic ecosystem is present on site.

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

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

Natural vegetation is minimal being invaded by alien vegetation and footpaths. The area has become completely transformed and offers no significant biodiversity or natural pristine ecosystems**. KZN Wildlife comments to be included in the Final BAR.**

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Illanga Newspaper	
Date published	26/03/2015	
Site notice position	**Latitude**	**Longitude**
	28°48´31˝ S	E 29°12´13˝
Date placed	26/03/2015	

Include proof of the placement of the relevant advertisements and notices.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 983.

A site notice was placed at two strategic points on the 26/03/2015, and two Newspaper articles (English and Zulu) were published in the Ilanga Newspaper on the 26/03/2015 (See **Appendix D**). The elected ward councillors were made aware of the proposed development. A hand delivered proposal letter was signed by both councillors informing them about the proposed project (date of hand delivery 26/03/2015 see acknowledgment of receipt). The elected structures that currently exist were chosen to be the most appropriate means of informing community members of the proposed development. All organs of state that were identified during the process were informed and requested to comment on the BAR. (See **Appendix D** for confirmation of all correspondence to stakeholders and “comments & responses”).

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 983

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Ms Dubazane	Ward Councillor	078 4008188

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
No concerns have been raised by the local community, other than the lack of formal access to all amenities. The ward councillor expressed the need for an access road, and the employment opportunities that will be created during the construction phase. The ward councillor expressed the Mayor's concern that the proposed road has not been constructed to date. **The access road is a priority for DOT projects for the current financial year (2015/16).**	Responses have been included in the **Appendix D** entitled 'Comments Received'

4. COMMENTS AND RESPONSE REPORT

SEE **APPENDIX D** FOR COMMENTS AND REPONSES REPORT.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	**Contact person (Title, Name and Surname)**	**Tel No**	**e-mail**	**Postal address**
Department of Transport	Mr C. Mkhonto	036 6384400	chris.mkhonto@kzntransport.gov.za	Private Bag x9911 Ladysmith 3370
Amafa	Ms Bernadet	033 3946543	bernadetp@amafapmb.co.za	P.O.Box 2685 PMB 3201
Ladysmith Municipality	Mr N. Malinga		nkosi.malinga@okhahlamba.org	Private Bag x 70113 Wasbank 2920
KZN Wildlife	Mr D Wieners	033 8451999	Dominic.Wieners@kznwildlife.com	P.O.Box 13053 3202
Department of Water & Sanitation	Mr S. Naidoo	031 3362798	naidooso@dwa.gov.za	P.O. Box 1018 Durban 4000

SECTION D: IMPACT ASSESSMENT

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

N.B All mitigation measures have been outlined in specific detail in the EMPr **(Appendix E),** therefore this section must be read in conjunction with the EMPr. The impacts that have been outlined below relate to both activities. Due to this being a linear development and the access road following the existing track, no alternative routes have been investigated. The proposed upgrade will follow the existing track which will have minimal impact to the environment as no further disturbance is envisaged. Furthermore the proposed bridge construction will also be constructed along an existing crossing which has already been disturbed by human activities. It is not feasible to construct the bridge at a "new crossing point" since this will have adverse negative impacts to the environment. For reporting purposes the existing route will be investigated and forms the preferred alternative **(Route 1).**

1.1 Selection of Route – Access Road

The selection of an access road will have the greatest environmental impact. The proposed gravel road will be constructed along an existing track. The area is degraded with the presence of alien vegetation and highly eroded banks. Therefore the existing road has been selected as the preferred alternative as not to cause further disturbance to the environment. Engineering Designs prepared by DOT has taken the most efficient techniques with minimal impact to the environment into consideration. Generally, roads are constructed along the path of least disturbance, often following existing tracks.

1.2 Selection of Site – Low Level Bridge

The selection of a new bridge crossing point will have the greatest environmental impact. The proposed new low level bridge will be constructed along an existing crossing point with footpaths that have been developed over the years. The area is degraded with the presence of alien vegetation. Therefore the existing crossing point has been selected as the preferred alternative as not to cause further disturbance to the environment. The proposed access road forms part of the bridge crossing. Engineering Designs prepared by consultants has taken the most efficient techniques with minimal impact to the environment into consideration.

KEY:

N/A:	
NONE:	
LOW:	
MEDIUM:	
HIGH:	

Below are the parameters used to describe the impacts/issues in this assessment including the construction and operational phase:

SCORE	ELABORATION
LOW	These are impacts which individually or combined pose a deleterious or adverse impact and low negative risk to the quality of the receiving environment, and may lead to potential health, safety and environmental concerns. Aesthetically and/or physical non-compliance can be expected for short periods. In this case the impact is short term, local in extent, not intense in its effect and may not be likely to occur. A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
MEDIUM	These are impacts which individually or combined pose a moderate negative risk to the quality of health of the receiving environment. These systems would not generally require immediate action but the deficiencies should be rectified to avoid future problems and associated cost to rectify once in HIGH risk. Aesthetically and/or physically non-compliance can be expected over a medium term. In this case the impact is medium term, moderate in extent, mildly intense in its effect and probable. Mitigation is possible with additional design and construction inputs.
HIGH	These are impacts which individually or combined pose a significantly high negative risk to the environment. These impacts pose a high risk to the quality of the receiving environment. The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.

Impacts/Significance associated with the Construction phase

Activity	Impact Summary	Significance	Proposed Mitigation
Dust Pollution	**Indirect Impacts:** During construction high levels of dust is emitted into the atmosphere by construction vehicles and sediment is produced as a result of dust that enters the environment in rainfall runoff. These impacts are short-term and will only result over a 2 month period. No surrounding dwellings will directly be affected. These impacts have been addressed in detail within the EMPr.	High	All construction activities should be strictly limited to the construction servitude area. Vegetation clearance should be restricted to the actual road servitude within the drainage line and river crossings.
Spillages	Construction vehicles pose major threats w.r.t spillages on-site, this may result in the contamination of soil and water. The presence of fuels on-site may have a negative impact on the groundwater. Cement mixing/spillages on open ground pose a threat to the receiving environment.	Medium	All hazardous substances must be stored on an impervious surface in a designated bunded area, able to contain 110% of the total volume of materials stored at any given time.

Activity	Impact Summary	Significance	Proposed Mitigation
Soil erosion	All topsoil that will be removed during construction will be prone to erosion, therefore all topsoil must be stockpiled using the appropriate erosion control techniques. Soil erosion was evident at various points along the existing route as a result of poor drainage. The proposed gravel road will address these concerns by implementing correct standard designs by DOT. A vegetation rehabilitation plan will be included in the EMPr to address the mitigation measures that must be implemented to reduce soil erosion on site. Extensive gully erosion is evident around the entire area. The road itself may have negative soil erosion impacts during construction but positive impacts thereafter as it may stabilize erosion.	High	Soil removed from the road reserve is to be appropriately stored for later use as back-fill material and must be stored separately. All stockpiles are to be protected from possible soil erosion, and stock piles should not exceed 1m in height.

Activity	Impact Summary	Significance	Proposed Mitigation
Water Quality	The Department of Water Affairs have submitted recommendations to ensure water quality is not compromised and the impact of construction on the stream is minimal. A Bridge Data Block and hydrological calculations that addresses minimal impact to water flow and flood return periods have been prepared. The drawings and calculations have been included in an appendix in this report. The EMPr outlines the procedures to be followed by the Contractor.	Medium	Adequate culverts or concrete pipes must be installed in order to maintain the current hydrological patterns. Appropriate mitigation measures for controlling sediment input into the stream and drainage areas will be required during construction. Where necessary and according to risks in terms of bank erosion, gabions or storm water control structures should be used to disperse storm water flows and prevent further bank erosion. Appropriate gabion structures should be installed to prevent further bank erosion. Ideally the proposed bridge should span the entire active channel and the engineering designs submitted to DWA must be followed.

Activity	Impact Summary	Significance	Proposed Mitigation
Habitat Fragmentation	Roads can act as barriers or filters to animal movement and lead to habitat fragmentation. Many species will not cross the open space created by a road due to the threat of predation, and roads also cause increased animal mortality from traffic. This barrier effect can prevent species from migrating and recolonizing areas where the species has gone locally extinct as well as restricting access to seasonally available or widely scattered resources. This will be a low negative impact as a track already exists, and the new proposed gravel road is an upgrade, therefore the route has been disturbed by the existing track and footpaths.	Low	Prior to construction and vegetation clearance the ECO should closely examine the site and supervise the demarcated areas. All sensitive areas must be clearly demarcated and appropriate measures must be taken to minimize impacts. The EMPr outlines the measures to be followed in more detail.

Activity	Impact Summary	Significance	Proposed Mitigation
Spread of Alien Vegetation	**Indirect Impacts:** The removal of topsoil and natural vegetation with an increase in human activity may result in the increase of alien vegetation. The vegetation rehabilitation will address this issue in more detail.	Medium	Ideally the road should be situated away from densely vegetated areas or alternatively restricted to the existing track and human pathways.
Unplanned routes/footpaths	Construction workers may disturb or create footpaths that are not planned or existing, which may lead to areas becoming prone to erosion and spread of alien vegetation. Strict control measures must be implemented by the Contractor and ECO. All areas must be clearly demarcated and incidents must be reported immediately to the site agent.	Low	The EMPr provides details of the implementation plan w.r.t the issue.

Activity	Impact Summary	Significance	Proposed Mitigation
Waste Management	**Cumulative Impacts** Extra waste generated during the construction phase could result in added pressure placed on the local landfill site.	Low	A waste management plan has been included in the EMPr.
Water Resources	Water will be required during the construction phase that may lead to extra demands on the local water resources of the municipality. However, water will be transported to the site via tanks which will minimize the impact. No water will be extracted from any water course in the construction phase.	Low	No water should be extracted from the water course and this must be monitored by the Engineer and ECO. Any deviations must be recorded an appropriate measures must be taken to ensure compliance.

Activity	Impact Summary	Significance	Proposed Mitigation
Impact on surface and ground water	**Direct Impact:** Pollution of soil/groundwater (fuel, oil, cement, other chemicals etc.)	Medium	All measures indicated in the EMPr to reduce pollution must be implemented by the Contractor
	Indirect Impact: No indirect impact	None	No mitigation is required
	Cumulative Impact: No cumulative impact	None	No mitigation required
Impact of Storm water	**Direct Impact:** Storm water could lead to erosion without the proper mitigation measures in place, and side drains not properly constructed.	Medium	The time that stripped areas are exposed shall be minimised wherever possible. Top soiling and re-vegetation shall commence immediately after the completion of an activity and at an agreed distance behind any particular work front. Storm water control should be undertaken to prevent soil loss from the site. Side drains must be constructed correctly to minimize storm water run-off.

Activity	Impact Summary	Significance	Proposed Mitigation
Impact of Storm water	**Indirect Impact:** No indirect impact	None	No mitigation required
	Cumulative Impact: No cumulative impact	None	No mitigation required
Sanitation	**Direct Impacts:** Inadequate sanitation could lead to pollution of the water table.	Medium	The EMPr outlines the specific measures that must be adhered to and sets out guidelines that must be implemented. Chemical toilets must be supplied and serviced regularly. All ablution facilities must be situated in the demarcated construction camp area.
	Indirect Impacts: No indirect impacts	None	No mitigation required
	Cumulative Impacts: No cumulative impacts	None	No mitigation required

Activity	Impact Summary	Significance	Proposed Mitigation
Heritage impacts	**Direct Impact:** No negative impact. As artefacts of historical or cultural value was not found on the route.	Low	Should any artefacts be found during excavation, all works must stop immediately and AMAFA must be informed and a Heritage Assessment must be undertaken
	Indirect Impact: No indirect impacts	None	No mitigation required
	Cumulative Impact: No cumulative impacts	None	No mitigation required
Noise disturbance	**Direct Impacts:** Construction machinery and personnel could disturb the peace in the surrounding area.	Medium	Construction personnel must at all times adhere to the regulations of the EMPr. Construction must be limited to normal working hours. Noise suppression should be applied to all equipment.
	Indirect Impacts: No indirect impacts	None	No mitigation required
	Cumulative Impacts: No cumulative impacts	None	No mitigation required

Activity	Impact Summary	Significance	Proposed Mitigation
Waste Disposal	**Direct Impact:** Waste is generated through construction activities and therefore the possibility of the area being polluted is increased.	Medium	Sufficient refuse bins must be placed at the site. Refuse must be placed in the designated skips/bins which must be regularly emptied. These bins must be kept in a demarcated area
	Indirect Impact: Waste such as plastic and paper will impact surrounding animals if ingested**.**	High	No waste (especially plastic/paper) is allowed to be lying around the site. All waste must be placed in the bins.
	Cumulative Impact: No cumulative impact	None	No mitigation required
Socio-Economic Impact	**Direct Impact:** Temporary employment	High **(Positive impact)**	No mitigation is proposed as the project will have positive socio-economic impact during construction
	Indirect Impact: Improved living standards	High **(Positive impact)**	No mitigation is proposed as the project will have positive socio-economic impact during construction

Activity	Impact Summary	Significance	Proposed Mitigation
Socio-Economic Impact	**Cumulative Impact:** No cumulative impact.	None	No mitigation required
No-go option: Safety	**Direct Impacts:** During most rainy seasons, the road is flooded. The local community's safety will therefore be compromised.	N/A	Another safe alternative must be provided
	Indirect Impacts: None	N/A	N/A
	Cumulative Impacts: None	N/A	N/A

Alternative 2

No alternative site or route has been identified. Alternative alignments would require additional disturbance to the environment with very little potential of improvement in terms of environmental performance. This is a linear activity and the proposed gravel road will be upgraded on the existing track to minimise negative impacts to the environment, furthermore DOT has assessed other options and none were cost effective. As a new road will require relocation of dwellings and disturbance to the natural state of the surroundings. Therefore upgrading the existing track with a low level bridge along existing crossing points is the most feasible option.

Impacts/Significance associated with the Operational Phase

Activity	Impact Summary	Significance	Proposed Mitigation
Increased traffic in the area	**Direct Impacts:** The proposed road is an access route off a local road, therefore increased traffic	Low	Traffic can be controlled should it become a hindrance.
Increased vehicular fumes contributing to Air Pollution	It is not envisaged that the increased vehicular fumes will contribute significantly to increased localized air pollution but may have a cumulative effect.	Low	Planting trees along the road reserve will help reduce the Carbon Dioxide
Direct alteration of faunal habitat	The area is highly transformed by the existing track and river crossing.	Low	Permeability must be maintained to allow for the cattle and other fauna to remain in the habitat. To the greatest extent, the safety of animals on the road must be maintained.
Safety Issues for the community	**Indirect Impacts:** The proposed road is merely an upgrade of the existing track; therefore safety issues do not pose a major threat.	Low	Local communities must exercise caution on the road and educate children on road safety.
Increased noise	The road services the local community therefore noise levels should not be affected greatly by the upgrade.	Low	Responsible driving and use of vehicles must be practiced.

Activity	Impact Summary	Significance	Proposed Mitigation
Increased socio-economic benefits	The positive impact is that of increased socio-economic development to the local community.	High **(Positive Impact)**	This can be enhanced through proper planning.

Impacts/Significance associated with the Closure Phase

No impacts have been assessed for this section as the closure phase is not envisaged for this development; however the EMPr outlines specifications on rehabilitation measures that must be implemented after the construction phase.

6. ENVIRONMENTAL IMPACT STATEMENT

Alternative A (preferred alternative)

It is the opinion of the EAP that all potential impacts that could potentially occur during the construction and operational phase of the road construction have been identified and key impacts and their mitigation measures are provided in this report. There are no route alternatives as the existing road will be upgraded to a gravel road causing minimal negative impact to the environment. No fatal flaws were identified during the Basic Assessment Process, which included a comprehensive Public Participation Process. Most of the impacts will occur during the construction phase, and therefore be for a limited period and can be adequately mitigated. The EMPr has been developed to provide adequate mitigation measures for all phases of the proposed development including the proposed bridge construction.

The following factors were taken into consideration (Access Road):

A) Site and route

- The route and site location has been selected based on the fact that an existing track is currently used as an access road, however this is not suitable. DOT therefore proposes to upgrade the existing track to a gravel road which conforms to DOT standards.
- The existing route is disturbed and footpaths have been created along the track.
- Should a new access road be constructed this will impact negatively on the receiving environment.

B) Land

- No land needs to be expropriated and the community has expressed the need for the track to be upgraded to a gravel road.
- No land will be lost that is currently utilized by the community or the school.

C) Design of the gravel road

- The proposed design of the gravel road has taken DOT standards into consideration. This will improve the overall drainage of the road and minimize surface run-off and erosion along the road verges.
- The route is relatively gentle in gradient and no major modifications are envisaged along the route.

D) Funding

- DOT has made funding available for this financial year 2015/16, the upgrade falls within the ambient of road infrastructure projects for the local municipality.

It is the opinion of the EAP that the proposed access road should be constructed.
The construction would result in minor environmental impact whilst promoting development in the area. The construction of this road from an environmental perspective will result in an improved situation with minimal erosion and damage caused by storm water run-off.

The following factors were taken into consideration (Low Level Bridge):

Damage to stream and surrounding environment:

Specific concerns would be heavy vehicle traffic operating in close proximity to the stream and drainage line causing banks to erode and collapse, resulting in sedimentation of the stream. Storage of materials and soil within or near the stream could also result in the deposition of these materials into the stream leading to contamination of the river system. These impacts can be managed by designating areas of the watercourse that are not within the construction footprint as ‘no-go’ areas. Heavy vehicles should therefore be kept at least 15m away from the stream and drainage line except where needed for the construction of the bridge.
As per the EMPr, no materials may be stored within 30m of the stream or drainage line. No dumping is to be permitted within these areas.

Damage to the steam channel during the excavation of material from the stream bed.

Over time, sediment has accumulated up stream and flow was impeded. This material will be excavated to level out the bed so that water can flow easily through the piers without damming up on the upstream side or falling from too great a height. Although this involves excavation and removal of material from the river bed, most of this material will be re-used in the rehabilitation phase.

It is the opinion of the EAP that the proposed access bridge should be constructed. This construction would result in minor environmental and social impact, as minor vegetation will be removed and general disturbance for the construction of the bridge at this point. The bridge will be designed withstand at least 1:10 year flood events therefore providing safe access to the local community. The construction of this bridge from an environmental perspective will result in an improved situation with less erosion and damage to the stream bed when compared to the current informal crossing. It is not logical to upgrade the existing road without constructing a proper crossing point, therefore both activities are recommended provided the construction EMP is strictly adhered to and an ECO is appointed during the construction phase.

Alternative B

N/A

Alternative C

N/A

No-go alternative (compulsory)

Should the proposed construction of both the road and bridge not go ahead, the site would be exposed to on-going erosion as well as major safety concerns for crossing the existing track during high rainfall periods The road provides the local community access to a number of amenities, therefore the “No-Go” alternative was used as a baseline for impact studies. The proposed construction has positive impacts with minimal environmental impacts.

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 x	NO

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

N/A

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

- The EMPr must be strictly adhered to and implemented during the construction and operational phases.
- An ECO should be appointed by the applicant to undertake Environmental Audits and submit reports to the Competent Authority when requested.
- All mitigation measures and factors outlined in the BAR must be considered.
- Should cultural artefacts or heritage sites occur in close proximity to the site, construction must cease immediately and the applicant must appoint a heritage specialist to submit a report to AMAFA.
- All impacts identified during the planning and design, construction and operation can be adequately mitigated Impacts identified and addressed through mitigation included: vegetation, waste management, traffic and emissions.
- The proposed development site will have an impact of **low; short - term significance** on the receiving environment (albeit extremely limited) if the majority of indigenous species are retained within the development.
- It is imperative that runoff from the proposed development is adequately managed and the sewerage and waste water do not result in deterioration of water quality for the adjacent river.

- The development is designed at the planning stage to take cognizance of the river and to take environmentally sound measures which ensure well rounded sustainability.
- In addition, the development of sound storm water management structures should eliminate any run-off into the River reducing the risk of flood events.
- Construction of the access road would contribute to the community in the following ways:
  (a) Vehicles would not have to endure rugged terrain.
  (b) Communities will have easier access to public and governmental transportation.
  (c) Travelling route distances would be decreased.
  (d) Will increase the safety of the people within the community as there will be no need to walk through dense vegetation to get to their destination.
  (e) Response and delivery time would be increased for public and emergency services.
  (f) Easier travelling routes for basic needs, schools and medical centers.
  (g) The bridge will link both communities and enhance activity between the communities.
- Based on the status quo above and given the indigent nature of the communities affected it is the EAP‘s recommendation that route one be authorized by the Competent Authority.
- Furthermore, no concerns were raised by I&AP‘s (public and stakeholders) for the preferred layout and development, in contrary there was general consensus in support for the development.
- The development is in keeping with the land use of the surrounding area and it is therefore the EAP‘s recommendation that the preferred option be approved for the proposed development.

Is an EMPr attached?	YES	NO
	X	

_____ _____

SHELDON SINGH **DATE**

APPENDIX A.1

LOCALITY MAP

APPENDIX A.2

ARIEL PHOTO

APPENDIX A.3
TOPOGRAPHICAL MAP

APPENDIX B

SITE PHOTOS

APPENDIX C

PLAN OF THE BRIDGE

APPENDIX D

PUBLIC PARTICIPATION

- **D.1 – SUMMARY OF COMMENTS/RESPONSES FROM I&APS**
- **D.2 – PROOF OF RECIEPTS**
- **D.3 – COPY OF NEWSPAPER AD**
- **D.4 – COPY OF SITE NOTICES**
- **D.5 - COMMENTS FROM AMAFA**
- **D.5 – COMMENTS FROM KZN WILDLIFE**
- **D.6 – COMMENTS FROM WATER & SANITATION**

D.1 – SUMMARY OF COMMENTS/RESPONSES FROM I&APS

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APPENDIX E

ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)