

BASIC ASSESSMENT REPORT



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.

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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 construct a local road from an existing track, to a Type 7A Local Road (Gravel Road) which is (6m in width and 6.020Km in length) with a road reserve of 20m that conforms to DOT standards **(Appendix C.1 Type 7A Gravel Road Design)**. The existing road will be upgraded in one of the Greytown villages off P 161. The road transverses two watercourses, therefore DOT proposes to construct a causeway structure at the first watercourse, and a slab structure at the other crossing point. The proposed construction of both structures will occur at the existing crossing point which has been disturbed. The proposed development of the local road will provide access to basic amenities as well as access to Sheshamsamo Primary School.

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Photo 1: Showing existing track.



Photo 2: showing the surrounding dwellings that utilize the existing track.



Photo 3: Showing watercourse where the slab structure will be constructed.

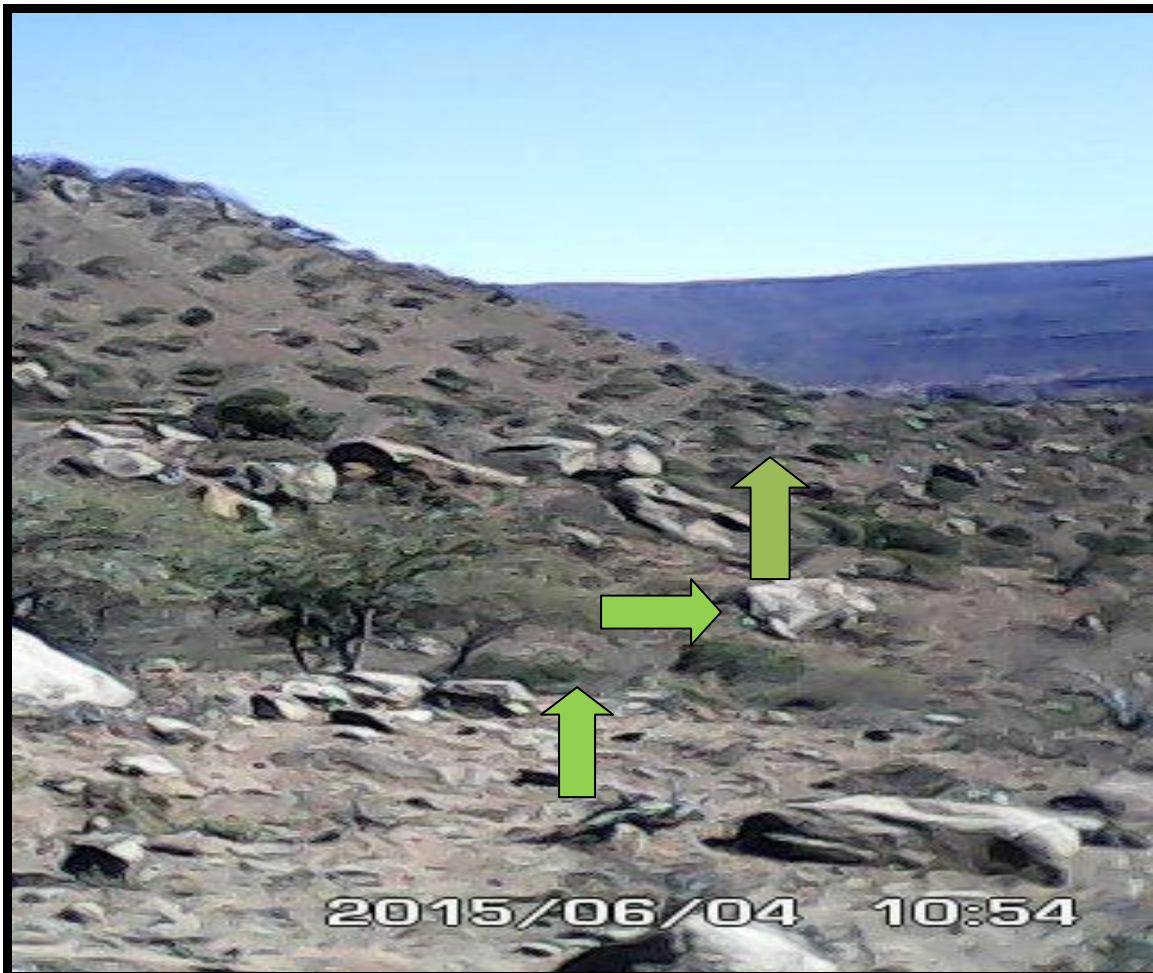


Photo 4: Showing proposed construction of a new portion of the local road.

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- 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
<p>Listing Notice 1 of 2014, Listed Activity 24.</p> <p>The development of -</p> <p>(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</p> <p>(ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;</p> <p>but excluding-</p> <p>(a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or</p> <p>(b) Roads where the entire road falls within an urban area.</p>	<p>The proposed construction of a local road from a mud track to a gravel road 6m in width, and a length of 6.020 km with a road reserve wider than 13.5m.</p>

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<p>Listing Notice 1 of 2014, Listed Activity 12</p> <p>The development of:</p> <p>(iii) – bridges exceeding 100 square metres in size;</p> <p>(xii) infrastructure or structures with a physical footprint of 100 sq m or more; where such development occurs -</p> <p>(a) within a watercourse</p>	<p>Based on DOT standard details for a portal causeway the approx. width is 8.45m and length is 7.4m which varies according to the stream width. A standard portal causeway will be constructed with a length of 20m and width of 8m which will be supported on pad foundation founded on bedrock.</p>
<p>Listing Notice 1 of 2014, Listed Activity 19</p> <p>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 -</p> <p>(i) a watercourse;</p>	<p>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.</p>

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.

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a) Site Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred route was chosen based on the fact that a local road currently exists and a new road will be constructed. 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.	S28°54'55"	E30°26'19"
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
- Middle/Additional point of the activity
- End point of the activity

	28°54'55" S	30°26'19" E
	28°55'14" S	30°26'11" E
	28°55'36" S	30°24'19" E

Alternative S2 (if any)

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

	N/A	N/A
	N/A	N/A
	N/A	N/A

Alternative S3 (if any)

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

	N/A	N/A
	N/A	N/A
	N/A	N/A

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b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
(a) The proposed construction of a local road from a mud track to a gravel road 6m in width, and a length of 6.020km. The road will be upgraded on an existing track, which has become prone to erosion and inundated during periods of high rainfall.	28°54'55"S	30°26'19"E
(b)Based on DOT standard details for a causeway the approx. width is 8.45m and length is 7.4m which varies according to the stream width. A standard causeway will be constructed with a length of 20m and width of 8m which will be supported on pad foundation founded on bedrock.	28°55'48"S	30°25'54" E
(c) A standard slab structure will be constructed with a length of 10 m and width of 4 m which will be supported on pad foundation founded on bedrock.	28°55'42.75"S	30°25'13.34" E

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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 local 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

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 causeway and slab structure 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 a new road will be constructed from an existing track.
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, causeway and slab structure 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.

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3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1¹ (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

	160m ²
	N/A m ²
	N/A m ²

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

	6.020km
	N/A m
	N/A m

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

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

	N/Am ²
	N/Am ²
	N/Am ²

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

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4. SITE ACCESS

Does ready access to the site exist?

YES	NO
X	
N/A	

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

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 local road is an upgrade of the existing track, providing access to the local communities, and school children. The existing road provides direct access for community members. The gravel road, proposed causeway and slab structure will be constructed to ensure safe access to pedestrians and motorists. This activity is in line with the property's existing land use rights.			

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2. Will the activity be in line with the following?

(a) Provincial Spatial Development Framework (PSDF)	YES X	NO	Please explain
<p>According to the SDF (2013), there are main roads, District & Provincial roads in the area. The general qualities of these roads are good except the access routes which are found in the rural areas. The Greytown region is predominately rural and access to basic developmental areas is limited. Development in this area will create opportunities and unlock new development .Therefore the activity is in line with the PSDF.</p>			
(b) Urban edge / Edge of Built environment for the area	YES X	NO	Please explain
<p>The road is not in a built urban environment thus urban edge policies are not affected.</p>			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO X	Please explain
<p>According to the IDP (2014-15) rural roads require more attention, as they are unsurfaced and prone to erosion. The municipality currently does not have storm water control measures. It was highlighted in the IDP (2014-15), that focus needs to be on storm water management as well as the monitoring of settlement establishment on areas which are adjacent to rivers & streams (Umvoti IDP,2014/2015, p117). Therefore the activity is in line with both the IDP and SDF of the local municipality.</p>			

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(d) Approved Structure Plan of the Municipality	YES X	NO	Please explain
<p>The ward councillor has expressed the communities' concerns w.r.t the need for a local road to be constructed, 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.</p>			
(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
<p>The EMF is currently still in the compilation stage.</p>			
(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
<p>The SDF aligns itself with the new national priorities as the underlying principles are based on sustainable development planning strategies; access routes as investment lines; a service centre strategy; integration; meeting land use needs and identification of areas of economic development potentials; restructuring of the local municipality (Umvoti SDF, 2013).</p>			

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<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES X</p>	<p>NO</p>	<p>Please explain</p>
<p>The community will benefit directly from the proposed gravel road. Community members are left stranded during periods of high rainfall. The construction process will also increase employment, as local labour will be sourced by the contractor providing skilled training to community members. Therefore it's recommended to be a high societal priority for the local community members.</p>			
<p>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?</p>	<p>YES X</p>	<p>NO</p>	<p>Please explain</p>
<p>All necessary services are available for the activity to commence.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?</p>	<p>YES</p>	<p>NO X</p>	<p>Please explain</p>
<p>No infrastructure planning is envisaged by the municipality w.r.t this project. The project costs are borne by the Department of Transport.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	<p>YES</p>	<p>NO X</p>	<p>Please explain</p>
<p>The proposed activity is site specific and is at a localized level.</p>			
<p>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</p>	<p>YES X</p>	<p>NO</p>	<p>Please explain</p>
<p>The site location is highly degraded and natural vegetation is disturbed with the presence of alien vegetation. The banks along the road are highly eroded due to poor drainage of the existing track. Therefore the location factors favour this activity, as the site will be rehabilitated once construction is completed.</p>			

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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 minimizing 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.			

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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, which will promote economic growth in the area as well as make travelling for basic amenities, education and work feasible for the local communities. The access road is prone to flooding and more importantly access to basic amenities is limited during high rainfall periods. The establishment of access roads lays the foundation for further and knock-on development, thereby leading to the upliftment of the society. While the local road may not have benefits as far reaching as to society in general, it is paving the way for upliftment of disadvantaged societies. The majority of the population has no formal education and is illiterate. Most people earn a living from governmental social grants, pensions and others from informal trading. Development of this area is therefore paramount and the establishment of this road can be considered the first step in the direction toward upliftment of the community. The road will also allow for public transport modes to cater to the local community. The construction of the road would contribute to the community in the following ways:

- Vehicles would not have to endure rugged terrain.
- Communities will have easier access to public and governmental transportation.
- Travelling route distances would be decreased.
- Will increase the safety of the people within the community.
- Response and delivery time would be increased for public and emergency services.
- Easier travelling routes for basic needs, schools and medical centers.

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16. Any other need and desirability considerations related to the proposed activity?	Please explain
<p>According to the IDP (2014-15) 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.</p>	
17. How does the project fit into the National Development Plan for 2030?	Please explain
<p>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.</p>	
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.	
<p>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 causeway 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.</p>	

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

All of these principles have been taken into account as the construction of this causeway will be socially sustainable due continuous access that will be provided to local communities. Communities will therefore be able to access basic amenities at all times. Economically, the proposed activity will ensure that communities gain access to the school. 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.

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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 Assessments 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

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7. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES	NO
X	
3 m ³	

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

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
N/A m ³	

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

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

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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
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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
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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 m³

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.

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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 than exhaust emissions and dust associated with construction phase activities?

YES	NO X
YES	NO

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

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

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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	NO
X	

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
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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	

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

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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
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name of Specialist	Neelesh Ramasis
Qualification	Bsc. Environmental Science

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	uMzinyathi Municipality(DC 24)
	Local Municipality	Umvoti Local Municipality
	Ward Number(s)	
	Farm name and number	N/A
	Portion number	N/A
	SG Code	N/A

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

YES	NO <input checked="" type="checkbox"/>
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1. GRADIENT OF THE SITE

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10 <input checked="" type="checkbox"/>	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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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
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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
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2. LOCATION IN LANDSCAPE

3.

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

2.1 Ridgeline

2.2 Plateau

2.3 Side slope of hill/mountain

2.10 At sea

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

2.4 Closed valley

2.5 Open valley

2.6 Plain

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

2.7 Undulating plain / low hills

2.8 Dune

2.9 Seafront

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

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4. 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 X	NO	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

As per the site investigation on the 04/06/15 the following features have been identified:

The Umvoti municipality is one of the local municipalities which fall under the UMzinyathi District Municipality. It is situated approximately 75km from Pietermaritzburg and 55km from Stanger, and includes the urban centers of

BASIC ASSESSMENT REPORT

Greytown and Kranskop (SDF, 2013). The site for the proposed development is located in one of the villages in the Greytown area off P 161.

The general topography of the region as per the site investigation was classified as undulating plains/low hills. The general gradient of the site is 1:15-1:10, which indicates generally an undulating terrain. A watercourse in the village is present and development of a causeway structure will take place in order for community members to utilize, ensuring safety and movement across. The distance across the watercourse is approximately <20m. There exists another water point where a slab structure will be placed. The slab structure will be placed on sedimentary rock (Sandstone) which is found in the watercourse. Sandstone is relatively stable with regards to engineering qualities.

The geology for most of the Greytown region, including the site Thwaleykhe consists of the Ecca group which is 250 million years old, overlain with patches of the Drakensberg formation. The Ecca group mainly consists of Shale and Sandstone. The watercourse is underlain by Sedimentary rock, which can be classified as sandstone. The specific watercourse is reliant on rainfall and can be classified as seasonally perennial. The watercourse consists of fine grained, broken material which includes sand.

During the summer months, increased rainfall leads to difficulty in crossing the watercourse, therefore the construction of a causeway structure would be advantageous to the members of the community. There exist very few geotechnical hindrances to development where areas are underlain by sandstone. There are no steep slopes in the area, therefore there is no need for a slope stability assessment. The watercourse is underlain by sedimentary rock (Sandstone), with regards to engineering qualities sandstone is fairly stable and does not break on contact and is not brittle.

Soils around this region exhibit a yellow/red colour, which is an indication of the presence of iron which is dominated by hematite and aluminum. The area has estimated clay content of between 20-40% near the watercourse, during high periods of rainfall the estimated clay content could rise. Some of the soils in this region are

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severely degraded due to geological influence, overgrazing and improper land use. There are no steep slopes or cliffs near the site of development which means that construction will not be hampered.

Rock Type	Description of rock	Engineering qualities
Sandstone	Sandstone (sometimes known as arenite) is a clastic sedimentary rock composed mainly of sand-sized minerals or rock grains. Most sandstone is composed of quartz and/or feldspar because these are the most common minerals in the Earth's crust. Like sand, sandstone may be any color, but the most common colors are tan, brown, yellow, red, grey, pink, white and black	Inherent material deterioration problems generally occur gradually over long periods of time, at predictable rates and require appropriate routine or preventive maintenance to control.



Photo 5: Showing sandstone outcrop found in the watercourse.



Photo 6: Showing general terrain of area including geological outcrops.

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5. 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 <input checked="" type="checkbox"/>	Paved surface	Building or other structure	Bare soil <input checked="" type="checkbox"/>

6. SURFACE WATER

Perennial River	YES	<input checked="" type="checkbox"/> NO	UNSURE
Non-Perennial River	YES	<input checked="" type="checkbox"/> NO	UNSURE
Permanent Wetland	YES	<input checked="" type="checkbox"/> NO	UNSURE
Seasonal Wetland	YES	<input checked="" type="checkbox"/> NO	UNSURE
Artificial Wetland	YES	<input checked="" type="checkbox"/> NO	UNSURE
Estuarine / Lagoonal wetland	YES	<input checked="" type="checkbox"/> NO	UNSURE

7. 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

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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 <input checked="" type="checkbox"/>
Core area of a protected area?	YES	NO <input checked="" type="checkbox"/>
Buffer area of a protected area?	YES	NO <input checked="" type="checkbox"/>
Planned expansion area of an existing protected area?	YES	NO <input checked="" type="checkbox"/>

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Existing offset area associated with a previous Environmental Authorisation?	YES	NO <input checked="" type="checkbox"/>
Buffer area of the SKA?	YES	NO <input checked="" type="checkbox"/>

8. 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 <input checked="" type="checkbox"/>
	Uncertain	

No heritage permit is required. 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 EMP. A draft BAR document was sent to AMAFA for comments and uploaded onto the SAHRIS website. **Awaiting comments from AMAFA.**

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

9. 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:

According to the SDF (2013), the Umvoti local municipality has experienced a steady decline in unemployment since 1996. In 1996 the unemployment level was recorded at 49.8% this has significantly dropped to 30.4% in 2011. The general prediction trend is translated to a reduction of an average of 1.6% year on year.

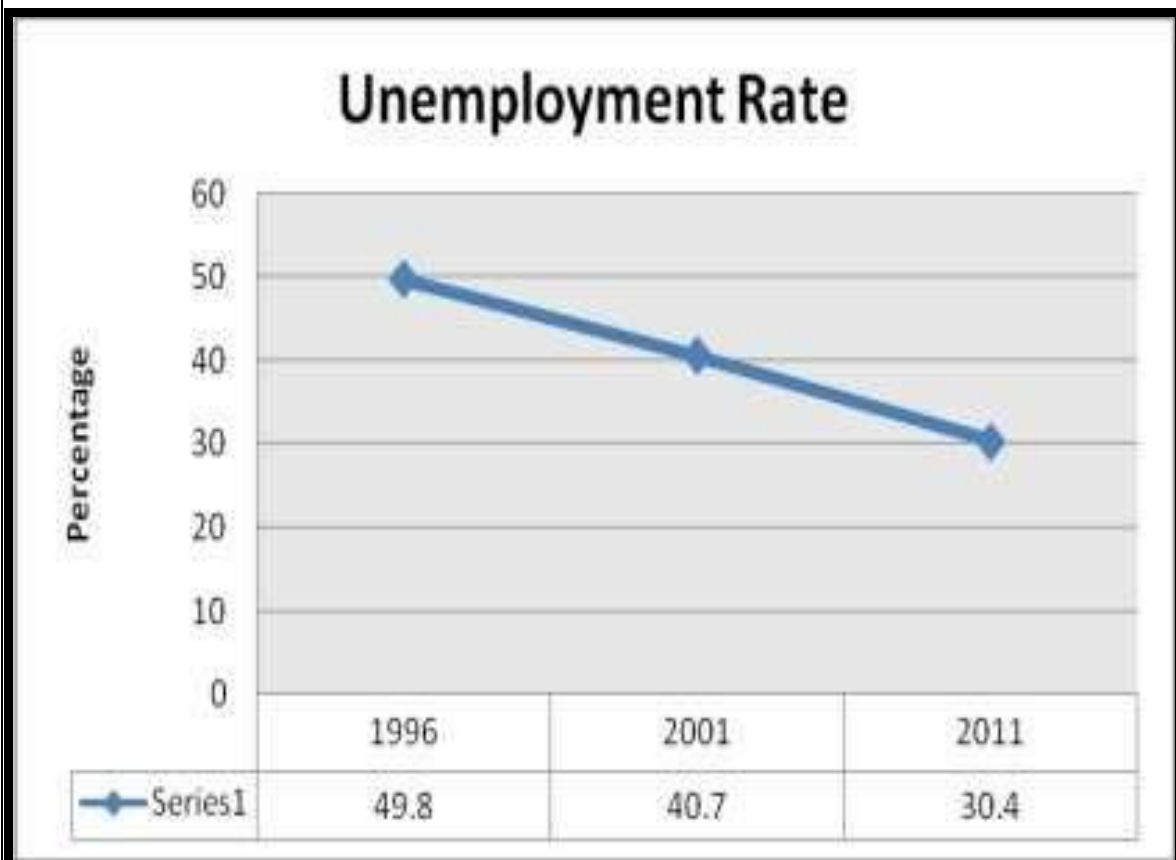


Figure 3: Representing Unemployment Rate (SDF, 2013, pg 67).

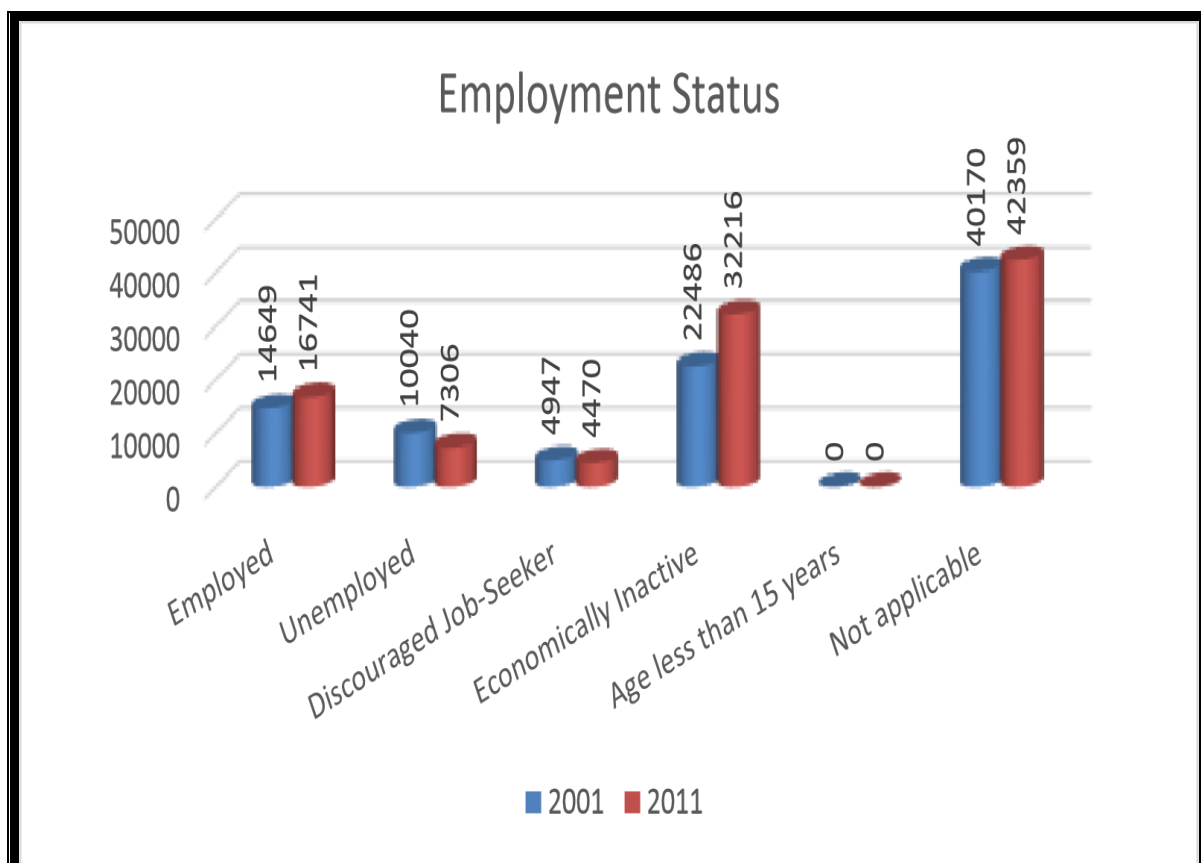


Figure 4: Representing Umvoti Employment Status (IDP, 2014-15, pg 92).

Economic profile of local municipality:

The Umvoti Local Municipality has well known sectors of economic development, which contribute or drive the economic growth of the area. General government services, wholesale and retail trade, manufacturing and agriculture as well as forestry have been major contributors in the economy. Greytown is the main provider of higher income jobs in senior management, professional, technical, clerks as well as skilled personnel. Commercial farms provide most of the skilled jobs and are provided through processing plants. It should be noted that Traditional Authority areas provide few to no jobs at all (IDP, 2014-2015).

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Table 1: Representing the main economic contributors of the Umvoti municipality.

Sector	Share % of GVA
General Government Services	17.3
Wholesale and Retail trade, Catering and Accommodation	16.0
Manufacturing	15.8
Finance, Insurance, Real Estate and Business Services	14.1
Agriculture, Forestry and Fishing	12.6
Community, social and personal services	8.5
Transport, storage and communication	8.4
Construction	3.1
Mining and quarrying	2.6
Electricity, gas and water	2.2

Level of education:

Majority of the population appears to have some form of education over the past ten years (2001-2011), while those with no schooling has decreased. According to census 2011, 35% of the population have secondary education (12.8% Grade 12), 32.4% have attended primary schools and only 2.6% have some form of higher education (IDP, 2014-2015).

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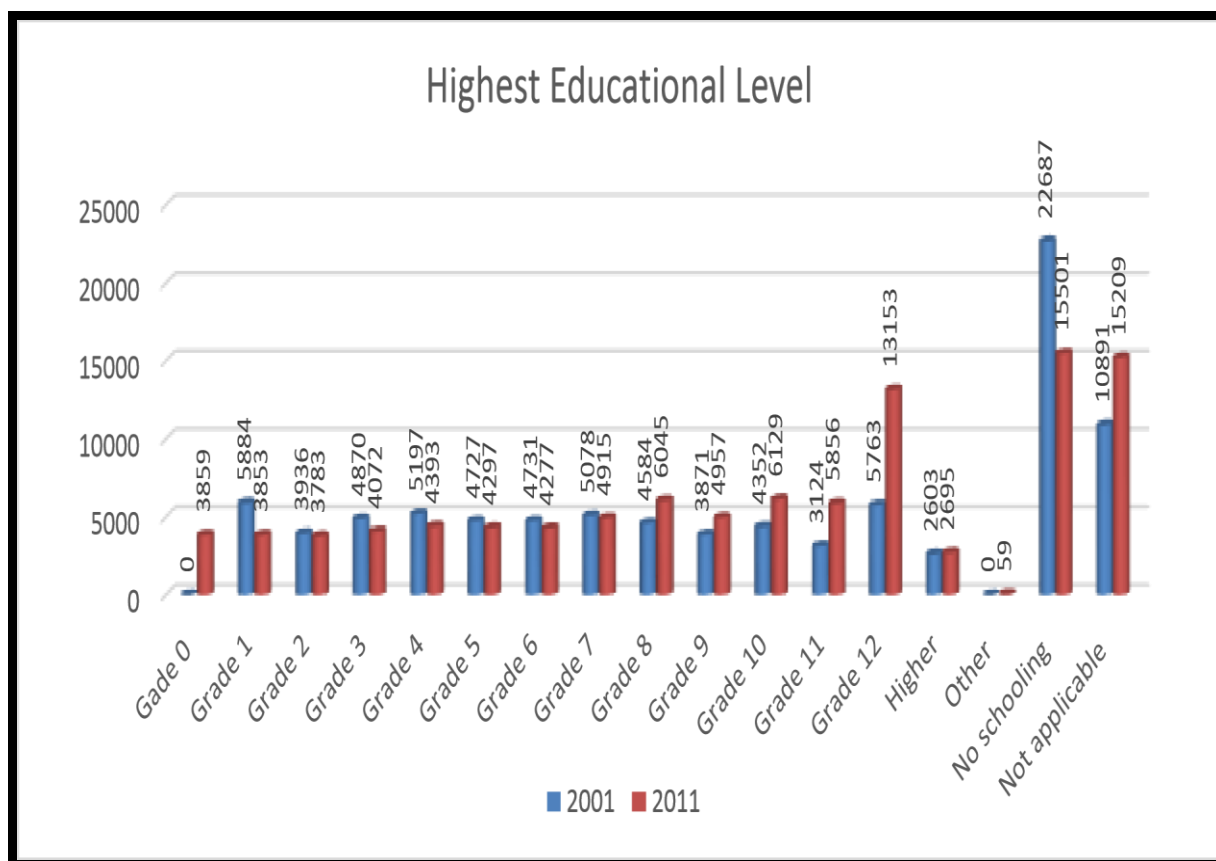


Figure 5: Representing educational level of the Umvoti municipality (IDP, 2014-15, pg 90).

b) Socio-economic value of the activity

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

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

Will the activity contribute to service infrastructure?

Is the activity a public amenity?

How many new employment opportunities will be created in the development and construction phase of the activity/ies?

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

To be determined	
R N/A	
YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO
20	
R 5 Million	

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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 %

10. BIODIVERSITY

According to the GIS Map compiled by Cornerstone Mapping (Attached as an Appendix A.1), and the interrogation of various GIS data sources, the road doesn't fall within any sensitive zone. The area is degraded and approximately 90% of Kwazulu Natal Highland Thornveld has been removed by human activity over a number of years. 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. **Awaiting comments.**

- 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

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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	Critical	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)	Estuary	Coastline
	Endangered			
	Vulnerable			
	Least			

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Terrestrial Ecosystems		Aquatic Ecosystems						
No. 10 of 2004)	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	Ilanga	
Date published	11/06/15	
Site notice position	Latitude	Longitude
	28°55'37.11" S	30°24'19.57"E

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.

Two Newspaper articles (English and Zulu) were published in the Ilanga Newspaper on the 11/06/2015 (See **Appendix D**). The ward councillor was made aware of the proposed development. (Date of hand delivery to be confirmed). 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” section).

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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)
Mr S.E Mngoma	Ward Councillor	076 7714 377

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.	Responses have been included in the Appendix D entitled 'Comments Received'

4. COMMENTS AND RESPONSE REPORT

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

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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	Nomusa Mahaye	034 2998600	nomusa.mahaye@kzntransport.gov.za	Private Bag X2002 Dundee 3000
Amafa	Ms Bernadet	033 3946543	bernadetp@amafapmb.co.za	P.O.Box 2685 PMB 3201
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
Department of Water & Sanitation	Mr S. Govender	031 336 2759	Govenders2@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 causeway structure and slab structure will also be constructed along an existing crossing which has already been disturbed by human activities. It is not feasible to construct the causeway 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 a local road will have the greatest environmental impact. The proposed gravel road will be constructed along an existing track. The area is degraded 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 –Causeway Structure

The selection of a new causeway structure will have the greatest environmental impact. The proposed new causeway structure will be constructed along an existing crossing point with footpaths that have been developed over the years. Therefore the existing crossing point has been selected as the preferred alternative as not to cause further disturbance to the environment. The proposed a road forms part of the causeway structure. The Engineering Designs that were considered in this report was that of DOT standards for a causeway structure.

Impact Ratings

The following presents the assessment criteria used to evaluate the impacts resulting from the proposed development.

Impact Assessment Methodology

The impacts that may result from the construction phase and operation phase of the project was assessed according to a number of criteria to arrive at an overall significance rating. The criteria used were as follows:

Spatial Scale

- Site **(S)** Immediate area of impact
- Local **(L)** Area within 20km of the development
- Regional **(R)** Entire Municipality

Duration

- Short Term **(ST)** Less than the duration of the activity
- Medium Term **(MT)** Impact persists until activity ceases
- Long Term **(LT)** Impact persists well beyond the cessation of the activity
- Permanent **(P)** Impact is permanent

Probability

- Low **(L)** Unlikely
- Medium **(M)** Possible
- High **(H)** Likely

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Intensity

Intensity describes whether an impact is destructive or benign.

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.

Significance

Impacts can be Low, Medium or High and can be positive (+ve) or negative (-ve).

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Impacts/Significance associated with the Construction phase

Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SCALE	SPATIAL	DURATION	PROBABILITY	INTENSITY
DIRECT IMPACTS							
<i>Dust Pollution</i>	(-)	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.	L	MT	M	L	L

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	POST MITIGATED SIGNIFICANCE
<i>Spillages</i>	(-)	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.	S	MT	M	M	L
<i>Water Quality</i>	(-)	During construction, water quality is compromised. This is mainly due to human activity and by implementing inappropriate techniques such as diverting the flow of the water course. Pollution of the water course is also a major concern during construction, such as washing of equipment and discharging waste into the river.	L	MT	M	M	L

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	POST MITIGATED SIGNIFICANCE
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 EMP 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.	S	MT	M	M	L

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative					
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	SIGNIFICANCE	POST MITIGATED
<i>Habitat Fragmentation</i>	(-)	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 re-colonizing 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.	L	LT	M	M	L	

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	POST MITIGATED SIGNIFICANCE
<i>Unplanned routes/footpaths.</i>	(-)	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.	S	MT	M	L	L
<i>Water Resource</i>	(-)	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 watercourse in the construction phase.	L	MT	M	L	L

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	SIGNIFICANCE
<i>Impact on surface and ground water</i>	(-)	Pollution of soil/ groundwater (fuel, oil, cement, other chemicals etc.)	L	MT	M	M	L
<i>Impact of Storm water</i>	(-)	Storm water could lead to erosion without the proper mitigation measures in place, and side drains not properly constructed.	S	MT	M	M	L
<i>Sanitation</i>	(-)	Inadequate sanitation could lead to pollution of the water table.	S	MT	M	M	L
<i>Heritage impacts</i>	(+)	No negative impact. As artifacts of historical or cultural value was not found on the route.	S	ST	L	L	L
<i>Noise disturbance</i>	(-)	Construction machinery and personnel could disturb the peace in the surrounding area.	S	MT	M	L	L
<i>Waste Disposal</i>	(-)	Waste is generated through construction activities and therefore the possibility of the area being polluted is increased.	L	MT	M	M	L

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	POST MITIGATED SIGNIFICANCE
<i>Socio-Economic Impact</i>	(+)	Construction creates temporary employment for community members.	L	P	H	N / A	H
<i>No-go option</i>	(-)	Safety - During most rainy seasons, the road is flooded. The local community's safety will therefore be compromised.	-	-	-	-	-

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	SIGNIFICANCE
INDIRECT IMPACTS							
<i>Spread of Alien Vegetation</i>	(-)	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.	S	MT	M	M	L
<i>Waste Disposal</i>	(-)	Waste such as plastic and paper will impact surrounding animals if ingested.	L	MT	M	H	L
<i>Socio-Economic Impact</i>	(+)	Improved living standards.	L	P	H	L	L
<i>No-go option</i>	(-)	Safety - During most rainy seasons, the road is flooded. The local community's safety will therefore be compromised.	-	-	-	-	-

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Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SCALE	SPATIAL	DURATION	PROBABILITY	INTENSITY
CUMULATIVE IMPACTS							
<i>Waste Generation</i>	(-)	Extra waste generated during the construction phase could result in added pressure placed on the local landfill site.	L	MT	L	L	L
<i>No-go option</i>	(-)	Safety - During most rainy seasons, the road is flooded. The local community's safety will therefore be compromised.	-	-	-	-	-

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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. Therefore upgrading the existing track with causeway along existing crossing points is the most feasible option.

BASIC ASSESSMENT REPORT

Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	SIGNIFICANCE
DIRECT IMPACTS							
<i>Increased traffic in the area</i>	(-)	The proposed road is an access route off a local road, therefore increased traffic.	L	LT	M	L	L
<i>Increased vehicular fumes contributing to Air Pollution</i>	(-)	It is not envisaged that the increased vehicular fumes will contribute significantly to increased localized air pollution but may have a cumulative effect.	L	MT	L	L	L
<i>Direct alteration of faunal habitat</i>	(-)	The area is highly transformed by the existing track and river crossing.	L	LT	L	L	L
<i>Increased socio-economic benefits</i>	(+)	The positive impact is that of increased socio-economic development to the local community.	L	LT	H	L	H

BASIC ASSESSMENT REPORT

Impact	Impact type Positive (+ve) Or Negative (-ve)	Activity	Preferred alternative				
			SPATIAL SCALE	DURATION	PROBABILITY	INTENSITY	MITIGATED SIGNIFICANCE
INDIRECT IMPACTS							
<i>Safety Issues for the community</i>	(+)	The proposed road is merely an upgrade of the existing track; therefore safety issues do not pose a major threat.	S	ST	L	L	L
<i>Increased noise</i>	(-)	The road services the local community therefore noise levels should not be affected greatly by the upgrade.	S	MT	M	L	L

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 and causeway 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 causeway construction.

The following factors were taken into consideration (Local 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.

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 ambit of road infrastructure projects for the local municipality.

It is the opinion of the EAP that the proposed local 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 (Causeway Structure):

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 lines except where needed for the construction of the causeway structure.

As per the EMP, 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 causeway should be constructed.

This construction would result in minor environmental and social impact, as minimal vegetation will be removed and general disturbance for the construction of the causeway at this point. The causeway will be designed to withstand at least 1:10 year flood events therefore providing safe access to the local community. The construction of the causeway 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 causeway 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
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If “NO”, indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

N/A

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

- 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.

BASIC ASSESSMENT REPORT

- 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 causeway 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

X

NO

SHELDON SINGH

DATE

APPENDIX A.1

LOCALITY MAP

APPENDIX A.2

AERIAL MAP

APPENDIX A.3

TOPOGRAPHICAL MAP

APPENDIX B

SITE PHOTOS

APPENDIX C

DESIGN DRAWINGS

C.1 – PLAN OF THE ROAD DESIGN

C.2 – PLAN OF THE CAUSEWAY

C.3- PLAN OF THE SLAB STRUCTURE

C.1 – PLAN OF THE ROAD DESIGN

C.2 PLAN OF THE CAUSEWAY

C.3- PLAN OF THE SLAB STRUCTURE

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 - COMMENTS FROM AMAFA**
- **D.5 – COMMENTS FROM KZN WILDLIFE**
- **D.6 – COMMENTS FROM WATER & SANITATION**

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APPENDIX E

ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)