

# 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.

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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	<b>NO</b>
	X

**1. PROJECT DESCRIPTION**

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

**INTRODUCTION**

The Department of Transport (DOT) proposes to construct a vehicular bridge with pedestrian walkway. The new low-level bridge will be constructed over the tributary to Woodstock Dam along local road L464 in one of the Bergville villages within the Okhahlamba Local Municipality (DC 23). The existing structure had been built in an incorrect position which is currently causing a bottle neck effect where the river flow is damming upstream of the structure in turn the flow of the tributary is currently eroding the bank on the upstream side severely before being deflected towards the two existing portal culverts. The bridge will have an overall length of approximately 24.75 m and will be designed to clear the 1: 10 year flood return period. The bridge will have 1 span of 14 meters with wing walls on either ends of the approach. The development of the bridge will encourage public transport and other basic services within the Bhalekisi community and provide safe travel to all road users across the river.

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Photo 1: showing existing structure.



Photo 2: showing downstream view of the watercourse.

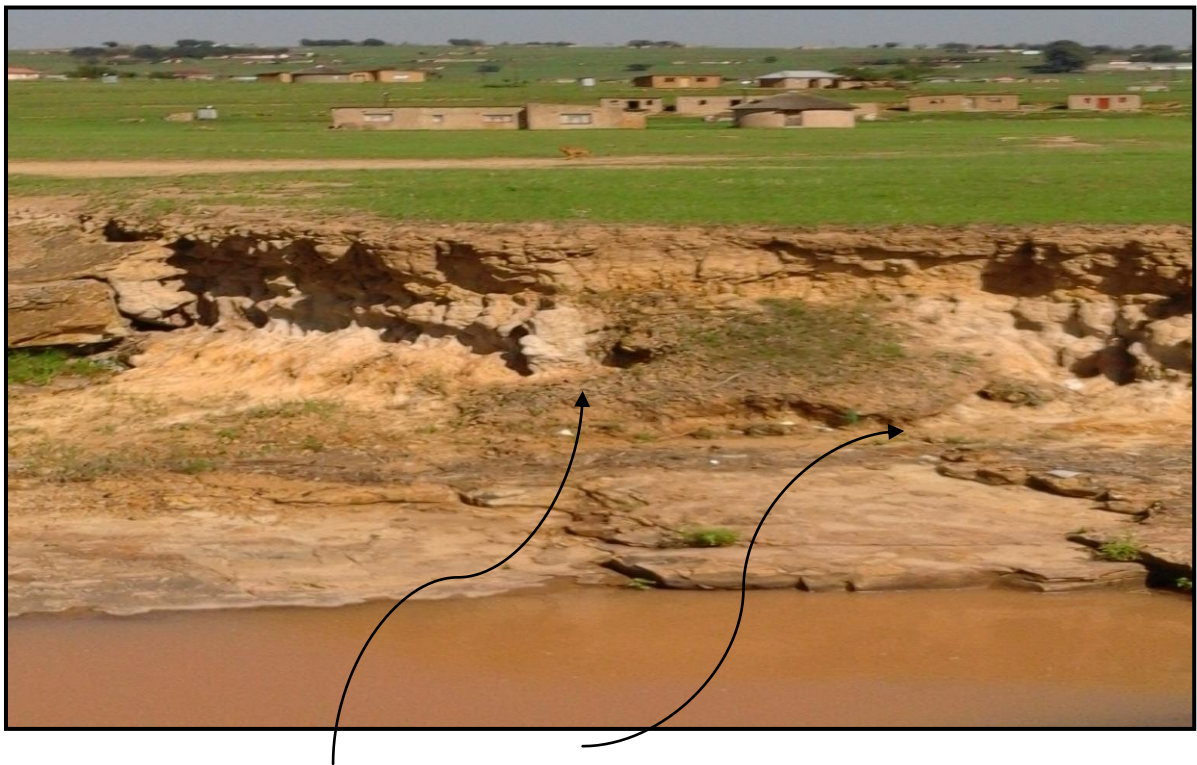


Photo 3: Showing erosion along river banks.



Photo 4: Showing existing gabion structure for erosion control along the stream banks.

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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><b>Listing Notice 1 of 2014, Listed Activity 12</b></p> <p>The development of:</p> <p>(iii) – bridges exceeding 100 square metres in size;</p> <p>(a) within a watercourse</p>	<p>The bridge will have an overall length of approximately 24.75m and will be designed to clear the 1: 10yr flood return period. The bridge will have 1 span of 14 meters with wing walls on either ends of the approach.</p>
<p><b>Listing Notice 1 of 2014, Listed Activity 19</b></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 <b>NO</b> soil will be removed off-site.</p>

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### 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.

<b>a) Site Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
The preferred crossing point for the bridge was chosen based on location. The proposed bridge is as close as possible to the current crossing area and is along the existing local road L464. As the realignment of roads is extremely costly, no other crossing points have been investigated. This alternative has shown to be the best practical option when taking into consideration the minimal impact to the receiving environment. The bridge design has taken numerous engineering methodologies into consideration which has a minimal impact on the environment.	S 28°43'42.37"	E 29°10'0.32"
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A	N/A	N/A
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A	N/A	N/A



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In the case of linear activities:

**THE SECTION BELOW IS NOT APPLICABLE TO THIS REPORT.**

**Alternative:**

**Latitude (S):**

**Longitude (E):**

Alternative S1 (preferred)

- 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 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

**b) Lay-out alternatives**

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
(a) The bridge will have an overall length of approximately 24.75 m and will be designed to clear the 1: 10 year flood return period. The bridge will have 1 span of 14 meters with wing walls on either ends of the approach.	S 28°43'42.37"	E 29°10'0.32"
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
No alternate bridge designs have been investigated as the proposed/preferred designs:	N/A	N/A

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1. Meet the demand (the need for vehicular and pedestrian bridge structures to cross the respective rivers); 2. Is within the budget available from Department of Transport to establish vehicular and pedestrian bridge; 3. Have limited impact on the ecological environment and will not impede the flow of the rivers.		
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A	N/A	N/A

### c) Technology alternatives

<b>Alternative 1 (preferred alternative)</b>
<b>(REFER TO APPENDIX C FOR GENERAL ARRANGEMENT DRAWING OF BRIDGE)</b>
<b>Alternative 2</b>
N/A
<b>Alternative 3</b>
N/A

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

No alternate technologies have been investigated as the proposed/preferred design:

1. Meet the demand (the need for vehicular bridge structures with pedestrian walkway to cross the respective river)
2. Is within the budget available from Department of Transport to establish a bridge structure with a pedestrian walkway.
3. Have limited impact on the ecological environment and will not impede the flow of

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the river.

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 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 bridge construction such as the improved connectivity and access for local residents. There will be a continuance of the bottle neck effect where the river flow is damming upstream of the structure and the flow of the tributary will continuously erode the bank on the upstream side severely as the existing structure had been built in the incorrect position. This will have a negative impact on the community as they will continue to have lack of quick response to basic services such as health facilities and police response. The crossing area has become prone to erosion causing difficulty for school children as public transport cannot access the area especially during high rainfall seasons.

### 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 A1<sup>1</sup> (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

**Size of the activity:**

Alternative A1 <sup>1</sup> (preferred activity alternative)	159.39 m <sup>2</sup>
Alternative A2 (if any)	N/A m <sup>2</sup>
Alternative A3 (if any)	N/A m <sup>2</sup>

or, for linear activities:

**Alternative:**

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

**Length of the activity:**

Alternative A1 (preferred activity alternative)	24.75m
Alternative A2 (if any)	N/A m

<sup>1</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

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Alternative A3 (if any)

N/A m
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**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/Am <sup>2</sup>
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Alternative A2 (if any)

N/Am <sup>2</sup>
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Alternative A3 (if any)

N/Am <sup>2</sup>
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### 4. SITE ACCESS

Does ready access to the site exist?

YES	NO
x	

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

N/A
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Describe the type of access road planned:

N/A
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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.

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### 5. ACTIVITY MOTIVATION

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

<b>1. Is the activity permitted in terms of the property's existing land use rights?</b>	<b>YES</b> X	NO	Please explain
<p>The bridge structure will be located off the P288 along L464 providing a crossing point to the local communities, and school children. The bridge will be constructed to ensure safe access to pedestrians and motorists, whilst minimizing soil erosion and siltation of the watercourse due to runoff. The existing portal culverts are not appropriate as they were constructed in the incorrect position which has caused the bottle neck effect where the river flow is damming upstream of the structure and the flow of the tributary has continuously eroded the bank on the upstream side severely. The bridge will be constructed to ensure safe means of crossing for the pedestrians and motorists. This activity is in line with the property's existing land use rights and does not constitute a change in land use.</p>			
<b>2. Will the activity be in line with the following?</b>			
<b>(a) Provincial Spatial Development Framework (PSDF)</b>	<b>YES</b> X	NO	Please explain
<p>The Bergville region is predominately rural and access to basic developmental areas is limited. Therefore the activity is in line with the PSDF which outlines infrastructure development as a priority area within the rural municipality such as the Okhahlamba Local Municipality.</p>			
<b>(b) Urban edge / Edge of Built environment for the area</b>	<b>YES</b> X	NO	Please explain
<p>The bridge is not in a built urban environment thus urban edge policies are not affected.</p>			

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<p><b>(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?).</b></p>	<p>YES</p>	<p><b>NO</b> X</p>	<p>Please explain</p>
<p>It has been identified by the IDP (2012-2017) that the construction of infrastructure in the rural community is a priority. This has been seen as a way of access to economic development. The main aim of the municipality is to encourage more engagement with Government Departments especially 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 has many projects that are to be implemented. There are numerous environmental applications that govern 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</p>			
<p><b>(d) Approved Structure Plan of the Municipality</b></p>	<p><b>YES</b> X</p>	<p>NO</p>	<p>Please explain</p>
<p>The ward councillor has expressed the communities' concerns with regards to the need for a proper crossing at the watercourse as the existing structure is in a poor state and in-accessible especially 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. However, the project is not funded by the local municipality but rather by the KZN Department of Transport.</p>			
<p><b>(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?)</b></p>	<p>YES</p>	<p><b>NO</b> X</p>	<p>Please explain</p>
<p>No existing environmental management priorities for the area will be compromised, as the activity will contribute to the EMF.</p>			

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<b>(f) Any other Plans (e.g. Guide Plan)</b>	YES	<b>NO</b> X	Please explain
N/A			
<b>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)?</b>	<b>YES</b> X	NO	Please explain
The proposed activity contributes to improved access infrastructure within the local municipality, and therefore is in line with the IDP and SDF.			
<b>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.)</b>	<b>YES</b> X	NO	Please explain
Community members are often left stranded during periods of high rainfall, therefore, the construction of a new bridge structure will impact positively to members of the community. This structure will give access to both motorists and pedestrians. During the construction process local labour will be employed 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.			
<b>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?</b>	<b>YES</b> X	NO	Please explain
All necessary services are available for the activity to commence.			

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<b>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)?</b>	YES	NO X	Please explain
No infrastructure planning is envisaged by the municipality with regards to this project. The project costs are borne by the Department of Transport.			
<b>7. Is this project part of a national programme to address an issue of national concern or importance?</b>	YES	NO X	Please explain
The proposed activity is site specific and is at a localized level.			
<b>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.)</b>	YES X	NO	Please explain
The site is extremely degraded and banks along the portal culverts are highly eroded as a direct result of poor drainage of the existing structure. The bottle neck effect where the river flow is damming upstream of the structure and the flow of the tributary has continuously eroded the bank on the upstream. The natural vegetation of the site is interrupted and been removed due to human activities. On completion of construction, the site will be rehabilitated. Therefore, the location factors favour this activity.			
<b>9. Is the development the best practicable environmental option for this land/site?</b>	YES X	NO	Please explain
The proposed site has been assessed and a favorable position for the bridge structure has been identified with all stakeholders. The existing structure was build in the wrong position causing a bottle neck effect to the stream therefore the construction of the new bridge will allow continuance in the natural flow of the watercourse and this will have minimal environmental impact. Therefore the development is the best practical environmental as well as engineering option.			



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<b>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b>	YES X	NO	Please explain
The proposed construction of the bridge structure will positively impact the local community by providing access to basic amenities, and minimizing the negative impact of flooding, and soil erosion. The proposed construction will outweigh the negative impacts in terms of increased socio-economic development for the local community.			
<b>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</b>	YES	NO X	Please explain
No precedent will be set in the area; however the construction of the bridge will improve accessibility for community members; and minimize erosion and storm water run-off. This will also encourage public transport in the area and quick response to emergency services.			
<b>12. Will any person's rights be negatively affected by the proposed activity/ies?</b>	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. The proposed development does not infringe on the rights of the residents			
<b>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</b>	YES	NO X	Please explain
The project is located in a rural area, and therefore the urban edge is not affected.			
<b>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</b>	YES	NO X	Please explain
This is a localized site specific activity, and will benefit the local community members.			

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<b>15. What will the benefits be to society in general and to the local communities?</b>	Please explain
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There is an urgent need to ensure safe and reliable means of crossing the watercourse for both vehicles and pedestrians. The construction of the new bridge with a walkway will make travelling for basic amenities, education and work feasible for local community members. The existing crossing structure is prone to erosion and flooding particularly during periods of high rainfall, thus limiting the access to basic amenities. 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. The bridge structure may not have benefits as far reaching as to society in general, however, the construction of the new bridge lays the foundation for further and knock-on development which would lead to the upliftment of disadvantaged societies. Therefore, the development of this area is of great importance. The proposed action of constructing a new structure can be considered as the first step towards upliftment or development of the local community. The construction of the bridge would contribute to the community in the following ways:

- Vehicles would not have to endure rugged terrain.
- To encourage public transport within the Bhalekisi community.
- Travelling route distances would be decreased.
- Will increase the safety of the people within the community.
- Improve access for Emergency services such as ambulance, SAPS, mobile clinics etc.
- Safe travel to all road users across the river.
- Encourage economic development of the communities and 'unlocking land' for housing and farming.

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<b>16. Any other need and desirability considerations related to the proposed activity?</b>	Please explain
<p>According to the IDP (2012 to 2017) there is a critical need to improve infrastructure within the local municipality. The area is predominately rural and developmental initiatives are limited with regards to 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>	
<b>17. How does the project fit into the National Development Plan for 2030?</b>	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>	
<b>18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.</b>	
<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 Draft 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 <b>Appendix D</b>. 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 <b>Appendix E</b>.</p>	

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**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:

<b>Title of legislation, policy or guideline</b>	<b>Applicability to the project</b>	<b>Administering authority</b>	<b>Date</b>
National Environmental Management Act, 1998 (Act No 107 of 1998)	Environmental Authorisation is required in terms of Regulation GN. 983 of Dec 2014 (included within NEMA 107 of 1998)	Department of Environmental Affairs	1998
Environmental Impact Assessment Regulations (Notice No. GN. 983 of 2014)	Guidelines with regards to the Environmental Impact Assessment Process to be undertaken	Department of Environmental Affairs	1998

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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?

<b>YES</b>	NO
X	
5 m <sup>3</sup>	

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)?

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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	<input checked="" type="checkbox"/> NO
	X
N/A m <sup>3</sup>	

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

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

YES	<input checked="" type="checkbox"/> NO
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in a municipal sewage system?

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

N/A m <sup>3</sup>	
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Will the activity produce any effluent that will be treated and/or disposed of on site?

YES	<del>NO</del> X
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*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	<del>NO</del> X
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If YES, provide the particulars of the facility:

<b>Facility name:</b>		
<b>Contact person:</b>		
<b>Postal address:</b>		
<b>Postal code:</b>		
<b>Telephone:</b>	<b>Cell:</b>	
<b>E-mail:</b>	<b>Fax:</b>	

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

N/A
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**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	<del>NO</del> X
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If YES, is it controlled by any legislation of any sphere of government?

YES	NO
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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	<b>NO</b> X
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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?

<b>YES</b> X	NO
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If YES, is it controlled by any legislation of any sphere of government?

YES	<b>NO</b> X
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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):

<b>Municipal</b>	Water board	Groundwater	River, stream, dam or lake	<b>Other</b>	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

X

NO

**A Water Use Licence Application (WULA) will be lodged with the Department of Water and Sanitation (DWS) in terms of Section 21 (c) and (i) of the National Water Act of 1998. The application will run concurrently with the EIA process. Furthermore a Draft Basic Assessment Report will be hand delivered to DWS offices for comments, which forms an integral part of the Public Participation Process with regards to informing all relevant stakeholders (I&APS). The comments/recommendations will then be addressed in specific detail in the revised Basic Assessment Report and EMPR.**

### 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

**DESIGN REPORT: PROPOSED BRIDGE CROSSING OVER THE TRIBUTARY TO WOODSTOCK DAM ON LOCAL ROAD L464**

Based on the site visit and findings, Nankhoo Engineers strongly recommended that a vehicular bridge with pedestrian walkway be constructed over the tributary to Woodstock Dam on L464. It must be noted that existing gravel roads on either approach will have a slight re-alignment to tie into the proposed bridge. It should also be noted that L464 forms a loop around the Bhalekisi Community and is currently the only road which services this community. The bridge construction will allow safe travel to all road users across the river and will encourage public transport within the Bhalekisi community. The proposed crossing point will provide the community access to the following:

Schools

- Vulamehlo Primary School
- Intumbane Primary School
- Ubulinga Secondary School
- Ogada Primary School
- Mafu Secondary School

Clinics:

- Oliviershoek Provincial Clinic

There will also be access to various other basic enmities such as grocery shops and churches. For a more detailed description, refer to **APPENDIX C**.

## BASIC ASSESSMENT REPORT

### 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

- Paragraphs 1 - 6 below must be completed for each alternative.
- Has a specialist been consulted to assist with the completion of this section?

YES	NO
X	

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.

<b>Property description/physical address:</b>	<b>Province</b>	KwaZulu-Natal
	<b>District Municipality</b>	UThukela Municipality
	<b>Local Municipality</b>	Okhahlamba Municipality
	<b>Ward Number(s)</b>	8
	<b>Farm name and number</b>	N/A
	<b>Portion number</b>	N/A
	<b>SG Code</b>	N/A

# BASIC ASSESSMENT REPORT

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

### 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

2.2 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"/>

## BASIC ASSESSMENT REPORT

### 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 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 X	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES X	NO	YES	NO	YES	NO
An area sensitive to erosion	YES X	NO	YES	NO	YES	NO

**As per the site investigation on the 12/15 the following features have been identified:**

Okhahlamba Municipality is one of the five local municipalities within the area of the UThukela district municipality. Okhahlamba is located west of Emnambithi/Ladysmith, neighboring the international boundary with Lesotho and Free State Province in the north (SDF, 2013). The site for the proposed development is located in one of the villages in Bergville in the Okhahlamba municipality off P288, along L464.

The geology of the region is underlain by specific geological units, the Drakensberg Lembombo group, and the Stormberg group which consists of sandstones of the lowermost Molteno formation. In these formations, there are geological outcrops which have been identified on site as Sandstone. Sandstone is considered to be generally stable, and good founding conditions occur for structures which occur at nominal depths. Very few geotechnical hindrances are present within the site and for developmental areas that are underlain by this specific rock type. Soils present in this region are shallow on hard weathering rock. Soils around this region exhibit a red/yellow colour, which is an indication of the presence of iron which is dominated by hematite and aluminum.

Deep soil deposits are found along rivers and streams on level to moderate slopes. The area has an estimated clay content of between 30-50% near the watercourse. The banks of the watercourse are severely eroded. The watercourse present on the site is underlain by Sedimentary rock, which can also be classified as sandstone. The banks of the watercourse are severely eroded. While there are no large rocks or boulders present within the watercourse, it can be noted that there is a bottle neck effect occurring in the watercourse where the flow is damming upstream. This is due to hindrance caused by the current causeway structure which was built in the wrong location.



Photo 5: Showing erosion along the river banks.

#### 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 <sup>E</sup>	Natural veld with scattered aliens <sup>E</sup>	Natural veld with heavy alien infestation <sup>E</sup>	Veld dominated by alien species <sup>E</sup>	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

## BASIC ASSESSMENT REPORT

### 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 <sup>H</sup>
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential <sup>A</sup>	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant <sup>A</sup>	Nature conservation area
Medium industrial <sup>AN</sup>	Train station or shunting yard <sup>N</sup>	Mountain, koppie or ridge
Heavy industrial <sup>AN</sup>	Railway line <sup>N</sup>	Museum
Power station	Major road (4 lanes or more) <sup>N</sup>	Historical building
Office/consulting room	Airport <sup>N</sup>	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam <sup>A</sup>	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



## BASIC ASSESSMENT REPORT

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	<b>NO</b> x
Core area of a protected area?	YES	<b>NO</b> x
Buffer area of a protected area?	YES	<b>NO</b> x
Planned expansion area of an existing protected area?	YES	<b>NO</b> x
Existing offset area associated with a previous Environmental Authorisation?	YES	<b>NO</b> x
Buffer area of the SKA?	YES	<b>NO</b> 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

**A Draft BAR has been submitted to Amafa. Awaiting comments.**

## BASIC ASSESSMENT REPORT

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.

According to the recent statistics, the Okhahlamba Local Municipality has a total population of 132 068 and it is a sparsely populated area which is predominantly tribal. 97% of the population is black African. The primary enrolment rate is high in this municipality at 93,1 % but the matric pass rate is very low at 22,5% in 2011 ( Stats SA, 2011).

The major contributors to the economy are agriculture, tourism and wholesale trade. The unemployment rate is 43%, which is among the highest in the district, which has a dependency ratio of 79. There is though a huge concern on the youth unemployment rate which is 52, 3%. The largest employer is wholesale, retail trade, catering and accommodation (20%), while community services are the second largest employer at 18%. This is followed by manufacturing (15%) and general government (12%). The majority of the population within OLM does not receive any form of income, whilst 28% earn between R1-R400 pm and 11% earn between R801-R1600 per month. This is an indication of high levels of poverty and low levels of income.

Level of unemployment:

In Okhahlamba, the employment opportunities are scarce. This has escalated the unemployment levels both for skilled and unskilled labour. There has been a decrease in the unemployment rate since 2001 from 58.9% to 43% in 2011. Although this is positive, the high youth unemployment rate of 52.3% is a concern.

## BASIC ASSESSMENT REPORT

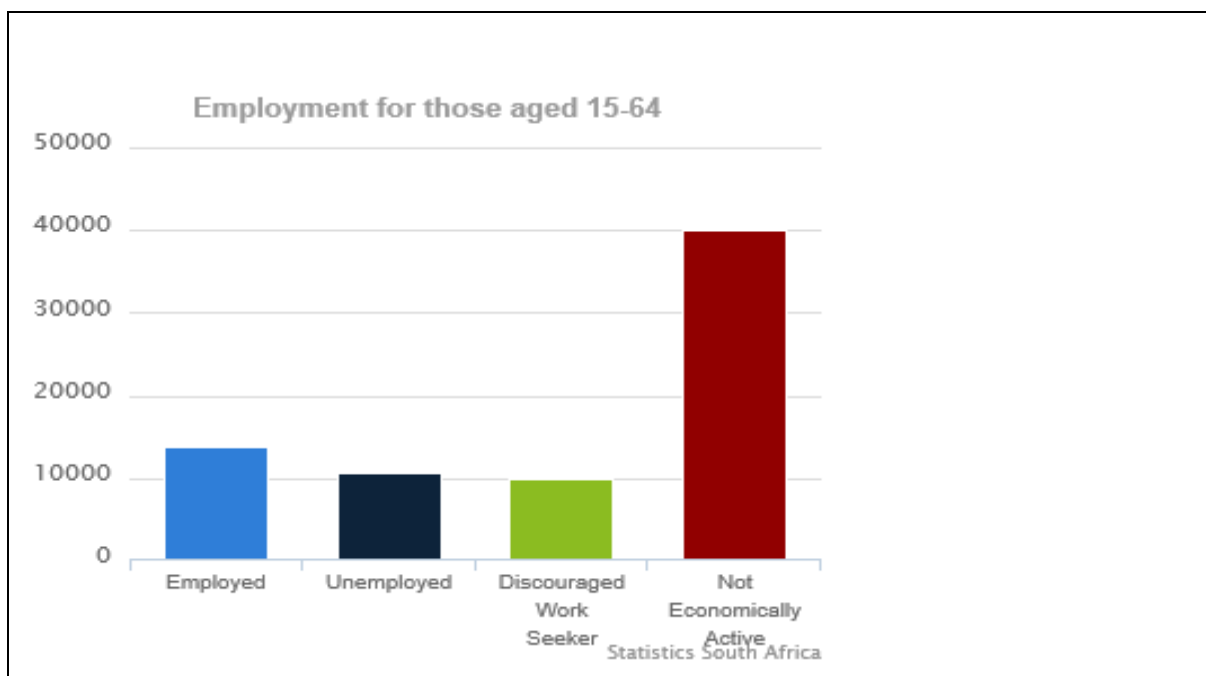


Chart showing unemployment levels within the Okhahlamba Local Municipality (Stats SA, 2011).

Employment Status	Number
Employed	13718
Unemployed	10501
Discouraged Work Seeker	9709
Not Economically Active	39853

### 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. Most residents sustain their families through 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.

## BASIC ASSESSMENT REPORT

The chart below is an indication of the types of industry that people generally engage with, comprising mostly of community/ social and personal, wholesale/Retail and private households (IDP, 2012 – 2017, p20).

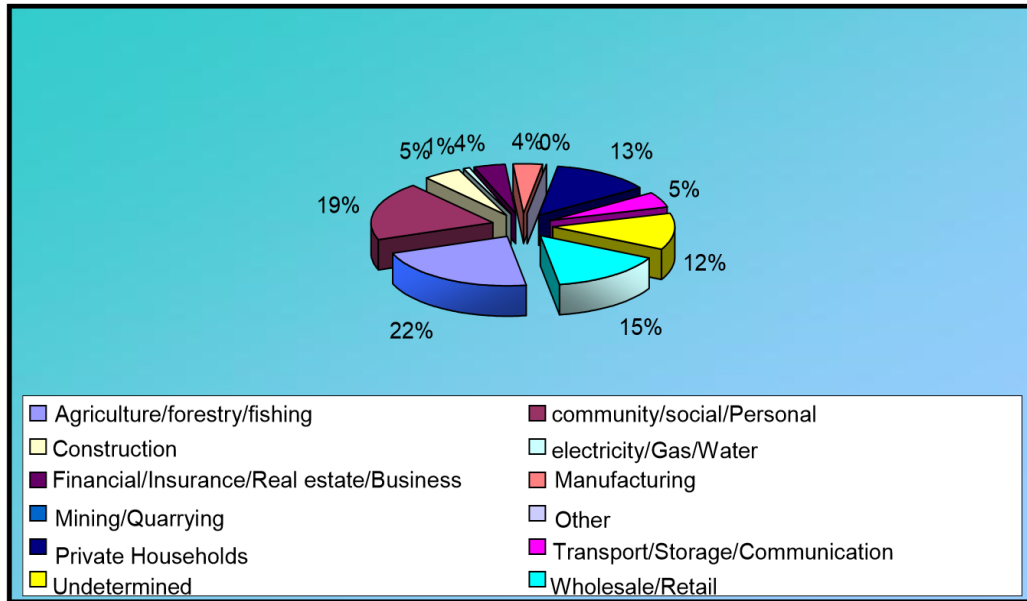
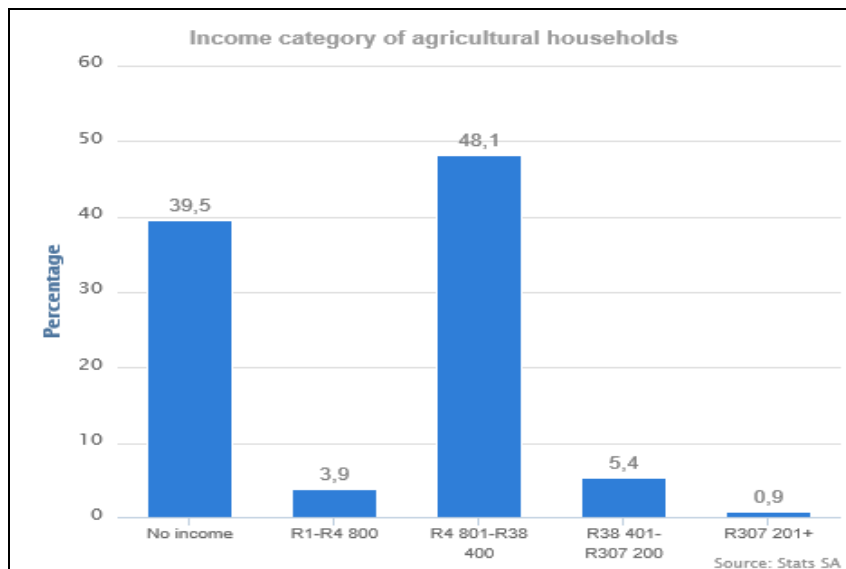


Chart 2: showing economic profile of OLM (IDP, 2012 – 2017, p20).

This is the income generated by each household with their agricultural produce to sustain their families.



Stats SA, 2011

## BASIC ASSESSMENT REPORT

### 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.

Group	Percentage
No Schooling	2,9%
Some Primary	46,4%
Completed Primary	6,3%
Some Secondary	31,8%
Completed Secondary	11,5%
Higher Education	0,5%
Not Applicable	0,7%

Showing levels of education in the municipality

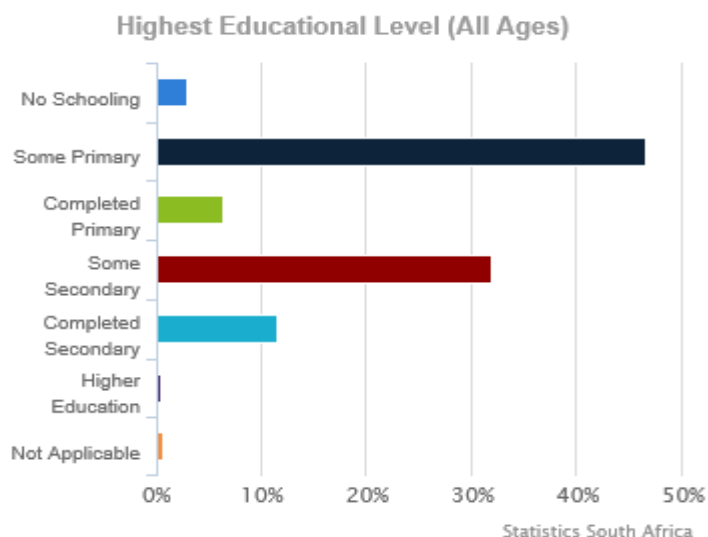


Chart: showing level of education in the municipality, (Stats SA, 2011)

## BASIC ASSESSMENT REPORT

### b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R5 mill	
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 <input checked="" type="checkbox"/>	NO
Is the activity a public amenity?	YES <input checked="" type="checkbox"/>	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	25	
What is the expected value of the employment opportunities during the development and construction phase?	R3.2mill	
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?	N/A	
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

**The site is degraded and eroded 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. Comments will be included in the final BAR.**

## BASIC ASSESSMENT REPORT

- 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 site has been utilized as a crossing point over a number of years; therefore the site has become degraded by footpaths and most natural vegetation has been removed. Culvert structures have been previously constructed at the site.

## BASIC ASSESSMENT REPORT

**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						
<b>Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)</b>	Critical	Wetland (including rivers, depressions, channelled and unchannelled 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 dominated by grass and footpaths. The area has become completely transformed and offers no significant biodiversity or natural pristine ecosystems.



## SECTION C: PUBLIC PARTICIPATION

### 1. ADVERTISEMENT AND NOTICE

<b>Publication name</b>	Illanga Newspaper	
<b>Date published</b>	01/02/16	
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>
	S 28°43'44.46"	E 29°10'05.90"
	S 28°43'41.85"	E 29°09'43.32"
	S 28°43'30.91"	E 29°10'17.54"
<b>Date placed</b>	27/01/16	

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.

#### **Site Notice**

Three site notices were placed at strategic points along L464 on the 27<sup>th</sup> of January 2016 for public viewing (**See Appendix D**). The notices were placed so that the community members may register as Interested and Affected Parties (I&AP's) and also provide comment on the proposed development. No comments have been received to date and no persons registered as I&AP's.

#### **Newspaper Ad**

A newspaper article in IsiZulu was published in the Illanga Newspaper on the 1<sup>st</sup> of February 2016 (See **Appendix D**) as part of the Public Participation Process. This process allowed for Interested and Affected parties (I&AP's) an opportunity to comment, or raise issues relevant to the proposed development. No comment has received and no one has registered as an Interested and Affected Party.

**Meeting with ward councillor and tribal authority**

A formal meeting was held on the 27<sup>th</sup> of January 2016, at this meeting the elected ward councillor as well as the tribal authority (Induna) of the area was made aware of the proposed development. A formal letter outlining the nature of the proposed development was made available to the ward councilor and tribal authority during the meeting. The letter affirms that the ward councilor and the Induna were made aware of the proposed development and have no objections to the proposed development. (See **Appendix D** for acknowledgement letter). 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 Draft Basic Assessment Report, comments will be included as Appendix D of the final BAR.

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

<b>Title, Name and Surname</b>	<b>Affiliation/ key stakeholder status</b>	<b>Contact details (tel number or e-mail address)</b>
Mr L. Ngwenya	Ward councillor	073 621 5050
Mr M. Macu	Induna	079 427 0080

## BASIC ASSESSMENT REPORT

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### 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 as well as the induna are in favour of the proposed upgrade of the existing structure and voiced out the urgency of the development as the bridge becomes flooded during rain seasons.	Responses have been included in the <b>Appendix D</b> entitled 'Comments Received'

### 4. COMMENTS AND RESPONSE REPORT

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

## BASIC ASSESSMENT 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	<a href="mailto:Chris.mkhonto@kzntransport.gov.za">Chris.mkhonto@kzntransport.gov.za</a>	Private Bag x9911 Ladysmith 3370
Amafa	Ms Bernadet	033 3946543	<a href="mailto:bernadep@amafapmb.cp.za">bernadep@amafapmb.cp.za</a>	P.O.Box 2685 PMB 3201
KZN Wildlife	Mr D Wieners	033 8451999	<a href="mailto:Dominic.Wieners@kznwildlife.com">Dominic.Wieners@kznwildlife.com</a>	P.O.Box 13053 3202
Department of Water & Sanitation	Mr S. Govender	031 3362759	<a href="mailto:GovenderS2@dwa.gov.za">GovenderS2@dwa.gov.za</a>	PO 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. The existing structure had been built in the incorrect position which is currently causing a bottle neck effect where the river flow is damming upstream of the structure. The flow of the tributary is currently eroding the bank on the upstream side severely before being deflected towards the two existing portal culverts.

#### **1.1 Selection of Site – Bridge**

The selection of bridge crossing point will have the greatest environmental impact. The proposed bridge and walkway will be constructed along a point with footpaths that have been developed over the years. Therefore the proposed crossing point has been selected as the preferred alternative as not to cause further disturbance to the environment. Engineering Designs prepared by consultants (Nankhoo Civil Engineers) and the flood assessment report prepared by BMK Engineers has taken the most efficient techniques with minimal impact to the environment into consideration.

**Risk Assessment**

**Risk Assessment Methodology**

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:

**Ranking Scales for Environmental Risk Assessment**

**Probability Rating (P)**

Rating	Probability
5	Definite
4	High Probability
3	Medium Probability
2	Low Probability
1	Improbable
0	None

## BASIC ASSESSMENT REPORT

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### Duration Rating (D)

Rating	Duration
5	Permanent
4	Long term (ceases with operational life)
3	Medium Term (5-15 years)
2	Short-term (0-5 years)
1	Immediate

### Scale Rating (S)

Rating	Scale
5	International
4	National
3	Regional
2	Local
1	Site
0	None

## BASIC ASSESSMENT REPORT

### Magnitude Rating (M)

Rating	Magnitude
10	Very High
8	High
6	Moderate
4	Low
2	Minor

After each impact is rated according to the ranking scales above, the **environmental significance** of each impact could be assessed by applying the following formula:

$$SP = (\text{MAGNITUDE (M)} + \text{DURATION (D)} + \text{SCALE(S)} \times \text{PROBABILITY (P)})$$

Where SP is defined as significance points. The maximum value of significance points (SP) is 100. Environmental effects could therefore be rated as either high (H), moderate (M), or low (L) significance is based on the following:

Rating	SP
>60 Points	High Environmental Significance (HES)
30-60 Points	Moderate Environmental Significance (MES)
<30 Points	Low Environmental Significance (LES)



## BASIC ASSESSMENT REPORT

**Proposal: Proposed construction of bridge over the tributary to Woodstock Dam along L464 in the Bergville area.**

### Impacts/Significance associated with the Construction Phase

Potential Impact	Proposed Mitigation	Significance Rating					
		Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Dust Pollution</u></b></p> <p>During construction high level of dust is emitted into the atmosphere by construction vehicles as well as some areas being stripped of vegetation and therefore sediment is produced as a result of dust that enters the environment in rainfall runoff.</p>	<p>During construction period areas that have been stripped of vegetation must be dampened periodically to avoid excessive dust and the construction vehicles must adhere to a speed limit to avoid excessive dust emission. These impacts are temporary and will only result over construction period. No surrounding dwellings will directly be affected. These impacts have been addressed in detail within the EMPr.</p>	<b>Before Mitigation</b>	Local	Immediate	Definite	High	<b>MES</b>
			2	1	5	8	<b>55</b>
		<b>After Mitigation</b>	Local	Immediate	Medium	Low	<b>LES</b>
			2	1	3	4	<b>21</b>

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Site Establishment</u></b></p> <p>Should the site not be secured it could cause a negative impact to the surrounding community as children may be exposed to hazardous chemicals and fuels. Lack of proper bins and sanitation facilities may cause pollution of site and negatively affect the receiving environment.</p>	<p>The construction camp and storage site should be fenced for the duration of the construction phase, in order to give maximum security to the surrounding environment and materials. Proper sanitation and recycling bins must be placed on site. The construction camp must be sited outside the 1:100 floodline. These impacts have been addressed in detail within the EMPr.</p>						
		<b>Before Mitigation</b>	Local	Immediate	High	Moderate	<b>MES</b>
			2	1	4	6	<b>36</b>
		<b>After Mitigation</b>	Site	Immediate	Low	Low	<b>LES</b>
			1	1	2	4	<b>12</b>

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b>Spillages</b></p> <p>Construction vehicles pose major threats with regards to spillages on-site; this may result in the contamination of soil and water. The presence of fuels and other chemicals on-site may have a negative impact on the groundwater.</p>	<p>Every effort should be made to ensure that any chemicals or hazardous substances do not contaminate the soil or ground water on site. Cement will be mixed off-site and construction vehicles kept at a distance from the watercourse. These impacts have been addressed in detail within the EMPr.</p>						
		<b>Before Mitigation</b>	Site	Immediate	High	Moderate	<b>MES</b>
			1	1	4	6	<b>32</b>
		<b>After Mitigation</b>	Site	Immediate	Low	Low	<b>LES</b>
			1	1	2	4	<b>12</b>

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Soil Erosion</u></b></p> <p>During construction the removal of ground cover (vegetation) increases the probability of the soil being eroded by wind as well as stormwater. All topsoil that will be removed during construction will be prone to erosion. Increase of hardened surfaces due to compaction by vehicles and equipment, thereby increasing stormwater runoff which may lead to soil erosion.</p>	<p>All topsoil will be stockpiled using the appropriate erosion control techniques. Soil erosion was evident at various points along the watercourse since the existing structure was built in a wrong position. Surface flow of water at the site during construction should be controlled to avoid soil erosion. A rehabilitation plan will be included in the EMPr to address the mitigation measures that must be implemented to reduce soil erosion on site.</p>						
		<b>Before Mitigation</b>	Site	Short-term	Definite	High	<b>MES</b>
			1	2	5	8	<b>55</b>
		<b>After Mitigation</b>	Site	Short-term	Low	Low	<b>LES</b>
	1	2	2	4	<b>14</b>		

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Unplanned routes/footpaths</u></b></p> <p>During the construction phase, 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.</p>	<p>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. These impacts have been addressed in detail within the EMPr.</p>							
		<b>Before Mitigation</b>	Site	Immediate	High	Moderate	<b>MES</b>	
			1	1	4	6	<b>32</b>	
		<b>After Mitigation</b>	Site	Immediate	Low	Low	<b>LES</b>	
			1	1	2	4	<b>12</b>	

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Water Resource</u></b></p> <p>During construction water would be used for dust control when clearing vegetation and for road traffic; for making concrete for foundations of the structures; and for consumptive use by the construction crew. Water could be obtained from the watercourse causing strain on the watercourse.</p>	<p>Water will be transported to the site via tanks which will eliminate the impact. No water will be extracted from any watercourse during the construction phase. The construction crew will be educated regarding the protection of the watercourse.</p>							
		<b>Before Mitigation</b>	Site	Immediate	High	Moderate	<b>MES</b>	
			1	1	4	6	<b>32</b>	
		<b>After Mitigation</b>	Site	Immediate	Improbable	Minor	<b>LES</b>	
			1	1	1	2	<b>4</b>	

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>River Bank Disturbance &amp; Erosion</u></b></p> <p>During the construction phase the river bed and banks may be disturbed due to construction materials and vehicles. Soil stripping and clearing can result in soil erosion and also result in sedimentation in the watercourse. Inappropriate design and alignment of the river bridge may result in flow problems such as impeding/diverting flow which may result in bank erosion</p>	<p>After construction, all slopes must be stabilised to reduce the risk of erosion. Where possible, stockpiled topsoil must be used for rehabilitation. Ensure that no rubble is left in the river after completion of work. The river should be returned to its natural state after construction. A rehabilitation plan will be implemented after the construction phase. The ECO will monitor the rehabilitation and closure of the construction phase.</p>						
		<b>Before Mitigation</b>	Site	Short-term	High	Moderate	<b>MES</b>
			1	2	4	6	<b>36</b>
		<b>After Mitigation</b>	Site	Short-term	Low	Low	<b>LES</b>
	1	2	2	4	<b>14</b>		

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Aquatic Vegetation</u></b></p> <p>During construction the removal of indigenous aquatic vegetation increases the likelihood of the area being invaded by alien species decreasing the biodiversity of the area. The removal of aquatic vegetation may lead to insufficient control on bank stability or potential buffer for dissolved and particulate material entering the channel from the hill slope.</p>	<p>No indigenous vegetation will be removed as the area has been transformed and is dominated by grass species and footpaths. Indigenous species will be planted to rehabilitate the site as outlined in the rehabilitation plan addressed in the EMPr.</p>							
		<b>Before Mitigation</b>	Site	Short-term	High	High	<b>MES</b>	
			1	2	4	8	<b>44</b>	
		<b>After Mitigation</b>	Site	Short-term	Low	Low	<b>LES</b>	
			1	2	2	4	<b>14</b>	



BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Downstream Hydrology and Stormwater Runoff</u></b></p> <p>During the construction phase, storm water runoff could lead to erosion of topsoil and siltation of the watercourse without the proper mitigation measures in place, and side drains not properly constructed. The suspended solids, silt or chemical pollutants could lead to pollution of downstream watercourses or groundwater.</p>	<p>There should be proper sediment control in place to prevent siltation. During site establishment, stormwater culverts and drains are to be located and covered with metal grids to prevent blockages. The Contractor shall not in any way modify nor damage the banks and drainage lines adjacent to or within the designated area. A Storm Water Management Plan prepared by the Engineer addressed these concerns.</p>	<b>Before Mitigation</b>	Local	Short-term	High	Low	<b>MES</b>
			2	2	4	4	<b>32</b>
		<b>After Mitigation</b>	Site	Immediate	Medium	Minor	<b>LES</b>
			1	1	3	2	<b>12</b>

## BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Visual impact</u></b></p> <p>If the construction site is kept untidy it could have negative visual impact on the community. If facilities such as toilets, bins, tanks and topsoil stockpiles are left uncovered and unfenced could have a negative visual impact on the community as well as potentials visitors in the area and could be a health and safety issue.</p>	<p>The ECO shall regularly inspect the site to ensure that it is neat and clean. The site shall be kept visually and aesthetically pleasing, especially in and around the construction camp. The proposed river bridge construction will improve aesthetics from visual perspective.</p>							
		<b>Before Mitigation</b>	Local	Short-term	High	Moderate	<b>MES</b>	
			2	2	4	6	<b>40</b>	
		<b>After Mitigation</b>	Site	Short-term	Low	Low	<b>LES</b>	
1	2		2	4	<b>14</b>			

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Surface and ground water</u></b></p> <p>Spillage of hazardous chemicals and oil and fuel leaks from construction vehicles may result in the contamination of soil and groundwater. Poor management with regards to solid waste collection at the construction site could lead to surface water contamination.</p>	<p>Storage of materials, chemicals and fuels must be kept safely that it may not cause risk to the Surface and ground water. Temporary bunds must be constructed around chemical or fuel storage area and such storages should be located outside 1:100 year floodline of the water source. This impact has been addressed in detail in the EMPr.</p>						
		<b>Before Mitigation</b>	Site	Immediate	High	Moderate	<b>MES</b>
			1	1	4	6	<b>32</b>
		<b>After Mitigation</b>	Site	Immediate	Medium	Low	<b>LES</b>
	1	1	3	4	<b>18</b>		

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Waste Disposal and Sanitation</u></b></p> <p>Waste is generated throughout the construction phase and therefore the possibility of the area being polluted is increased. Waste such as plastic and paper will impact surrounding animals if ingested. Inadequate sanitation could lead to pollution of the water table.</p>	<p>Portable chemical toilets will be available on site, these sanitation facilities must be situated out of 1:100 year floodline of any watercourse. Waste will be disposed at a permitted landfill site and recycling material such as glass, paper and plastic will be encouraged among the construction workers. These impacts have been addressed in the EMPr.</p>						
		<b>Before Mitigation</b>	Site	Short-term	High	Moderate	<b>MES</b>
			1	2	4	6	<b>36</b>
		<b>After Mitigation</b>	Site	Short-term	Low	Low	<b>LES</b>
	1	2	2	4	<b>14</b>		

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Heritage impacts</u></b></p> <p>During construction the construction vehicles may cause impact to surrounding artefacts and fossils. If no environmental education is given to the construction workers they may remove or damage heritage structures where such damage could affect the historic, social, and amenity values of the community.</p>	<p>No graves or historic structures were located along the proposed route or its vicinity. However if any artefacts or fossils are found during the construction phase, work will cease immediately and the relevant authority will be informed. Construction will commence after authorization by relevant authority is granted.</p>						
		<b>Before Mitigation</b>	Local	Short-term	High	Moderate	<b>MES</b>
			2	2	4	6	<b>40</b>
		<b>After Mitigation</b>	Site	Short-term	Low	Low	<b>LES</b>
			1	2	2	4	<b>16</b>

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Noise disturbance</u></b></p> <p>Excessive noise pollution from the construction sites may impact the surrounding environment. Construction machinery (e.g. jackhammer) and construction vehicles (e.g. trucks loaded with stone and water tanks) will create noise.</p>	<p>Such noise will be generated in a discontinuous fashion during daytime only while the bridge is being built. This impact is temporary in nature as it will last during the construction phase. These impacts have been addressed in detail within the EMPr.</p>							
		<b>Before Mitigation</b>	Local	Immediate	Definite	Moderate	<b>MES</b>	
			2	1	5	6	<b>45</b>	
		<b>After Mitigation</b>	Local	Immediate	Medium	Low	<b>LES</b>	
			2	1	3	3	<b>18</b>	

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Spread of Alien Vegetation</u></b></p> <p>The removal of topsoil and natural vegetation with an increase in human activity may result in the introduction of alien vegetation.</p>	<p>The Contractor should be responsible for implementing a programme of weed control (particularly in areas where the soil has been disturbed); and grassing any remaining stockpiles to prevent weed invasion. The infrastructure associated with the proposed river bridge construction must be designed so that the natural state of the surrounding area is kept to avoid spread of alien vegetation. The EMPR will address this issue in more detail.</p>	<b>Before Mitigation</b>	Local	Short-term	High	Moderate	<b>MES</b>	
			2	2	4	6	<b>40</b>	
		<b>After Mitigation</b>	Local	Short-term	Low	Low	<b>LES</b>	
2	2		2	4	<b>16</b>			

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
<p><b><u>Socio-Economic Impact</u></b></p> <p>Improved living standards. Bridges give easy access to basic amenities such as clinics and schools. Positive Impact noted.</p>	<p>Positive impact noted.</p>		<b>Scale</b>	<b>Duration</b>	<b>Probability</b>	<b>Magnitude</b>	<b>Significance Points (SP)</b>
		<b>Before Mitigation</b>	Local	Permanent	High	N/A	<b>LES</b>
			2	5	4	N/A	<b>28</b>
		<b>After Mitigation</b>	Local	Permanent	High	N/A	<b>LES</b>
			2	5	4	N/A	<b>28</b>



BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
<p><b><u>Socio-Economic Impact</u></b></p> <p>The construction phase will be associated with positive socio-economic impacts as construction creates temporary employment for community members. The road would increase the potential for residents to improve their business potential both locally and give them better access to outside markets.</p>	<p>Positive Impact noted.</p>		Scale	Duration	Probability	Magnitude	Significance Points (SP)	
		<b>Before Mitigation</b>	Local	Short-term	Definite	N/A	<b>LES</b>	
			2	2	5	N/A	<b>20</b>	
		<b>After Mitigation</b>	Local	Short-term	Definite	N/A	<b>LES</b>	
			2	2	5	N/A	<b>20</b>	

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
<p><b><u>No-go option</u></b></p> <p>Safety – the existing structure is old and continues to cause a bottle neck for the river causing erosion. The existing structure is damages and hard to access during high rainfall seasons. The local community’s safety will therefore be compromised.</p>	N/A		<b>Scale</b>	<b>Duration</b>	<b>Probability</b>	<b>Magnitude</b>	<b>Significance Points (SP)</b>
		<b>Before Mitigation</b>	-	-	-	-	-
			-	-	-	-	-
		<b>After Mitigation</b>	-	-	-	-	-
			-	-	-	-	-

## BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>No-go option</u></b></p> <p>Safety - During most rainy seasons, the bridge becomes is slippery and muddy. The local community's safety will therefore be compromised.</p>	N/A							
		<b>Before Mitigation</b>	-	-	-	-	-	
			-	-	-	-	-	
		<b>After Mitigation</b>	-	-	-	-	-	
			-	-	-	-	-	

BASIC ASSESSMENT REPORT

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**Significant Impacts associated with the Operational Phase**

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<b><u>Waste Generation</u></b>  Extra waste generated during the construction phase could result in added pressure placed on the local landfill site.	This is temporary in nature as no waste will be generation during operation phase. Addressed in the EMPr and EIA phase.						
		<b>Before Mitigation</b>	Local	Immediate	Medium	Moderate	<b>LES</b>
			2	1	3	6	<b>30</b>
		<b>After Mitigation</b>	Local	Immediate	Low	Low	<b>LES</b>
	2	1	2	4	<b>14</b>		

## BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Increased traffic in the area</u></b></p> <p>The proposed construction of the bridge would lead to increased traffic in the area. This could lead to soil erosion, gathering of waste as well as loss of peace in the community.</p>	<p>This does not pose a major impact as there is river crossing point currently utilised by local residents. This is a rural community with minimal activities.</p>						
		<b>Before Mitigation</b>	Local	Long-term	Medium	Moderate	<b>MES</b>
			2	4	3	6	<b>36</b>
		<b>After Mitigation</b>	Local	Long-term	Low	Minor	<b>LES</b>
2	2		2	2	<b>12</b>		

## BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Increased vehicular fumes</u></b></p> <p>Increase of cars utilizing the bridge will contribute to air pollution.</p>	<p>It is not envisaged that the increased vehicular fumes will contribute significantly to increased localized air pollution as this is a rural community. Addressed in detail within the EMPr.</p>						
		<b>Before Mitigation</b>	Local	Medium-term	Medium	Moderate	<b>MES</b>
			2	3	3	6	<b>33</b>
		<b>After Mitigation</b>	Local	Short-term	Medium	Low	<b>LES</b>
			1	2	3	4	<b>21</b>

## BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Safety Issues for the community</u></b></p> <p>Increase accessibility to the community could lead to increase criminal activities by interlopers.</p>	<p>The proposed bridge is within a rural community and there has been an existing crossing point in the area; therefore safety issues do not pose a major threat.</p>	<b>Before Mitigation</b>	Local	Long term	Medium	Moderate	<b>MES</b>
			2	4	3	6	<b>36</b>
		<b>After Mitigation</b>	Local	Long term	Low	Minor	<b>LES</b>
			2	4	2	2	<b>16</b>

## BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating						
			Scale	Duration	Probability	Magnitude	Significance Points (SP)	
<p><b><u>Increased Noise</u></b></p> <p>Increase accessibility may cause excessive noise that may harm the activity or balance of human or animal life.</p>	<p>The road services the local community, therefore noise levels should not be affected greatly by the upgrade. Construction time is strictly restricted to working hours</p>							
		<b>Before Mitigation</b>	Local	Short-term	Medium	Moderate	<b>MES</b>	
			2	4	3	6	<b>36</b>	
		<b>After Mitigation</b>	Local	Immediate	Low	Minor	<b>LES</b>	
			2	1	3	2	<b>15</b>	



BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Increased socio-economic benefits</u></b></p> <p>The positive impact is that of increased socio-economic development to the local community. Efficient access to amenities, for instance, clinics and schools.</p>	Positive Impact Noted						
		<b>Before Mitigation</b>	Local	Permanent	High	N/A	<b>LES</b>
			2	5	4	N/A	<b>28</b>
		<b>After Mitigation</b>	Local	Permanent	High	N/A	<b>LES</b>
			2	5	4	N/A	<b>28</b>

BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<p><b><u>Increased socio-economic benefits</u></b></p> <p>The positive impact is that of increased socio-economic development to the local community. Efficient access to amenities, for instance, clinics and schools.</p>	Positive Impact Noted						
		<b>Before Mitigation</b>	Local	Permanent	High	N/A	<b>LES</b>
			2	5	4	N/A	<b>28</b>
		<b>After Mitigation</b>	Local	Permanent	High	N/A	<b>LES</b>
			2	5	4	N/A	<b>28</b>

## BASIC ASSESSMENT REPORT

Potential Impact	Proposed Mitigation	Significance Rating					
			Scale	Duration	Probability	Magnitude	Significance Points (SP)
<b><u>No-go option</u></b>  Safety - During most rainy seasons, the bridge is muddy. The local community's safety will therefore be compromised.	N/A						
		<b>Before Mitigation</b>	-	-	-	-	-
			-	-	-	-	-
		<b>After Mitigation</b>	-	-	-	-	-
			-	-	-	-	-

**Summary of score rating for the proposed bridge.**

The proposed bridge has been carefully planned to cater for the substantiated needs and requirements of the community while being mindful of imposing the least negative environmental impact. The proposed development will occur in a new crossing point since the old crossing point was built in a wrong position and has negative impact on the environment. No indigenous vegetation will be removed as the area has been transformed and is dominated by alien species and footpaths. The proposed bridge does not transverse any environmentally sensitive areas, including wetlands and homesteads. Additionally, the proposed development will serve as rehabilitation to the environment. According to the risk rating after all significant impacts were taken into consideration, the preferred alternative is said to have a **low environmental significance** after all impacts were rated individually with and without mitigation. It was found that most of the impacts listed and rated have a low environmental significance with the mitigations being implemented.

**Alternative 2:**

No alternative site has been identified. Alternative alignments would require additional disturbance to the environment with very little potential of improvement in terms of environmental performance. The proposed bridge and sidewalk construction site has been selected as the best practical option to rehabilitate the disturbed natural flow of the river which has caused erosion.

**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 bridge construction have been identified and key impacts and their mitigation measures are provided in this report. 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.

**The following factors were taken into consideration (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 15 m away from the stream and drainage line except where needed for the construction of the low level bridge. As per the EMPR, no materials may be stored within 30 m 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 bridge should be constructed.

This construction would result in minor environmental and social impact 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 crossing with portal culverts.

## BASIC ASSESSMENT REPORT

### Alternative B

N/A

### Alternative C

N/A

### No-go alternative (compulsory)

Should the proposed construction of the 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 crossing point provides the local community access to a number of services. The proposed construction has positive impacts with minimal environmental impacts.



## BASIC ASSESSMENT REPORT

### 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; immediate to short - term significance** on the receiving environment (albeit extremely limited).
- 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

## BASIC ASSESSMENT REPORT

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.
- Based on the status quo above and given the indigent nature of the communities affected it is the EAP's recommendation that the bridge structure 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**

# **AERIAL PHOTO**

# **APPENDIX A.3**

## **TOPOGRAPHICAL MAP**

# **APPENDIX B**

# **SITE PHOTOS**

# **APPENDIX C**

## **DESIGN INFORMATION**

- **C.1 – DESIGN REPORT**
- **C.2 – GENERAL ARRANGEMENT DRAWING OF STRUCTURE**
- **C.3 – FLOOD ASSESSMENT REPORT**

**C.1 – DESIGN REPORT**



## **C.2 – GENERAL ARRANGEMENT OF STRUCTURE**

**C.3 – FLOOD ASSESSMENT REPORT**

# **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.6 – COMMENTS FROM KZN WILDLIFE**
- **D.7 – COMMENTS FROM WATER & SANITATION**

**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.6 – COMMENTS FROM KZN WILDLIFE**

**D.7 – COMMENTS FROM WATER & SANITATION**

**APPENDIX E**  
**ENVIRONMENTAL MANAGEMENT**  
**PROGRAMME (EMPR)**