



Pongola River Bridge Basic Social Assessment

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Kim Moonsamy

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Reviewed by: KL MOONSAMY

Approval:

Signature

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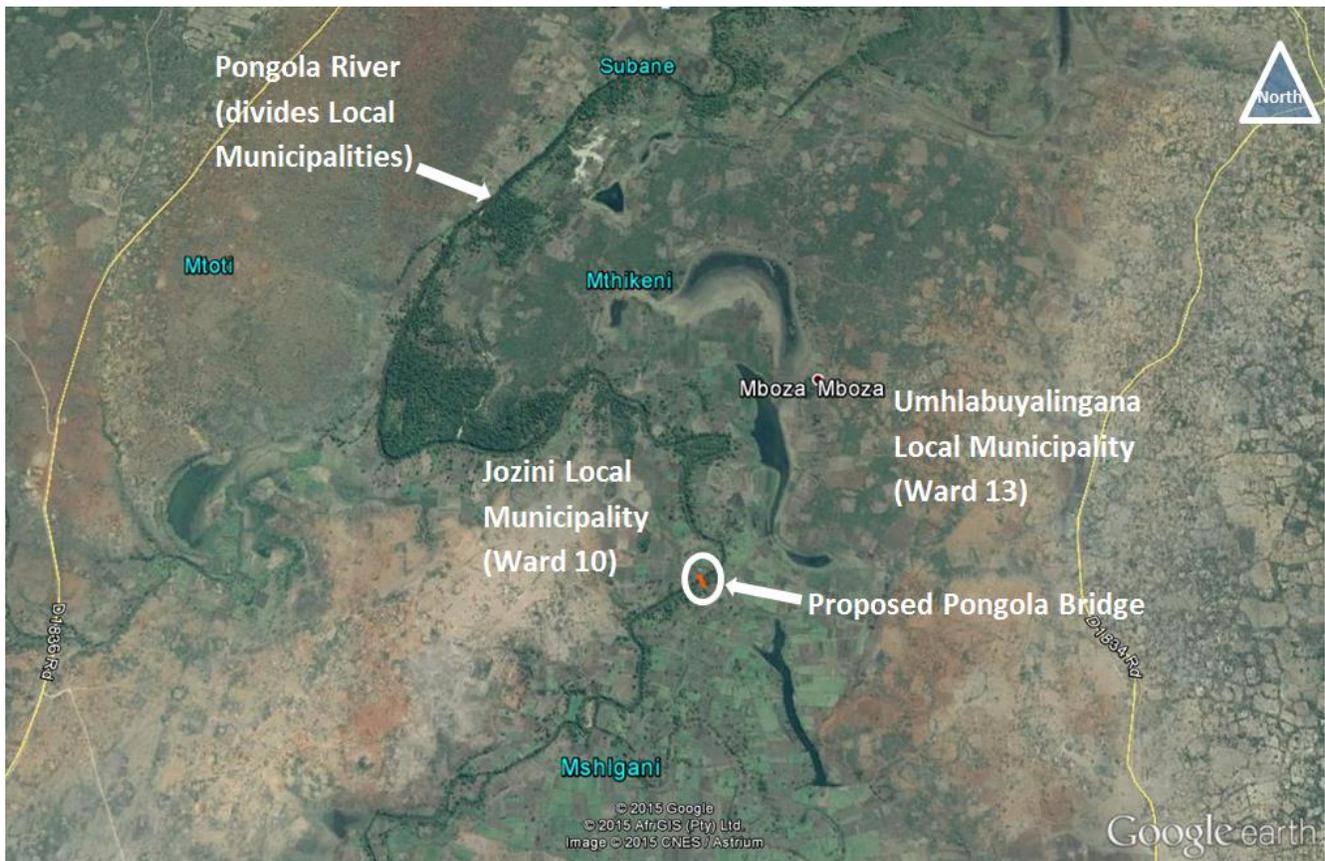
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1 INTRODUCTION

1.1 Project Background

Royal HaskoningDHV has been tasked to perform a Basic Social Assessment (BSA) for the construction of the Pongola River Bridge in Pongola, Kwa Zulu Natal. This report is the BSA that will be submitted together with other applicable specialist studies and the overarching Environmental Basic Assessment Report to the Department of Transport.



MAP 1-1: LOCALITY MAP OF THE PROPOSED PONGOLA RIVER BRIDGE

The proposed Pongola Bridge will link two Local Municipalities found in the Umkhanyakude District, that is, the Umhlabuyalingana Local Municipality (LM) and the Jozini Local Municipality. The east of the bridge (towards the Umhlabuyalingana LM) will lead to the D1834 road (2.8 kms¹ away) and the Mboza clinic. The west of the Bridge (towards Jozini Local Municipality) will lead to the D1836 (4.7 kms away) and the Munyu primary school.

¹ Approximate direct line distances.

The bridge construction footprint will be approximately 500m². The bridge itself will be 6 meters (m) wide and 60 meters long. It will be a single, wide lane 4 meters in width. It will also have a 1.1 meters wide sidewalk with parapet hand railings. The height to the carriageway level will be 2 meters.

The length of the approach roads² (towards the bridge) will cater for 100 meters on either side, 200 meters in total. Road works will be limited to 45 meters on either side of the structure.

1.2 Scope of the Basic Social Assessment

This Basic Social Assessment has been developed in order to define and assess the specific current social and economic conditions and resulting conditions before, during and following the bridge development. The report takes account of the current reality in terms of the rural nature of the residential and road user population (beneficiaries) and assesses the significant impact that this bridge development will have on such beneficiaries. The BSA recommends mitigatory measures that will serve to enhance the significance of the positive impacts, while diminishing negative impacts (if any).

1.3 Methodology

This Basic Social Assessment is conducted using the ‘desktop approach.’ All available secondary data that is currently in the public domain has been utilised to contribute to information gathering and subsequent analysis. Secondary data from the relevant local municipalities, as well as statistical presentations of the relevant area (as produced by Statistics South Africa, 2011), were utilised.

1.4 Assumptions and Limitations

- The report is based on information obtained via the EIA (Environmental Impact Assessment) project team, engineers, and various specialists, and is valid based on such information received at the time,
- Should any critical elements of the project have changed (for example design elements), the report will need to take account of such adjustments, and
- It is only the bridge development which has been considered, not the approach roads to the bridge.

1.5 Structure of this Report

This Social Assessment report is presented in the following structure:

| | | |
|----------------------|---|--|
| <i>Section One</i> | : | Brief introduction (Project Background, Methodology, Assumptions and Limitations); |
| <i>Section Two</i> | : | General overview of the relevant municipal Wards |
| <i>Section Three</i> | : | A description of the surrounding communities; |

² Note: this project does not include the building of the approach roads from either side of the bridge.

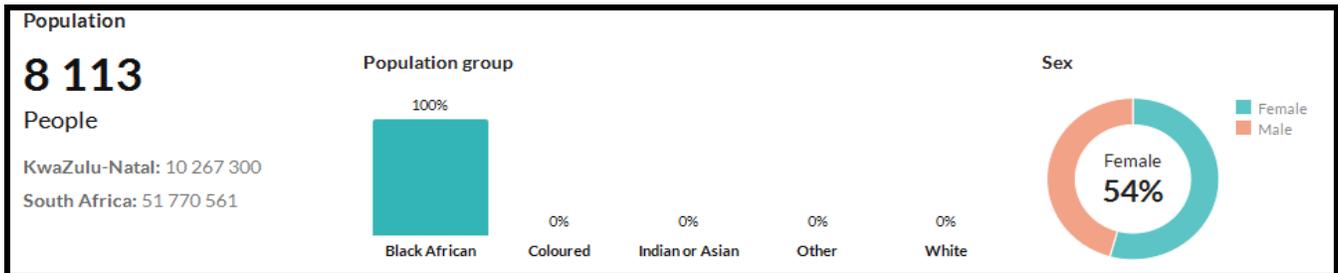
- Section Four : Impact assessment and mitigation measures;
- Section Five : Recommendations; and
- Section Six : Bibliography.

2 GENERAL OVERVIEW OF THE RELEVANT MUNICIPAL WARDS

The project site is found in the overlapping jurisdiction of the Umhlabuyalingana LM (Ward 13) and the Jozini LM (Ward 10), within the uThungulu District Municipality of the province of Kwa Zulu Natal.

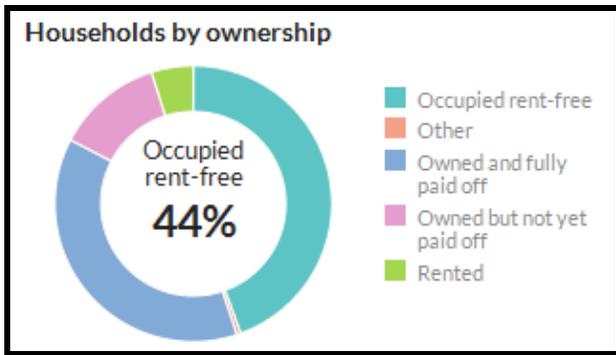
The particular challenges faced by local residents (due to the proposed development) which may affect their lifestyles or livelihoods (whether of a positive or negative consequence), can only be ascertained when viewed in context of their everyday lives. The most credible data that lends to such an understanding has been assimilated and presented by Statistics South Africa via the 2011 South African Country Survey. Relevant results for the said Wards are presented within this section. The results for both relevant Wards are similar due to their proximity and rural nature.

According to Census 2011, produced by Statistics South Africa, there are 8 113 people living in Ward 13 of the Umhlabuyalingana LM. The median age in the Ward is 16 years, with 53% of the Ward’s population under the age of 18 years. This is reflective of a very young population. Fifty four (54%) percent of the population are recorded as ‘female.’



GRAPH 2-1: WARD 13 POPULATION

Ninety five percent (95%) of the Ward’s population speak isiZulu, and 96% are reportedly born on the province. There are 1 674 households in the Ward, with 29% of these households living in formal housing and nearly 62% residing in ‘traditionally built’ houses. Slightly over 50% of households either own or are in the process of paying off the costs of their houses. It is reported that 37.7% have confirmed owning and already paid off their residences. Forty four percent (44%) are occupying their residences, rent free.

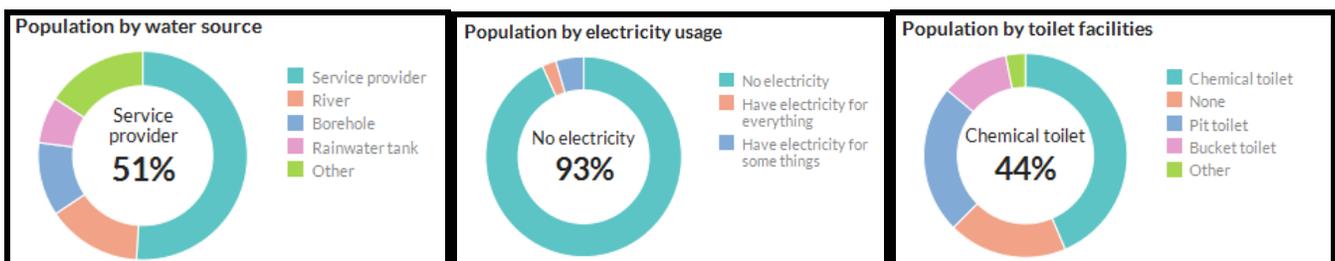


GRAPH 2-2: WARD 13 HOUSEHOLDS BY OWNERSHIP

Heads of households are primarily female (54%). This may be due to a number of reasons, although the primary reason may be that many working age men tend to migrate to the larger cities in search of work, leaving the female of the household in charge.

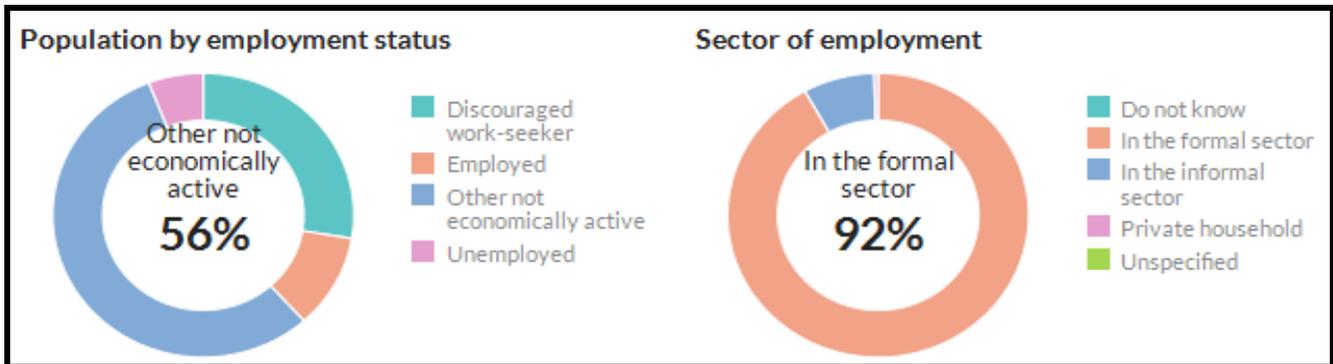
The average income of households is R14 600 per year. When assessed further one can estimate that each household is living off approximately \$3 per day. This is well below the United National Poverty assessment of the ‘breadline’ conditions of \$2 per person, per day, bearing in mind that the average household in the Ward supports at least five people.

An estimated 51% of the Ward’s population utilise the local water service provider for access to water. A small percentage, 14.6% utilise water from nearby rivers. Very few homes in the Ward have access to electricity supply (93%), and a small number of homes have access to chemical/ flush toilets (44%). Over 34% of Ward residents still utilise pit latrines and bucket toilets, while almost 19% reportedly have no access to any form of toilet facility.



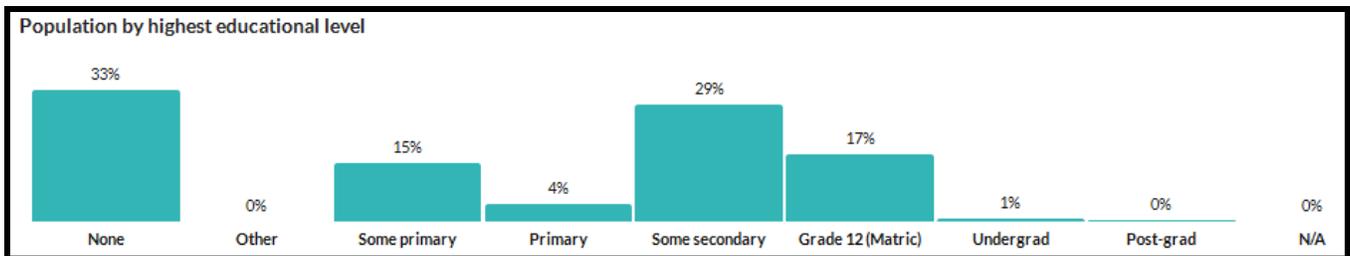
GRAPH 2-3: WARD 13 WATER, SANITATION AND SANITATION PROVISION

Just over 10% of the Ward’s working age population is reportedly employed, with 56% not economically active. This is indicative of a subsistence based economy, where residents are ‘living off the land.’ This kind of food insecurity will leave the Ward’s population very vulnerable during times of severe climatic changes such as droughts and floods. Ninety two percent (92%) of the small number of employed individuals reportedly work in the formal sector within the Ward, with a small percentage (7.6%) in the informal sector.



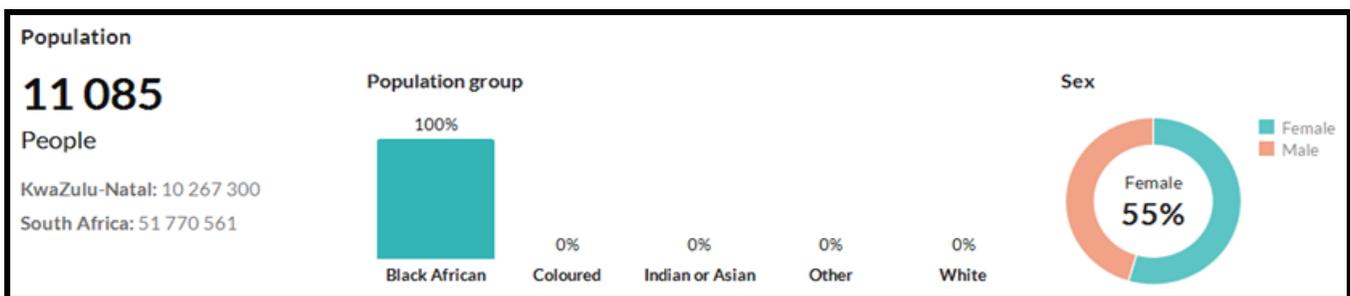
GRAPH 2-4: WARD 13 EMPLOYMENT

Slightly over 42% of the Ward’s population have completed Grade 9 or a higher educational level, with just over 18% of that figure completing Grade 12 or a higher educational level. Thirty three (33%) of individuals have never been to school. These statistics are indicative of a very high uneducated population, higher than the province’s and national average.



GRAPH 2-5: WARD 13 EDUCATIONAL LEVEL

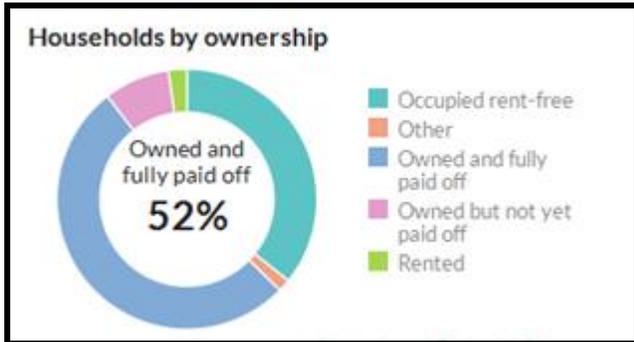
According to Census 2011, produced by Statistics South Africa, there are 11 085 people living in Ward 10 of the Jozini LM. The median age in the Ward is 16 years, with 54% of the Ward’s population under the age of 18 years. This is reflective of a very young population. Fifty five percent of the population are recorded as ‘female.’



GRAPH 2-6: WARD 10 POPULATION

Ninety six percent (96%) of the Ward’s population speak isiZulu, and 97% are reportedly born on the province. There are 2 062 households in the Ward, with 45% of these households living in formal housing and 37% residing in ‘traditionally built’ houses. Slightly over 60% of households either own or are in the process of paying off the

costs of their houses. It is reported that 52% have confirmed owning and already paid off their residences. Thirty five percent (35%) are occupying their residences, rent free.

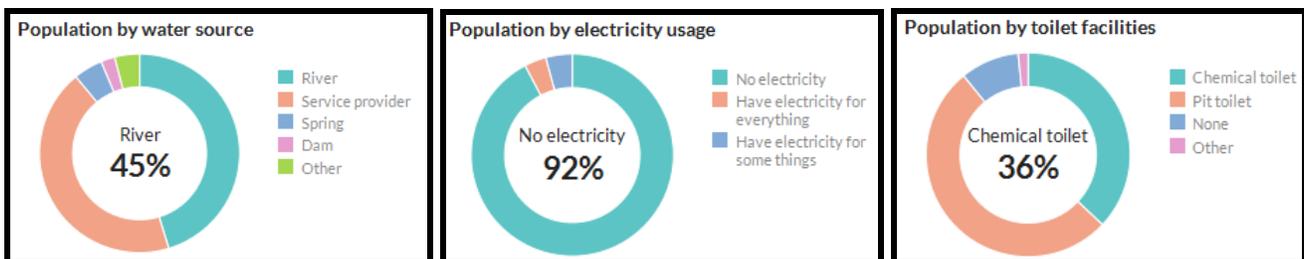


GRAPH 2-7: WARD 10 HOUSEHOLD OWNERSHIP

Heads of households are primarily female (56.5%). This may be due to a number of reasons, although the primary reason may be that many working age men tend to migrate to the larger cities in search of work, leaving the female of the household in charge.

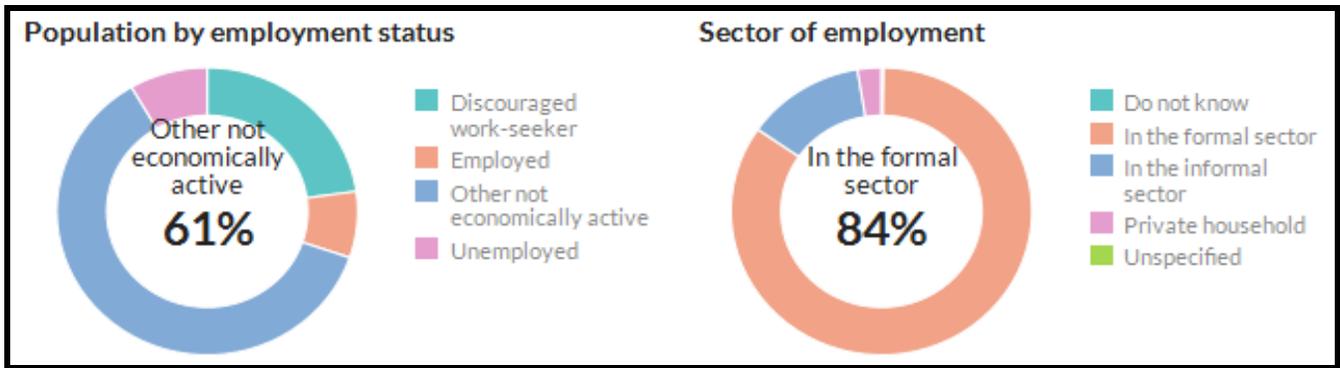
The average income of households is R14 600 per year. When assessed further one can estimate that each household is living off approximately \$3 per day. This is well below the United National Poverty assessment of the ‘breadline’ conditions of \$2 per person, per day, bearing in mind that the average household in the Ward supports at least five people.

An estimated 45% of the Ward’s population utilise the local water resources that are freely available due to poor access to tapped water. Very few homes in the Ward have access to electricity supply, and an even smaller number of homes have access to chemical/ flush toilets. Over 50% of Ward residents still utilise pit latrines.



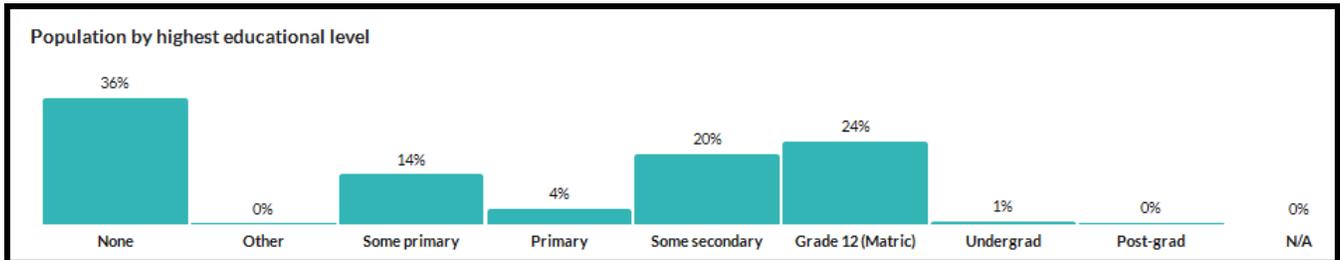
GRAPH 2-8: WARD 10 WATER, ELECTRICITY AND SANITATION PROVISION

Just over 7% of the Ward’s working age population is reportedly employed, with 61% not economically active. This is indicative of a subsistence based economy, where residents are ‘living off the land.’ This kind of food insecurity will leave the Ward’s population very vulnerable during times of severe climatic changes such as droughts and floods. Eighty four percent (84%) of the small number of employed individuals reportedly work in the formal sector within the Ward, with a small percentage (12%) in the informal sector.



GRAPH 2-9: WARD 10 EMPLOYMENT

Slightly over 41% of the Ward’s population have completed Grade 9 or a higher educational level, with almost 25% of that figure completing Grade 12 or a higher educational level. Slightly over 36% of individuals have never been to school. These statistics are indicative of a very high uneducated population, higher than the province’s and national average.



GRAPH 2-10: WARD 10 EDUCATIONAL LEVEL

3 A DESCRIPTION OF THE SURROUNDING COMMUNITIES

There are a number of villages (small communities) that will benefit from the proposed Bridge development. Some of those in closest proximity have been identified as:

Umhlabuyalingana Local Municipality (LM)

- Mshenga – 2.3 kms away;
- Siphondweni – 5.5 kms away;
- Hlazane – 4.8 kms away; and
- Mshlgani – 1.3 kms away.

Jozini Local Municipality

- Subane – 5 kms away;
- Msenyeni – 4.8 kms away; and
- Mtoti – 4.2 kms away.

The local population utilises the Pongola River and floodplain for its natural food resources (such as fishing) and growing subsistence crops. Agricultural activities are limited to subsistence and small-scale commercial farming. Much of the area is under threat due to subsistence for survival purposes or/and to developmental pressures.

The communities in both municipalities had voiced their need for a bridge over the Pongola River. Initially a pedestrian bridge, however later the communities realised the additional future advantages of a vehicular bridge. Access to other areas, increasing human movement (including for the purposes of trading or reaching social service institutions such as clinics and schools), are a few of the beneficial values that local communities envisage themselves deriving from the proposed Pongola River Bridge. The Umhlabuyalingana LM has included the need for such a bridge in its 2011-2016 Integrated Development Plan (IDP).

3.1 Secondary Road Networks

According to the Department of Transport's assessment of municipal road network report completed in 2007, the Umhlabuyalingana municipality has a total of 346 km of roads. This figure was determined by estimating the road lengths using a figure of 382 inhabitants per kilometre of paved and gravel road, and assuming that 8% of all roads can be classified as tracks. By applying the above assumptions, it is estimated that the Umhlabuyalingana municipality has 152 km of paved roads, 169km gravel roads and 26km of tracks. With exception of the road from Mbazwana to Manguzi, the road network is poor to very poor condition, and in dire need of upgrade. This is due to a number of existing roads being informal and in need of upgrading. These mainly include the local access roads that provide direct access to settlements. The majority of these roads exist as tracks.

Transports whether motorized or non-motorized face many challenges within the Municipal area. These can be summarized as follows:

- Poor conditions of roads;
- Inadequate pedestrian signs and markings and off-loading areas especially within the
- few urban areas;
- Limited traffic calming measures within areas of high accidents;
- An absence of traffic lights, especially at major intersections;
- Unavailability of adequate public transport facilities especially for the disabled;
- Lack of pedestrian and non-motorized transport facilities.

3.2 Importance of the Bridge

The bridge has been identified as a critically important mechanism that will increase communication, access to facilities, and the general movement of people, thereby increasing social, recreational and ultimately, economic ties.

4 IMPACT ASSESSMENT AND MITIGATION MEASURES

The overall significance score for each identified impact is calculated by multiplying **impact magnitude** by **environmental value or social value**. The range of possible impact significance scores is from 4 to 100. Possible significance scores are classified into seven rating classes as shown in the table below.

For the purpose of this assessment, a significance score of 39 to 44 (**medium-low**) is considered **‘acceptable but undesirable’** to society. Undesirable impacts are not recommended and should be mitigated, but they may be offset by significant gains (>44+) in other aspects of the environment. A significance score of 45 to 59 (**medium**) and 60 to 72 (**medium-high**) is considered **‘generally unacceptable’** to society and only high gains (>72+) in other aspects of the environment can or should offset this impact. However, trade-offs between ‘generally unacceptable’ and ‘highly beneficial’ impacts should be avoided where possible in line with the principles of sustainability. A significance score of over 72 (**high to very high**) is considered **‘totally unacceptable’** to society and no gains in other aspects of the environment can or should offset this impact.

TABLE 4-1: SIGNIFICANCE TABLE

| Significance Score | Significance Rating | Significance Interpretation | |
|--------------------|---------------------|-----------------------------|---------------------------------|
| | | Negative | Positive |
| 4 – 17 | Very Low | Acceptable | Limited Importance |
| 18 – 31 | Low | Acceptable | Limited Importance |
| 32 – 38 | Medium-Low | Acceptable | Mildly Important |
| 39 – 44 | Medium-Low | Acceptable But Undesirable | Moderately Important/Beneficial |
| 45 – 59 | Medium | Generally Unacceptable | Important/Beneficial |
| 60 – 72 | Medium-High | Generally Unacceptable | Very Important/Beneficial |
| 73 – 86 | High | Totally Unacceptable | Highly Important/Beneficial |
| 87 – 100 | Very High | Totally Unacceptable | Critically Important/Beneficial |

4.1 Impact and mitigation tables

Social and economic issues have been assessed via the use of a widely used assessment methodology, and are presented in the table below. The impact significance in each of the three phases of project development (pre-construction, construction and operation) has been accounted for, as well as the specific impacts that may occur in each phase. Necessary mitigation measures have also been recommended for each impact.

TABLE 4-2: IMPACTS AND MITIGATION TABLE (PRE-CONSTRUCTION, CONSTRUCTION AND OPERATION)

| Impact and Mitigation Table | | |
|------------------------------------|--|---|
| | Pre-mitigation impact rating | Post mitigation impact rating |
| Construction Phase | | |
| Impact 01 | Socio-economic | |
| <i>Issue/ Impact</i> | Establishment of informal settlements - on community land by people seeking work opportunities | |
| Social/economic/agricultural value | 1 | 1 |
| Extent | 1 | 1 |
| Probability | 1 | 1 |
| Degree of disturbance | 1 | 1 |
| Duration | 1 | 1 |
| Impact magnitude | 5 | 5 |
| Impact significance | 5 (Negative very low, limited importance) | 5 (Negative very low, limited importance) |
| <i>Mitigation Measures</i> | No unknown informal dwellers will be given permission by the local Nkosi/s to build homes. As a result while job seekers and the resulting informal settlements are a reality in most situations where development projects are taking place, this area is under the customary control of the (Nkosi's (Gumede and Tembe) from the Mashabane and Nyawo Traditional Authorities respectively, and such incidences are not likely. | |
| | | |
| Impact 02 | Socio economic | |
| <i>Issue/ Impact</i> | Changes in local employment and incomes through project recruitment | |
| Social/economic/agricultural value | 5 | 5 |
| Extent | 2 | 2 |
| Probability | 3 | 3 |
| Degree of disturbance | 2 | 2 |
| Duration | 1 | 1 |
| Impact magnitude | 8 | 8 |
| Impact significance | 40 (Positive medium-low, moderately important/ beneficial) | 40 (Positive medium-low, moderately important/ beneficial) |
| <i>Mitigation Measures</i> | The project will have to employ a certain contingent of local labour during the construction period. The formulation of a formal recruitment policy will ensure fair access to jobs, especially for local residents. This must be a requirement of companies working in the construction phase. | |
| | | |

| Impact and Mitigation Table | | |
|------------------------------------|--|---|
| | Pre-mitigation impact rating | Post mitigation impact rating |
| Impact 03 | Socio economic | |
| <i>Issue/ Impact</i> | Increased business opportunity through the procurement of goods and services | |
| Social/economic/agricultural value | 5 | 5 |
| Extent | 2 | 2 |
| Probability | 3 | 3 |
| Degree of disturbance | 2 | 2 |
| Duration | 1 | 1 |
| Impact magnitude | 8 | 8 |
| Impact significance | 40 (Positive medium-low, moderately important/ beneficial) | 40 (Positive medium-low, moderately important/ beneficial) |
| <i>Mitigation Measures</i> | This project does not anticipate considerable procurement of goods and services. Procurement of labour services will possibly be 10 contracting staff and 10 local labour staff for the duration of the construction period. A contractor Procurement policy must be maintained. | |
| | | |
| Impact 04 | Socio economic | |
| <i>Issue/ Impact</i> | Increased opportunity for informal business development | |
| Social/economic/agricultural value | 1 | 1 |
| Extent | 1 | 1 |
| Probability | 1 | 1 |
| Degree of disturbance | 1 | 1 |
| Duration | 1 | 1 |
| Impact magnitude | 5 | 5 |
| Impact significance | 5 (Positive very low, limited importance) | 5 (Positive very low, limited importance) |
| <i>Mitigation Measures</i> | Low positive impact that will remain the same. There will not be a dire need for locally produced goods, however informal trading that may to a small degree supply the contracting staff with daily basic requirements, may establish during the construction period. | |
| | | |
| Impact 05 | Socio economic | |
| <i>Issue/ Impact</i> | Inconvenience and danger to proximate residents and livestock through increased road traffic and dust | |
| Social/economic/agricultural value | 4 | 4 |
| Extent | 1 | 1 |
| Probability | 4 | 1 |
| Degree of disturbance | 3 | 1 |
| Duration | 3 | 1 |
| Impact magnitude | 15 | 5 |
| Impact significance | 60 (Negative medium -high, generally unacceptable) | 20 (Negative low, acceptable) |

| Impact and Mitigation Table | | |
|------------------------------------|---|---|
| | Pre-mitigation impact rating | Post mitigation impact rating |
| <i>Mitigation Measures</i> | The local community is most seriously affected due to the use of the same road to enter and leave the project site. A policy on Contractor Health and Safety for the duration of their work on site, must apply, and be monitored. Regular information sharing discussions with the Contractors must be pursued, giving residents an opportunity to voice concerns and grievances throughout the project construction duration. Apart from residents, cattle will also be at a greater health and safety risk during the construction phase due to the movement of an increased number of heavy vehicles. Specific caution to must be undertaken. | |
| Impact 06 | Socio economic | |
| <i>Issue/ Impact</i> | Local dissatisfaction due to finite jobs and perceived preferential access to these jobs and procurement | |
| Social/economic/agricultural value | 5 | 5 |
| Extent | 2 | 1 |
| Probability | 3 | 1 |
| Degree of disturbance | 2 | 1 |
| Duration | 1 | 1 |
| Impact magnitude | 8 | 5 |
| Impact significance | 40 (Negative medium-low, acceptable but undesirable) | 25 (Negative low, acceptable) |
| <i>Mitigation Measures</i> | <p>Only a certain number of people will be employed during construction, that is 10 contractor labour contingency, and 10 local labour contingency. In the context of widespread unemployment, local residents (and especially people in the proximate area to the development) will be dissatisfied if access to the finite construction phase jobs and the provision of associated services is perceived to be biased and preferential. The establishment of a labour office during construction may dispel fears that the recruitment of local labour is political, gender or culturally biased. The labour office is more likely to be seen as independent and objective. Contractors must develop and implement recruitment and employment policy, and a goods and services procurement policy that will promote fair access to jobs and procurement opportunities, through an objective and transparent process.</p> <p>In addition, the local Nkosi's (Gumede and Tembe) from the Mashabane and Nyawo Traditional Authorities respectively, must each assist in communicating labour processes and constraints to the local job seekers.</p> | |
| Operation Phase | | |
| Impact 01 | Socio economic | |
| <i>Issue/ Impact</i> | Increased access to local services (education, health facilities, etc.) | |
| Social/economic/agricultural value | 5 | 5 |
| Extent | 5 | 5 |
| Probability | 5 | 5 |
| Degree of disturbance | 5 | 5 |
| Duration | 5 | 5 |
| Impact magnitude | 20 | 20 |
| Impact significance | 100 (Positive very high, critically important/beneficial) | 20 (Positive very high, critically important/beneficial) |

| Impact and Mitigation Table | | |
|------------------------------------|---|---|
| | Pre-mitigation impact rating | Post mitigation impact rating |
| <i>Mitigation Measures</i> | The surrounding communities will have greater access to critical services such as education and health care facilities due to increased mobility. | |
| Impact 02 | Socio economic | |
| <i>Issue/ Impact</i> | Increased business opportunity through greater road mobility (D1836 and D1834 roads) | |
| Social/economic/agricultural value | 4 | 4 |
| Extent | 1 | 1 |
| Probability | 3 | 3 |
| Degree of disturbance | 3 | 3 |
| Duration | 5 | 5 |
| Impact magnitude | 11 | 11 |
| Impact significance | 44 (Positive medium-low, moderately important/ beneficial) | 44 (Positive medium-low, moderately important/ beneficial) |
| <i>Mitigation Measures</i> | Increased mobility could increase business trade. | |

5 RECOMMENDATIONS

While impacts related to the Construction stage of the proposed road development are for the most part, short term, it is impacts that may be experienced during the longer term Operational stage of the project which is of major significance. The two measured positive impacts in this stage relate to increased access to local services (education, health facilities), and increased opportunity for trade and the subsequent growth of local businesses. In this regard, it is recommended that the Project always bear the objective that local impacts (and perhaps regional impacts in the long term), be to the positive social and economic benefit of the local populations. There are no significant long term negative impacts envisaged.

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