agriculture
& environmental affairs

Department:
Agriculture
& Environmental Affairs
PROVINCE OF KWAZULU-NATAL

	(For official use only)
EIA File Reference Number:	DC/
NEAS Reference Number:	KZN/EIA/
Waste Management Licence Number: (if applicable)	
Date Received:	

BASIC ASSESSMENT REPORT

Submitted in terms of the Environmental Impact Assessment Regulations, 2010 promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998)

This template may be used for the following applications:

- **Environmental Authorization** subject to basic assessment for an activity that is listed in Listing Notices 1or 3, 2010 (Government Notices No. R 544 or No. R 546 dated 18 June 2010); or
- **Waste Management Licence** for an activity that is listed in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) for which a basic assessment process as stipulated in the EIA Regulations must be conducted as part of the application (refer to the schedule of waste management activities in Category A of Government Notice No. 718 dated 03 July 2009).

Kindly note that:

1. This **basic assessment report** meets the requirements of the EIA Regulations, 2010 and is meant to streamline applications. This report is the format prescribed by the KZN Department of Agriculture & Environmental Affairs. Please make sure that this is the latest version.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not 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 text.
3. Where required, place a cross in the box you select.
4. An incomplete report will be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it will result in the rejection of the application as provided for in the regulations.
6. No faxed or e-mailed reports will be accepted.
7. The report must be compiled by an independent environmental assessment practitioner ("EAP").
8. 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.
9. The KZN Department of Agriculture & Environmental Affairs may require that for specified types of activities in defined situations only parts of this report need to be completed.
10. The EAP must submit this basic assessment report for comment to all relevant State departments that administer a law relating to a matter affecting the environment. This provision is in accordance with Section 24 O (2) of the National

Environmental Management Act 1998 (Act 107 of 1998) and such comments must be submitted within 40 days of such a request.

11. **<u>Please note</u> that this report must be handed in or posted to the District Office of the KZN Department of Agriculture & Environmental Affairs to which the application has been allocated (please refer to the details provided in the letter of acknowledgement for this application).**

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	DC28/0024/2013 KZN/EIA/0001242/2013
File reference number (Waste Management Licence):	

SECTION A: DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER AND SPECIALISTS

1. NAME AND CONTACT DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Name and contact details of the EAP who prepared this report:

Business name of EAP:	**Terratest (Pty) Ltd**		
Physical address:	**13 The Boulevard, Westway Office Park, Westville 3629**		
Postal address:	**PO Box 2762, Westway Office Park**		
Postal code:	**3635**	**Cell:**	**076 246 1523**
Telephone:	**031 275 5500**	**Fax:**	**031 265 8255**
E-mail:			

2. NAMES AND EXPERTISE OF REPRESENTATIVES OF THE EAP

Names and details of the expertise of each representative of the EAP involved in the preparation of this report:

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (yrs)
Sandile Nkomonde	**BSoc. Sci. (Hons) Geography & Environmental Management**		**2**

3. NAMES AND EXPERTISE OF SPECIALISTS

Names and details of the expertise of each specialist that has contributed to this report:

Name of specialist	Education qualifications	Field of expertise	Section/ s contributed to in this basic assessment report	Title of specialist report/ s as attached in Appendix D

SECTION B: ACTIVITY INFORMATION

1. PROJECT TITLE

Describe the project title as provided on the application form for environmental authorization:

Construction of Ngomankulu / Nsuze Bridge

2. PROJECT DESCRIPTION

Provide a detailed description of the project:

The proposed project is the construction of a pedestrian and vehicular bridge over the Nsuze River at approximately 28°44'48.26"S , 31°3'8.38"E, located within the Nkandla Local Municipality in KwaZulu-Natal. The bridge is proposed to be 54m in length. It will include a 4m wide road way that will be flanked by a pedestrian walkway. The bridge construction activities may include: earthworks; bridge excavation; cast-in situ concrete activities; construction of pier and abutment footings.

3. ACTIVITY DESCRIPTION

Describe each listed activity in Listing Notice 1 (GNR 544, 18 June2010), ~~or~~ Listing Notice 3 (GNR 546, 18June 2010) or Category A of GN 718, 3 July 2009 (Waste Management Activities) which is being applied for as per the project description:

Activity 11 - *The construction of:*

iii. bridges;

vi. bulk storm water outlet structures;

xi. infrastructure or structures covering 50 square metres or more;

where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

Activity 18 – *The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from:*

i. a watercourse;

The following listed activity of Government Notice Regulation 546 is

potentially triggered.

Activity 16 - *The construction of:*

(iv) infrastructure covering 10 square metres or more

where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse

a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape provinces:

ii. Outside urban areas, in:

(hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve.

4. FEASIBLE AND REASONABLE ALTERNATIVES

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

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

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

Sections B 5 – 15 below should be completed for each alternative.

5. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. List alternative sites were applicable.

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1[1] (preferred or only site alternative)	28°	44'	48.26"	31°	3'	8.38"
Alternative S2 (if any)	o	'	"	o	'	"
Alternative S3 (if any)	o	'	"	o	'	"

In the case of linear activities:

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only route alternative)						
• Starting point of the activity	o	'	"	o	'	"
• Middle point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"
Alternative S2 (if any)			"			"
• Starting point of the activity	o	'	"	o	'	"
• Middle point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"
Alternative S3 (if any)			"			"
• Starting point of the activity	o	'	"	o	'	"
• Middle point of the activity	o	'	"	o	'	"
• End point of the activity	o	'	"	o	'	"

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

6. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	Size of the activity:
Alternative A1[2] (preferred activity alternative)	332.64m²
Alternative A2 (if any)	m²
Alternative A3 (if any)	m²

or, for linear activities:

Alternative:	Length of the activity:
Alternative A1 (preferred activity alternative)	54m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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)	332.64m²

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

Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

7. SITE ACCESS

Does ready access to the site exist?	YES **X**	NO
If NO, what is the distance over which a new access road will be built		M

Describe the type of access road planned:

A gravel access road is available on the eastern end of the proposed bridge. The road ends at the Nsuze River's bank. Construction vehicles would have to cross the river to access the western half of the project site. Construction vehicles may cross the river along the relatively defined route across the river that is currently being used by general public's vehicles. A gravel road begins from the river's western bank that leads to the households situated on the western half of Ngomankulu. An access road may need to be developed to link the existing gravel road on the west to the western end of the project site. The estimated length of this road is approximately 120m.

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.

8. SITE OR ROUTE PLAN

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

The site or route plans must indicate the following:

8.1. the scale of the plan which must be at least a scale of 1:500;
8.2. the property boundaries and numbers/ erf/ farm numbers of all adjoining properties of the site;
8.3. the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
8.4. the exact position of each element of the application as well as any other structures on the site;
8.5. the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
8.6. walls and fencing including details of the height and construction material;
8.7. servitudes indicating the purpose of the servitude;
8.8. sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
- rivers, streams, drainage lines or wetlands;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation including protected plant species (even if it is degraded or infested with alien species);

8.9. for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and

8.10. the positions from where photographs of the site were taken.

9. SITE PHOTOGRAPHS

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

10. FACILITY ILLUSTRATION

A detailed illustration of the facility must be provided at a scale of 1:200 and attached to this report as Appendix C. The illustrations must be to scale and must represent a realistic image of the planned activity/ies.

11. ACTIVITY MOTIVATION

11.1. Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Unknown at this stage.	
What is the expected yearly income that will be generated by or as a result of the activity?	Unknown At this stage.	
Will the activity contribute to service infrastructure?	YES **X**	NO
Is the activity a public amenity?	YES **X**	NO
How many new employment opportunities will be created in the development phase of the activity?	50	
What is the expected value of the employment opportunities during the development phase?	Unknown at this stage.	
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?	None	
What is the expected current value of the employment opportunities during the first 10 years?	Unknown at this stage	
What percentage of this will accrue to previously disadvantaged individuals?	100%	

11.2. Need and desirability of the activity

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

Drowning

The need for the bridge is for the community to be able to cross the Nsuze River to access the western half of Ngomankulu. The western half of Ngomankulu includes the Ngomankulu Primary School. Teachers, pupils and the general community currently walk across the river. At times when the river floods, the community is forced to swim across or stay on the side of the river they are on.

Poor Access to Western half of Ngomankulu
Vehicles are also limited by the river. Only high-riding vehicles attempt to the river. This limits public transport such as minibus taxis and taxi vans from transporting the community to their households. In most cases people using public transport from the Nkandla town have to carry their groceries across the river. When the river floods it is reported that it may take up to three (3 No) days to be subside. There has been a number of people who have drowned in the floods over the years; recently a teacher drowned with a student she was trying to save. Livestock is also affected by the flooding river.

Indicate any benefits that the activity will have for society in general:

Increase accessibility.
Access to health facilities will be easier and ambulance services will be able to access households easier. There will be greater use of public transport including minibus taxis and minivan taxis as these modes of transport will be able to access more households beyond Ngomankulu. Service delivery to the general society may be improved as access to areas beyond Ngomankulu will be improved.

Improved Economic Activity and Standard of Living
The improved accessibility may be interpreted as improved access to a wider market range for entrepreneurs. Goods and services will be transported more easily from the surrounding towns including Nkandla, Eshowe, Melmoth and Kranskop. goods and service providers. The bridge may also present increased demand for goods and services as more people have improved access to goods and services.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Eradicate Drowning
The Ngomankulu community, including school children and teachers, will no longer have to cross the river to access the western half of the community which includes the Ngomankulu Primary School. The establishment of the bridge will reduce or eliminate the possibility of livestock drowning, therefore reducing the community's loss of sources of livelihood.

Increase Accessibility of Western Half of Ngomankulu
Access to health Ngomankulu clinic will be improved and access to the community for the ambulance services will be enhanced. There will be greater use of public transport including minibus taxis and minivan taxis as these modes of transport will be able to access more households on the west half of the Nsuze River. The bridge could help accelerate service delivery of water, sanitation and electricity to the Ngomankulu area as these are currently unavailable.

Improved Economic Activity and Standard of Living
The improved access will allow the Ngomankulu community to access surrounding towns more easily for goods and services. The bridge may open up new markets for goods and services produced in Ngomankulu as well. From the construction phase of the project, improvement in economic activity may be foreseeable. Local labour may be employed during construction which would improve unemployment levels in the area. Existing shops may benefit from the increased demand for goods during the construction phase. More shops in Ngomankulu may develop due to the improved access which may improve unemployment levels.

12. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Date:
Constitution of the Republic of South Africa (Act 108 of 1996)	Department of Justice and Constitutional Development	1996
The National Environmental Management (Act 107 of 1998) (NEMA)	Department of Environmental Affairs	1998
The Environmental Impact Assessment Regulations (GN R. 543 & GN R. 544 of 2010)	Department of Environmental Affairs	2010
The Environment Conservation Act (Act 73 of 1989) (ECA)	Department of Environmental Affairs	1989
The National Water Act (No 36 of 1998)	Department of Water Affairs	1998
The Conservation of Agricultural Resources Act (Act 43 of 1983)	Department of Agriculture, Forestry and Fisheries	1983
The Atmospheric Pollution Prevention Act (No 45 of 1964)	Department of Environmental Affairs	1964
National Environmental Management: Air Quality Act (Act 39 of 2004) (NEMAQA)	Department of Environmental Affairs	2004
The Occupational Health and Safety Act (Act 85 of 1993)	Department of Labour	1993
National Heritage Resources Act (Act 25 of 1999)	Department of Arts and Culture	1999
The Protected Areas Act (Act 57 of 2003)	Department of Environmental Affairs	2003
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEMBA)	Department of Environmental Affairs	2004

13. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

13.1. Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES	NO
	X	
If yes, what estimated quantity will be produced per month?	10m^3	

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

There will be bins that will be placed on site for site staff to use. The waste in the bins will be removed and temporarily stored in skips which will be situated at the construction camps. The contractor will be responsible for frequent transporting of the waste in the skips to a permitted waste disposal site.

Where will the construction solid waste be disposed of? (provide details of landfill site)

The waste will be disposed of at the nearest permitted Landfill site in Eshowe as the permitted landfill site in Nkandla is still under construction.

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

How will the solid waste be disposed of? (provide details of landfill site)

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

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine the further requirements of the application.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?	YES	NO X

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

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

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

13.2. Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO X
If yes, what estimated quantity will be produced per month?		m^3
Will the activity produce any effluent that will be treated and/or disposed of on site?	Yes	NO X

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	NO X

If yes, provide the particulars of the facility:

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

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

Portable chemical toilets have been recommended at a rate of 1 toilet per 5 workers.

13.3. Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	NO

X	
YES	NO

If yes, is it controlled by any legislation of any sphere of government?
If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.
If no, describe the emissions in terms of type and concentration:

Exhaust fumes from construction vehicles and associated construction machinery may result in emissions being released into the atmosphere; however, the emissions are estimated to be at negligible levels. Dust may also result from the associated activities; however, mitigation measures have been considered, thus dust levels should also be at negligible levels.

13.4. Generation of noise

Will the activity generate noise?

YES X	NO

YES	NO

If yes, is it controlled by any legislation of any sphere of government?
If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If no, describe the noise in terms of type and level:

Noise from construction vehicles and associated construction machinery will result in noise being generated; however, the levels may be considered negligible and will be during acceptable hours of the day.

14. WATER USE

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

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

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

YES	NO X

Does the activity require a water use permit from the Department of Water Affairs?
If YES, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this report.

15. ENERGY EFFICIENCY

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

No specific energy efficient measures have been implemented in the design phase, as the project shall not use any energy once it has been established.

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

Street lighting is the only possible source of energy consumption attributed to the proposed upgrade. However, as this has not be considered in the design phase, the long term energy requirements of the development are minor and are limited to energy required for routine maintenance.

SECTION C: 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 C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A): [ ]

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

1. GRADIENT OF THE SITE

Indicate the general 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

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 **(Please cross the appropriate box)**.

Alternative S1 (preferred site):

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley X	Plain	Undulating plain/low hills	Dune	Sea-front

Alternative S2 (if any):

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea-front

Alternative S3 (if any):

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea-front

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Has a specialist been consulted for the completion of this section?			YES	NO **X**
If YES, please complete the following:				
Name of the specialist:				
Qualification(s) of the specialist:				
Postal address:				
Postal code:				
Telephone:		Cell:		
E-mail:		Fax:		
Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?			YES	NO **X**
If YES, specify and explain:				
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?			YES	NO **X**
If YES, specify and explain:				
Are any further specialist studies recommended by the specialist?			YES	NO **X**
If YES, specify:				
If YES, is such a report(s) attached in Appendix D?			YES	NO

Signature of specialist: _____ Date:

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES **X**	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO **X**	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES **X**	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO **X**	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO **X**	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO **X**	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO **X**	YES	NO	YES	NO
An area sensitive to erosion	YES **X**	NO	YES	NO	YES	NO

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

4. GROUNDCOVER

Has a specialist been consulted for the completion of this section?		YES	NO **X**
If YES, please complete the following:			
Name of the specialist:			
Qualification(s) of the specialist:			

Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	
Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?		YES	NO X
If YES, specify and explain:			
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?		YES	NO X
If YES, specify and explain:			
Are any further specialist studies recommended by the specialist?		YES	NO X
If YES, specify:			
If YES, is such a report(s) attached in Appendix D?		YES	NO

Signature of specialist: _____ Date:

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

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

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

5. LAND USE CHARACTER OF SURROUNDING AREA

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

Land use character			**Description**
Natural area	YES X	NO	Impact to natural areas will be avoided where possible or kept to the absolute minimum.
Low density residential	YES X	NO	Low density residential land use has been identified within 500m of the proposed site, however, direct impact to the low density residential area will be avoided due to the localized nature of the proposed project.
Medium density residential	YES	NO X	
High density residential	YES	NO X	
Informal residential	YES	NO	Informal residential areas exist within

	X		500m of the proposed project site in a dispersed pattern. Direct impact to these residential land use areas will be avoided due to the localized nature of the proposed project.
Retail commercial & warehousing	YES	NO X	
Light industrial	YES	NO X	
Medium industrial	YES	NO X	
Heavy industrial	YES	NO X	
Power station	YES	NO X	
Office/consulting room	YES	NO X	
Military or police base/station/compound	YES	NO X	
Spoil heap or slimes dam	YES	NO X	
Quarry, sand or borrow pit	YES	NO X	
Dam or reservoir	YES	NO X	
Hospital/medical centre	YES	NO X	
School/ creche	YES X	NO	Ngomankulu Primary School is within 500m of the proposed project site. However no direct adverse impacts are anticipated on the school facility as the proposed project would be localized.
Tertiary education facility	YES	NO X	
Church	YES	NO X	
Old age home	YES	NO X	
Sewage treatment plant	YES	NO X	
Train station or shunting yard	YES	NO X	
Railway line	YES	NO X	
Major road (4 lanes or more)	YES	NO X	
Airport	YES	NO X	
Harbour	YES	NO X	
Sport facilities	YES X	NO	An informal soccer field is situated within 60m of the proposed project site. Construction vehicles could drive over the

			facility or machinery could be parked on the facility. The informal soccer field could also be used as a site office by the construction contractor. These impacts could be avoided by identifying an alternative area that is not used by the local community for any recreational purposes or any other purpose. Identification of an alternative site would be conducted together with the community and traditional authority. Construction vehicles would be prohibited from driving on the soccer field and limited to driving only on existing and identified routes. The indirect impacts would be kept to a minimum.
Golf course	YES	NO **X**	
Polo fields	YES	NO **X**	
Filling station	YES	NO **X**	
Landfill or waste treatment site	YES	NO **X**	
Plantation	YES	NO **X**	
Agriculture	YES **X**	NO	Agricultural activity is evident within 500m of the proposed project site. However direct impacts would be avoided due to the localised nature of the proposed project.
River, stream or wetland	YES **X**	NO	The proposed bridge construction is proposed to occur over the Nsuze River. Two piers that will be developed 18m apart to support the bridge will be established within the river's flow area. Cofferdams will be established to divert water during the construction of the piers. The water will not be diverted beyond the river's natural width. The direct impacts would be restricted to a minimum as much as possible.
Nature conservation area	YES	NO **X**	
Mountain, hill or ridge	YES	NO **X**	
Museum	YES	NO **X**	
Historical building	YES	NO **X**	
Protected Area	YES	NO **X**	
Graveyard	YES	NO **X**	
Archaeological site	YES	NO **X**	
Other land uses (describe)	YES	NO **X**	

6. 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 palaeontological sites, on or within 20m of the site?	YES **X**	NO
If YES, contact a specialist recommended by AMAFA to conduct a heritage impact assessment. The heritage impact assessment must be attached as an appendix to this report.		
Briefly explain the recommendations of the specialist:		
Will any building or structure older than 60 years be affected in any way?	YES	NO **X**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO **X**
If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.		

SECTION D: PUBLIC PARTICIPATION

1. ADVERTISEMENT

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

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  (i) the site where the activity to which the application relates is or is to be undertaken; and
  (ii) any alternative site mentioned in the application;

(b) giving written notice to—
  (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  (v) the local and district municipality which has jurisdiction in the area;
  (vi) any organ of state having jurisdiction in respect of any aspect of the activity (as identified in the application form for the environmental authorization of this project); and
  (vii) any other party as required by the competent authority;

(c) placing an advertisement in—
  (i) one local newspaper; or

(ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
   (i) illiteracy;
   (ii) disability; or
   (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

(a) indicate the details of the application which is subjected to public participation; and

(b) state—
   (i) that an application for environmental authorization has been submitted to the KZN Department of Agriculture & Environmental Affairs in terms of the EIA Regulations, 2010;(ii)
   (iii) a brief project description that includes the nature and location of the activity to which the application relates;
   (iv) where further information on the application can be obtained; and
   (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

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

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE PROCESS

The EAP must ensure that the public participation process is according to that prescribed in regulation 54 of the EIA Regulations, 2010, but may deviate from the requirements of subregulation 54(2) in the manner agreed by the KZN Department of Agriculture & Environmental Affairs as appropriate for this application. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate.

Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before this application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations (regulation 57 in the EIA Regulations, 2010) and be attached as Appendix E to this report.

6. PARTICIPATION BY DISTRICT, LOCAL AND TRADITIONAL AUTHORITIES

District, local and traditional authorities (where applicable) are all key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of this application and provided with an opportunity to comment.

Has any comment been received from the district municipality?	YES	NO
	X	

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

uThungulu District Municipality has received the Background Information Document and would like to register as an Interested and/or Affected Party. Request to include Ms N. Hlongwa on behalf of uThungulu District Municipality.

Has any comment been received from the local municipality?	YES	NO X

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

Has any comment been received from a traditional authority?	YES	NO X

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

7. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?	YES	NO
		X

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

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

The general concern from the Ngomankulu community was that the bridge was long overdue. Many people and livestock have drowned over the years. Several officials have arrived at Ngomankulu to conduct studies for the bridge and there still is no bridge. Furthermore, the mayor of Nkandla had announced through the media that construction of the bridge would commence in August 2013.

The community concurred that although there are trees close to the proposed site that are used for medicinal purposes and cultural customs , their value should not outweigh the value of the bridge because the bridge would save many lives and livelihoods. The trees in question are: the Buffalo Thorn tree (*Ziziphus mucronata)* used for collecting a spirit from where a person dies; and the Natal Mahogany (*Trichilia emetic*) used medicinal purposes. According to the SANBI Red List of Endangered Species, these two types of trees are considered to be at a low risk of extinction. In addition, the community stated that there are many other trees with the same medicinal properties that traditional healers use and may continue to use, that will not be affected by the construction of the bridge.

There was a query about the proliferation of alien plants in the surrounding veld. It was stated that the municipality was going to initiate a programme to cut down alien plants, thereby creating employment opportunities for the affected communities.

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

Bridge Construction Overdue

The Basic Assessment that is underway has no association with any previous studies or site visits that were conducted by any other officials. The Basic Assessment further disassociates itself from any pronouncements made by any officials as the assessment is being carried out according to a schedule that was accepted by the client on whose behalf the assessment is being conducted. Additionally, the schedule has taken into consideration the legal framework within which the assessment is being performed. Several stakeholders, including the affected community, are involved in the process. All inputs from the various stakeholders must be considered in the assessment process to allow for informed decision making by the competent authority.

Alien Plants Programme

The alleged alien plants programme is not part of the scope of works for the proposed bridge construction project. The municipality's programme is also not part of the Basic Environmental Assessment being conducted. The assessment is an investigation of the potential impacts associated with the activities of the proposed development on the surrounding environment and

community.

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

2.1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the planning and design phase:

Alternative S1 (preferred alternative)

Direct impacts:

Clearance of vegetation

The planning and design phase would involve preliminary investigations which may require the cutting and clearing of vegetation, particularly to access the geotechnical trial pits and borehole core drilling to determine depth of quality rock.

Indirect impacts:

Soil erosion

Soil erosion may occur as a result of vegetation clearing and disturbance to soils through excavations.

Air pollution

Air quality may be undermined as a result of the fumes from construction vehicles and construction plant are released into the air.

Cumulative impacts:

Soil erosion

Soil erosion particularly by wind and rain, may occur as a result of the clearing of vegetation as well as from the excavation of trial pits. However, the cumulative impact of soil erosion would be minimal due to the localised scale of the preliminary investigations.

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

There would be no clearance of vegetation and soil disturbance.

Indirect impacts:

Soil erosion would not be accelerated as a result of vegetation clearance.

Pollution of the air would not be exacerbated by emissions from construction vehicles and construction plant

Cumulative impacts:

Soil erosion would not be exacerbated by project preliminary design activities together with erosion from the natural elements.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	Alternative S2
Adherence to the Environmental Management Plan must be a high priority. Clearing and cutting of vegetation should be planned, phased and conducted at the absolute minimum where necessary. Trial pit excavation activities should be conducted strategically and disturbance limited as much as possible. Excavation should only occur where necessary.	

Precautionary measures that should be considered to mitigate soil erosion could be the use of sandbag barriers, silt fences along the embankments, and soil moistening. The area should be rehabilitated and re-vegetated. Excavated soil must be returned in its correct soil horizon as quickly as possible.	

b. Process, technology, layout or other alternatives

List the impacts associated with any process, technology, layout or other alternatives that are likely to occur during the planning and design phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

Soil disturbance

As part of the preliminary assessments, a Tractor-Loader-Backhoe (TLB) may be used to excavate trial pits for the geotechnical survey, which would lead to soil profile disturbance. Twelve trial-pits are proposed to be excavated by a TLB to depths ranging between 1.3m and 3.15m.

The TLB and other construction vehicles may also contribute to soil compaction, however, the degree of compacting may be considered as low due to the confined scale of the preliminary investigations.

Soil Contamination

Soil contamination could occur if construction vehicles and construction machinery have leaks of hazardous substances such as fuel and oil.

Water Pollution

Hazardous waste such as leaking oil from construction vehicles and construction plant could leak into the Nsuze River as the vehicles would need to be driven across the river to access the western end of the proposed project site.

Indirect impacts:

Cumulative impacts:

Alternative A2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

There would be no soil disturbance as no preliminary geotechnical, hydrological or hydraulic investigations would be conducted.

Soil contamination and water pollution would not occur as no construction vehicles and construction plant would be present on the site.

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:	**Alternative A2:**
Adherence to the Environmental Management Plan must be a high priority. Clearing and cutting of vegetation should be planned, phased and conducted at the absolute minimum where necessary.	

Trial pit excavation activities should be conducted strategically and disturbance limited as much as possible. Excavation should only occur where necessary. Precautionary measures that should be considered to mitigate soil erosion could be the use of sandbag barriers, silt fences along the embankments, and soil moistening. The area should be rehabilitated and re-vegetated. Excavated soil must be returned in its correct soil horizon as quickly as possible.	

2.2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the construction phase:

Alternative S1 (preferred site)

Direct impacts:

Soil erosion

Soil erosion may occur during the construction phase as local soils are disturbed and/or compacted in the creation of access roads, for construction vehicles to access the western end of the proposed bridge. Soil erosion may also occur from the excavations of foundation for the abutments.

Impact on drainage system

Two piers that are proposed to be developed 18m apart to support the bridge will be established within the Nsuze River's flow area. Cofferdams will be established in order to divert the water away from the area where piers will be constructed. The water will not be diverted beyond the river's natural width. However disturbance of the river flow may be expected.

Loss of vegetation

An access road may need to be developed on the western half of the project area. This access road would link the project site to the existing gravel road that begins from the river on the western end of the project area. Therefore vegetation could be lost from the clearing of vegetation for the development of the access road.

Disturbance of fauna

There is a potential for faunal habitats to be disturbed and some faunal species to be temporarily displaced by construction activities.

Traffic disruption

Traffic volumes are generally low in the study area. However there is the possibility of a temporary disruption of traffic flow on local roads during the Construction Phase as construction vehicles will use existing roads to access the project site. There is also one preferred route that is wide enough for one vehicle only. The route goes through the river which is used by all vehicles. This route may need to be treated as a stop-go area.

Safety

Safety while driving across the river is of high concern. Flash floods are said to occur, especially in the rainy seasons. Water levels may need to be monitored to determine the safety of crossing the river.

General waste

General (rubble, soils, litter) waste may be generated during construction. Improper management of these waste materials may result in the pollution of local soils and the Nsuze River.

Hazardous waste

Hazardous substances (fuel, lubricants, concrete, paint and protective chemicals to help reduce rust) may be used during the construction phase which, if not managed properly, poses a threat of contamination of soils, groundwater, and hydrological systems.

Air pollution

Air pollution related to particulate and dust generation will occur during construction, however, with the correct

mitigation measures in place, these levels should be acceptable.

Noise pollution
The construction phase may generate some noise pollution which, with the correct mitigation measures in place, these levels should be acceptable.

Visual impact
Due to the nature of the project and the design of the bridge, the project is expected to have a low negative impact on the visual aesthetics and sense of place.

Socioeconomic impacts
Employment opportunities for the local communities may be created directly by the construction phase, coupled with skills development opportunities for the communities. The number of people in the area may increase as a result of people looking for employment opportunities associated with the proposed project.

Indirect impacts:
Existing access roads may be disrupted by the increase in traffic.
Indirect employment opportunities may be created.
Increased demand for consumables may increase with the increased number of people within the study area.
Mismanagement of waste generated from construction may result in the pollution of water systems.
Soil erosion may result from the disturbance of soil profiles.

Cumulative impacts:

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:
Soil Erosion – will not be accelerated if the proposed project does not commence.

Impact on River System – There will be no impact on the Nsuze River and associated floodplains, and any other hydrological system.

Loss of Vegetation – There will be no impact on local vegetation.

Disruption of Traffic – Traffic will not be disrupted should the proposed project not commence.

Safety – There will be no impact on the local traffic safety as would be associated with the construction of the bridge.

General and Hazardous Waste – There will be no general or hazardous waste generated as a result of the construction activities.

Air Pollution – There will be no impact on the quality of air as would be associated with the construction the bridge.

Noise Pollution – There will be no noise pollution generated from the proposed project.

There would be no bridge to provide safe access to the western half of Ngomankulu for the community and their livestock. This would continue to impact on the community's livelihoods.

Indirect impacts:
Existing access roads would not be disrupted as there would be no increase in traffic volumes.
There would be no indirect employment opportunities that would be created.
There would be no increased demand for consumables as there would be no population increase within the study area.
There would be no pollution of water systems as there would be no waste generated from construction activities.

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	Alternative S2
Soil Erosion Mitigation measures should be implemented continuously throughout the construction phase. These measures would include soil stabilisation techniques and re-vegetation of affected areas, together with the avoidance of areas that are most prone to erosion. Topsoil must be removed from the excavated areas and preserved and protected from runoff using berms, and/or sand bags as necessary. Stockpiles must be kept away from stormwater flow paths and drainages courses, and may not exceed 1.5m in height. Areas that are to be cleared or excavated must be re-vegetated with appropriate indigenous vegetation, as soon as possible. All bare areas of soil must be protected with cut brush from indigenous plant material only. Excavation of drainage embankments must be kept at an absolute minimum where required. Access roads must be planned strategically so as to reduce the number of access roads constructed and thereby reducing the potential of soil compaction and/or soil erosion. **River Systems contamination** Storm water control measures must be incorporated into the design of the bridge, and at any point where storm water diversion may be required, or where vegetation has been cleared. The erosion potential of the area must also be taken into account and areas of significant erosion potential must be avoided. **Vegetation Clearance** Vegetation clearance should be phased in accordance with the progression of the construction phase in order to help reduce soil erosion. Protected plant species should be removed and relocated or replanted, while alien invasive species should be removed and replaced with indigenous vegetation. The local vegetation may play an important role in reducing soil erosion at the site of each pylon. No vegetation on the site is to be harvested for medicinal, nutritional, or any other properties. **Disturbance of Fauna** No form of hunting is permitted on the proposed site or adjacent properties. Access to sensitive areas must be limited. Strict control should be maintained over all activities during construction, in particular heavy machinery and vehicle movements, and staff. **Traffic Control** Traffic control measures should be implemented and traffic regulations regarding vehicle load limits and speed limits must be adhered to in order to help minimise the safety risk on the roads. **Waste Disposal** All building rubble and general waste must be disposed of at the permitted Nkandla Dump Site that is licensed with DWAF. All waste including hazardous waste must be collected, stored and transported to the nearest hazardous waste facility registered to receive such waste, in accordance with the requirements of the National Environmental Management Waste Act of 2008. **Air Pollution** Proper maintenance of construction plant and moistening of soil where necessary must be practiced continuously throughout the construction phase in order to help reduce dust pollution. Burning of waste material is **prohibited**. Construction	

vehicles and plant should be regularly checked and serviced to help reduce emissions particularly from any malfunctions. Operational silencers should be installed in all construction vehicles and plant in order to help reduce emissions. **Noise Pollution** Construction activity may only occur between 08h00 and 17h00, and site staff must wear ear protection if necessary. Construction vehicles and plant should be regularly serviced in order to help reduce noise pollution from any malfunctioning. **Disturbance of Sites of Cultural and Heritage Significance** Only use established roads during the construction process. All secondary access roads planned need to be surveyed for heritage sites before construction may commence. Should any heritage material or artefacts be located during the construction process then all activities should stop in the immediate vicinity of the site and the local heritage agency Amafa contacted for further evaluation.	

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the construction phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

Construction machinery and vehicles that will be driven across the river may have leaks of fuel and lubricants that may contaminate the water.
Excavation activities for the abutments' foundations may result in exacerbated erosion of the loose soil.

Indirect impacts:

The establishment of cofferdams during the construction of piers may result in increased erosion on the edges of the river as more volumes of water will be flowing towards the edges as a result of being diverted by the cofferdams.

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

No construction of the bridge, which would mean no construction vehicles would cause any disturbance or contamination on the site.

Indirect impacts:

No construction of the bridge, which would mean there would be no pier construction activities to disturb the flow of the water.

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:	**Alternative A2:**
Proper maintenance of construction plant and vehicles must be practiced to ensure that no leaks occur from the vehicles and machinery. The river's embankments must be rehabilitated to mitigate any further erosion. Sand bags or silt fences should be used to intercept sheet flow from disturbed areas.	

2.3. IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the operational phase:

Alternative S1 (preferred alternative)

Direct impacts:

Maintenance is anticipated on an *ad hoc* basis. It is likely that vegetation, which may have re-established on the access roads used during the Construction Phase, will be disturbed.

Dust and noise generation may also be likely from the maintenance procedures. However this may be deemed acceptable as it would occur during reasonable hours of the day.

Indirect impacts:

Cumulative impacts:

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

No construction of the bridge, which would eliminate the need for maintenance procedures to be conducted.

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	**Alternative S2**
Vegetation rehabilitation measures should be employed where and when necessary. Disturbance to vegetation should be kept to a minimum during maintenance periods. Adherence to the EMP with regards to the generation of noise and dust from the maintenance procedures.	

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the operational phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

Dust, noise and vegetation disturbance may result from vehicles and equipment used during maintenance procedures.

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

No construction of the bridge, which would eliminate the need for maintenance procedures to be conducted.

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	Alternative A2
Vegetation rehabilitation measures should be employed where and when necessary. Disturbance to vegetation should be kept to a minimum during maintenance periods. Adherence to the EMP with regards to the generation of noise and dust from the maintenance procedures.	

2.4. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING OR CLOSURE PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the decommissioning or closure phase:

Alternative S1 (preferred alternative)

Direct impacts:

The proposed bridge is will be a newly built structure and there is no existing structure that needs to be decommissioned. Therefore no impacts are anticipated.

Indirect impacts:

Cumulative impacts:

Alternative S2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

The proposed bridge is will be a newly built structure and there is no existing structure that needs to be decommissioned. Therefore no impacts are anticipated

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	Alternative S2
The proposed bridge is will be a newly built structure and there is no existing structure that needs to be decommissioned. Therefore no impacts are anticipated	

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the decommissioning or closure phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

The proposed bridge is will be a newly built structure and there is no existing structure that needs to be decommissioned. Therefore no impacts are anticipated

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts: The proposed bridge is will be a newly built structure and there is no existing structure that needs to be decommissioned. Therefore no impacts are anticipated ***Indirect impacts:*** ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	**Alternative A2**
The proposed bridge is will be a newly built structure and there is no existing structure that needs to be decommissioned. Therefore no impacts are anticipated	

2.5. PROPOSED MONITORING AND AUDITING

For each phase of the project and for each alternative, please indicate how identified impacts and mitigation will be monitored and/or audited.

Alternative S1 (preferred site)	**Alternative S2**
Planning and Design Phase The environmental impacts at the planning and design phase can be classified as low as the phase involves preliminary assessments of the selected bridge construction site from topographic, geotechnical, land-use and environmental perspectives. The nature of the impacts may be the disturbance of the soil profile and vegetation clearing, but at localised scales. These impacts are more likely to occur than not, however, if the mitigation measures of rehabilitating each site (where preliminary assessments are conducted) are implemented, the significance of the impacts will be alleviated. It will therefore be imperative for the planning and design activities to be conducted in compliance with the mitigation measures and with the Environmental Management Plan (EMP) to help reduce the impacts of the activities. An Environmental Control Officer (ECO) should be appointed to monitor the implementation of the EMP **Construction Phase** The construction phase is anticipated to have the most significant environmental impacts. The types of potential and anticipated impacts are: soil profile disturbance and erosion; loss of vegetation; general and hazardous waste generation; traffic disruption; disturbance of drainage/river systems; land, air and water pollution. The significance of these impacts is anticipated to be medium and the likelihood of their occurrence is high, as partly or wholly a result of the construction activities. It will therefore be imperative for the construction activities to be conducted in compliance with the mitigation measures and with the EMP to help reduce the impacts of the activities. An ECO should be appointed to monitor the implementation of the EMP. **Operational Phase** Loss of vegetation is an impact that may be anticipated at the bridge's operational phase. The loss of vegetation may occur infrequently as a result of *ad hoc* maintenance measures. These impacts are also anticipated to be short-term and localised in scale with low negative significance.	

Alternative A1 (preferred alternative)	**Alternative A2**

3. ENVIRONMENTAL IMPACT STATEMENT

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

Alternative S1 (preferred site)

The number and magnitude of the potential and anticipated negative environmental impacts that may be associated with this project can be alleviated through the implementation of suitable mitigation measures. In this way, the positive socioeconomic impacts may be enhanced and the potential negative impacts reduced. These mitigation measures must be included in the EMP which must be adhered to throughout the life of the project. An on-site Environmental Control Officer ECO should be appointed to monitor the implementation of the EMP.

Alternative S2

Alternative A1 (preferred alternative)

Types of Impacts

Negative impacts including loss of vegetation, soil erosion, general and potential hazardous waste generation, impact on traffic flows, pollution, cultural and heritage impact, and impact on river system can be anticipated. These negative impacts may be reduced by the implementation of the respective mitigation measures.
The negative impacts are anticipated to occur at a localised scale on the site where the bridge is to be established.

Likelihood

The majority of these impacts are likely to occur during the design phase, planning phase, and the construction phase. The impacts are likely to be low to moderate in intensity due to the limited spatial scale of the impacts.

Duration

Most of the impacts may occur on a short term basis, and more particularly during the construction phase which can be estimated at three to four months. More negligible impacts may be anticipated as a result of maintenance procedures during the operational phase, however, these should be short term in nature.

Significance of Impacts

Overall, in terms of the biophysical environment, low to moderate negative impact significance is expected from the proposed project and the impacts are expected to occur over the short term. Moderate impacts can be classified as impacts on soil profiles, impacts on river system, and removal of vegetation. The implementation of the mitigation measures described should help to reduce those impacts to low negative.

Alternative A2

No-go alternative (compulsory)

SECTION F. RECOMMENDATION OF EAP

Is the information contained in this report and the documentation attached | YES | NO |

hereto in the view of the EAPr sufficient to make a decision in respect of this report?	X	
If "NO", please contact the KZN Department of Agriculture & Environmental Affairs regarding the further requirements for your report.		

If "YES", please attach the draft EMPr as Appendix F to this report and 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:

SECTION G: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

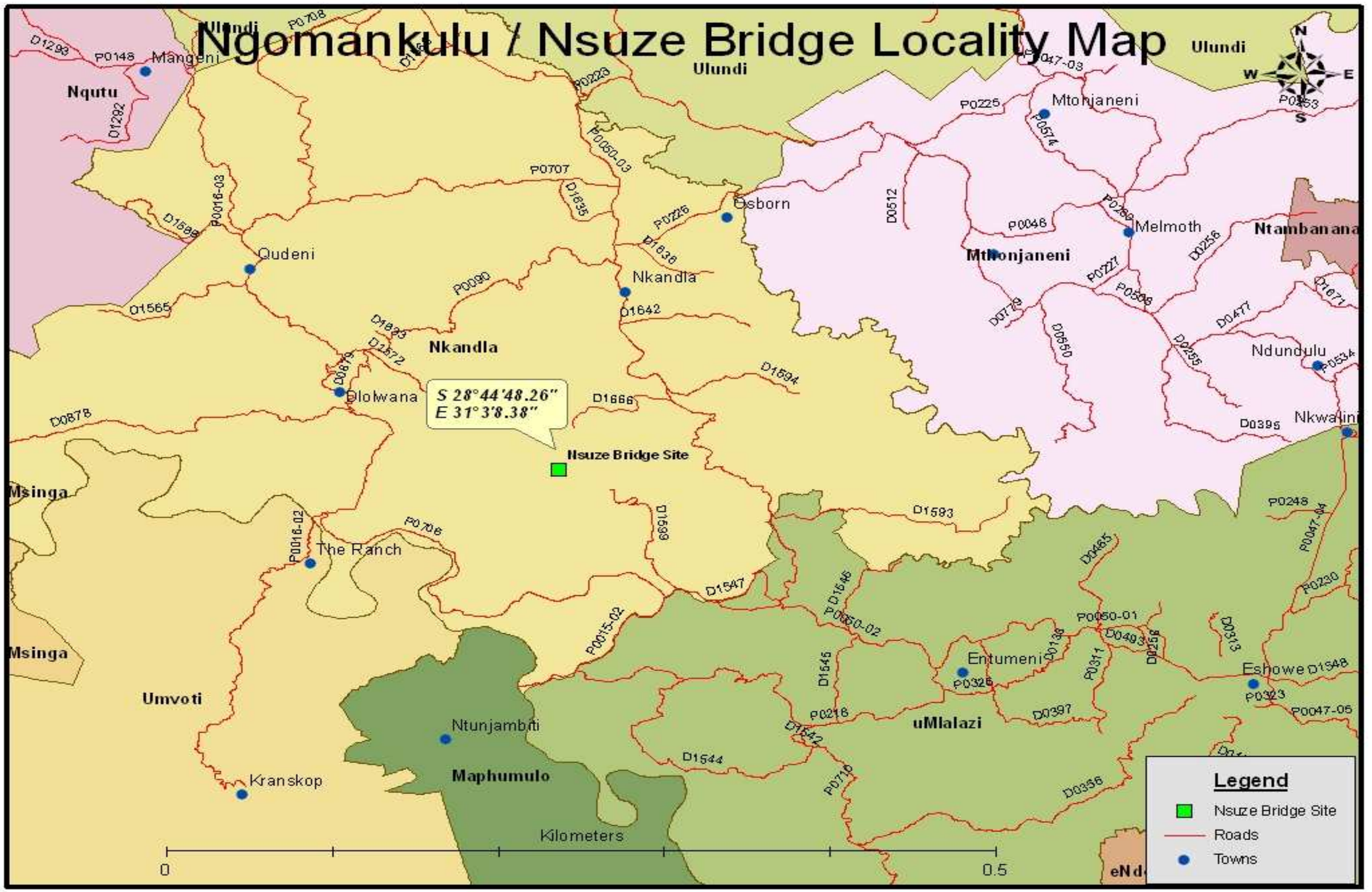
Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Draft Environmental Management Programme (EMPr)

Appendix G: Other information

Appendix A: Site plan(s)

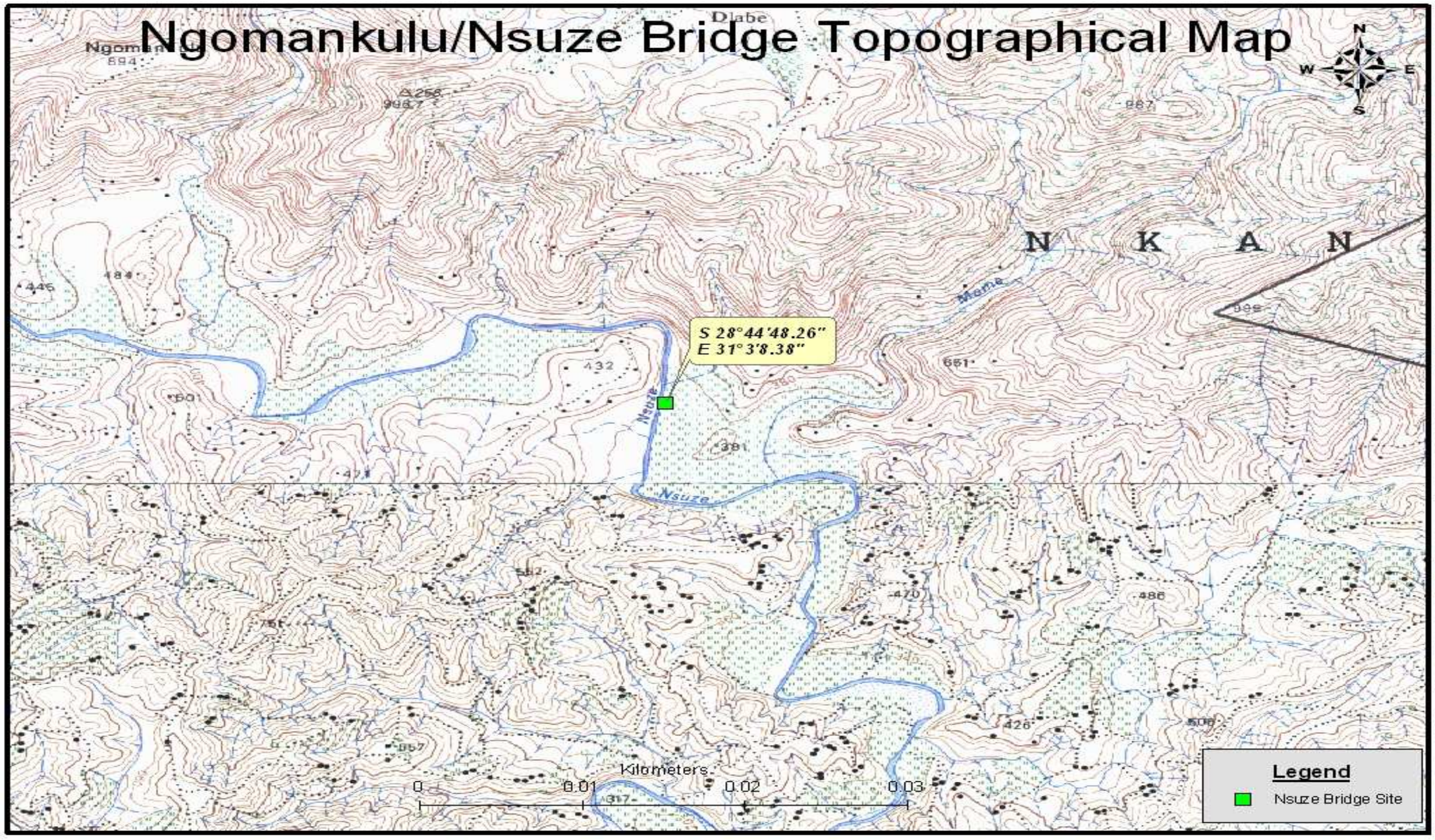

Ngomankulu / Nsuze Bridge Locality Map
Ulundi
Nqutu
Msinga
Umvoti
Maphumulo
uMlalazi
eNdwedwe
Mangeni
Qudeni
Nkandla
Dlolwana
Osborn
Mthonjaneni
Melmoth
Ntambanana
Ndundulu
Nkwalini
Eshowe
Entumeni
The Ranch
Ntunjambili
Kranskop
S 28°44'48.26"
E 31°3'8.38"
Nsuze Bridge Site
N
S
E
W
Kilometers
0
0.5
Legend
Nsuze Bridge Site
Roads
Towns

SITE PLAN

LEGEND

500m Buffer

Proposed Bridge


Ngomankulu/Nsuze Bridge Topographical Map
Dlabe
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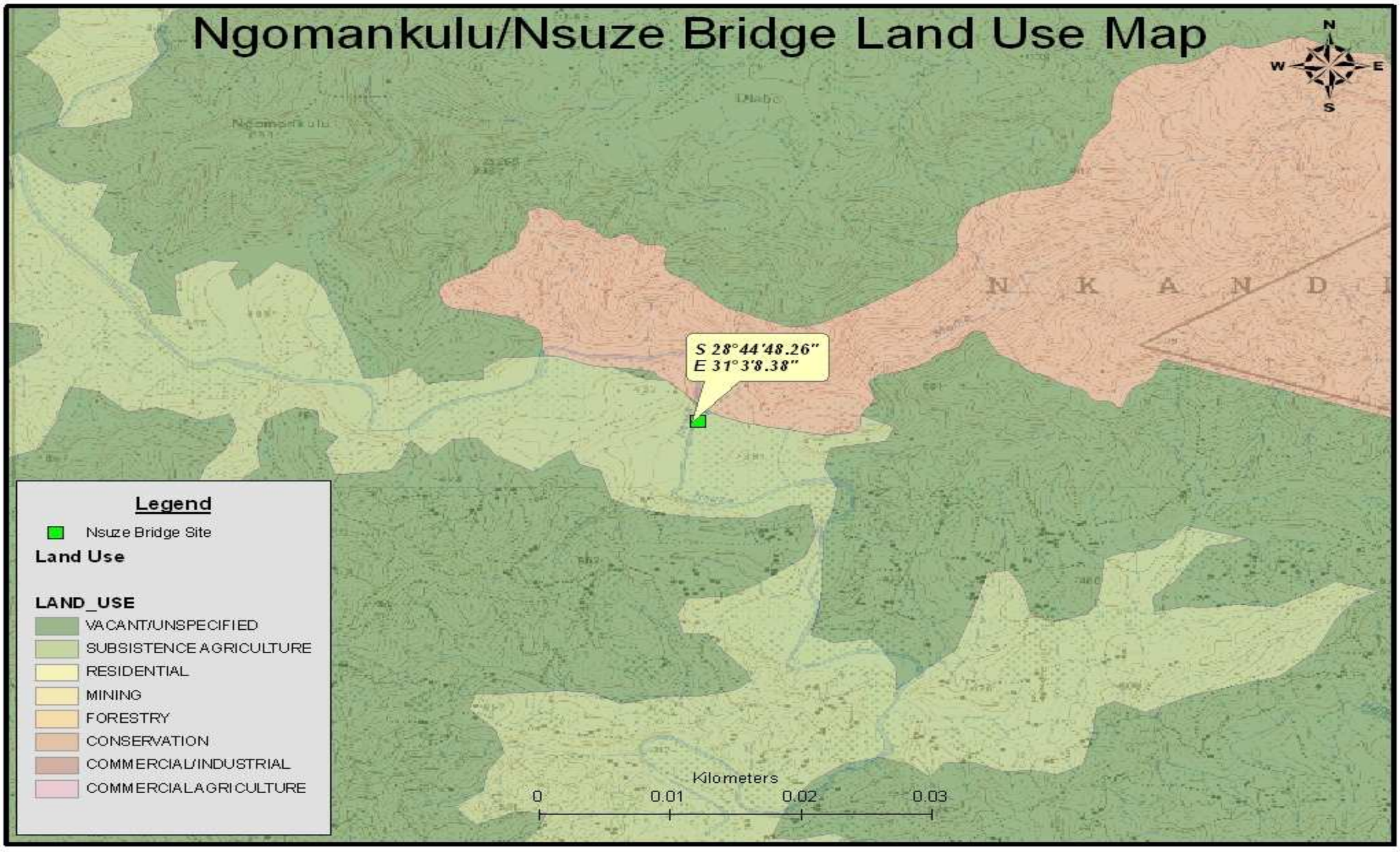
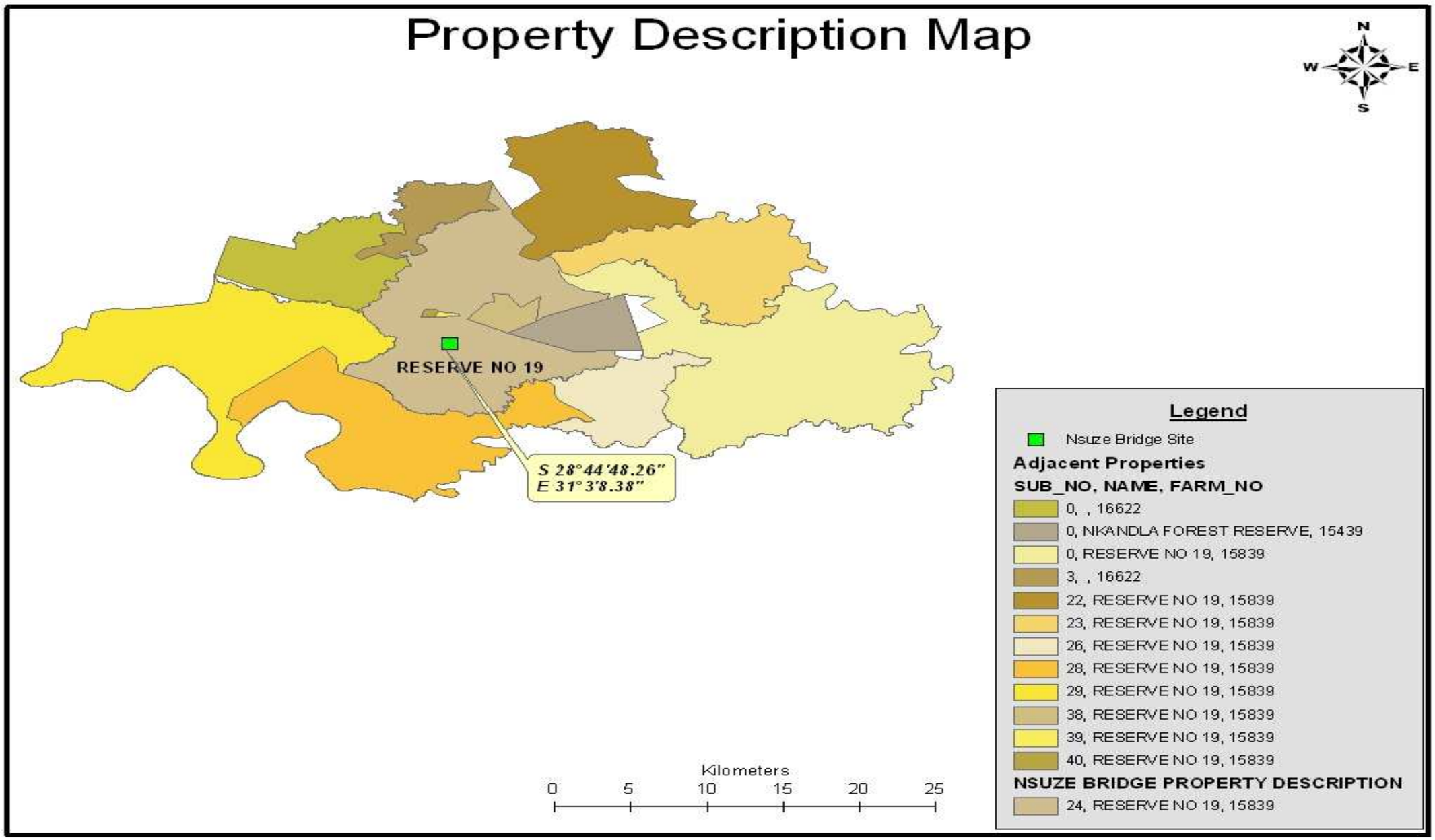
Mame
S 28°44'48.26"
E 31°3'8.38"
Nsuze
Kilometers
0
0.01
0.02
0.03
Legend
Nsuze Bridge Site


Ngomankulu/Nsuze Bridge Land Use Map
N
W
E
S
Ngomankulu
Mabo
N K A N D
S 28°44'48.26"
E 31°3'8.38"
Legend
Nsuze Bridge Site
Land Use
LAND_USE
VACANT/UNSPECIFIED
SUBSISTENCE AGRICULTURE
RESIDENTIAL
MINING
FORESTRY
CONSERVATION
COMMERCIAL/INDUSTRIAL
COMMERCIAL AGRICULTURE
Kilometers
0
0.01
0.02
0.03

Property Description Map



Appendix B: Photographs

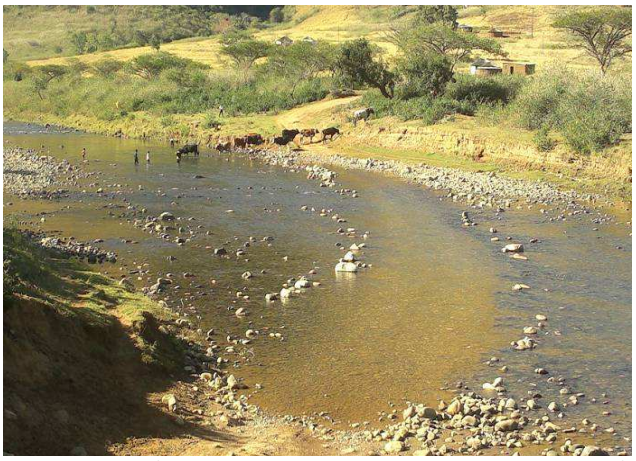
South to western quadrant of proposed project site.

West to northern quadrant of the proposed project site.

Existing access road leading to project site from the east.

Proposed bridge site, from the eastern end to the western end across the Nsuze River.

Grass and shrubs on the eastern half of the Nsuze River, facing north



Relatively defined vehicle path through Nsuze River, facing east. Children and cattle crossing river from west to east (left to right of image).

Children crossing river from west to east.

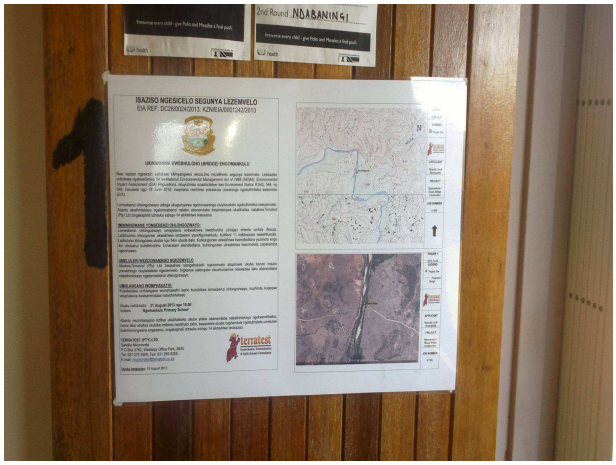
Informal soccer field located 60m east of proposed project site.

Buffalo Thorn tree located within 20m north of the project site on the east of the Nsuze River.

Natal Mahogany tree located within 20m south of the project site on the east of the Nsuze River.


Public Participation Meeting held at Ngomankulu Primary School.

Site Notice of Public Participation Meeting placed at Lindela Community Centre, Nkandla



Site Notice of Public participation Meeting Placed at Ngomankulu Clinic.