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. **Please note 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):	DC24/0008/2014 KZN/EIA/0001592/2014
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:	Envirolution_Mr K Govender		
Physical address:	223 Columbine Avenue, Mondeor 2091		
Postal address:	P.O Box 1898 Sunninghill		
Postal code:	2157	**Cell:**	083 419 8905
Telephone:	0861 44 44 99	**Fax:**	0861 626 222
E-mail:	gesan@envirolution.co.za		

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)
Mr Gesan Govender	Bsc (hons)	Pri.Sci. Nat	10yrs plus

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
J van Schalkwyk	PhD	Iron Age, Colonial Period, Industrial Heritage	Specialist Report	Cultural Heritage Impact Assessment For The Madadeni Bulk Sewer Pipeline, Newcastle Region, Kwazulu-Natal
Johann du Preez	PhD	Biodiversity and Wetland Specialist	Specialist Report	A Wetland Assessment of the Proposed Pipeline route and Sewage Pump Station in Madadeni, Newcastle, Kwazulu-Natal

SECTION B: ACTIVITY INFORMATION

1. PROJECT TITLE

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

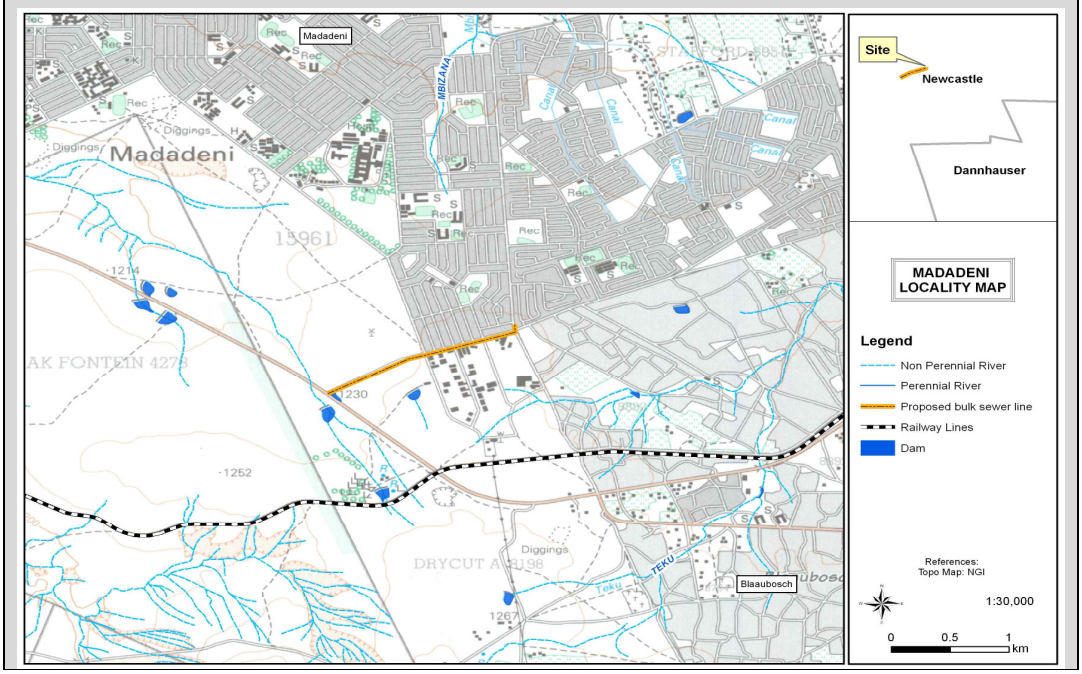
Proposed Madadeni H39 Bulk Sewer Pipe, Newcastle, KwaZulu-Natal Province.

2. PROJECT DESCRIPTION

Provide a detailed description of the project:

Newcastle Local Municipality proposes to construct a 1,6km PVC bulk sewer pipe of 200mm diameter in Madadeni H39. The proposed pipeline will be a rising main from the pump station. From the proposed pump station the sewer will be pumped and it will discharge in a manhole of an existing 1050mm diameter bulk sewer line. The estimated flows through the pipeline are as follows: Q peak = 25l/s Head 19m. Envirolution Consulting, as independent Environmental Consultant has thus been appointed to undertake the Basic Assessment on behalf of Abaziyo Consulting engineers cc.

The site is located in the Kwazulu Natal Province. The Newcastle Municipality falls within the Amajuba District Council located within the north-western corner of the KwaZulu-Natal province. It includes the former Newcastle Transitional Local Council and areas of the previous Umzinyathi Region. The total area of the Newcastle Municipality is estimated to be about 185 554 hectares (ha). The study area falls within the **Grassland Biome**. The entire pipeline route falls in a Kwazulu-Natal Highland Thornveld (Gs6) (Mucina & Rutherford 2006), a vegetation type that dominates the Newcastle area.



3. ACTIVITY DESCRIPTION

Describe each listed activity in Listing Notice 1 (GNR 544, 18 June2010), 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:

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice) :	Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)[1]:
GN R544, 18 June 2010	Activity 11: of listing notice 1 of 2010	The construction of (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.
GN R544, 18 June 2010	Activity 18: of listing notice 1 of 2010	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal of soil, shells, shell grit, pebbles or rock from (i) a watercourse but excluding where such infilling, depositing, dredging, excavation, removal or moving occurs behind a development setback line.

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

[1] Please note that this description should not be a repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description, i.e. describe the components of the desired development

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.

Please note that No site alternatives have been proposed as the proposed development must be located within the existing manhole of an existing 1050mm diameter bulk sewer line. The pipes must link to the ancillary sewage infrastructure.

For the purpose of this Basic Assessment, Design/Layout alternatives have been considered and impacts associated with the design are the same as that of the preferred Design outlined in Section E (2.2)of this Draft BAR

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.

	Latitude (S):			**Longitude (E):**		
Alternative:						
Alternative S1[2] (preferred or only site alternative)	**27º**	**47'**	**6"**	**30º**	**3'**	**2"**
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	**27º**	**47'**	**6"**	**30º**	**3'**	**2"**
• Middle point of the activity	**27º**	**46.8'**	**5"**	**30º**	**3'**	**2"**
• End point of the activity	**27º**	**47.108'**	**5"**	**30º**	**2'**	**2"**
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	'	"

[2] "Alternative S.." refer to site alternatives.

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[3] (preferred activity alternative)	**200 m²**
Alternative A2 (if any)	N/A m²
Alternative A3 (if any)	N/A m²

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	**1500 m**
Alternative A2 (if any)	N/A m
Alternative A3 (if any)	N/A 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)	**200m²**
Alternative A2 (if any)	m²
Alternative A3 (if any)	m²

7. SITE ACCESS

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

Describe the type of access road planned:

The proposed Site will be accessed through the road Mad12 street. Mad12 Street, the start point of the sewer pipeline, travel for 1,6km and turn left onto Mad8 street, the end point of the sewer pipe.The proposed pipeline route is directly next to an existing access road to Madadeni (Mad 12 road).The vegetation is to a large extent degraded due to the impact of the existing access road, the earlier construction activities during the construction..
5.

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

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?	R20 million

What is the expected yearly income that will be generated by or as a result of the activity?	R200 000	
Will the activity contribute to service infrastructure?	YES	NO
Is the activity a public amenity?	YES	NO
How many new employment opportunities will be created in the development phase of the activity?	28	
What is the expected value of the employment opportunities during the development phase?	R350 000	
What percentage of this will accrue to previously disadvantaged individuals?	50%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	8	
What is the expected current value of the employment opportunities during the first 10 years?	R500 000	
What percentage of this will accrue to previously disadvantaged individuals?	50%	

11.2. Need and desirability of the activity

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

The rapid growth of Madadeni Area has put enormous pressure on the capacity of the existing sewerage system. In the last few years, the Newcastle Local Municipality has identified and demarcated thousands of new stands for development of the residential area. This has afforded many residents of Madadeni with an opportunity to build new homes.

This has however stretched existing services such as water and sewer reticulation in the area, requiring the Municipality to develop and expand the services infrastructure. In the case of sewerage, urgent intervention is required to develop the necessary infrastructure to avoid overwhelming the existing sewer-age system and causing overflows that could later cause health risks.

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

Newcastle population is relatively young with 46% of the population being younger than 19 years of age, while the age group between 20 and 34 years accounts for 27% of the population. This puts pressure on the provision of educational facilities, social welfare, health services and the stimulation of the economy to provide job opportunities and economic development. The unemployment rate is estimated at 46 percent and 73 percent of the residents live below the poverty line. This project will present the community with employment opportunities.

.

The proposed upgrade will ensure enough capacity of sewer services to accommodate new developments in the surrounding areas.

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

The proposed upgrade will ensure enough capacity of sewer services to accommodate new developments in the surrounding areas

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:

Title of legislation, policy or guideline	Administering authority	Date
National Environmental Management Act, No. 107 of 1998 (NEMA), as amended & NEMA EIA Regulations, 2010: GN544, published in Government Gazette 33306 on 18 June 2010	Department of Environmental Affairs (DEA)	1998
National Environmental Management: Waste Act No. 59 of 2008: Category A – GNR 718 : Activity 18	Department of Environmental Affairs (DEA)	1998
National Environmental Management: Biodiversity Act, Act 10 of 2004	Department of Environmental Affairs (DEA)	2004
National Water Act, No. 36 of 1998	Department of Water Affairs (DWA)	1998

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 X	NO
If yes, what estimated quantity will be produced per month?	Unknown m^3	

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

During construction phase construction rubble/ solid waste will be temporarily stored on site in designated waste skips and then removed by an appropriate waste contractor appointed by the main construction contractor to an approved landfill site. Pipe off cuts are likely to be gathered and sold to/reused by scrap steel collectors. Furthermore the EMPr make recommendations with regard to best waste management practises. This will be the responsibility of the developer

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

The construction solid waste will be disposed of at the registered Municipal landfill site, of Newcastle local Municipality, Landfill situated off the N11 on the Madadeni Road.

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)

N/A

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

N/A

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

The contractor should ensure that the right amount of material is used during construction to ensure the optimal reuse and recycling of materials. The contractor should also provide recycle bins on site coded into the following categories:

- Plastic;
- Paper; and
- Glass.

The developer should ensure that the right amount of material is used while construction takes place to ensure the optimal reuse and recycling of materials.

13.3. Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES X	NO

If yes, is it controlled by any legislation of any sphere of government?	YES	NO
		X

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:

Vehicular and dust emissions will be the only source of ambient emissions generated as a result of the project. There will be some vehicular emissions during the construction phase. There is also the potential for dust generation during the construction phase. This may be a result of wind over exposed areas of cleared land. Dust can be relatively easily prevented through the implementation of air pollution mitigation measures contained in the EMPr (**Appendix F)**

13.4. Generation of noise

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

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:

The noise generated will be from the equipment and machinery used during the construction phase. Construction sites can generate significant levels of noise and vibration and cause disturbance to residents and businesses in the vicinity of the site. However, much of the noise generated is unavoidable and noise control methods are to be employed, such as :

- **Specifying the hours during which the works may be carried out;**

  Typically the main control that is imposed on construction sites is to limit the times during which they are permitted to make noise that their neighbours can hear.
  - **Monday to Friday 8am to 6pm**
  - **Saturdays 8am to 1pm**
  - **Sundays and Public Holidays- No noisy activities allowed**

Mitigation measures outlined in the EMPr (**Appendix F)**

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:	**N/A** litres	
Does the activity require a water use permit from the Department of Water Affairs?	YES	NO
	X	

If YES, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this report.
A section 21 (i) and (c) of the National Water Act 36 and 1998 Water Use Licence Application (WULA) will be considered. The Licence can only be issued after an Environmental Authorisation has been granted by the Department of Agriculture and Environmental Affairs (DAE-KZN).

15. ENERGY EFFICIENCY

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

The scope of work will be structured in a way that, where possible, the use of labour intensive methods will be employed. Not only will it serve the local community but it also saves the use of Pneumatic Equipment that requires a lot of energy input.

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

The activity involves the construction of a sewer Pipeline; as such there are no alternative energy sources available during construction. Once the construction has been completed no further energy will be required.

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):	**1**

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

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1: (Proposal)

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
X						

Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site **(Please cross the appropriate box)**.

Alternative S1 (preferred site):

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

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 **X**	NO
If YES, specify and explain:	The typical grass species present in this vegetation type are *Elionurus muticus, Eragrostis capensis, E. plana, E. racemosa, Heteropogon contortus, Themeda triandra, Hyparrhenia hirta, Setaria sphacelata, Andropogon appendiculatus, Brachiaria serrrata* and *Cymbopogon pospischilli.* The moist soils are dominated by grasses such as *Eragrostis plana, Andropogon appediculatus* and *A. ucomis.* However there are along the route sensitive sites such as storm water ditches and associated wetland plants, and these will not be interfered with during the contraction phase.	
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 **X**

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	NO **X**	YES	NO	YES	NO

Dolomite, sinkhole or doline areas	YES	NO X	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES X	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO X	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO X	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO X	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO X	YES	NO	YES	NO
An area sensitive to erosion	YES	NO X	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:	N/A		
Qualification(s) of the specialist:	N/A		
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:	No Red Data listed plant species or protected species were found on particular sites. Large parts of these sites are relatively transformed due to human impacts such as road construction, crop farming, grazing and other activities.		
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 X

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]	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land **X**	Paved surface	Building or other structure **X**	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	
Low density residential	YES	NO **X**	
Medium density residential	YES **X**	NO	
High density residential	YES **X**	NO	
Informal residential	YES	NO **X**	
Retail commercial & warehousing	YES **X**	NO	
Light industrial	YES **X**	NO	Within the town of Madadeni
Medium industrial	YES	NO	
Heavy industrial	YES	NO **X**	South West of Madadeni
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**	The Dam is far from site
Hospital/medical centre	YES **X**	NO	2.3 Km from the proposed Site
School/ creche	YES **X**	NO	Two school opposite to each other were seen, 300m from proposed site
Tertiary education facility	YES **X**	NO	
Church	YES	NO **X**	
Old age home	YES	NO **X**	
Sewage treatment plant	YES **X**	NO	5km from the site
Train station or shunting yard	YES	NO **X**	
Railway line	YES	NO **X**	
Major road (4 lanes or more)	YES	NO **X**	
Airport -Landing Strip	YES **X**	NO	7 km from proposed site
Harbour	YES	NO **X**	
Sport facilities	YES	NO **X**	
Golf course	YES	NO **X**	
Polo fields	YES	NO **X**	
Filling station	YES **X**	NO	6km from site
Landfill or waste treatment site	YES	NO **X**	

Plantation	YES	NO **X**	
Agriculture	YES	NO **X**	
River, stream or wetland	YES **X**	NO	
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	NO **X**

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:	The aim of the survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area in which the development is proposed. The cultural landscape qualities of the region is made up of a pre-colonial element consisting of limited Stone Age and Iron Age occupation, as well as a much later colonial (farmer) component, which gave rise to an urban component. As no sites, features or objects of cultural heritage significance have been identified in the study area, there would be no impact as a result of the proposed development. Therefore, the specialist recommendations from a heritage point of view are that the proposed development can continue, on condition of acceptance of the outlined mitigation measures. And that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.

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.

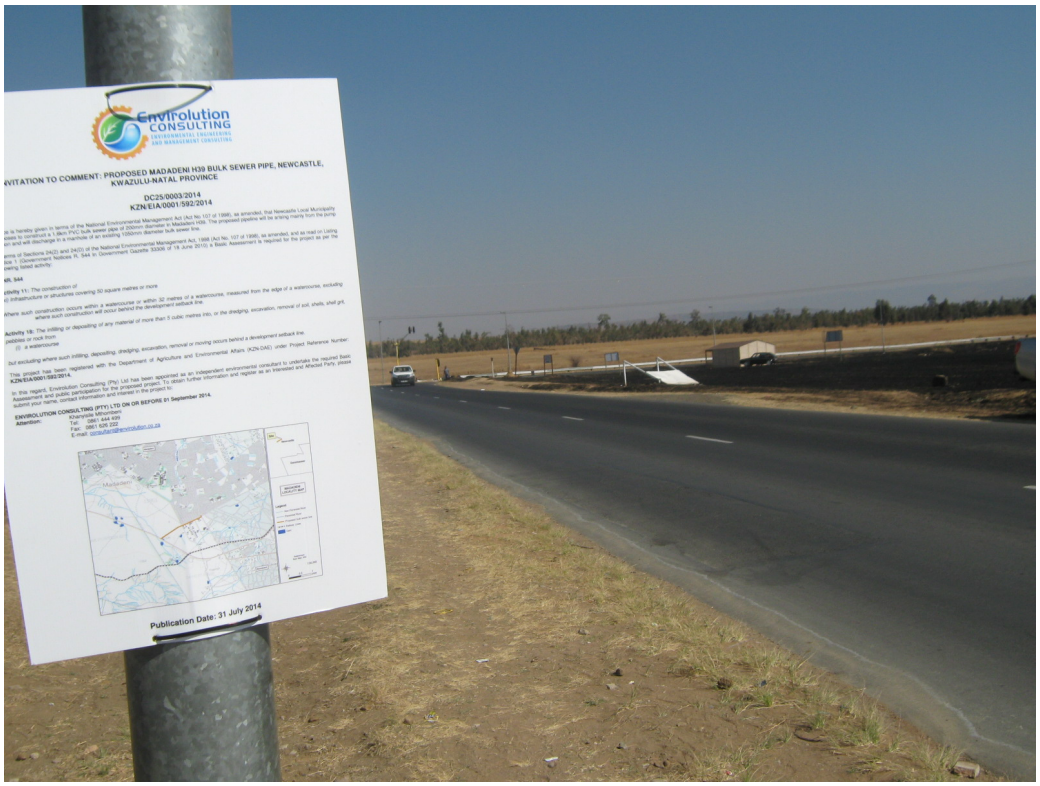


Figure 1: Site Notices

Kukhuthazwe imfundo kubafundi baseNcandu Combined School

Lihle mathebula

Bakhuthazwe ngokuba babheke imfundo abafundi baseisikoleni samabanga aphakeme iNcandu Combined School, lapho bevakashelwe ngabanye abafundi ababefunda kusoma lesikole ngenhloso yokuzobakha.

Bakuthinle cwaka lapho abafundi kanye nothisha baseNcandu Combined bebelele izinkulumo ezakhaya kubafundi ababebavakashele ngoLwesine.

Kanti labafundi bebehlanganiswe endaweni yokuthandazela kuwona amagceke akulesisikole ngalo usuku osebalwe ngenhla. Umhlell waloluhlelo lokukhuthaza abafundi uNksz Smokey Nkosi, uthe inhloso eholele ekutheni agcine ehlele usuku olufana naloku, yingoba eneslfiso sokubuyisa ithemba kanye nokuziqhenya kubafundi baseNcandu.

Uthe lesisikole sisando kuba wumdabi-zekwayo njengoba uthishanhloso esamisiwe emsebenzi ngemumva kokusolwa ngokuqabula umfundi othovisi lakhe.

"Ngalesosigameko sabona ukuthi sesiyafa isithunzi sesikole sethu njengoba nathi safunda kuso.

Sibe sesiqala ukusondela singabafundi abadala ngenhloso yokuba siyokwakha isikole sethu. Senza konke okusemandleni ukuba sisibuyisele esimweni esejwayelekile, futhi nesamukeleke njengazo zonke izikole," kulanda okaNkosi.

Uqhube wathi lokhu bakuqale ngokuba beze bazohlanza isikole ngosikhathi samaholide nabafundi kanye nothisha. Uthe bawenza lowo msebenzi beyishumi nanhlanu. "Nginenkolelo enkulu yokuthi njengoba sekusukume thina lukhulu ushintsho oluzobakhona kulesisikole futhi nezinto zizoluhlaga. Nanhlanje sihlele ukuba sibenabanye abafundi abaphuma kulesisikole nasebeyizinto ezithile emphakathini. Ngalendlela sibuyisa ukuzesthemba kubafundi kanye nokubakhuthaza ukuba bakukhuthalele ukufunda ukuze kuzofezeka amaphupho abo empilweni," kusho uNksz Nkosi.

Ubuye wathi nanhlanje bazokwazi ukuthi akubona kuphela abaqale eNcandu kodwa bakhona abadala abaphakamisa igama lalesisikole.

Omunye obeyisihambeli kulesisikole uMnus Mhungisi Mdluli osebenza eMnyangweni wezeMidlalo kanye nokuNcebeleka kumkhandlu waseMajuba, uthe kuyajabulisa kakhulu uma ekwazile ukufika kulelizanga ukuba abe ephunze eNcandu Combined. "INcandu ezinye zezikole zasemakhaya nezibukelwa phansi kakhulu, kodwa ngathi liyaphakama leligama lalesikole ngoba noma yikuphi lapho singena khona sibuzwa ukuthi sivelaphi bese sisho igama laseNcandu. Ngiyafisa ukuthi nani bafundi niziqhenye ngalesikole futhi nisithande kakhulu. Nikuthalele imfundo ngoba yiyona ezonivulela iminyango yalapho enifisa ukufika khona ngokusasa lenu," kusho uMdluli. Sebephetha izinkulumo bathe bazoqhubeka nokusebenza ngokubambisana nabafundi bakwamatikuletsheni ngoba bazimisele kwizifundo zabo. Kanti abafundi abahlanu bahlomule ngezingubo zokulala ezintsha nezivele kubafundi ababevakashele eNcandu.

Othisha abangaphansi kwenyonyana iSouth African Democratic Teachers Union benikeza ukudla kumndeni wakwaMtibi.

Abafundi baseNcandu Combine bezokwethulelwa izinkulumo ezakhaya ngabafundi ababefunda kulesisikole.

INVITATION TO COMMENT

NOTICE OF A BASIC ASSESSMENT FOR THE PROPOSED MADADENI H39 BULK SEWER PIPE, NEWCASTLE, KWAZULU-NATAL PROVINCE

DC/25/0003/2014
KZN/EIA/0001582/2014

Notice is hereby given in terms of the National Environmental Management Act (Act No 107 of 1998), as amended, that Newcastle Local Municipality proposes to construct a 1,6km PVC bulk sewer pipe of 200mm diameter in Madadeni H39. The proposed pipeline will be arising mainly from the pump station and will discharge in a manhole of an existing 1050mm diameter bulk sewer line.

In terms of Sections 24(2) and 24D of the National Environmental Management Act (Act No. 107 of 1998), as amended, and as read on Listing Notice 1 (Government Notices R. 544 in Government Gazette 33306 of 18 June 2010) a Basic Assessment is required for the project as per the following listed activity:

GN R 544: 2010 (Listing Notice 1) Activity 11

The construction of
(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.

GN R 544: 2010 (Listing Notice 1) Activity 18

The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal of soil, shells, shell grit, pebbles or rock from
(i) a watercourse

but excluding where such infilling, depositing, dredging, excavation, removal or moving occurs behind a development setback line.

Interested and/or affected parties who wish to participate by contributing comments, or who would like to obtain more information, should please contact Khanyisile Mthombeni at, Tel: 0861 444 499 Fax: 0861 626 222, E-mail: consultant@envirolution.co.za **on or before 01 September 2014.**

Envirolution CONSULTING

Figure 2: Advert

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):

No comments received to date, comments are anticipated once the Draft Basic Assessment Report (DBAR) (this report) has been circulated. Comments received in response to the DBAR will be included in the Final Basic Assessment Report (FBAR) and comments and responses received will be included in the comments and response report in Appendix E.

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):

No comments received to date, comments are anticipated once the Draft Basic Assessment Report (DBAR) (this report) has been circulated. Comments received in response to the DBAR will be included in the Final Basic Assessment Report (FBAR) and comments and responses received will be included in the comments and response report in Appendix E.

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):

No comments received to date, comments are anticipated once the Draft Basic Assessment Report (DBAR) (this report) has been circulated. Comments received in response to the DBAR will be included in the Final Basic Assessment Report (FBAR) and comments and responses received will be included in the comments and response report in Appendix E.

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):

No comments received to date, comments are anticipated once the Draft Basic Assessment Report (DBAR) (this report) has been circulated. Comments received in response to the DBAR will be included in the Final Basic Assessment Report (FBAR) and comments and responses received will be included in the comments and response report in Appendix E.

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.

No comments received to date from I&APs, comments are anticipated once the Draft Basic Assessment Report (DBAR) (this report) has been circulated. Comments received in response to the DBAR will be included in the Final Basic Assessment Report (FBAR) and comments and responses received will be included in the comments and response report in Appendix E.

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):

No Response has been given yet to date to I&APs, response comments are anticipated once the Draft Basic Assessment Report (DBAR) (this report) has been circulated. The Response given in response to the DBAR will be included in the Final Basic Assessment Report (FBAR) and comments and responses received will be included in the comments and response report in Appendix E.

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: **There will be no impacts envisaged during the planning and designing phase.**

The potential impacts of the proposed pipeline were identified through a site visit, the Environmental Assessment Practitioners experience and expertise in the field and specialist studies.

In the Basic Assessment Report, the potential impacts are broadly identified and outlined. An assessment of the potential impacts is provided, identifying the impacts that are potentially significant and recommending management and mitigation measures to reduce the impacts.

In general, it is recognized that every development has the potential to pose various risks to the environment as well as to the residents or businesses in the surrounding area. Therefore, it is important that these possible risks are taken into account during the planning phase of the development. Risks and key issues were identified and addressed through an internal process based on similar developments, and an environmental evaluation.

Previous experience has shown that it is often not feasible or practical to only identify and address possible impacts. The rating and ranking of impacts is often a controversial aspect because of the subjectivity involved in attaching values to impacts.

Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.
The classes are rated as follows:

1) No significance
The impact is not substantial and does not require any mitigatory action.

2) Low
The impact is of little importance, but may require limited mitigation.

3) Medium
The impact is of importance and therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.

4) High
The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

Alternative S1 (preferred alternative)
There are no site alternatives from the proposed development, Instead there is design alternatives

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	**Alternative S2 (Design Alternative)**

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)
There will be no impacts envisaged during the planning and designing phase

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Alternative A2 (if any)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:	**Alternative A2:**

2.2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

a. Site alternatives

Alternative S1 (preferred alternative)

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Impacts on flora and fauna: • Construction activities will disturb the fauna in the area. • The clearing of vegetation will result in the loss of habitat, habitat fragmentation and possibly a loss of	Medium (Negative)	. Educate workers on minimizing damage to vegetation during construction 2. Only vegetation that must be removed for the construction of the pipeline should be removed and the	Low (Negative)

species on the site. • The noises and vibrations resulting from machinery and blasting could impact on faunal species outside the site. • Pollution resulting from the construction site such as litter, solid waste, sewerage and spills of oil, lubricants and fuel could reduce the quality of the habitats in the surrounding area and directly impact on the health and welfare of the fauna and flora surrounding the site. Due to the disturbance of the site alien plants will be able to establish and could become a problem by infesting neighbouring land.		footprint must be kept as small as possible. 3. Cleared indigenous vegetation can be stockpiled for possible reuse in later rehabilitation or landscaping, or as a brush pack for erosion prevention. 4. Stockpiles of vegetation are only to be located in areas approved by the ECO, and may not exceed 2 m in height. Methods of stacking must take cognisance of the possible creation of a fire hazard. 5. No burning of stockpiled vegetation is permitted. 6. Alien vegetation must be cleared from the footprint of the pipeline prior to construction; 7. Sensitive vegetation (wetlands and primary grasslands) that should not be impacted by construction activities should be cordoned off throughout the construction periods to restrict the movement of vehicles and any other development into such areas; and 8. Ensure natural indigenous vegetation is used for rehabilitation purposes.	
Soil erosion: Construction earthworks may cause soil erosion.	**Medium**	1. Construction activities should preferably take place during the dry winter months. 2. Stockpiles must be covered in excess windy conditions. 3. Dust suppression is necessary for stockpiles older than a month. 4. Stockpiles should not be higher than 2 m to avoid compaction. 5. Ensure that excavated and stockpiled material is stored and beamed on higher lying areas of the site and not in any areas where water would naturally accumulate. 6. Subsoil must be returned into the trench after all pipes have been installed.	**Low**
Impacts on ground water: Groundwater contamination due to construction earthworks.	**Medium**	1. Construction vehicles are to be maintained in good working order, to reduce the probability of leakage of fuels, oils and lubricants. 2. All cement mixing must occur on impervious surfaces and within controlled banned areas. 3. Oil residue must be treated with oil absorbent spill kits and this material removed to a licensed waste disposal site. 4. Contractor/s must provide regularly serviced portable chemical toilets for	**Low**

		construction workers at a distance no more than 200 m from the place of construction. 5. No materials may be discharged from the construction camps. 6. During operation, regular maintenance of the pipeline is required to prevent sewerage leaks.	
Impacts on stormwater: The accumulation of stormwater.	**Medium**	1. No stockpiles or construction materials may be stored or placed within any drainage line that may be in close proximity of storm water drains. 2. No stockpiles or construction materials may be stored or placed in close proximity to storm water drains.	**Low**
Impact on dust and air quality: The influx of pollutants will occur due to the establishment of the construction camp and the movement of people and vehicles on site. Excavated and stockpiled material that is vulnerable to wind has the potential to contribute to the influx of pollutants in the air.	**High**	1. Continuous watering of the site should be carried out to prevent dust pollution during windy and dry conditions. 2. A continuous dust monitoring process needs to be undertaken during construction. 3. Speed restriction of 20km/h must be implemented for all construction vehicles. 4. All vehicles transporting friable materials such a sand, rubble etc must be covered by a tarpaulin or wet down.	**Medium**
Impact on aesthetic quality: Stockpiled materials; workforce; and construction sites.	**Medium**	1. Ensure that no litter, refuse, waste, rubbish, rubble, debris and builders wastes generated on the premises be placed, dumped or deposited on adjacent or surrounding properties including road verges, roads or public places and open spaces during or after the construction period. All waste/litter/rubbish etc must be disposed of at an approved dumping site as approved by the Council. 2. No waste may kept on the construction site for more than two weeks. 3. Supply sufficient garbage bins throughout the site and empty regularly. 4. Ensure good housekeeping is implemented at all times. 5. Keep the property neat and litter free at all times and maintain the landscaped areas.	**Low**
Impact on socio-economics: Impact on nearby residential areas.	**Medium**	1. All adjacent landowners must be informed of the construction processes prior to commencement of construction activities. 2. Adjacent land owners must be informed timeously of any service stoppages in their areas.	**Low**

		3. Notification must include possible timeframes for stoppages. 4. Consequences of such stoppages must be clearly indicated to all surrounding/affected land owners. 5. Affected land owners must be timeously informed of any/all maintenance to the pipeline which may result in service stoppages to their properties. Again this must include possible timeframes so alternatives can be provided.	
Traffic: Increase of construction vehicles in the area.	**Medium**	1. Construction vehicle movement to and from site must be outside peak hour traffic (07:00am - 09:00am, & 16:00pm – 18:00pm.) 2. Construction activities must not interfere with the flow of traffic or cause blockages. 3. Should road or lane closures be required, prior notice must be given and permission requested from the responsible bodies (Authorities and landowners).	**Low**
Safety and Security: Workforce and construction sites.	**Medium**	1. Ensure all construction vehicles and machinery is under the control of competent personnel. 2. Limit access to the construction site to the workforce only. Comply with the requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993). 3. The above will apply when maintenance is required on the pipeline.	**Low**
The following impacts are positive:			
Impact on infrastructure services: The status of the infrastructure services will be impacted on through the proposed upgrade.		There are no mitigation measures as the impact is positive. 1. The status of the sewerage infrastructure services in the surrounding area will be improved through the proposed installations	

Design Alternative

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Impacts on flora and fauna: • Construction activities will disturb the fauna in the area. • The clearing of vegetation will result in the loss of habitat, habitat fragmentation and possibly a loss of species on the site. • The noises and vibrations resulting from machinery and blasting could impact on faunal species outside the site. • Pollution resulting from the construction site such as litter, solid waste, sewerage and spills of oil, lubricants and fuel could reduce the quality of the habitats in the surrounding area and directly impact on the health and welfare of the fauna and flora surrounding the site. Due to the disturbance of the site alien plants will be able to establish and could become a problem by infesting neighbouring land.	Medium (Negative)	. Educate workers on minimizing damage to vegetation during construction 2. Only vegetation that must be removed for the construction of the pipeline should be removed and the footprint must be kept as small as possible. 3. Cleared indigenous vegetation can be stockpiled for possible reuse in later rehabilitation or landscaping, or as a brush pack for erosion prevention. 4. Stockpiles of vegetation are only to be located in areas approved by the ECO, and may not exceed 2 m in height. Methods of stacking must take cognisance of the possible creation of a fire hazard. 5. No burning of stockpiled vegetation is permitted. 6. Alien vegetation must be cleared from the footprint of the pipeline prior to construction; 7. Sensitive vegetation (wetlands and primary grasslands) that should not be impacted by construction activities should be cordoned off throughout the construction periods to restrict the movement of vehicles and any other development into such areas; and 8. Ensure natural indigenous vegetation is used for rehabilitation purposes.	Low (Negative)
Soil erosion: Construction earthworks may cause soil erosion.	**Low**	1. Construction activities should preferably take place during the dry winter months. 2. Stockpiles must be covered in excess windy conditions. 3. Dust suppression is necessary for stockpiles older than a month. 4. Stockpiles should not be higher than 2 m to avoid compaction. 5. Ensure that excavated and stockpiled material is stored and bermed on higher lying areas of the site and not in any areas where water would naturally accumulate. 5. The horizontal drilling method requires less excavation and will have less of an impact. However, this is a	**Low – No significance**

		costly process.	
Impacts on stormwater: The accumulation of stormwater.	**Low**	1. No stockpiles or construction materials may be stored or placed within any drainage line that may be in close proximity of storm water drains. 2. No stockpiles or construction materials may be stored or placed in close proximity to storm water drains.	**Low – No significance**
Impact on dust and air quality: The influx of pollutants will occur due to the establishment of the construction camp and the movement of people and vehicles on site. Excavated and stockpiled material that is vulnerable to wind has the potential to contribute to the influx of pollutants in the air.	**Low**	1. Continuous watering of the site should be carried out to prevent dust pollution during windy and dry conditions. 2. A continuous dust monitoring process needs to be undertaken during construction. 3. Speed restriction of 20km/h must be implemented for all construction vehicles. 4. All vehicles transporting friable materials such a sand, rubble etc must be covered by a tarpaulin or wet down. 5. The horizontal drilling method requires less excavation and will have less of an impact. However, this is a costly process and Newcastle Local Municipality is an organ of state with limited funding.	**Low – No significance**
Impact on aesthetic quality: Stockpiled materials; workforce; and construction sites.	**Low**	1. Ensure that no litter, refuse, waste, rubbish, rubble, debris and builders wastes generated on the premises be placed, dumped or deposited on adjacent or surrounding properties including road verges, roads or public places and open spaces during or after the construction period. All waste/litter/rubbish etc must be disposed of at an approved dumping site as approved by the Council. 2. No wastes may remain on the construction site for more than two weeks. 3. Supply sufficient garbage bins throughout the site and empty regularly. 4. Ensure good housekeeping is implemented at all times. 5. Keep the property neat and litter free at all times and maintain the landscaped areas.	**Low – No significance**
Traffic: Increase of construction vehicles in the area.	**Low**	1. Construction vehicle movement to and from site must be outside peak hour traffic (07:00am - 09:00am, & 16:00pm – 18:00pm.) 2. Construction activities must not interfere with the flow of traffic or cause blockages.	**Low – No significance**

		3. Should road or lane closures be required, prior notice must be given and permission requested from the responsible bodies (Authorities and landowners).	
Safety and Security: Workforce and construction sites.	**Low**	1. Ensure all construction vehicles and machinery is under the control of competent personnel. 2. Limit access to the construction site to the workforce only. Comply with the requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993). 3. The above will apply when maintenance is required on the pipeline.	**Low – No significance**
Impacts on the wetland:	**Medium**	1. Rehabilitate damage (including pollution) caused to the wetland. 2. No animals may be trapped, hunted or handled in any way. 3. Stormwater on the site must be managed so as to reduce the silt loads in the system. Measures must be implemented to distribute stormwater as evenly as possible to avoid point sources of erosion and increase infiltration. 4. Potential pollutants such as hydrocarbons should be managed to prevent spillages or contamination of the wetland. 5. Any post-development re-vegetation or landscaping exercise may only use species indigenous to South Africa. Plant species locally indigenous to the area are preferred. 6. Alien vegetation should be managed and monitored. 7. Lighting should be positioned in such a way so as not to disturb species of nocturnal herpetofauna currently dependant on the wetland habitat.	**Low**
The following impacts and mitigation measures for the construction phase are envisaged to be the same as identified for alternative 1 (Proposal) for the design alternative: • Impacts on groundwater; • Impacts on flora and fauna; • Impacts on infrastructure services; and • Impacts on socio-economics			

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

Alternative S1 (preferred site)

Direct impacts: ***Indirect impacts:***

Cumulative impacts:

Alternative S2 (if any)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	**Alternative S2**

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):

The following impacts and mitigation measures for the construction phase are envisaged to be the same as identified for alternative 1 (Proposal) for the design alternative:

Alternative A1 (preferred alternative)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Alternative A2

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:	**Alternative A2:**

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:

There will be no impacts envisaged during the Operational Phase as this is an infrastructure that could be upgraded but not closed or decommissioned

Alternative S1 (preferred alternative)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Alternative S2 (if any)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	**Alternative S2**

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: ***Indirect impacts:***   ***Cumulative impacts:***

Alternative A2

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

No-go alternative (compulsory)

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	**Alternative A2**

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:

There will be no decommissioning or closure envisaged as this is an infrastructure that could be upgraded but not closed or decommissioned

Alternative S1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative S2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	**Alternative S2**

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:

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	**Alternative A2**

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
The Environmental Control Officer (ECO) will be appointed by the developer as an independent monitor of the implementation of the EMPr. He/she must form part of the project team and be involved in all aspects of project planning that can influence environmental conditions on the site. The ECO must attend relevant project meetings, conduct inspections to assess compliance with the EMPr and be responsible for providing feedback on potential environmental problems associated with the development. In addition, the ECO is responsible for: ▪ Liaison with relevant authorities; ▪ Liaison with contractors regarding environmental management; and ▪ Undertaking routine monitoring and appointing a competent person/institution to be responsible for specialist monitoring, if necessary. ▪ The ECO has the right to enter the site and do monitoring and auditing at any time, subject to compliance with health and safety requirements applicable to the site (e.g. wearing of safety boots and protective head gear).	

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 proposed Madadeni H39 Bulk Sewer Pipes construction is preferred from the environmental perspective as the construction will occurs within a transformed zoned area. In general, the Sewer Pipe will not be located in a highly sensitive environment; no direct impact on ecological and hydro geological environment is expected. There are no critical biodiversity areas or ecological process areas that traverse the site. No wetland conditions will be directly impacted by the expansion, although the wetland is in close proximity.

The impact assessment section of this report indicates that the most significant environmental impacts associated with the proposed development can be effectively mitigated to have a low significance impact rating.

The key decision making factors which the EAP believes need to be kept in mind by the authorities in deciding on the sustainability of their decision, are as follows:

The proposed Madadeni H39 Bulk Sewer Pipes are strategically required to meet the demands of anticipated current and future increase in sewage quantities that would result from expected developments in Newcastle Local Municipality;

It is the opinion of Envirolution Consulting (Pty) Ltd that the proposed installation of sewerage infrastructure will not have a significant environmental impact and is therefore preferred.

Responsible environmental management will be required on site, during the planning and construction phases of the development. These management measures should be guided by the Environmental Management Program attached as Appendix F

Alternative S2

N/A

Alternative A1 (preferred alternative)

N/A

Alternative A2

No-go alternative (compulsory)

The No-go option implies that the Project does not proceed, and will thus comprise of The Newcastle Local Municipality not going ahead with the Proposed Madadeni H39 Bulk Sewer Pipe. Ideally this would be the preferred alternative as the status quo of the environment remains unchanged, however due to the anticipated future developments in the Madadeni H39 area, that will require adequate sewer treatment, this alternative is not feasible. Should the Local Municipality keep the current capacity of the sewer pipes, it is highly likely that any anticipated current and future developments will function without adequate sewage infrastructure.

- **Direct impacts**

  - Newcastle Local Municipality will not be able to provide adequate sewage treatment for future developments.
  - Limited development and employment opportunities will be created as there is no construction phase).

- **Indirect Impacts**

- Local suppliers and contractors will not benefit from the business opportunities relating to supply and delivery of materials
- No new business and industrial ventures due to lack of adequate waste water treatment infrastructure

SECTION F. RECOMMENDATION OF EAP

Is the information contained in this report and the documentation attached hereto in the view of the EAP sufficient to make a decision in respect of this report? If "NO", please contact the KZN Department of Agriculture & Environmental Affairs regarding the further requirements for your report.	YES	NO

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:

Both the heritage and Wetland reports have recommended that the project may go ahead as long as mitigation measures outline are observed carefully. It is a recommendation of this Basic Assessment that the Proposed construction of the sewerline be authorised. It is therefore recommended that the environmental authorities authorise the development subject to the following conditions

- The EMPr for this application be made a binding document for the contractors and managers on site.
- The Contractor to use local Labour during the contraction phase where applicable
- Compliance with the mitigation measures outlined in this BA report and EMPr;
- The Contractor shall ensure that adequate protection measures are taken to minimize the potential pollution incidents from the sewerline.
- Neighbouring Property owners closer to the sites must be informed at least 30 days before the construction commences;
- Compliance with all legal requirements in relation to environmental management and conditions of the authorisation issued by DEA

(See Appendix F for the EMPr.)

SECTION G: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Locality Map

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports
- Appendix D1: Heritage Report
- Appendix D2: Wetland Assessment Report

Appendix E: Comments and responses report

Appendix F: Draft Environmental Management Programme (EMPr)

Appendix G: Other information