edtea
Department :
Economic Development, Tourism and 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, 2014 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 1, 2014 (Government Notices No. R 983 dated 04 December 2014); 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, 2014 and is meant to streamline applications. This report is the format prescribed by the KZN Department of Economic Development, Tourism & 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 Economic Development, Tourism & 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 Economic Development, Tourism & 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):	
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:	**Mawenje Consulting Africa**		
Physical address:	**Pallazo Towers West, Cnr William Nicol Drive and Monte Casino Blvd, Fourways, 2086, Johannesburg, South Africa**		
Postal address:	**P. BOX 1454, Lonehill**		
Postal code:	**2062**	**Cell:**	**076 9014006**
Telephone:	**011 510 0075**	**Fax:**	**086 625 8191**
E-mail:	**gabriel@mawenje.com**		

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)
Gabriel T. Ngorima	**Masters-Environmental Sciences (Wits), BES (Hons) Environmental Sciences**	**SACNASP**	**12 years**

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
Gabriel T. Ngorima	**Masters-Environmental Sciences (Wits), BES (Hons) Environmental Sciences**	**Environmental Sciences & Ecology**	**Report Compilation**	**Ecological Study for KwaMathukuza Phase 2 housing Development**
Phathutshedzo Mukwevho	**M.Sc. Environmental Management (UJ), B.Sc. Hons. Botany (UJ).**	**Environmental Sciences & Ecology**	**Report Compilation**	**Ecological Study for KwaMathukuza Phase 2 housing Development**
P.O Ndjeka	**BTech Civil Engineering (TUT), Honours Public Administration (Stellenbosch)**	**Geo-technical**	**Site Description & Impact Assessment**	**KwaMathukuza Housing Project, Geotechnical Investigation Report**
Bonginkosi Msiya	**BSc Transport Planning & Traffic Engineering (UP)**	**Transportation Planning Traffic Engineering**	**Impact Assessment**	**KwaMathukuza Housing Project, Traffic Impact Assessment Study**
Vumi Dlamini	**BSc Social Sciences in Environmental Analysis and management (UP)**	**Community Health Environmental management**	**Health Impact Assessment**	**Community Health Impact Assessment Report for the Proposed Phase 2 KwaMathukuza Housing Development in KwaMathukuza, Newcastle, KwaZulu Natal**

SECTION B: ACTIVITY INFORMATION

1. PROJECT TITLE

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

KwaMathukuza Phase 2 Housing Development in Newcastle, KwaZulu-Natal

2. PROJECT DESCRIPTION

Provide a detailed description of the project:

The Newcastle Local Municipality proposes the development of the site for a residential development of approximately 221 units named KwaMathukuza Phase 2 that forms part of the initial project of the 1385 houses built and completed in 2012 in this area. There are around 200 residents who have become residents of the transit camp that was built by the Provincial Department of Human Settlements to decant people whose houses were constructed during the rectification project. As part of a process to demolish the transit camp, the Municipality and the Provincial Department of Human Settlements have agreed that phase 2 of the project be undertaken.

The erf sizes will be roughly 150m^2 with slightly larger erven along the main peripheral roads. The internal road reserves will be 10 metres wide and all bulk services including electrical, water, waste and sewage will be connected from the existing as per development of Phase 1.

3. ACTIVITY DESCRIPTION

Describe each listed activity in Listing Notice 1 (GNR 983, 04 December 2014), Category A of GN 718, 3 July 2009 (Waste Management Activities) which is being applied for as per the project description:

Number and date of the relevant notice:	Activity No (s) (in terms of the relevant notice) :	Listed activity as per project description:	Process indicated by regulations
GN 983 of 2014	27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for- (i) the undertaking of a linear activity; or	Basic Assessment

		(ii) maintenance purposes undertaken in accordance with a maintenance management plan.	

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.

The two alternatives considered for the development were layout Alternatives.

1) **Alternative A (Preferred), is proposing a 200 metre buffer/setback from the existing Sewage works and hence providing for approximately 221 units on the site.** (Refer to Appendix A1 for site Plans)
2) **Alternative B, is proposing a 110 metre buffer/setback from the existing Sewage works and hence providing for approximately 227 units on the site.** (Refer to Appendix A2 for site Plans)

<u>Sections B 5 – 15 below should be completed for each alternative.</u>

Please note that No site alternatives have been proposed for the proposed development. However 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 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.

Alternative:	**Latitude (S):**			**Longitude (E):**		
Alternative S1[1] (preferred or only site alternative)	S27º	45‘38	23“	E030º	00‘11	75“
Alternative S2 (if any)	S27º	45‘38	23“	E030º	00‘11	75“
Alternative S3 (if any)	N/A					

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:**

[1] “Alternative S..” refer to site alternatives.

Alternative A1[2] (preferred activity alternative)	54800m^2 (5,48ha)
Alternative A2 (if any)	54800m^2
Alternative A3 (if any)	m^2

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	N/A m
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)	N/A m^2
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	N/A m	

Describe the type of access road planned:

The site is located at the intersection of Asiphephe (Albert Wessels) Drive and Yende Street, just off Madadeni Road. The proposed development will take access off Yende Street on the northern side and from Njesuthu and Jonono Roads to the south.

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.

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

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?	R24 340	408
What is the expected yearly income that will be generated by or as a result of the activity?	N/A	
Will the activity contribute to service infrastructure?	YES X	NO
Is the activity a public amenity?	YES	NO X
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?	R10 000 000	
What percentage of this will accrue to previously disadvantaged individuals?	95%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	0	
What is the expected current value of the employment opportunities during the first 10 years?	N/A	

What percentage of this will accrue to previously disadvantaged individuals?	95%

11.2. Need and desirability of the activity

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

KwaMathukuza Phase 2, forms part of the initial project of the 1385 houses built and completed in 2012 in this area. There are around 200 residents who have become residents of the transit camp that was built by the Provincial Department of Human Settlements to decant people whose housed were constructed during the rectification project. As part of a process to demolish the transit camp, the Municipality and the Provincial Department of Human Settlements have agreed that phase 2 of the project be undertaken.

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

To facilitate the provision housing in line with the national and provincial norms and standards.
To promote sustainable human settlements in rural areas (land reform areas areas).

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

The project seeks to facilitate the provision housing in line with the national and provincial norms and standards and hence reduce housing back-logs to meet the provincial and national targets. Rate of urbanisation in Newcastle has been very rapid, resulting in the development of settlements along P483 in particular as linear settlements from KwaMathukuza through JBC to Khathide in the north. Rapid urbanisation brings with it many problems as it places huge demands on land, water, housing, transport and employment.

Population growth rate in Newcastle is in an upward trajectory with the majority of the growth occurring mainly in the eastern areas – around Madadeni and Osizweni Townships. These are largely underdeveloped areas occupied mainly by low income and poor communities. The project therefore seeks to provide more housing to a municipality that is experiencing population growth and hence higher human settlements demand.

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:
National Environmental Management Act, No. 107 of 1998 (NEMA), as amended & NEMA EIA Regulations, 2014: GN983, published in Government Gazette on 4 December 2014	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 and Sanitation (DWS)	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?	50m^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. 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 X	NO
If yes, what estimated quantity will be produced per month?	5,65 m^3	

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

The operational (domestic) 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 through Newcastle Municipality services.

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 X	NO

If yes, contact the KZN Department of Economic Development, Tourism & 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 Economic Development, Tourism & 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?	N/A 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 Economic Development, Tourism & 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:	N/A		
Contact person:	N/A		
Postal address:	N/A		
Postal code:	N/A		
Telephone:	N/A	Cell:	N/A
E-mail:	N/A	Fax:	N/A

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

If yes, contact the KZN Department of Economic Development, Tourism & 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

13.4. Generation of noise

Will the activity generate noise?	YES X	NO
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.

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.

15. ENERGY EFFICIENCY

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

Compliance to local municipality by-laws

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

Compliance to local municipality by-laws

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):	**N/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 **X**	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S2 (if any): N/A

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): N/A

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 **X**	Undulating plain/low hills	Dune	Sea-front

Alternative S2 (if any): N/A

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

Alternative S3 (if any): N/A

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 **X**	NO

If YES, please complete the following:

Name of the specialist:	P.O Ndjeka		
Qualification(s) of the specialist:	BTech Civil Engineering (TUT), Honours Public Adminstration (Stellenbosch		
Postal address:	P.O Box 2845, Pretoria		
Postal code:	0001		
Telephone:	082442 9108	Cell:	082 4429108
E-mail:	pende@telkomsa.net	Fax:	0862421918

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:	N/A	
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:	N/A	
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): N/A		Alternative S3 (if any): NA	
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	NO **X**	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO **X**	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO **X**	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	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:	Gabriel T Ngorima		
Qualification(s) of the specialist:	Masters Environmental Science (Wits), Professional Natural Scientist		
Postal address:	P.O Box 1454, Lonehill		
Postal code:	2062		
Telephone:	011510 0075	Cell:	0769014006
E-mail:	gabriel@mawenje.com	Fax:	086 625 8191

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: N/A		
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: N/A		
Are any further specialist studies recommended by the specialist?	YES	NO **X**
If YES, specify: N/A		
If YES, is such a report(s) attached in Appendix D? N/A	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	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	Disturbed grassland, the development will have minimum impact as it is already disturbed as the site is next to a built-up area
Low density residential	YES	NO X	
Medium density residential	YES	NO X	
High density residential	YES X	NO	The KwaMathukuza Phase 1. The proposed land use is high density residential so there will be no impact
Informal residential	YES X	NO	The western side of site has a Transit camp. This will be demolished as part of the development
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	Creche(s) and schools (i.e. V.S. Zulu Primary School) in KwaMathukuza Phase 1 could be impacted after the completion of the project as new settlers could send their children to those schools.
Tertiary education facility	YES	NO X	

Church	YES **X**	NO	Any church possibly existing in the phase 1 Kwamathukuza could be impacted by increase in numbers of new setters once the project is completed.
Old age home	YES	NO X	
Sewage treatment plant	YES X	NO	The Sewage plant is in close proximity and might be a nuisance to the proposed development. A buffer is required.
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	NO X	
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	NO X	
River, stream or wetland	YES	NO X	
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:	N/A	
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 Economic Development, Tourism & 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 41 of the EIA Regulations, 2014, but may deviate from the requirements of subregulation 41(2) in the manner agreed by the KZN Department of Economic Development, Tourism & 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 44 in the EIA Regulations, 2014) 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):

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, 2014, 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.

N/A at this stage no issues has been received from interested and affected parties

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):

N/A at this stage no issues has been received from interested and affected parties

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

Description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity

The first step in the environmental impact assessment process is to describe the nature of the impact providing a description of what is being affected and how (first column on the description table below).
The second column is the determination of how significant the identified impacts will have on the biophysical environment. The significance of impacts will be determined through a synthesis of the aspects produced, in terms of their nature, duration, intensity, extent and likelihood.
The significance of impacts are described as follows:
1) No significance
The impact is not substantial and does not require any migratory 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.
The third column gives the recommendations management and mitigation measures to reduce the identified impacts. It is important to note that potential impacts of the proposed project were identified, assessed and recommended mitigation measures based on the site visits conducted, Environmental Assessment Practitioners experience and expertise in the field as well as recommendations from specialist studies.

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

THERE WERE NO IMPACTS IDENTIFIED ACCOSSIATED WITH 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 WERE NO SITE ALTERNATIVES CONSIDERED, HOWEVER THERE WERE DESIGN ALTERNATIVES CONSIDERED.

Alternative S1 (preferred alternative)

Direct impacts: No impacts ***Indirect impacts: No impacts*** ***Cumulative impacts: No impacts***

Alternative S2 (if any)

Direct impacts: No impacts

Indirect impacts: No impacts   ***Cumulative impacts: No impacts***

No-go alternative (compulsory)

Direct impacts: No impacts   ***Indirect impacts: No impacts***   ***Cumulative impacts: No 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 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)

Potential impacts:	**Significance rating Of impacts:**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**
Based on the proposed change that the buffer zone around the sewage works can be increased to 200m, a draft layout plan shows that it is possible to accommodate approximately 221 residential units of roughly 150m² each: **The impact here could be unpleasant nuisance and Possible health issues from the waste water treatment plant due to close proximity to the proposed houses.**	Medium (negative)	• Considered a 200m setback from the sewage works where the number of residential units will approximately be 221 residential units • Where impacts have been assumed to be potentially significant, various mitigation measures to manage and monitor the impacts of the WWTW have been proposed (Refer to Health Impact assessment on appendix D1) • Determined the Health Baseline Status, in order to plan effectively, and avoid designs that might exacerbate the Health status in the proposed site. (Refer to Health Impact assessment on appendix D1)	Low (negative)

Direct impacts: No impacts   ***Indirect impacts: No impacts***   ***Cumulative impacts: No impacts***

Alternative A2 (if any)

Direct impacts: No impacts   ***Indirect impacts: No impacts***   ***Cumulative impacts: No impacts***

No-go alternative (compulsory)
Direct impacts: No impacts ***Indirect impacts: No impacts*** ***Cumulative impacts: No 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

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

Alternative S1 (preferred site)

Direct impacts: Air quality impacts from dust emission during construction
Noise impacts from construction machinery

Indirect impacts: Minimum traffic impact during construction due to construction equipment

Cumulative impacts: Minimum impact due to increased cumulative impact on air quality and noise

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.	**Medium** (Negative)	1. The footprint must be kept as small as possible. 2. Cleared indigenous vegetation can be stockpiled for possible reuse in later rehabilitation or landscaping, or as a brush pack for erosion prevention. 3. 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. 4. No burning of vegetation is permitted. **5.** Sensitive vegetation (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 Ensure natural indigenous vegetation is used for rehabilitation purposes.	**Low** (Negative)

• Due to the disturbance of the site alien plants will be able to establish and could become a problem by infesting neighbouring land.			
Soil erosion: Construction earthworks may cause soil erosion.	Medium (Negative)	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 construction.	Low (Negative)
Impacts on ground water: Groundwater contamination due to construction earthworks.	Medium (Negative)	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	Low (Negative)

		chemical toilets for 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 (Negative)	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.(refer to the Geotech study on appendix D3)	Low (Negative)
Noise Impacts: Nuisance to the neighbouring people as from construction vehicles, equipment and machinery during construction.	Medium (Negative)	1. Specifying the hours during which the works may be carried out; 2. 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. a. Monday to Friday 8am to 6pm b. Saturdays 8am to 1pm c. Sundays and Public Holidays- No noisy activities allowed. 3. Mitigation measures outlined in the EMPr.	Low (Negative)
Impact on dust and air quality: The influx of pollutants will occur due to	High (Negative)	1. Continuous watering of site should be carried to prevent pollution during windy and dry conditions.	Medium (Negative)

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.		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.	
Impact on aesthetic quality: Stockpiled materials; workforce; and construction sites.	Medium (Negative)	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 be 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.	Low (Negative)
Impact on socio-economics: **1.** Impact on nearby residential areas.	Medium (Negative)	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. 3. Notification must include possible timeframes for stoppages.	Low (Negative)

		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.	
Health and social issues WWTP possible health & odour issues	High (Negative)	1. The buffer between the WWTP and the proposed site will be increased to 200m, however this result in the reduction of residential units from the proposed 227 to 221 units. 2. Upgrade the WWTP and develop measures to reduce emissions of bad odours: 3. The site of the treatment facility should be well demarcated and fenced off to control access by non-authorised people (Refer to Health Impact assessment on appendix D1) 4. Monitoring the activities and parameters of the WWTP, in order to prevent potential accidents. (Refer to Health Impact assessment on appendix D1)	Medium (Negative)
Traffic: Increase of construction vehicles in the area.	Medium (Negative)	1. Construction vehicle movement to and from site must be outside peak hour traffic (07:00am - 09:00am, & 16:00pm – 18:00pm.) 2. Add additional 50m slip lane from Albert Wessel north bound link.	**Low** (Negative)

		3. Upgrade east access road from the T-intersection with P483 to a 3.0 m width per direction tarred road 4. Three way priority intersection, with priority intersection along Albert Wessel road and stop from main road 1. 5. Four- way priority intersection, with priority alone Road 1 and stop from Access road C. **6.** Three-way priority intersection, with priority alone Yende street and stop from Access D. (Refer to the Traffic Impact Assessment Report on Appendix D2)	
Safety and Security: Workforce and construction sites.	Medium (Negative)	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).	Low (Negative)
The following impacts are positive:			
Impact on housing provision: There will be a positive impacted as more people will have decent accommodation and hence improved standard of living		There are no mitigation measures as the impact is positive.	

Alternative S2 (if any)

N/A

No-go alternative (compulsory)

Direct impacts: No impacts, however the shortage of houses will remain that has negative Social impacts.

Indirect impacts: Non
Cumulative impacts: Non

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):

Alternative A1 (preferred alternative)

Direct impacts: No impacts

Indirect impacts: No impacts

Cumulative impacts: No impacts

Alternative A2

Direct impacts: No impacts

Indirect impacts: No impacts

Cumulative impacts: No impacts

No-go alternative (compulsory)

Direct impacts: No impacts

Indirect impacts: No impacts

Cumulative impacts: No 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

THERE WERE NO SITE ALTERNATIVES CONSIDERED RELATING TO OPERATIONAL PHASE

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

Alternative S1 (preferred alternative)

Direct impacts: No impacts

Indirect impacts: No impacts

Cumulative impacts: No impacts

Alternative S2 (if any)

Direct impacts: No impacts

Indirect impacts: No impacts

Cumulative impacts: No impacts

No-go alternative (compulsory)

Direct impacts: No impacts

Indirect impacts: No impacts

Cumulative impacts: No 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: Traffic Impact

Indirect impacts: Positive impact on social status of people in the area due to provision of houses

Cumulative impacts: Increase in water pollution

Alternative A2

Direct impacts: Traffic Impact. The proximity to Sewage works will be a nuisance to the dwellers.

Indirect impacts: Positive impact on social status of people in the area due to provision of houses.

Cumulative impacts: Increase in water pollution

No-go alternative (compulsory)

Direct impacts: No impacts

Indirect impacts: No impacts

Cumulative impacts: No impacts

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	**Alternative A2**

Potential impacts:	Significance rating Of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Impacts on stormwater: Increase in run-off water as well as the accumulation of stormwater as a result of tarred roads	**Medium** (Negative)	Run-off water will decant into the drainage line that may be in close proximity of storm water drains. (refer to the Geotech study report in Appendix D3)	Low
Health and social issues WWTP possible health & odour issues	**High** (Negative)	1. Increased the buffer between the WWTP and proposed residential site to 200m. 2. The WWTP Practices and standard operating procedures should be followed; • The concerned staff/operators should receive training on the safe and efficient operation of such wastewater treatment facilities; • Warning signs should be placed around the unit and warning notices should be distributed/ circulated particularly in the events of maintenance and sludge disposal; • Protective clothing and tools should be worn at all times; and • The site of the treatment facility should be well demarcated and fenced off to control access by non-authorised people. (Refer to the Health Impact Assessment in appendix D1)	Medium (Negative)
Traffic:	**High**	1. Add additional 50m slip lane from Albert Wessel	**Low**

Potential impacts:	Significance rating Of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Increase in traffic during peak hour (83 vehicles per hours).	(negative)	north bound link. 2. Upgrade east access road from the T-intersection with P483 to a 3.0 m width per direction tarred road 3. Three way priority intersection, with priority intersection along Albert Wessel road and stop from main road 1. 4. Four- way priority intersection, with priority alone Road 1 and stop from Access road C. 5. Three-way priority intersection, with priority alone Yende street and stop from Access D. (Refer to Traffic impact Assessment Report in Appendix D2)	
The following impacts are positive			
Impact on housing provision: There will be a positive impact as more people will have decent accommodation and hence improved standard of living		There are no mitigation measures as the impact is positive.	
Impact on soil erosion: Reduction on erosion as a result of tarred surface			
Impact on dust and air quality: Dust emission will be reduced in the area as the roads will be tarred.			

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

NOT APPLICABLE TO HOUSING DEVELOPMENT

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the decommissioning or closure phase:
THERE WERE NO SITE ALTERNATIVES CONSIDERED

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).	No alternative site considered

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 KwaMathukuza Phase 2 Housing Development in Newcastle, KwaZulu-Natal is preferred from the environmental perspective as the construction will occur within a locality that does not consist of significant environmental sensitive features. In general, the development will have 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 development, although the Ingagane river is in close proximity (approx. 800m). The were concerns regarding the proximity of the WWTP to the proposed site, and a study by a Health impact specialist was done indicating

possible health hazards to the people. However the potential health impacts that can arise from the transit camps, warrant that the Housing Development project proceed, provided that the WWTP adheres to the recommended environmental, Social and health management commitments (Refer to the Health Impact Assessment report in appendix D1).
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 medium and low significance impact rating through the considerations of the mitigation measures identified.

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:
Population growth rate in Newcastle is in an upward trajectory with the majority of the growth occurring mainly in the eastern areas – around Madadeni and Osizweni Townships. These are largely underdeveloped areas occupied mainly by low income and poor communities. The project therefore seeks to provide more housing to a municipality that is experiencing population growth and hence higher human settlements demand.

It is the opinion of Mawenje Consulting Africa (Pty) Ltd that the proposed KwaMathukuza Phase 2 Housing Development in Newcastle, KwaZulu-Natal will not have a significant environmental impact and is therefore preferred subject to addressing all issues raised in the impact assessment. 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.

Alternative S2

NO SITE ALTERNATIVE CONSIDERED

Alternative A1 (preferred alternative)

N/A

Alternative A2

N/A

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 KwaMathukuza Phase 2 Housing Development in. This alternative is not feasible as this proposed development will bring about positive social benefits to the people within the municipality without degrading sensitive biophysical aspects of the environment.

Direct impacts:
Possible odour issues form the WWTP

Cumulative impacts:

- Increased traffic volumes
- The housing development will facilitate the provision housing in line with the national and provincial norms and standards.
- The housing development will promote sustainable human settlements in rural areas (land reform areas areas).

SECTION F. RECOMMENDATION OF EAP

	YES	NO
Is the information contained in this report and the documentation attached 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 Economic Development, Tourism & 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: Locality Map (s)

Appendix B: Photographs

Appendix C: Facility illustration(s)
- Appendix C1: Layout Alternative 1 (Preferred)
- Appendix C2: Layout Alternative 2

Appendix D: Specialist reports

- Appendix D1: Health Impact Assessment Report
- Appendix D2: Traffic Impact Assessment
- Appendix D3: Geotech Study
- Appendix D4: Service Report

Appendix E: Public Participation Report

Appendix F: Draft Environmental Management Programme (EMPr)

Appendix G: Other Information