Mpumalanga Province
Department of Agriculture and Land Administration

(For official use only)

File Reference Number:						
Application Number:						
Date Received:						

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2006

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2006 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.

2. The report must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.

4. An incomplete report may 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 may result in the rejection of the application as provided for in the regulations.

6. This report must be handed in at offices of the relevant competent authority as determined by each authority.

7. No faxed or e-mailed reports will be accepted.

8. The report must be compiled by an independent environmental assessment practitioner.

9. 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.

10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. In addition, if it is clear to the EAP that because of the particular circumstances of the case it is not sensible to complete any of the sections indicated under paragraph 3 of this report, he or she may apply for exemption from completing that part of the report in the spaces provided in the report. It must however be noted that if the application for exemption is turned down, the report may have to be resubmitted.

SECTION A: APPLICATION FOR EXEMPTION

The relevant parts of this section must be completed if the environmental assessment practitioner (EAP) on behalf of the applicant whishes to apply for exemption from completing or complying with certain parts of this basic assessment report.

1. APPLICATION FOR EXEMPTION FROM ASSESSING ALTERNATIVES:

At least two alternatives (site or activity) should be assessed. If that is not possible, the applicant should apply for exemption from having to assess alternatives. Such exemption will, however, not apply to the no-go alternative that must be assessed in all cases.

Provide a detailed motivation for not considering alternatives including an explanation of the reason for the application for exemption (supporting documents, if any, should be attached to this report):

Exemption is applied for assessing **site alternatives**. The reason being that the proposed development on Portion 13 and Portion 188 of the farm Nooitgedacht 268 - IT is part of a purchase agreement between GTF Trust and Msukaligwa Municipality (See Appendix F).

I declare that the above motivation is accurate and, hereby apply for exemption in terms of regulation 51 of the Environmental Impact Assessment Regulations, 2006, from having to assess alternatives in this application as required in section 24(4)(b) in the National Environmental Management Act, 1998 (Act No. 107 of 1998)

Signature of the EAP:  Date: 2009-09-01

2. APPLICATION FOR EXEMPTION FROM COMPLETING OR COMPLYING WITH PART(S) OF THIS BASIC ASSESSMENT REPORT:

Application for exemption form completing or complying with certain parts of this basic assessment report may be made by completing the relevant sections below. Applications for exemptions from completing or complying with any other part of the basic assessment report must be made in the normal manner.

Indicate the numbers of the sections of this report for which exemption is applied for:

Section B:	7(a)	7(b)	7(c)	7(d)	8	9	10(c)	10(e)	10(f)	10(g)	10(h)	10(j)	10(k)	12
Section B:	1	2 (a)	3	4	5	6								
Section D:	1(a)	1(b)	1(c)	1(d)	1(f)	1(g)	3							

Provide a detailed motivation including an explanation of the reason for the application for exemption (supporting documents, if any, should be attached to this report):

Site alternative assessment (2a). See Appendix F. The reason being that the proposed development on Portion 13 and Portion 188 of the farm Nooitgedacht 268 - IT is part of a purchase agreement between GTF Trust and Msukaligwa Municipality.

I declare that the above motivation is accurate and, hereby apply for exemption in terms of regulation 51 of the EIA Regulations, 2006, from having to complete the indicated sections of the Basic Assessment Report.

Signature of the EAP:  Date: 2009-09-01

SECTION B: ACTIVITY INFORMATION

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for in detail (A1):

The activity entails the development of residential properties. The township will cater for the current demand for open erven in Ermelo and alleviate the strain on the local authority to provide services due to the high intensity land use in central Ermelo. The majority of the properties will be for dwelling units and apartment type developments. The envisaged development will be approximately 18.25 ha in extent.

2. ALTERNATIVES

Describe alternatives that are considered in this application. 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.

2(a) Site alternatives:

Describe site alternative 1 (S1), for the activity described above, or for any other activity alternative:

Exemption applied for site alternatives as there are no alternatives due to the sale agreement between the developer and the local municipality

Describe site alternative 2 (S2), if any, for the activity described above, or for any other activity alternative:

Exemption applied for site alternatives

Describe site alternative 3 (S3), if any, for the activity described above, or for any other activity alternative:

Exemption applied for site alternatives

(2)(b) Activity alternatives:

Describe activity alternative 1 (A1), if any, for any or all of the site alternatives as appropriate:

Proposal: The activity entails the development of residential properties. The township will cater for the current demand for open erven in Ermelo and alleviate the strain on the local authority to provide services due to the high intensity land use in central Ermelo. The majority of the properties will be for dwelling units and apartment type developments. The envisaged development will be approximately 18.25 ha in extent.

The envisaged development to take place on Portion 13 and Portion 188 of the farm Nooitgedacht 268 – IT.

The main purpose of the application is to establish thus a township to facilitate the orderly and coordinated subdivision and rezoning of land for the purpose of a balance residential township, and the disposal thereof to various parties as part of a residential development. The township will also have special conditions for the development of institutional facilities.

The proposed township will consist of the following stands:

(The Ermelo Town Planning Scheme 1982) will be the relevant town planning scheme for the proposed development)

1. Amusement
   This stand is currently already developed with the "Ermelo Sport In" recreational facility. This facility caters for various sports and will remain on the site. The stand of this facility will be approximately 8825m^2 . This facility will remain the property of the municipality.

2. Residential 3
   A total number of seven residential 3 stands have been provided for in the layout. Densities of 50 units per hectare have been proposed for the Residential 3 properties. The total area for residential 3 is approximately 64807.7m^2 and a number of 324 dwelling units can be erected on these properties. The size of these dwellings will also follow first time home owners to procure property.

3.Special: (Erf 15)
   This property which is approximately 8020m^2 will be zoned for the following special conditions : Amusement – recreational facilities ; business premises – office use; Residential at a density of 50 units / hectare

4.Special
   Four properties in the development will be zoned Special. The properties could be utilised for the following: Institutional and uses incidental to it, e.g. Retirement Village; Residential 3 rights with special consent for special buildings, hotels and social halls; business premises, amusement.

5.Special – Private Open Space
   The private open space in this township will have very unique characteristics. The fact that there is a man made stream (artificial) that flows through the length of the property will give the open space a variety of features. The private open space area will make up 38.7% of the township area. The private open space will also be used for the following: access; proportional ownership and contribution to maintenance; security fencing

No development to be below the 1:100 year flood line pertaining to the envisaged development area. Incorporation of sound environmental measures into the development life cycle.

Describe activity alternative 2 (A2), if any, for any or all of the site alternatives as appropriate:

Proposal: The activity entails the development of residential properties. The township will cater for the current demand for open erven in Ermelo and alleviate the strain on the local authority to provide services due to the high intensity land use in central Ermelo. The majority of the properties will be for dwelling units and apartment type developments. The envisaged development will be approximately 18.25 ha in extent.

The envisaged development to take place on Portion 13 and Portion 188 of the farm Nooitgedacht 268 – IT.

The main purpose of the application is to establish thus a township to facilitate the orderly and coordinated subdivision and rezoning of land for the purpose of a balance residential township, and the disposal thereof to various parties as part of a residential development. The township will also have special conditions for the development of institutional facilities.

The proposed township will consist of the following stands:

(The Ermelo Town Planning Scheme 1982) will be the relevant town planning scheme for the proposed development)

1. Amusement
   This stand is currently already developed with the "Ermelo Sport In" recreational facility. This facility caters for various sports and will remain on the site. The stand of this facility will be approximately 8825m^2 . This facility will remain the property of the municipality.

2. Residential 3
   A total number of seven residential 3 stands have been provided for in the layout. Densities of 50 units per hectare have been proposed for the Residential 3 properties. The total area for residential 3 is approximately 64807.7m^2 and a number of 324 dwelling units can be erected on these properties. The size of these dwellings will also follow first time home owners to procure property.

3.Special: (Erf 15)
   This property which is approximately 8020m^2 will be zoned for the following special conditions : Amusement – recreational facilities ; business premises – office use; Residential at a density of 50 units / hectare

4.Special
   Four properties in the development will be zoned Special. The properties could be utilised for the following: Institutional and uses incidental to it, e.g. Retirement Village; Residential 3 rights with special consent for special buildings, hotels and social halls; business premises, amusement.

5.Special – Private Open Space
   The private open space in this township will have very unique characteristics. The fact that there is a man made stream (artificial) that flows through the length of the property will give the open space a variety of features. The private open space area will make up 38.7% of the township area. The private open space will also be used for the following: access; proportional ownership and contribution to maintenance; security fencing

Development to extend below the 1:100 year flood line pertaining to the envisaged development area. No incorporation of environmental measures into the lifecycle of the development.

Describe activity alternative 3 (A3), if any, for any or all of the site alternatives as appropriate:

Activity alternative 3 : no go development option

No go alternative

No development activity on Portion 13 and Portion 188 of the farm Nooitgedacht 268 – IT.

4. 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 and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**		**Longitude (E):**	
Alternative S1[1] (preferred or only site alternative)	26°	31.934‘	29°	58.927‘
Alternative S2 (if any) Exemption applied for	°	‘	°	‘
Alternative S3 (if any) as the no go option	26°	31.934‘	29°	58.927‘

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

In the case of linear activities :

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

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

5. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	**Size of the activity:**
Alternative A1[2] (preferred activity alternative)	18 2526.4 m^2
Alternative A2 (if any)	20 0000 m^2
Alternative A3 (if any) as the no go option	18 2526.4 m^2

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	m^2
Alternative A2	m^2
Alternative A3- no go option	m^2

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)	15 126 m^2
Alternative A2 (if any)	15 126 m^2
Alternative A3 (if any) No go option	15 126 m^2

6. SITE ACCESS

Does ready access to the site exist, or is access directly from an existing road? YES
If NO, what is the distance over which a new access road will be built
Describe the type of access road planned:

Access roads to form part of the existing infrastructure around the envisaged development so as to provide separate entrances to the envisaged development

Include the position of the access road on the site plan.

7. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

7(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? YES
If yes, what estimated quantity will be produced per month? Undetermined at this stage

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

The building contractors to be respectively responsible for the safe and responsible removal and disposal of their respective construction waste. These wastes to be disposed of at an approved and permitted disposal site / landfill site. The main types of construction waste to be kept separated at source so as to prevent potential hazardous waste such as hydrocarbons to contaminate non hazardous waste. The containers / areas wherein the construction waste is to be temporarily disposed of into should be on special demarcated areas and run off from these sites should be prevented. Any containers / skips wherein construction waste is to be disposed of into should be leak proof and clearly marked for the respective purpose. Should any hazardous construction waste be generated such as used oils it is not to be temporarily stored on the site for more than 90 days. These types of wastes then to be disposed of responsibly at an approved permitted landfill site accepting such wastes.

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

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

Same as above

Will the activity produce solid waste during its operational phase? YES

If yes, what estimated quantity will be produced per month? 32 400 kg

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

The solid waste to be disposed o by the municipality to an approved and permitted landfill site.

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, the application should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

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

If yes, inform the competent authority and request a change to an application for scoping and EIA.

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

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.

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

Has a specialist been consulted to assist with the completion of this section? NO

If YES, please complete:

Name of the specialist:			
Qualification(s) of the specialist:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Are any further specialist studies recommended by the specialist? NO

If YES, specify:

If YES, is such a report(s) attached?

Signature of specialist: _____ Date:

7(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES

If yes, what estimated quantity will be produced per month? 7200 m^3

Will the activity produce any effluent that will be treated and/or disposed of on site? NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

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

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:

Has a specialist been consulted to assist with the completion of this section? NO

If YES, please complete:

Name of the specialist:			
Qualification(s) of the specialist:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Are any further specialist studies recommended by the specialist? NO

If YES, specify:

If YES, is such a report(s) attached?

Signature of specialist: _____ Date:

7(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere? NO
If yes, is it controlled by any legislation of any sphere of government?
If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If no, describe the emissions in terms of type and concentration:

During the construction phase particulates and exhaust fumes will result from the construction activities. This will be for a limited period only.

Has a specialist been consulted to assist with the completion of this section? NO
If YES, please complete:

Name of the specialist:			
Qualification(s) of the specialist:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Are any further specialist studies recommended by the specialist? NO
If YES, specify:
If YES, is such a report(s) attached?

Signature of specialist: _____ Date:

7(d) Generation of noise

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

Noise generation to be the most significant during the construction phase which would impact on the houses north, east, south and west of the envisaged development. However, this is a very limited period and mitigation measures are captured in the section on the mitigation of impacts.

Has a specialist been consulted to assist with the completion of this section? NO
If YES, please complete:

Name of the specialist:			
Qualification(s) of the specialist:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Are any further specialist studies recommended by the specialist? NO
If YES, specify:
If YES, is such a report(s) attached?

Signature of specialist: _____ Date:

8. WATER USE

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

Municipal	

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: Not applicable
Does the activity require a water use permit from the Department of Water Affairs and Forestry? NO
If yes, please submit the necessary application to the Department of Water Affairs and Forestry and attach proof thereof to this application if it has been submitted.

9. ENERGY EFFICIENCY

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

The following recommendations regarding structural designs are recommended by the environmental consultant:

• The use of building material that requires excessive amounts of energy to manufacture should be minimised.

• The use of building material originating from sensitive or scarce environmental resources should be minimised.

• Building material should be legally obtained by the supplier, e.g. wood must have been legally harvested, and sand should be obtained only from legal borrow pits and from commercial sources.

• Building material that can be recycled / reused should be used rather than building material that cannot.

• Use highly durable building material for parts of the building that is unlikely to be changed during the life of the building (unlikely to change due to e.g. renovation, fashion, changes in family life cycle) is highly recommended.

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

Local building material instead of imported building material should be used as much as possible as this will reduce transportation impacts, enhance local job creation and decrease costs.

10. SITE OR ROUTE PLAN (APPENDIX A AND C)

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 document. The site or route plans must indicate the following:

10(a) The scale of the plan which must be at least a scale of 1:500;
10(b) the property boundaries and numbers of all the properties within 50m of the site;
10(c) the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
10(d) the exact position of each element of the application as well as any other structures on the site;
10(e) 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;
10(f) all trees and shrubs taller than 1.8m;
10(g) walls and fencing including details of the height and construction material;
10(h) servitudes indicating the purpose of the servitude;
10(i) sensitive environmental elements within 100m of the site or sites including (but not limited thereto):
- rivers;
- the 1:100 year flood line (where available or where it is required by Department of Water Affairs);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or invested with alien species);

10(j) for gentle slopes the 1m 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
10(k) the positions from where photographs of the site were taken.

11. SITE PHOTGRAPHS (APPENDIX B)

Colour photographs from the center 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 form**.** It should be supplemented with additional photographs of relevant features on the site, if applicable.

12. FACILITY ILLUSTRATION (APPENDIX C)

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

13. ACTIVITY MOTIVATION

13(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 29 018 600
What is the expected yearly income that will be generated by or as a result of the activity?	R 2 901 860
Will the activity contribute to service infrastructure or is it a public amenity?	YES
How many new employment opportunities will be created in the development phase of the activity?	720
What is the expected value of the employment opportunities during the development phase?	R100 000 000
What percentage of this will accrue to previously disadvantaged individuals?	90 %
How many permanent new employment opportunities will be created during the operational phase of the activity?	Approximately 500
What is the expected current value of the employment opportunities during the first 10 years?	R 12 000 000
What percentage of this will accrue to previously disadvantaged individuals?	90 %

13(b) Need and desirability of the activity

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

Ermelo are has experienced rapid growth in the last couple of years with the re-commissioning of the Camden power station and the numerous mines that have opened in the surrounding areas. In terms of mining (coal), a large number of new developments are expected within the near future.

The Ermelo CBD and surrounding residential areas have been densifying over the last two – four years and in effect created a need for new open erven. The proposed township will alleviate this current need with a wide range of choices for new and existing homeowners.

The fact that the township will include land use rights for an old age home or retirement village will allow for the erection of one to alleviate the strain on the current old age home.

The township establishment will cater for the current demand for open residential erven and alleviate the strain on the local authority to provide services due to the high intensity land use in central Ermelo. The majority of the properties will be for dwelling units and apartment type developments.

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

The township establishment will subsequently cater for the current demand for open residential erven and alleviate the strain on the local authority to provide services due to the high intensity land uses in central Ermelo. The majority of the properties will be for dwelling units and apartment type developments.

This development also takes into consideration the following development objectives as stated in clause 1.5 of the Msukaligwa IDP and contributes to the following:

To support local economic development initiatives in order to empower and develop SMME and strive to create job opportunities so that unemployment and level of poverty can be reduced

To encourage and attract investments within the municipality by improving infrastructure that will create an environment for business opportunities and encourage the tourism industry

To ensure that local environmental issues are adequately addressed and the envisaged development projects have a minimal or positive impact on the natural environment.

Issues and programs emanating from IDP's must be compatible with the priority areas of the Provincial Growth and Development Strategy (PGDS) of the Mpumalanga Provincial Government. This envisaged development also aids to some extent in contributing in addressing 4 of the priority areas of intervention as stipulated by the PGDS, namely:

Economic development
Infrastructure development
Environmental development and
Good governance (between the public and private sector)

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

Issues and programs emanating from IDP's must be compatible with the priority areas of the Provincial Growth and Development Strategy (PGDS) of the Mpumalanga Provincial Government. This envisaged development also aids to some extent in contributing in addressing 4 of the priority areas of intervention as stipulated by the PGDS, namely:

Economic development
Infrastructure development
Environmental development and
Good governance (between the public and private sector)

Job opportunities will also be created during the construction and operation phase of the envisaged development

14. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act No. 107 of 1998 **Government Notice R. 385 & 386** Sections 24 (2)(a) and (d) of NEMA, 1998 (Act No. 107 of 1998),	**National (Department of Water and Environmental Affairs) & Provincial (Mpumalanga Department of Agriculture and Land Administration)**	**27 November 1998 and 2006**

as described in regulations 22 to 26 of the EIA regulations , 2006, promulgated in terms of section 24(5) of the Act includes the following activities: 1(k) the bulk transportation of sewage and water, including storm water , in pipelines with- (i) an internal diameter of 0.36 metres or more; or (ii) a peak throughput of 120 litres per second or more 1(m) any purpose in the one in ten year flood line of a river or stream, or within 32 metres from the bank of a river or stream where the flood line is unknown, excluding purposes associated with existing residential use, but including: canals, channels, bridges, dams and weirs. 16. The transformation of undeveloped, vacant or derelict land to: a) establish infill development covering an area of 5 hectares or more, but less than 20 hectares; or 20. The transformation of an area zoned for the use as public open space or for a conservation purpose to another use. **National Environmental Management Act No. 107 of 1998 (NEMA)** Reference to the principles of the NEMA as set out under section 2. Special emphasis on the principles: (3) Development must be socially, environmentally and economically sustainable (4) (a) Sustainable development requires the consideration of all relevant factors including the following: (i) that the disturbance of ecosystems and loss of biodiversity are avoided or where they cannot be altogether avoided are minimised and remedied (ii) that pollution and degradation of the environment are avoided or where they cannot be altogether avoided, are minimised and remedied (iv) that waste is avoided, or where it cannot altogether be avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner (vii) that a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions (viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied (b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option. (e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle. (g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge. (i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment. (p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environmental And with specific reference to: 28. Duty of care and remediation of environmental damage		

Integrated Environmental Management: Integrated Environmental Management (IEM) is a philosophy, which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development (Integrated Environmental Management (IEM) is a philosophy, which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development (Department of Environmental Affairs: DEAT, 1992). The IEM guidelines intend endearing a pro-active approach to sourcing, collating and presenting information at a level that can be interpreted at all levels.	**Department of Water and Environmental Affairs**	**1992**
Development Facilitations Act, 1995 (Act No. 67 of 1995) The underlined principles of the application adhere to and comply with the general principles for land development as expressed in Section 3 of the Development Facilitations Act. These include inter alia: (a) policy and developments that: (i) Optimise the use of existing resources including bulk infrastructure, roads, transportation and social facilities associated thereto. It needs to be stressed that the bulk infrastructure (water, sewerage, electricity and roads) necessary to support the envisaged development are available. Secondly, transportation and existing social facilities, schools, shops, parks, etc. are also available within a convenient radius; (ii) Promote a diverse combination of land uses and that the application endeavours to provide and establish a variety of residential types in the Ermelo area. (iii) Discourages "urban sprawl" firstly, through the introduction of reasonably high densities in the area and through the optimum utilisation of the vacant available undeveloped land.	**Msukaligwa Local Municipality**	**1995**
Air quality Act , Act 39 of 2004 With specific reference to: 34. Control of noise 35. Control of offensive odours	**National (Department of Water and Environmental Affairs) & Provincial (Mpumalanga Department of Agriculture and Land Administration)**	**27 November 1998 and 2006**
National Water Act, Act 36 of 1998 (NWA) Specific reference to: 19. Prevention and remedying effects of pollution 22. Permissible water use	**National (Department of Water and Environmental Affairs) & Provincial (Mpumalanga Department of Agriculture and Land Administration)**	**1998**
National Environmental Management: Waste Act , Act 59 of 2008 With specific reference to: 16. general duty in respect of waste management 17. Reduction, re use, recycle and recovery of waste 18. Extended producer responsibility 21. General requirements for storage of waste 22. Storage of general waste 24. Collection of waste 26. Prohibition of unauthorized disposal 27. Littering	**Department of Water and Environmental Affairs and Mpumalanga Department of Agriculture and Land Administration**	**10 March 2009**

National Environmental Management: Biodiversity Act (Act 10 of 2004) With specific reference to: 70. List of invasive species 73. Duty of care related to listed invasive species 75. Control and eradication of listed invasive species	**Department of Water and Environmental Affairs and Mpumalanga Department of Agriculture and Land Administration**	**2004**

SECTION C: SITE/AREA DESCRIPTION

Important note: For linear activities (pipelines etc) as well as activities that cover very large sites, it may be necessary to complete Section C 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**
(complete only when appropriate)

1. GRADIENT OF THE SITE

Indicate the general gradient of the sites.

Alternative S1:

	1:50 – 1:20	

Alternative S2:

	1:50 – 1:20	

Alternative S3:

	1:50 – 1:20	

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site.

Alternative S1:

	Plain	

Alternative S2:

	Plain	

Alternative S3:

	Plain	

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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).

Has a specialist been consulted to assist with the completion of this section? YES

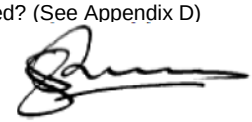
If YES, please complete:

Name of the specialist:	J Louis van Rooy and D Herman Wessels		
Qualification(s) of the specialist:	Engineering geologists		
Postal address:	P.O. Box 36786, Menlopark, Pretoria		
Postal code:	0102		
Telephone:	012 420 2023	Cell:	083 291 0938
E-mail:		Fax:	012 362 0577

Are any further specialist studies recommended by the specialist? NO

If YES, specify:

If YES, is such a report(s) attached? (See Appendix D)	YES	

Signature of specialist: 

Date: 2009-09-22

4. GROUNDCOVER

Tick the types of groundcover present on the site.

The area is moderately to highly disturbed with scattered aliens present. The area is also characterised by numerous foot paths used for crossing purposes of the area. An urban stream of poor quality flows through the envisaged development area.

The area in which the envisaged development is situated is classified as having <u>NO NATURAL HABITAT REMAINING</u>, according to the Mpumalanga Biodiversity Conservation Plan 2006 (Lotter, MC and Ferrar AA, Mpumalanga Parks and Tourism, 2006)

Alternative S1:

	Natural veld with scattered aliens[E]			
	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.

Has a specialist been consulted?		NO
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?		NO
If YES, specify and explain:		
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?		NO
If YES, specify and explain:		
Are any further specialist studies recommended by the specialist?		NO
If YES, specify:		
If YES, is such a report(s) attached?		

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).

Alternative S2: (Exemption applied for alternative site)

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.

Has a specialist been consulted?	YES	NO
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

If YES, specify and explain:		
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?	YES	NO
If YES, specify and explain:		
Are any further specialist studies recommended by the specialist?	YES	NO
If YES, specify:		
If YES, is such a report(s) attached?	YES	NO

Signature of specialist: _____ Date:

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

Alternative S3: (No go option)

	Natural veld with scattered aliens[E]		
	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.

Has a specialist been consulted?			NO
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?			NO
If YES, specify and explain:			
Are their any special or sensitive habitats or other natural features present on any of the alternative sites?			NO
If YES, specify and explain:			
Are any further specialist studies recommended by the specialist?			NO
If YES, specify:			
If YES, is such a report(s) attached?			

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).

5. LAND USE CHARACTER OF SURROUNDING AREA

Black out land uses and/or prominent features <u>that does not currently occur</u> within a 500m radius of the site

Alternative S1:

	Low density residential	Medium density residential	High density residential	
Retail	Commercial & warehousing	Light industrial		
	Office/consulting room			
				Dam or reservoir (recreation purposes)
	School			
	Sport facilities			
			~~River~~, urban stream ~~or wetland~~	

Other land uses (describe):	Guesthouses

If any of the boxes marked with an "[N] "are ticked, please consult an appropriate noise specialist to assist in the completion of this section.

Has a specialist been consulted? ☐ NO

If YES, please complete the following:

Name of the specialist:
Qualification(s) of the specialist:
Postal address:
Postal code:
Telephone: Cell:
E-mail: Fax:

Will the ambient noise level have a negative impact on the proposed activity? ☐ NO

If YES, specify and explain:

Are any further specialist or studies recommended by the specialist? ☐ NO

If YES, specify:

If YES, is such a report(s) attached? ☐

Signature of specialist: _____ Date:

If any of the boxes marked with an "[A]" are ticked, please consult an appropriate air quality specialist to assist in the completion of this section.

Has a specialist been consulted? ☐ NO

If YES, please complete the following:

Name of the specialist:
Qualification(s) of the specialist:
Postal address:
Postal code:
Telephone: Cell:
E-mail: Fax:

Will the ambient air pollution level have a negative impact on the proposed activity? ☐ NO

If YES, specify and explain:

Are any further specialist studies recommended by the specialist? ☐ NO

If YES, specify:

If YES, is such a report(s) attached? ☐

Signature of specialist: _____ Date:

If any of the boxes marked with an "[H]" are ticked, please consult an appropriate health assessment specialist to assist in the completion of this section.

Has a specialist been consulted? ☐ NO

If YES, please complete the following:

Name of the specialist:
Qualification(s) of the specialist:
Postal address:
Postal code:
Telephone: Cell:
E-mail: Fax:

Will the surrounding land use pose any unacceptable health risk on the proposed activity? ☐ NO

If YES, specify and explain:

Are any further specialist studies recommended by the specialist? ☐ NO

If YES, specify:

If YES, is such a report(s) attached? ☐

Signature of specialist: _____ Date:

Alternative S2: (Exemption applied for alternative sites)

Natural area	Low density residential	Medium density residential	High density residential	Informal residential[A]
Retail	Commercial & warehousing	Light industrial	Medium industrial[AN]	Heavy industrial[AN]
Power station[A]	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Hospitality facility
Open cast mine	Underground mine	Spoil heap or slimes dam[A]	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical center	School	Tertiary education facility	Church	Old age home

Sewage treatment plant[A]	Train station or shunting yard[N]	Railway line[N]	Major road (4 lanes or more)[N]	Airport[N]
Harbour	Sport facilities	Golf course	Polo fields	Filling station[H]
Landfill or waste treatment site[A]	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archeological site
Other land uses (describe):				

If any of the boxes marked with an "[N] "are ticked, please consult an appropriate noise specialist to assist in the completion of this section.

Has a specialist been consulted?				YES	NO
If YES, please complete the following:					
Name of the specialist:					
Qualification(s) of the specialist:					
Postal address:					
Postal code:					
Telephone:		Cell:			
E-mail:		Fax:			
Will the ambient noise level have a negative impact on the proposed activity?				YES	NO
If YES, specify and explain:					
Are any further specialist studies recommended by the specialist?				YES	NO
If YES, specify:					
If YES, is such a report(s) attached?				YES	NO

Signature of specialist: _____ Date:

If any of the boxes marked with an "[A]" are ticked, please consult an appropriate air quality specialist to assist in the completion of this section.

Has a specialist been consulted?				YES	NO
If YES, please complete the following:					
Name of the specialist:					
Qualification(s) of the specialist:					
Postal address:					
Postal code:					
Telephone:		Cell:			
E-mail:		Fax:			
Will the ambient air pollution level have a negative impact on the proposed activity?				YES	NO
If YES, specify and explain:					
Are any further specialist studies recommended by the specialist?				YES	NO
If YES, specify:					
If YES, is such a report(s) attached?				YES	NO

Signature of specialist: _____ Date:

If any of the boxes marked with an "[H]" are ticked, please consult an appropriate health assessment specialist to assist in the completion of this section.

Has a specialist been consulted?				YES	NO
If YES, please complete the following:					
Name of the specialist:					
Qualification(s) of the specialist:					
Postal address:					
Postal code:					
Telephone:		Cell:			
E-mail:		Fax:			
Will the surrounding land use pose any unacceptable health risk on the proposed activity?				YES	NO
If YES, specify and explain:					
Are any further specialist studies recommended by the specialist?				YES	NO
If YES, specify:					
If YES, is such a report(s) attached?				YES	NO

Signature of specialist: _____ Date:

Alternative S3: No go option

	Low density residential	Medium density residential	High density residential	
Retail	Commercial & warehousing	Light industrial		
	Office/consulting room			Dam or reservoir (recreational purposes)
	School			
	Sport facilities			
			~~River,~~ urban stream ~~or wetland~~	
Other land uses (describe):	Guesthouses			

If any of the boxes marked with an "^{N} "are ticked, please consult an appropriate noise specialist to assist in the completion of this section.

Has a specialist been consulted? NO

If YES, please complete the following:

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

Postal code:

Telephone: Cell:

E-mail: Fax:

Will the ambient noise level have a negative impact on the proposed activity? NO

If YES, specify and explain:

Are any further specialist studies recommended by the specialist? NO

If YES, specify:

If YES, is such a report(s) attached?

Signature of specialist: Date:

If any of the boxes marked with an "^{A}" are ticked, please consult an appropriate air quality specialist to assist in the completion of this section.

Has a specialist been consulted? NO

If YES, please complete the following:

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

Postal code:

Telephone: Cell:

E-mail: Fax:

Will the ambient air pollution level have a negative impact on the proposed activity? NO

If YES, specify and explain:

Are any further specialist studies recommended by the specialist? NO

If YES, specify:

If YES, is such a report(s) attached?

Signature of specialist: Date:

If any of the boxes marked with an "^{H}" are ticked, please consult an appropriate health assessment specialist to assist in the completion of this section.

Has a specialist been consulted? NO

If YES, please complete the following:

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	
Will the surrounding land use pose any unacceptable health risk on the proposed activity?			NO
If YES, specify and explain:			
Are any further specialist studies recommended by the specialist?			NO
If YES, specify:			
If YES, is such a report(s) attached?			

Signature of specialist: _____ Date:

6. CULTURAL/HISTORICAL FEATURES

Alternative S1

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 close (within 20m) to the site?		NO
If YES, explain:		
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:		
Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

Alternative S2 (Exemption applied for site alternatives)

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 close (within 20m) to the site?	YES	NO
	Uncertain	
If YES, explain:		
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:		
Will any building or structure older than 60 years be affected in any way?	YES	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

Alternative S3 (No go option)

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 close (within 20m) to the site?		NO
If YES, explain:		
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:		
Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION D: PUBLIC PARTICIPATION

1. ADVERTISEMENT (APPENDIX E)

The environmental assessment practitioner must follow any relevant guidelines adopted by the competent authority in respect of public participation and must at least –

1(a) Fix a notice in a conspicuous place, on the property where it is intended to undertake the activity which states that an application will be submitted to the competent authority in terms of these regulations and which provides information on the proposed nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations on the application may be made.

1(b) inform landowners and occupiers of adjacent land of the applicant's intention to submit an application to t he competent authority

1(c) inform landowners and occupiers of land within 100 metres of the boundary of the property where it is proposed to undertake the activity and whom may be directly affected by the proposed activity of the applicant's intention to submit an application to the competent authority;

1(d) inform the ward councillor and any organisation that represents the community in the area of the applicant's intention to submit an application to the competent authority;

1(e) inform the municipality which has jurisdiction over the area in which the proposed activity will be undertaken of the applicant's intention to submit an application to the competent authority; and

1(f) inform any organ of state that may have jurisdiction over any aspect of the activity of the applicant's intention to submit an application to the competent authority; and

1(g) place a notice in one local newspaper and any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these regulations.

2. CONTENT OF ADVERTISEMENTS AND NOTICES (APPENDIX E)

Advertisements and notices must indicate that an application will be submitted to the competent authority in terms of the EIA 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;

An advertisement was placed in the local newspaper the "HIGHVELDER" on 20 JUNE 2008.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES (APPENDIX E)

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 site alternatives where appropriate.

Site notices was placed on the site of the envisaged development area.

4. DETERMINATION OF APPROPRIATE MEASURES (APPENDIX E)

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. 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.

Invitations was delivered by hand to post boxes of all residents in a radius of 500m from the site. The municipality was also invited to attend the public meeting that was held on 28 June 2008. A site notice was also displayed on site for purposes of the basic assessment process.

5. COMMENTS AND RESPONSE REPORT (APPENDIX E)

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

6. LOCAL AUTHORITY PARTICIPATION (APPENDIX E)

Local authorities are 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 the application at least 30 (thirty) calendar days before the submission of the application.

Has any comment been received from the local authority? YES

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

The Msukaligwa Local Municipality fully support this envisaged development. This basic assessment will also be forwarded to the local authority for comment in the comment phase of the project. (See also appendix D)

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 at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders? YES

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

Comments received from stakeholders:

Concerns were raised pertaining to flooding of the areas from the stream.
= Response was given that no development will take place below the 1:100 year flood line. The culverts and the storm water management system will also be maintained so as to avoid any flooding from occurring in the rainy season

Concerns were raised whether the development would be a low cost housing development seeing that the development is to take place in a middle income area. Concerns where especially directed towards safety and security concerns
= Response was given that it would not be a low cost housing development

Concerns were raised pertaining to traffic congestion
= Response was given that there would be no significant impact on the traffic in the area as there would be various separate entrances to the development which would subsequent balance the traffic impact.
A letter was also received from the Msukaligwa Municipality in that no traffic impact assessment study is required. Please see appendix D.

See Appendix E for proof of the public participation process that was undertaken as part of the Basic Assessment process.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2006, 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 issues raised by interested and affected parties.

Potential of flooding in the area from the urban stream running through the envisaged development area
Traffic congestion

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 to this report):

Concerns were raised pertaining to flooding of the areas from the urban stream.
= Response was given that no development will take place below the 1:100 year flood line. The culverts and the storm water management system will also be maintained so as to avoid any flooding from occurring in the rainy season

Concerns were raised pertaining to flooding of the areas from the urban stream.
= Response was given that no development will take place below the 1:100 year flood line. The culverts and the storm water management system will also be maintained so as to avoid any flooding from occurring in the rainy season

IMPACTS ASSESSMENT

Impacts where assess according to the following criteria:

With regard to impact assessments the key principles contained in the National Environmental Management Act, No. 107 of 1998 (NEMA) include:

Mitigation hierarchy – avoidance of environmental impact, or where this is not possible, minimising the impact and remediation of the impact; and

Duty of care towards the environment

An assessment of the impacts of the proposed development was conducted within the context provided by these principles and objectives and in accordance with the methodology described below.

The significance of the identified impacts was determined using the approach outlined below. This incorporates two aspects for assessing the potential significance of impacts (terminology from the Department of Environmental Affairs and Tourism (DEAT) Guideline document on EIA Regulations, April 1998), namely occurrence and severity, which are further sub-divided as follows:

OCCURRENCE		SEVERITY	
Probability of occurrence	Duration of occurrence	Magnitude (severity) of impact	Scale / extent of impact

To assess each of these factors for each impact, the following four ranking scales were used:

PROBABILITY	DURATION
5 - Definite/don't know	5 – Permanent
4 - Highly probable	4 - Long-term
3 - Medium probability	3 - Medium-term (8-15 years)
2 - Low probability	2 - Short-term (0-7 years) (impact ceases after the operational life of the activity)
1 – Improbable	1 – Immediate
0 – None	

SCALE	MAGNITUDE
5 – International	10 - Very high/don't know
4 – National	8 – High
3 – Regional	6 - Moderate
2 – Local	4 – Low
1 - Site only	2 - Minor
0 – None	0 – None

Once these factors are ranked for each impact, the significance of the two aspects, occurrence and severity, is assessed using the following formula:

SP (significance points) = (probability + duration + scale) x magnitude

The maximum value is 150 significance points (SP). The impact significance will then be rated as follows:

SP >75	Indicates **high** environmental significance	An impact which could influence the decision about whether or not to proceed with the project regardless of any possible mitigation.
SP 30 – 75	Indicates **moderate** environmental significance	An impact or benefit which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.
SP 10 - 30	Indicates **low** environmental significance	Impacts with little real effect and which should not have an influence on or require modification of the project design.
SP 1 - 10	Indicates very **low** environmental significance	Impacts with negligible effect and which do not require modification of the project design.
SP 0	Indicates **no** environmental significance	Impacts with no effect on the receiving environment

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

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, including impacts relating to the choice of site alternatives.

Exemption applied for other site alternatives as there are no other site alternatives due to the sale agreement between the developer and the Msukaligwa Local Municipality. There is only one preferred site on which the development is envisaged for. The no go option is also included under the site alternatives.

Alternative S1 (preferred alternative)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Socio economic	**Direct and Cumulative**	**Positive impact** as it will contribute in making housing available which contributes in addressing the need for the current shortage of housing in the Ermelo area	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**Positive socio-economic impact which have a high significance rating. Not only providing housing and job opportunities, but also contributing to the local infrastructure. This is a good indication that the envisaged development should go ahead**
Environmental measures	**Direct, indirect and cumulative**	**Positive impacts**: by incorporating environmental measures into the planning and design phase , environmental pollution will be addressed. Environmental mitigation measures will be incorporated into the complete lifecycle of the development	**4: High**	**5: Permanent**	**2: Local**	**6: Moderate**	**66**	**Positive environmental impact which have a moderate significance rating. By incorporating mitigation measures into the planning phase of the development will ensure that potential environmental constraints and potential environmental pollution potentially arising from any of the stages of the development be addressed.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Safety	**Direct**	**Positive impact**: safety concerns have been raised by the public due to the current undeveloped land. This development will address such safety concerns so as to prevent hideaways for crime elements.	**4: High**	**5: Permanent**	**2: Local**	**6: Moderate**	**66**	**This impact is of moderate significance and addresses the concerns the immediate community had pertaining to safety in the area and the undeveloped land. According to comments received from the community the safety concerns will be addressed by having the envisaged development in the area where the vacant land is currently**
Site establishment planning	**Potential pollution impacts**	**Negative impacts** resulting from the impacts of the activity of site establishment which will continue throughout the lifetime of the site during the construction activity	**5: Definite**	**2: Short term**	**2: Local**	**4: Low**	**36**	**Moderate significance rating. Mitigation measures should be incorporated during the planning and construction phase to mitigate potential environmental impacts resulting from site establishment**
Geotechnical impacts pertaining to construction activities of the envisaged residential development	**Impacts on the structure (and environmentally related) of the residential development**	**Negative impacts** should appropriate geotechnical measures not form part of the planning phase	**5: Definite**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High significance rating. Geotechnical mitigation measures should be incorporated during the planning and construction phase to mitigate potential environmental impacts resulting from construction activities**

See table above

Direct impacts:

Socio economic impacts , environmental measures, safety

Indirect impacts:

Environmental measures

Cumulative impacts:

Socio economic impacts, environmental measures

Alternative S2

No site alternative . Exemption applied for.

Direct impacts:
Indirect impacts:
Cumulative impacts:

Alternative S3- No go option

See no go alternative below

Direct impacts:

Indirect impacts:
Cumulative impacts:

No-go alternative (compulsory)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Socio economic	**Direct and Cumulative**	**Negative impact** as it will contribute in making housing available which contributes in addressing the need for the current shortage of housing in the Ermelo area	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative socio-economic and environmental impact which have a high significance rating. If taken at a high probability that the envisaged development not be approved. Not only impacting negatively on providing housing and job opportunities, but also contributing in negatively impacting on the opportunity to improve the local infrastructure. This gives strong indication that the no go option is not an option and should not be pursued**
Environmental measures	**Direct, indirect and cumulative**	**Negative impacts**: The current issue of flooding in the area will not be addressed so as to the potential positive impact the development can have on the water quality of the anthropogenic created stream in the area	**3: Medium**	**5: Permanent**	**2: Local**	**6: Moderate**	**60**	**Moderate negative environmental impact: By not allowing the envisaged development to go ahead**
Safety	**Direct**	**Negative potential impact**: safety concerns has been noted by the public due to the current undeveloped land. By having this development not situated on this land currently will not address the safety concerns of the immediate community	**4: High**	**5: Permanent**	**2: Local**	**6: Moderate**	**66**	**This impact is of moderate significance and does not address the concerns the immediate community had pertaining to safety in the area and the undeveloped land. According to comments received from the community the safety concerns will be addressed by having the envisaged development in the area where the vacant land is currently**

See table above

Direct impacts:

Increase in safety risks in the area, due to the open space providing an area where people can be mugged

Due to low maintenance of the stream and culverts not being maintained and cleaned the occurrences of flooding can increase in the immediate area

The area not being utilised for development can impact negative on the sale agreement between the developer and the Msukaligwa Municipality

Indirect impacts:

Cumulative impacts:

No additional housing and services provided to alleviate some strain in the demand for housing in the area and to alleviate the strain on the local authority for the provision of services.

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative S1 (Preferred site alternative)	Alternative S2	Alternative S3 (as the no go alternative)
See the EMP (Appendix G) where mitigation measures is suggested for other impacts that might arrive from the planning phase)	**Not Applicable. Exemption applied for.**	**This option should not be pursued**

Mitigation measures will contribute in making the significance of negative impacts envisaged lower for Alternative S1

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Site establishment planning	**Potential pollution impacts**	Negative impacts resulting from the impacts of the activity of site establishment which will continue throughout the lifetime of the site during the construction activity	**2: Low**	**2: Short term**	**1: Site**	**4 : Low**	**20**	**Low environmental significance. Due to the implementation of mitigation measures into the project lifecycle of the envisaged development**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Geotechnical impacts pertaining to construction activities of the envisaged residential development	**Impacts on the structure (and environmentally related) of the residential development**	Negative impacts should appropriate geotechnical measures not form part of the planning phase	**2: Low**	**1: Short term**	**1: Site**	**4: Low**	**16**	**Low environmental significance. Due to the implementation of mitigation measures into the project lifecycle of the envisaged development**

List the potential activity/technology alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase:

Alternative A1 (preferred alternative)

Envisaged impacts as follow:

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Development and the 1:100 year flood line	**Direct and cumulative**	Negative impacts: should the development also take place beneath the 1:100 year flood line	**5: Definite (taken as the scenario that developments will take place beneath the 1:100 year flood line)**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High negative environmental impact: should the development take place between which has a high significance rating. If taken at a high probability that the envisaged development not be approved. Not only impacting negatively on providing housing and job opportunities, but also contributing in negatively impacting on the opportunity to improve the local infrastructure. This gives strong indication that the no go option is not an option and should not be pursued**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Environmental measures	**Direct, indirect and cumulative**	Negative impacts: Impact of NO mitigation measures to be incorporated into the planning and design phase of the development	**5: Definite probability (taken as the scenario that no environmental mitigation measures will be incorporated into the planning and development of the envisaged development)**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative environmental significance should environmental measures not be incorporated into the envisaged development.**
Site establishment planning	**Potential pollution impacts**	Negative impacts resulting from the impacts of the activity of site establishment which will continue throughout the lifetime of the site during the construction activity	**5: Definite**	**2: Short term**	**2: Local**	**4: Low**	**36**	**Moderate significance rating. Mitigation measures should be incorporated during the planning and construction phase to mitigate potential environmental impacts resulting from site establishment**
Geotechnical impacts pertaining to construction activities of the envisaged residential development	**Impacts on the structure (and environmentally related) of the residential development**	Negative impacts should appropriate geotechnical measures not form part of the planning phase	**5: Definite**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High significance rating. Geotechnical mitigation measures should be incorporated during the planning and construction phase to mitigate potential environmental impacts resulting from construction activities**

See table above

Direct impacts:

Development and the 1:100 year flood line

Cumulative environmental impact

Indirect impacts:

Environmental measures

Cumulative impacts:

Environmental measures, development and the 1: 100 year flood line

Alternative A2

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Development and the 1:100 year flood line	**Direct and cumulative**	Negative impacts: should the development also take place beneath the 1:100 year flood line	**5: Definite (taken as the scenario that developments will take place beneath the 1:100 year flood line)**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High negative environmental impact: should the development take place between which has a high significance rating. If taken at a high probability that the envisaged development not be approved. Not only impacting negatively on providing housing and job opportunities, but also contributing in negatively impacting on the opportunity to improve the local infrastructure. This gives strong indication that the no go option is not an option and should not be pursued**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Environmental measures	**Direct, indirect and cumulative**	Negative impacts: Impact of NO mitigation measures to be incorporated into the planning and design phase of the development	**5: Definite probability (taken as the scenario that no environmental mitigation measures will be incorporated into the planning and development of the envisaged development)**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative environmental significance should environmental measures not be incorporated into the envisaged development.**
Site establishment planning	**Potential pollution impacts**	Impacts relating to environmental pollution arising from the activity of site establishing and during the lifetime of the site during construction phase	**3: Medium**	**2: Short term**	**2: Local**	**6: Moderate**	**42**	**Moderate significance environmental impact. Mitigation measures will aid in reducing the environmental significance**
Geotechnical impacts pertaining to construction activities of the envisaged residential development	**Impacts on the structure (and environmentally related) of the residential development**	Impacts relating to: compressibility and collapsing of soil horizons, seasonal perched groundwater tables, erodability of soils, minor excavation difficulties, areas subject to flooding	**5: Definite**	**5:Permanent**	**1: Site**	**8: High**	**88**	**High environmental significance rating should geotechnical mitigation measures not be implemented.**

See table above

Direct impacts:

Planning to develop below the 1:100 year flood line which impacts on the development construction phase

No incorporation of environmental mitigation measures into the planning phase of the development which will impact on the construction and operational phase of the envisaged development altogether

Indirect impacts:

No incorporation of environmental mitigation measures into the planning phase of the development which will impact on the construction and operational phase of the envisaged development altogether

Cumulative impacts:

Planning to develop below the 1:100 year flood line which impacts on the development construction phase

No incorporation of environmental mitigation measures into the planning phase of the development which will impact on the construction and operational phase of the envisaged development altogether

No-go alternative (compulsory)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
1:100 year flood line	**Direct and cumulative**	Impacts of flooding events on other properties in the area	**5: Definite (taken the scenario of the no go option followed)**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High negative environmental significance. With the no go option pursued flooding is a definite to occur and the flooding events will also impact on the immediate properties. No sustainable measures in place should the no go option be followed in order to address flooding in the area.**
Environmental measures	**Direct, indirect and cumulative**	Negative impacts: with the no go option the impact on the near environment will continue to deteriorate.	**5: Definite probability (taken the scenario of the no go option followed)**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative environmental significance should environmental the no go option be followed. No provisions are also made in order to supplement to the current infrastructure, in terms of services as well. The environment together with the water quality in the area will also continue to deteriorate.**
Safety	**Direct**	Negative potential impact: safety concerns has been noted by the public due to the current undeveloped land. By having this development not situated on this land currently will not address the safety concerns of the immediate community	**4: High**	**5: Permanent**	**2: Local**	**6: Moderate**	**66**	**This impact is of moderate significance and does not address the concerns the immediate community had pertaining to safety in the area and the undeveloped land. According to comments received from the community the safety concerns will be addressed by having the envisaged development in the area where the vacant land is currently**

See table above

Direct impacts:

Increase in safety risks in the area, due to the open space providing an area where people can be mugged

Due to low maintenance of the stream and culverts not being maintained and cleaned the occurrences of flooding can increase in the immediate area

The area not being utilised for development can impact negative on the sale agreement between the developer and the Msukaligwa Municipality

Environmental impacts

Indirect impacts:

Environmental impacts

Cumulative impacts:

No additional housing and services provided to alleviate some strain in the demand for housing in the area and to alleviate the strain on the local authority for the provision of services.

Environmental impacts

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative A1:	**Alternative A2:**	**Alternative A3:**
Mitigation measures to be implemented as stated in the EMP **See EMP Appendix G**	**No mitigation measures suggested as environmental mitigation does not form part of any stage in the lifecycle of the envisaged development. Development to take place below the 1:100 year flood line.**	**This is the no-go option: This option is not recommended as there is a sale agreement between the Msukaligwa Municipality and the Developer**

Mitigation measures implemented for Alternative A1 will be able to lower the significance rating (See EMP for details: Appendix G)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Development and the 1:100 year flood line	**Direct and cumulative**	No development below the 1:100 year flood line. Positive impact	**1: Improbable**	**1: Immediate**	**1: Site**	**0: None**	**0**	**No environmental significance. Due to no development below the 1:100 year flood line**
Environmental measures	**Direct, indirect and cumulative**	Impacts such as environmental pollution addressed by means of implementing the mitigation measures	**2: Low**	**2: Short term**	**1: Site**	**2 : Minor**	**10**	**Low environmental significance. Due to the implementation of mitigation measures into the project lifecycle of the envisaged development**
Site establishment planning	**Potential pollution impacts**	Negative impacts resulting from the impacts of the activity of site establishment which will continue throughout the lifetime of the site during the construction activity	**2: Low**	**2: Short term**	**1: Site**	**4 : Low**	**20**	**Low environmental significance. Due to the implementation of mitigation measures into the project lifecycle of the envisaged development**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Geotechnical impacts pertaining to construction activities of the envisaged residential development	**Impacts on the structure (and environmentally related) of the residential development**	Negative impacts should appropriate geotechnical measures not form part of the planning phase	**2: Low**	**1: Short term**	**1: Site**	**4: Low**	**16**	**Low environmental significance. Due to the implementation of mitigation measures into the project lifecycle of the envisaged development**

3. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the construction phase:

Exemption applied for other site alternatives as there are no other site alternatives due to the sale agreement between the developer and the Msukaligwa Local Municipality. There is only one preferred site on which the development is envisaged for.

Alternative S1 (preferred alternative)

Envisaged impacts as follow:

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Development and the 1:100 year flood line	**Direct and cumulative**	Negative impacts: should the development also take place beneath the 1:100 year flood line	**5: Definite (taken as the scenario that developments will take place beneath the 1:100 year flood line)**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High negative environmental impact: should the development take place between which has a high significance rating. If taken at a high probability that the envisaged development not be approved. Not only impacting negatively on providing housing and job opportunities, but also contributing in negatively impacting on the opportunity to improve the local infrastructure. This gives strong indication that the no go option is not an option and should not be pursued**
Environmental measures	**Direct, indirect and cumulative**	Negative impacts: Impact of NO mitigation measures to be incorporated into the planning and design phase of the development	**5: Definite probability (taken as the scenario that no environmental mitigation measures will be incorporated into the planning and development of the envisaged development)**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative environmental significance should environmental measures not be incorporated into the envisaged development.**

See table above

Direct impacts:

Development and the 1:100 year flood line

Cumulative environmental impact

Indirect impacts:

Environmental measures

Cumulative impacts:

Environmental measures, development and the 1: 100 year flood line

Alternative S2

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Development and the 1:100 year flood line	**Direct and cumulative**	Negative impacts: should the development also take place beneath the 1:100 year flood line	**5: Definite (taken as the scenario that developments will take place beneath the 1:100 year flood line)**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High negative environmental impact: should the development take place between which has a high significance rating. If taken at a high probability that the envisaged development not be approved. Not only impacting negatively on providing housing and job opportunities, but also contributing in negatively impacting on the opportunity to improve the local infrastructure. This gives strong indication that the no go option is not an option and should not be pursued**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Environmental measures	**Direct, indirect and cumulative**	Negative impacts: Impact of NO mitigation measures to be incorporated into the planning and design phase of the development	**5: Definite probability (taken as the scenario that no environmental mitigation measures will be incorporated into the planning and development of the envisaged development)**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative environmental significance should environmental measures not be incorporated into the envisaged development.**

See table above

Direct impacts:

Planning to develop below the 1:100 year flood line which impacts on the development construction phase

No incorporation of environmental mitigation measures into the planning phase of the development which will impact on the construction and operational phase of the envisaged development altogether

Indirect impacts:

No incorporation of environmental mitigation measures into the planning phase of the development which will impact on the construction and operational phase of the envisaged development altogether

Cumulative impacts:

Planning to develop below the 1:100 year flood line which impacts on the development construction phase

No incorporation of environmental mitigation measures into the planning phase of the development which will impact on the construction and operational phase of the envisaged development altogether

No-go alternative (compulsory)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
1:100 year flood line	**Direct and cumulative**	Impacts of flooding events on other properties in the area	**5: Definite (taken the scenario of the no go option followed)**	**5: Permanent**	**1: Site**	**8: High**	**88**	**High negative environmental significance. With the no go option pursued flooding is a definite to occur and the flooding events will also impact on the immediate properties. No sustainable measures in place should the no go option be followed in order to address flooding in the area.**
Environmental measures	**Direct, indirect and cumulative**	Negative impacts: with the no go option the impact on the near environment will continue to deteriorate.	**5: Definite probability (taken the scenario of the no go option followed)**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative environmental significance should environmental the no go option be followed. No provisions are also made in order to supplement to the current infrastructure, in terms of services as well. The environment together with the water quality in the area will also continue to deteriorate.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Safety	**Direct**	Negative potential impact: safety concerns has been noted by the public due to the current undeveloped land. By having this development not situated on this land currently will not address the safety concerns of the immediate community	**4: High**	**5: Permanent**	**2: Local**	**6: Moderate**	**66**	**This impact is of moderate significance and does not address the concerns the immediate community had pertaining to safety in the area and the undeveloped land. According to comments received from the community the safety concerns will be addressed by having the envisaged development in the area where the vacant land is currently**

See table above

Direct impacts:

Increase in safety risks in the area, due to the open space providing an area where people can be mugged

Due to low maintenance of the stream and culverts not being maintained and cleaned the occurrences of flooding can increase in the immediate area

The area not being utilised for development can impact negative on the sale agreement between the developer and the Msukaligwa Municipality

Environmental impacts

Indirect impacts:

Environmental impacts

Cumulative impacts:

No additional housing and services provided to alleviate some strain in the demand for housing in the area and to alleviate the strain on the local authority for the provision of services.

Environmental impacts

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative S1	Alternative S2	Alternative S3
See EMP Appendix G for details	**No mitigation measures suggested as environmental mitigation does not form part of any stage in the lifecycle of the envisaged development**	**This is the no-go option: This option is not recommended as there is a sale agreement between the Msukaligwa Municipality and the Developer**

Mitigation measures implemented for S1 will be able to lower the significance ratings. See table below

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Development and the 1:100 year flood line	**Direct and cumulative**	No development below the 1:100 year flood line. Positive impact	**1: Improbable**	**1: Immediate**	**1: Site**	**0: None**	**0**	**No environmental significance. Due to no development below the 1:100 year flood line**
Environmental measures	**Direct, indirect and cumulative**	Impacts such as environmental pollution addressed by means of implementing the mitigation measures	**2: Low**	**2: Short term**	**1: Site**	**4 : Low**	**20**	**Low environmental significance. Due to the implementation of mitigation measures into the project lifecycle of the envisaged development**

List the potential activity/technology alternative related impacts (as appropriate) that are likely to occur as a result of the construction phase:

Alternative A1 (preferred alternative)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Site establishment	**Direct, indirect and cumulative**	Impacts envisaged in terms of outlay of site, removal of trees, impacts on aquatic environment, environmental pollution, waste management, safety to residents	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Moderate significance on the environment. Should be addressed and significance rating to be brought down with mitigation measures**
Temporary workshop areas, storage areas and material handling	**Direct, indirect and cumulative**	Impacts envisaged in terms of: storage areas, storm water diversions, waste management, vehicle maintenance	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Moderate negative environmental significance envisaged for the temporary workshop and storage areas, and material handling. Should be addressed and significance rating to be brought down with mitigation measures**
Contamination of water and release of contaminated water from construction activities into the aquatic environment	**Direct, indirect and cumulative**	Negative potential impact: in terms of discharging pollutants into the nearby stream, runoff from temporary site establishments and work bay areas	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Although the urban stream is from anthropogenic origin (man made) and not natural the impacts of activities from the construction phase can have a potential negative impact on the stream should mitigation measures not be implemented. The urban stream is already receiving contaminated storm water from other areas.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Waste management (overall in the construction phase)	**Direct, indirect and cumulative**	Negative potential impacts: in terms of the storage, management and disposal of waste of any nature generated in the construction phase	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Improper waste management can result in moderate significance environmental impacts. These impacts to be lessen with the implementation of mitigation measures.**
Soil management and erosion	**Direct, indirect and cumulative**	Negative impacts: in terms of inadequate management of top soil, increase in erosion to the stream, contamination of soil by construction activities	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Inadequate soil management and erosion results in a moderate environmental significance rating. This should also be addressed by mitigation measures and would subsequent result in making the impacts less resulting in a low significance rating**
Drainage	**Direct, indirect and cumulative**	Negative impacts envisaged : in terms of storm water and contaminated water management	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Drainage in terms of storm water management and preventing the contamination of such storm water results in a moderate environmental significance rating should it not be addressed by means of mitigation measures**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Spillages	**Direct, indirect and cumulative**	Negative anticipated impacts pertaining to: spillages of waste, construction materials, sewage, chemicals, hydrocarbons, etc on site. Inadequate treatment and removal of spilled material	**5: Definite**	**2: Short term**	**2: local**	**8: High**	**72**	**Inadequate management of spillages during the construction period can have potentially moderate environmental significance if not mitigated.**
Managing impacts on the nearby stream	**Direct, indirect and cumulative**	Negative anticipated : impacts resulting from construction activities on the stream pertaining to: sedimentation, constricting flow, pollution	**5: Definite**	**2: Short term**	**2: local**	**8: High**	**72**	**Inadequate management of the nearby stream to prevent any environmental pollution rates this impact as moderate significant.**
Noise control	**Direct**	Negative impacts pertaining to: construction machinery and vehicles	**5: Definite**	**2: Short term**	**2: Local**	**4: Low**	**36**	**Inadequate management of noise results in a moderate environmental significance should mitigation measures not be implemented. A definite level of uncomfortableness to be experiences by the immediate residents in the area adjacent to the envisaged development area.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Dust control	**Direct**	Negative impacts pertaining to air pollution by construction activities by means of earth movement, construction activities and movement of construction vehicles	**5: Definite**	**2: Short term**	**2: Local**	**6: Moderate**	**54**	**Inadequate management of dust generation results in a moderate environmental significance should mitigation measures not be implemented. A definite level of uncomfortableness to be experiences by the immediate residents in the area adjacent to the envisaged development area.**
Alien plants and invasive alien plants	**Direct and cumulative**	Negative impacts pertaining to the inadequate removal of alien plants during the construction phase.	**5: Definite**	**3: Medium term**	**2: Local**	**4: Low**	**40**	**Inadequate management of the removal of alien plants in the construction phase can result in the spread of the alien plants on a regional level by means of water transportation (by means of the regenerative parts of the plants) and also the re occurrence of plants in the area.**
Fire prevention and control	**Direct, indirect and cumulative**	Negative impacts: inadequate management of storage areas with flammable materials or potential occurrence of fires resulting from the construction activities	**3: Medium**	**1: immediate**	**1: Site**	**6: Moderate**	**30**	**The potential of fire due to construction activities can be rated as a moderate environmental significance impact. However, this impact can be eliminated by means of implementing applicable mitigation measures**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Access to the site	**Direct and indirect**	Negative impacts: pertaining to dust generation, construction works and worker control , limit compaction of topsoil	**3: Medium**	**2: Short term**	**2: Local**	**4: Low**	**28**	**The potential of negative impacts associated with access due to construction activities can be rated as a low environmental significance impact. However, this impact can be eliminated by means of implementing applicable mitigation measures**
Geotechnical related impacts	**Impacts relating to the structure of the residential developments and subsequent impacts on the environment**	Impacts relating to: compressibility and collapsing of soil horizons, seasonal perched groundwater tables, erodability of soils, minor excavation difficulties, areas subject to flooding	**5: Definite**	**5:Permanent**	**1: Site**	**8: High**	**88**	**High environmental significance rating should geotechnical mitigation measures not be implemented.**

See table above

Direct impacts

Indirect impacts

Cumulative impacts

Alternative A2

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Site establishment	**Direct, indirect and cumulative**	Impacts envisaged in terms of outlay of site, removal of trees, impacts on aquatic environment, environmental pollution, waste management, safety to residents	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Moderate significance on the environment. No mitigation measures to be implemented**
Temporary workshop areas, storage areas and material handling	**Direct, indirect and cumulative**	Impacts envisaged in terms of: storage areas, storm water diversions, waste management, vehicle maintenance	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Moderate negative environmental significance envisaged for the temporary workshop and storage areas, and material handling. No mitigation measures to be implemented**
Contamination of water and release of contaminated water from construction activities into the aquatic environment	**Direct, indirect and cumulative**	Negative potential impact: in terms of discharging pollutants into the nearby stream, runoff from temporary site establishments and work bay areas	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Although the urban stream is from anthropogenic origin (man made) and not natural the impacts of activities from the construction phase can have a potential negative impact on the urban stream. No mitigation measures to be implemented. The stream is already receiving contaminated storm water from other areas.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Waste management (overall in the construction phase)	**Direct, indirect and cumulative**	Negative potential impacts: in terms of the storage, management and disposal of waste of any nature generated in the construction phase	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Improper waste management can result in moderate significance environmental impacts. No mitigation measures to be implemented.**
Soil management and erosion	**Direct, indirect and cumulative**	Negative impacts: in terms of inadequate management of top soil, increase in erosion to the stream, contamination of soil by construction activities	**5: Definite**	**4: Long term**	**2: Local**	**8: High**	**88**	**Inadequate soil management and erosion results in a high environmental significance rating. No mitigation measures to be implemented.**
Drainage	**Direct, indirect and cumulative**	Negative impacts envisaged : in terms of storm water and contaminated water management	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Drainage in terms of storm water management and preventing the contamination of such storm water results in a moderate environmental significance rating. No mitigation measures to be implemented.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Spillages	**Direct, indirect and cumulative**	Negative anticipated impacts pertaining to: spillages of waste, construction materials, sewage, chemicals, hydrocarbons, etc on site. Inadequate treatment and removal of spilled material	**5: Definite**	**2: Short term**	**2: Local**	**8:High**	**72**	**Inadequate management of spillages during the construction period can have potentially moderate environmental significance if not mitigated. No mitigation measures to be implemented.**
Managing impacts on the nearby stream	**Direct, indirect and cumulative**	Negative anticipated : impacts resulting from construction activities on the stream pertaining to: sedimentation, constricting flow, pollution	**5: Definite**	**2: Short term**	**2: Local**	**8: High**	**72**	**Inadequate management of the nearby stream to prevent any environmental pollution rates this impact as moderate significant. No mitigation measures to be implemented.**
Noise control	**Direct**	Negative impacts pertaining to: construction machinery and vehicles	**5: Definite**	**2: Short term**	**2: Local**	**4: Low**	**36**	**Inadequate management of noise results in a moderate environmental significance should mitigation measures not be implemented. A definite level of uncomfortableness to be experiences by the immediate residents in the area adjacent to the envisaged development area. No implementation of mitigation measures.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Dust control	**Direct**	Negative impacts pertaining to air pollution by construction activities by means of earth movement, construction activities and movement of construction vehicles	**5: Definite**	**2: Short term**	**2: Local**	**6: Moderate**	**54**	**Inadequate management of dust generation results in a moderate environmental significance should mitigation measures not be implemented. A definite level of uncomfortableness to be experiences by the immediate residents in the area adjacent to the envisaged development area. No mitigation measures to be implemented**
Alien plants and invasive alien plants	**Direct and cumulative**	Negative impacts pertaining to the inadequate removal of alien plants during the construction phase	**5: Definite**	**3: Medium term**	**2: Local**	**4: Low**	**40**	**Inadequate management of the removal of alien plants in the construction phase can result in the spread of the alien plants on a regional level by means of water transportation (by means of the regenerative parts of the plants) and also the re occurrence of plants in the area. No mitigation measures to be implemented**
Fire prevention and control	**Direct, indirect and cumulative**	Negative impacts: inadequate management of storage areas with flammable materials or potential occurrence of fires resulting from the construction activities	**3: Medium**	**1: immediate**	**1: Site**	**6: Moderate**	**30**	**The potential of fire due to construction activities can be rated as a moderate environmental significance impact. No mitigation measures to be implemented**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Access to the site	**Direct and indirect**	Negative impacts: pertaining to dust generation, construction works and worker control , limit compaction of topsoil	**3: Medium**	**2: Short term**	**1: Site**	**4: Low**	**24**	**The potential of negative impacts associated with access due to construction activities can be rated as a low environmental significance impact. No mitigation measures to be implemented.**
Development below the 1:100 year flood line	**Direct, indirect and cumulative**	Negative impacts: associated with development below the 1:100 year flood line	**5: Definite**	**5: Permanent**	**1: Site**	**8: High**	**88**	**By developing below the 1:100 year flood line this impact is rated with a high environmental significance rating. No mitigation measures to be implemented.**
Geotechnical related impacts	**Impacts relating to the structure of the residential developments and subsequent impacts on the environment**	Impacts relating to: compressibility and collapsing of soil horizons, seasonal perched groundwater tables, erodability of soils, minor excavation difficulties, areas subject to flooding	**5: Definite**	**5:Permanent**	**1: Site**	**8: High**	**88**	**High environmental significance rating should geotechnical mitigation measures not be implemented. No mitigation measures to be implemented**

See table above

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A 3: No-go alternative (compulsory)

No impacts for the construction phase as no development are then to be undertaken in the envisaged area.

Direct impacts:
No activities to take place

Indirect impacts:
No activities to take place

Cumulative impacts:
No activities to take place

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative A1:	**Alternative A2:**	**Alternative A3:**
See EMP Appendix G. **No development to take place below the 1:100 year flood line**	**No mitigation measures suggested as environmental mitigation does not form part of any stage in the lifecycle of the envisaged development. Development to take place below the 1:100 year flood line.**	**This is the no-go option: no activities to take place** **This option is not recommended as there is a sale agreement between the Msukaligwa Municipality and the Developer**

Impacts will be reduced in significance rating for Alternative A1 by implementing mitigation measures (table below, see EMP (Appendix G) for details)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Site establishment	**Direct, indirect and cumulative**	Impacts envisaged in terms of outlay of site, removal of trees, impacts on aquatic environment, environmental pollution, waste management, safety to residents will be reduced	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance with the implemented environmental mitigation measures**
Temporary workshop areas, storage areas and material handling	**Direct, indirect and cumulative**	Impacts envisaged in terms of: storage areas, storm water diversions, waste management, vehicle maintenance will be reduced significantly	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance with the implemented environmental mitigation measures**
Contamination of water and release of contaminated water from construction activities into the aquatic environment	**Direct, indirect and cumulative**	Negative potential impact: in terms of discharging pollutants into the nearby stream, runoff from temporary site establishments and work bay areas will be reduced significantly	**3: Medium**	**2: Short term**	**2: Local**	**4: Low**	**28**	**Although the urban stream is from anthropogenic origin (man made: urban stream) and not natural the impacts of activities from the construction phase can have a potential negative impact on the urban stream should mitigation measures not be implemented. However, a low environmental significance with the implemented environmental mitigation measures is envisaged**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Waste management (overall in the construction phase)	**Direct, indirect and cumulative**	Negative potential impacts: relating to the storage, management and disposal of waste of any nature generated in the construction phase will be reduced significantly	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance with the implemented environmental mitigation measures**
Soil management and erosion	**Direct, indirect and cumulative**	Negative impacts: in terms of inadequate management of top soil, increase in erosion to the stream, contamination of soil by construction activities will be reduced significantly	**3: Medium**	**2: Short term**	**1: Site**	**4: Low**	**24**	**Low environmental significance with the implemented environmental mitigation measures**
Drainage	**Direct, indirect and cumulative**	Negative impacts envisaged : in terms of storm water and contaminated water management will be reduced significantly	**3: Medium**	**2: Short term**	**1: Site**	**4: Low**	**24**	**Low environmental significance with the implemented environmental mitigation measures**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Spillages	**Direct, indirect and cumulative**	Negative anticipated impacts pertaining to: spillages of waste, construction materials, sewage, chemicals, hydrocarbons, etc on site. Inadequate treatment and removal of spilled material. Impacts to be reduced significantly	**3: Medium**	**1: immediate**	**1: Site**	**2: Minor**	**10**	**Low environmental significance with the implemented environmental mitigation measures**
Managing impacts on the nearby stream	**Direct, indirect and cumulative**	Negative anticipated: impacts resulting from construction activities on the stream pertaining to: sedimentation, constricting flow, pollution. Impacts to be significantly reduced	**3: Medium**	**2: Short term**	**1: Site**	**4: Low**	**24**	**Low environmental significance with the implemented environmental mitigation measures**
Noise control	**Direct**	Negative impacts pertaining to: construction machinery and vehicles. Impacts to be reduced significantly by means of mitigation measures	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance with the implemented environmental mitigation measures**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Dust control	**Direct**	Negative impacts pertaining to air pollution by construction activities by means of earth movement, construction activities and movement of construction vehicles	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance with the implemented environmental mitigation measures**
Alien plants and invasive alien plants	**Direct and cumulative**	Negative impacts pertaining to the inadequate removal of alien plants during the construction phase	**3: Medium**	**2: Short term**	**2: Local**	**4: Low**	**28**	**Low environmental significance with the implemented environmental mitigation measures**
Fire prevention and control	**Direct, indirect and cumulative**	Negative impacts: inadequate management of storage areas with flammable materials or potential occurrence of fires resulting from the construction activities	**2: Low**	**1: immediate**	**1: Site**	**6: Moderate**	**24**	**Low environmental significance with the implemented environmental mitigation measures**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Access to the site	**Direct and indirect**	Negative impacts: pertaining to dust generation, construction works and worker control , limit compaction of topsoil. Impacts related to access will be reduced significantly	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance with the implemented environmental mitigation measures**
Geotechnical related impacts	**Impacts relating to the structure of the residential developments and subsequent impacts on the environment**	Impacts relating to: compressibility and collapsing of soil horizons, seasonal perched groundwater tables, erodability of soils, minor excavation difficulties, areas subject to flooding	**2: Low**	**1: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance with the implemented environmental mitigation measures**

4. IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the operational phase:

Exemption applied for other site alternatives as there are no other site alternatives due to the sale agreement between the developer and the Msukaligwa Local Municipality. There is only one preferred site on which the development is envisaged for.

Alternative S1 (preferred alternative)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Socio economic	**Direct and Cumulative**	Positive impact as it will contribute in making housing available which contributes in addressing the need for the current shortage of housing in the Ermelo area	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**Positive socio-economic impact which have a high significance rating. Not only providing housing and job opportunities, but also contributing to the local infrastructure. This is a good indication that the envisaged development should go ahead**
Environmental measures	**Direct, indirect and cumulative**	Positive impacts : by incorporating environmental measures into the planning and design phase will address potential environmental pollution and will be incorporated into the complete lifecycle of the development	**4: High**	**5: Permanent**	**2: Local**	**6: Moderate**	**66**	**Positive environmental impact which have a moderate significance rating. By incorporating mitigation measures into the planning phase of the development will ensure that potential environmental constraints and potential environmental pollution potentially arising from any of the stages of the development be addressed.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Safety	**Direct**	Positive impact: safety concerns have been raised by the public due to the current undeveloped land. This development will address such safety concerns so as to prevent hideaways for crime elements.	**4: High**	**5: Permanent**	**2: Local**	**8: Moderate**	**88**	**This impact is of high significance and addresses the concerns the immediate community had pertaining to safety in the area and the undeveloped land. According to comments received from the community the safety concerns will be addressed by having the envisaged development in the area where the vacant land is currently**

See table above

Direct impacts:

Socio economic impacts , environmental measures, safety

Indirect impacts:

Environmental measures

Cumulative impacts:

Socio economic impacts, environmental measures

Alternative S2

No site 2 alternative. Exemption applied for

Direct impacts:

Indirect impacts:

Cumulative impacts:

No go option: Alternative S3

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Socio economic	**Direct and Cumulative**	Negative impact as it will contributes in making housing available which contributes in addressing the need for the current shortage of housing in the Ermelo area	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High negative socio-economic and environmental impact which have a high significance rating. If taken at a high probability that the envisaged development not be approved. Not only impacting negatively on providing housing and job opportunities, but also contributing in negatively impacting on the opportunity to improve the local infrastructure. This gives strong indication that the no go option is not an option and should not be pursued**
Environmental measures	**Direct, indirect and cumulative**	Negative impacts: The current issue of flooding in the area will not be addressed.	**3: Medium**	**5: Permanent**	**2: Local**	**6: Moderate**	**60**	**Moderate negative environmental impact: By not allowing the envisaged development to go ahead**
Safety	**Direct**	Negative potential impact: safety concerns has been noted by the public due to the current undeveloped land. By having this development not situated on this land currently will not address the safety concerns of the immediate community	**4: High**	**5: Permanent**	**2: Local**	**8: High**	**88**	**This impact is of high significance and does not address the concerns the immediate community had pertaining to safety in the area and the undeveloped land. According to comments received from the community the safety concerns will be addressed by having the envisaged development in the area where the vacant land is currently**

See table above

Direct impacts:

Increase in safety risks in the area, due to the open space providing an area where people can be mugged

Due to low maintenance of the stream and culverts not being maintained and cleaned the occurrences of flooding can increase in the immediate area

The area not being utilised for development can impact negative on the sale agreement between the developer and the Msukaligwa Municipality

Indirect impacts:

Cumulative impacts:

No additional housing and services provided to alleviate some strain in the demand for housing in the area and to alleviate the strain on the local authority for the provision of services.

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative S1	Alternative S2	Alternative S3 (No go option)
See EMP Appendix G	**Exemption applied for Site alternative 2**	**This is the no-go option: No activities to take place in the operational phase, only impacts should the site be left as is.** **This option is not recommended as there is a sale agreement between the Msukaligwa Municipality and the Developer**

List the potential activity/technology alternative related impacts (as appropriate) that are likely to occur as a result of the operational phase:

Alternative A1 (Preferred option)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
On site management of impact of housing on the environment	**Direct, indirect and cumulative**	Impacts envisaged in terms of outlay of site, removal of trees, planting of plants (invasives) impacts on aquatic environment, environmental pollution, waste management, grey water and sewage management	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High environmental significance on the environment. Should be addressed and significance rating to be brought down with mitigation measures**
Contamination of water and release of contaminated water from operational activities into the aquatic environment	**Direct, indirect and cumulative**	Negative potential impact: in terms of discharging pollutants into the nearby stream, runoff from housing establishments , leaking pipes	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**Although the urban stream is from anthropogenic origin (man made) and not natural the impacts of activities from the operational phase can have a potential negative impact on the urban stream. High significance rating. The stream is already receiving contaminated storm water from other areas.**
Waste management (overall in the operational phase)	**Direct, indirect and cumulative**	Negative potential impacts: in terms of the storage, management and disposal of waste of any nature generated in the operational phase	**3: Medium**	**5: Permanent**	**2: Local**	**6: High**	**66**	**Improper waste management can result in moderate significance environmental impacts. The significance rating to be brought down with mitigation measures to be implemented.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Soil management and erosion	**Direct, indirect and cumulative**	Negative impacts: in terms of inadequate management of soil, increase in erosion to the stream, contamination of soil by operational activities	**3: Medium**	**5: Permanent**	**2: Local**	**6: Moderate**	**60**	**Inadequate soil management and erosion results in a moderate environmental significance rating. No mitigation measures to be implemented.**
Drainage	**Direct, indirect and cumulative**	Negative impacts envisaged : in terms of storm water and contaminated water management	**4: High**	**5: permanent**	**2: Local**	**6: Moderate**	**66**	**Drainage in terms of storm water management and preventing the contamination of such storm water results in a moderate environmental significance rating. No mitigation measures to be implemented.**
Spillages	**Direct, indirect and cumulative**	Negative anticipated impacts pertaining to: spillages of waste, sewage, chemicals, hydrocarbons, etc on site. Inadequate treatment and removal of spilled material	**3: Medium**	**5: permanent**	**2: Local**	**4: Low**	**40**	**Inadequate management of spillages during the operational period can have potentially moderate environmental significance if not mitigated. Mitigation measures to be implemented will eliminate the potential impact.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Managing impacts on the nearby stream	**Direct, indirect and cumulative**	Negative anticipated : impacts resulting from operational activities on the stream pertaining to: sedimentation, constricting flow, pollution, potential of flooding should infrastructure not be maintained	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**Inadequate management of the nearby stream to prevent any environmental pollution rates this impact as highly significant. Mitigation measures to be implemented to lessen the significance rating.**
Noise control	**Direct**	Negative impacts pertaining to: increased volume of vehicles	**5: Definite**	**5: Permanent**	**2: Local**	**2: Minor**	**24**	**Low environmental significance.**
Dust control	**Direct**	Negative impacts pertaining to air pollution by operational activities by means of vehicle movement on site	**5: Definite**	**5: Permanent**	**1: Site**	**2: Minor**	**22**	**Inadequate management of dust suppression results in a moderate environmental significance should mitigation measures not be implemented. Mitigation measures will result in the paving of most of the entrances to the development which will result in no dust being generated.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Alien plants and invasive alien plants	**Direct and cumulative**	Negative impacts pertaining to the planting of alien plants during the operational phase.	**3: Medium**	**5: Permanent**	**2: Local**	**6: Moderate**	**60**	**Inadequate management of the planting of alien plants in the operational phase can result in the spread of the alien plants on a local level by means of water transportation (by means of the regenerative parts of the plants) and also the re occurrence of plants in the area. Mitigation measures to be implemented can bring the moderate significance rating down.**
Fire prevention and control	**Direct, indirect and cumulative**	Negative impacts: inadequate fire management on site during the operational phase	**3: Medium**	**1: immediate**	**1: Site**	**6: Moderate**	**30**	**The potential of fire due to operational activities can be rated as a moderate environmental significance impact. Mitigation measures to be implemented to prevent fires from occurring**
Traffic congestion	**Direct**	Negative impacts: increase in traffic volumes to and from the envisaged development site	**2: Low**	**5: Permanent**	**1: Site**	**2: Minor**	**16**	**The potential of negative impacts associated with traffic congestion due to operational activities can be rated as a low environmental significance impact.**

Alternative A2

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
On site management of impact of housing on the environment	**Direct, indirect and cumulative**	Impacts envisaged in terms of outlay of site, removal of trees, planning of plants (invasives) impacts on aquatic environment, environmental pollution, waste management, grey water and sewage management	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**High environmental significance on the environment. No mitigation measures to be implemented.**
Contamination of water and release of contaminated water from operational activities into the aquatic environment	**Direct, indirect and cumulative**	Negative potential impact: in terms of discharging pollutants into the nearby stream, runoff from housing establishments , leaking pipes	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**Although the urban stream is from anthropogenic origin (man made) and not natural the impacts of activities from the operational phase can have a potential negative impact on the urban stream. High significance rating. The stream is already receiving contaminated *storm water from other areas.* No mitigation measures to be implemented**
Waste management (overall in the operational phase)	**Direct, indirect and cumulative**	Negative potential impacts: in terms of the storage, management and disposal of waste of any nature generated in the operational phase	**3: Medium**	**5: Permanent**	**2: Local**	**6: High**	**66**	**Improper waste management can result in moderate significance environmental impacts. No mitigation measures to be implemented**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Soil management and erosion	**Direct, indirect and cumulative**	Negative impacts: in terms of inadequate management of soil, increase in erosion to the stream, contamination of soil by operational activities	**3: Medium**	**5: Permanent**	**2: Local**	**6: Moderate**	**60**	**Inadequate soil management and erosion results in a moderate environmental significance rating. No mitigation measures to be implemented.**
Drainage	**Direct, indirect and cumulative**	Negative impacts envisaged : in terms of storm water and contaminated water management	**4: High**	**5: permanent**	**2: Local**	**6: Moderate**	**66**	**Drainage in terms of storm water management and preventing the contamination of such storm water results in a moderate environmental significance rating. No mitigation measures to be implemented.**
Spillages	**Direct, indirect and cumulative**	Negative anticipated impacts pertaining to: spillages of waste, sewage, chemicals, hydrocarbons, etc on site. Inadequate treatment and removal of spilled material	**3: Medium**	**5: permanent**	**2: Local**	**4: Low**	**40**	**Inadequate management of spillages during the operational period can have potentially moderate environmental significance if not mitigated. No mitigation measures to be implemented**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Managing impacts on the nearby stream	**Direct, indirect and cumulative**	Negative anticipated : impacts resulting from operational activities on the stream pertaining to: sedimentation, constricting flow, pollution, potential of flooding should infrastructure not be maintained	**5: Definite**	**5: Permanent**	**2: Local**	**8: High**	**96**	**Inadequate management of the nearby stream to prevent any environmental pollution rates this impact as highly significant. No mitigation measures to be implemented**
Noise control	**Direct**	Negative impacts pertaining to: increased volume of vehicles	**5: Definite**	**5: Permanent**	**2: Local**	**2: Minor**	**24**	**Low environmental significance.**
Dust control	**Direct**	Negative impacts pertaining to air pollution by operational activities by means of vehicle movement on site	**5: Definite**	**5: Permanent**	**1: Site**	**2: Minor**	**22**	**Inadequate management of dust suppression results in a moderate environmental significance should mitigation measures not be implemented. No mitigation measures to be implemented**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Alien plants and invasive alien plants	**Direct and cumulative**	Negative impacts pertaining to the planting of alien plants during the operational phase.	**3: Medium**	**5: Permanent**	**2: Local**	**6: Moderate**	**60**	**Inadequate management of the planting of alien plants in the operational phase can result in the spread of the alien plants on a local level by means of water transportation (by means of the regenerative parts of the plants) and also the re occurrence of plants in the area. No mitigation measures to be implemented**
Fire prevention and control	**Direct, indirect and cumulative**	Negative impacts: inadequate fire management on site during the operational phase	**3: Medium**	**1: immediate**	**1: Site**	**6: Moderate**	**30**	**The potential of fire due to operational activities can be rated as a moderate environmental significance impact. No mitigation measures to be implemented**
Traffic congestion	**Direct**	Negative impacts: increase in traffic volumes to and from the envisaged development site	**2: Low**	**5: Permanent**	**1: Site**	**2: Minor**	**16**	**The potential of negative impacts associated with traffic congestion due to operational activities can be rated as a low environmental significance impact. No mitigation measures to be implemented**

Alternative A 3: No-go alternative (compulsory)

No impacts for the construction phase as no development are then to be undertaken in the envisaged area.

Direct impacts:
No activities to take place

Indirect impacts:
No activities to take place

Cumulative impacts:
No activities to take place

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative A1	**Alternative A2**	**Alternative A3**
See EMP Appendix G	**No mitigation measures suggested as environmental mitigation does not form part of any stage in the lifecycle of the envisaged development**	**This is the no-go option: This option is not recommended as there is a sale agreement between the Msukaligwa Municipality and the Developer**

Mitigation measures for Alternative A1 (Also see the EMP for details)

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
On site management of impact of housing on the environment	**Direct, indirect and cumulative**	Impacts envisaged in terms of outlay of site, removal of trees, planting of plants (invasives) impacts on aquatic environment, environmental pollution, waste management, grey water and sewage management. Impacts to be reduced significantly	**3: Medium**	**2: Short term**	**1: Site**	**4: Low**	**24**	**Low environmental significance due to implemented mitigation measures**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Contamination of water and release of contaminated water from operational activities into the aquatic environment	**Direct, indirect and cumulative**	Negative potential impact: in terms of discharging pollutants into the nearby stream, runoff from housing establishments , leaking pipes	**2: Low**	**4: Long term**	**1: Site**	**4: Low**	**28**	**Although the urban stream is from anthropogenic origin (man made: urban stream) and not natural the impacts of activities from the operational phase can have a potential negative impact on the urban stream. However, a low environmental significance can be achieved should mitigation measures be implemented**
Waste management (overall in the operational phase)	**Direct, indirect and cumulative**	Negative potential impacts: in terms of the storage, management and disposal of waste of any nature generated in the operational phase	**2: Low**	**4: Long term**	**1: Site**	**4: Low**	**28**	**Low environmental significance due to implemented mitigation measures.**
Soil management and erosion	**Direct, indirect and cumulative**	Negative impacts: in terms of inadequate management of soil, increase in erosion to the stream, contamination of soil by operational activities	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance due to implemented mitigation measures.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Drainage	**Direct, indirect and cumulative**	Negative impacts envisaged : in terms of storm water and contaminated water management	**2: Low**	**2: Short term**	**1: Local**	**4: Low**	**20**	**Low environmental significance due to implemented mitigation measures.**
Spillages	**Direct, indirect and cumulative**	Negative anticipated impacts pertaining to: spillages of waste, sewage, chemicals, hydrocarbons, etc on site. Inadequate treatment and removal of spilled material	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance due to implemented mitigation measures.**
Managing impacts on the nearby stream	**Direct, indirect and cumulative**	Negative anticipated : impacts resulting from operational activities on the stream pertaining to: sedimentation, constricting flow, pollution, potential of flooding should infrastructure not be maintained	**2: Low**	**4: Long term**	**1: Site**	**4: low**	**28**	**Low environmental significance due to implemented mitigation measures.**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Noise control	**Direct**	Negative impacts pertaining to: increased volume of vehicles	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance due to implemented mitigation measures.**
Dust control	**Direct**	Negative impacts pertaining to air pollution by operational activities by means of vehicle movement on site	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance due to implemented mitigation measures.**
Alien plants and invasive alien plants	**Direct and cumulative**	Negative impacts pertaining to the planting of alien plants during the operational phase.	**3: Medium**	**2: Short term**	**2: Local**	**4: Low**	**28**	**Low environmental significance due to implemented mitigation measures**

Impact	Type of Impact	Impact Description	Probability	Duration	Scale	Magnitude	Significance points	Comments
Fire prevention and control	**Direct, indirect and cumulative**	Negative impacts: inadequate fire management on site during the operational phase	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance due to implemented mitigation measures.**
Traffic congestion	**Direct**	Negative impacts: increase in traffic volumes to and from the envisaged development site	**2: Low**	**2: Short term**	**1: Site**	**4: Low**	**20**	**Low environmental significance due to implemented mitigation measures.**

5. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

List the potential site alternative related impacts (as appropriate) that are likely to occur as a result of the decommissioning or closure phase:

Decommissioning and closure is not anticipated for the envisaged development.

Alternative S1 (preferred alternative)

Not applicable

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative S2

Not applicable

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative S3

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Not applicable

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative S1	**Alternative S2**	**Alternative S3**
Not applicable	Not applicable	Not applicable

List the potential activity/technology alternative related impacts (as appropriate) that are likely to occur as a result of the decommissioning and closure phase:

Decommissioning and closure is not anticipated for the envisaged development.

Alternative A1 (preferred alternative)

Not applicable as decommissioning is not envisaged

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2

Not applicable as decommissioning is not envisaged

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A3

Direct impacts:

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

No-go alternative (compulsory)

Not applicable as decommissioning is envisaged   ***Direct impacts:***   ***Indirect impacts:***   ***Cumulative impacts:***

Indicate mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative A1	**Alternative A2**	**Alternative A3 (No go option)**
Not applicable as decommissioning is not envisaged	Not applicable as decommissioning is not envisaged	No go option= no development.

6. PROPOSED MANAGEMENT OF IMPACTS AND MITIGATION

Indicate how identified impacts and mitigation will be monitored and/or audited.

Alternative S1	Alternative S2	Alternative S3 (No go option)
Please see the EMP in Appendix G	**Exemption applied for alternative sites**	**This is the no-go option and is not a recommended option.**

Alternative A1	Alternative A2	Alternative A3 (No go option)
Please see the EMP in Appendix G	**Impacts not to be monitored or audited. Not part of any lice cycle of the envisaged development process**	**This is the no-go option: This option is not recommended as there is a sale agreement between the Msukaligwa Municipality and the Developer**

7. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up 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 alternative)

Alternative S 1 is the preferred alternative.

This option is recommended as a sale agreement between the Msukaligwa Munisipality and the Developer exists.

There is no other alternative site available for the envisaged development.

Alternative S2

Exemption was applied for assessing alternative sites.

Alternative S3 (No go development option)

Alternative S 3 was indicated as being the no-go development approach. This option is not recommended as it does not contribute to such an extent as the preferred alternative which is the development on the envisaged site being extension 39 and extension 40.

Alternative A1 (preferred alternative)

These activities as indicated to take place over the project lifecycle do have potentially notable negative impacts on the immediate environment. However, should mitigation measures be implemented over the complete lifecycle as stipulated in the Environmental management Plan (EMP – Appendix G) the significance ratings can be brought down immensely and most environmental impacts can either me eliminated or minimised. No developments to take place below the 1:100 year flood line and impacts on the nearby urban stream to be anticipated and mitigated in order to prevent any flooding in the area.

Alternative A2

These activities are similar to Alternative A1, however, development is to take place also below the 1:100 year flood event. Development below the 1:100 year flood line holds potential disastrous environmental impacts and should not be pursued. No mitigation measures form part of the activities as per Alternative A2.

Alternative A3 (the no go alternative option)

This option as the no go option is not recommended as the potential development can contribute more

positive environmental and socio-economic impacts than pursuing the option of not having any development in this envisaged area.

8. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner). YES

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

The EMP contains all the relevant mitigation measures that should form part of the authorization. (see Appendix G)

No development to take place below the 1:100 year flood line.

Impacts on the nearby stream to be mitigated as per EMP

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Information in support of applications for exemption

Appendix G: Other information