



Gauteng Department of Agriculture and Rural Development (GDARD)

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, 2010 (Version 1)

List of all organs of state and State Departments where the draft report has been submitted, their full contact details and contact person

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2010.
 2. This application form is current as of 2 August 2010. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
 3. **A draft Basic Assessment Report must be submitted to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken. The draft reports must be submitted to the relevant State Departments and on the same day, two CD's of draft reports must also be submitted to the Competent Authority (GDARD) with a signed proof of such submission of draft report to the relevant State Departments.**
 4. The report must be typed within the spaces provided in the form. The size of the spaces provided is 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.
 5. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
 6. An incomplete report shall be rejected.
 7. 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.
 8. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
 9. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
 10. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
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DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch
18th floor Glen Cairn Building
73 Market Street, Johannesburg

Admin Unit telephone number: (011) 355 1345
Department central telephone number: (011) 355 1900

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

(For official use only)

File Reference Number:						
Application Number:						
Date Received:						

*** Submission to State Departments (Number 3 above)**

Has a draft report for this application been submitted to all State Departments administering a law relating to a matter likely to be affected as a result of this activity?

Is a list of State Departments referred to above been attached to this report?

if no, state reasons for not attaching the list.

SECTION A: ACTIVITY INFORMATION

1. ACTIVITY DESCRIPTION

Project title (must be the same name as per application form):

West End Office Park Sewerage Line

Select the appropriate box

The application is for an upgrade of an existing development The application is for a new development Other, specify

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES	NO
X	

If yes, describe the legislation and the Competent Authority administering such legislation

National Water Act, 1998 (Act No. 36 of 1998). The Act is administered by the Department of Water and Sanitation.

If yes, have you applied for the authorisation(s)?

YES	NO X
YES	NO

 If yes, have you received approval(s)? (attach in appropriate appendix)

2. 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:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended.	National & Provincial	27 November 1998
Environmental Impact Assessment Regulations, GN 544 of 10 December 2010 (Listing Activities 11, 18, 37 and 48, Listing Notice 1)	Gauteng Department of Agriculture and Rural Development (GDARD)	10 December 2010
National Water Act, 1998 (Act No. 36 of 1998)	National	20 August 1998
Occupational Health and Safety Act No. 85 of 1993	National	23 June 1993
Gauteng Transport Infrastructure Act (Act No. 8 of 2001)	Provincial	19 December 2001
CJV-L06-REP-2600-0010: Gautrain Water Management Plan Guidelines	Gautrain Management Agency	2006
Integrated Environmental Policy for the City of Tshwane	Local	January 2005
Integrated Development Plan for the City of Tshwane	Local	April 2011
Spatial Development Framework for the City of Tshwane	Local	June 2012
City of Tshwane Metropolitan Municipality Sanitation By-Laws	Local	10 September 2003

3. ALTERNATIVES

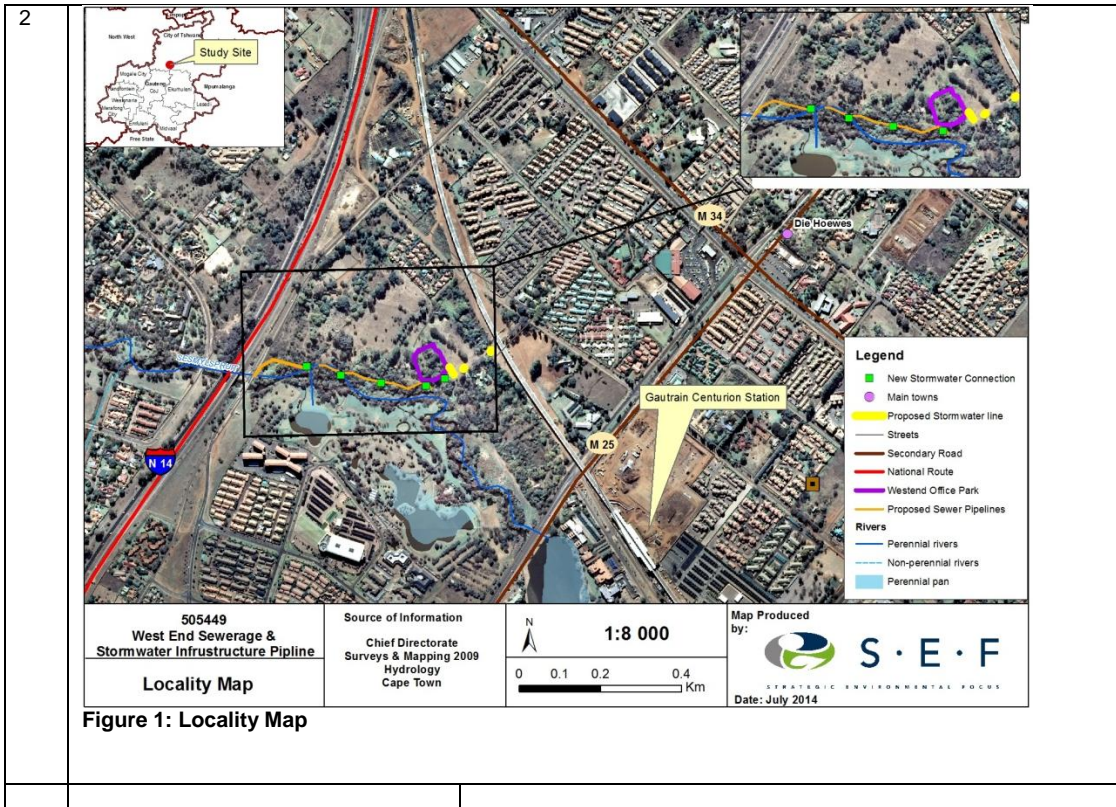
BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Describe the proposal and 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. The determination of whether the 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.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: 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. Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, operational or other(provide details of "other")	Description
1	Proposal	<p>Abland (Pty) Ltd proposes to construct an approximately 280m long sewerage pipeline (154m west of Extension 287 and 126m south of Extension 286) that will service the West End Office Park. The proposed pipeline is of 160mm diameter and will have a sewer flow of approximately 5 litres per second. The proposed sewerage pipeline will connect to the existing main municipal sewerage pipeline that is located to the west of the West End Office Park. The route of the proposed sewerage pipeline follows the Hennops River. The project also involves the installation of the stormwater pipeline and outlet structures which will be constructed perpendicular to the Hennops River. The stormwater features to be installed are as follows:</p> <ul style="list-style-type: none"> • 2 x 450mm diameter stormwater outlet structure at / above 1:100 flood line for Extension 287, • 1 x 525mm diameter stormwater outlet structure at / above 1:100 flood line for Extension 285 via Extension 286 • The flow for the 450mm diameter pipes is approximately 350 litre / second and the 525mm diameter pipe is approximately 500 litre / second. <p>The West End Office Park has been approved in the form of Environmental Authorisation (GAUT 002/521) obtained from the Gauteng Department of Agriculture and Rural Development (GDARD) 06 June 2007</p> <p>On completion of the sewerage pipeline and stormwater pipeline installations, the pipelines route and affected Hennops River banks will be rehabilitated. The Hennopsriver is a perennial river located within the A21B Quaternary catchment.</p> <p>The proposed rehabilitation programme will be undertaken on the river bank on which the proposed site is located and on areas that were impacted by the fencing of the bigger development (West End Office Park) that was undertaken. The rehabilitation programme is aimed at addressing the impacts on the riparian / terrestrial vegetation, inside the wetland buffer, that was cleared during implementation of the fence</p> <p>Rehabilitation will ensure that the embankment is protected from possible soil erosion and destabilisation of the river bank during the rainy season or flood event in the near future; which may result in degradation of the river banks and deposition of soils and siltation in downstream areas.</p>



In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

The proposed sewerage pipeline route is the shortest route between the connection points of the West End Office Park and the municipal sewerage pipeline. The proposed pipeline route is located next to the already disturbed part of the Hennopsriver. This will therefore result in the least negative environmental impact being caused by the proposed project to the surrounding landscape. In addition, the proposed rehabilitation to the pipeline area will not only address the impacts that result from the proposed pipeline route but will also improve the current state of the landscape along the Hennopsriver which will complement the West End Office Park Development

The location of the proposed stormwater features was informed by the location of the existing stormwater infrastructure as part of the larger municipal infrastructure planning

NOTE: The numbering in the above table must be consistently applied throughout the application report and process

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

Proposed activity

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Size of the activity:

Ha/ m²

or, for linear activities:

Proposed activity

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Length of the activity:

k/km

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

Proposed activity

Size of the site/servitude:

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Ha/m²

5. SITE ACCESS

Proposal

Does ready access to the site exist, or is access directly from an existing road?

YES X	
	m

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

West Avenue and Hall Street

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

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?

YES	NO
	m

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

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

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?

YES	NO
	m

If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

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

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated

0

Number of times

(only complete when applicable)

6. SITE OR ROUTE PLAN

A detailed site or route (for linear activities) 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:

- the scale of the plan, which must be at least a scale of 1:2000 (scale cannot be larger than 1:2000 i.e. scale cannot be 1:2500 but could where applicable be 1:1500)
- the property boundaries and numbers of all the properties within 50m of the site;
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- the exact position of each element of the application as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, septic tanks, storm water infrastructure and telecommunication infrastructure;
- walls and fencing including details of the height and construction material;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites including (but not limited thereto):
 - Rivers and wetlands;
 - the 1:100 and 1:50 year flood line;
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- 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
- the positions from where photographs of the site were taken.
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the 32m position from the bank to be clearly indicated)

7. SITE PHOTOGRAPHS

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 the appropriate Appendix. It should be supplemented with additional photographs of relevant features on the site, where applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 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. To be attached in the appropriate Appendix.

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Further:

Instructions for completion of Section B for linear activities

- 1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
- 2) Indicate on a plan(s) the different environments identified
- 3) Complete Section B for each of the above areas identified
- 4) Attach to this form in a chronological order
- 5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route times

Instructions for completion of Section B for location/route alternatives

- 1) For each location/route alternative identified the entire Section B needs to be completed
- 2) Each alternative location/route needs to be clearly indicated at the top of the next page
- 3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives times
(complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Section B - Section of Route (complete only when appropriate for above)

Section B – Location/route Alternative No. (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: Remainder of Portion 259 and Portion 266 of Farm Zwartkop 356-JR; and Holdings 231 and 232 Lyttelton Agricultural Holdings Extension 1
 (Farm name, portion etc.)

2. 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 decimal degrees. The degrees should have at least six 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):

In the case of linear activities:

Alternative:

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Latitude (S):	Longitude (E):
25°50'55.22"	28°10'55.89"
25°50'55.95"	28°11'00.01"
25°50'56.13"	28°11'03.13"

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix

Addendum of route alternatives attached

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

	1:7,5 – 1:5 X	Steeper than 1:5 X
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4. LOCATION IN LANDSCAPE

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

	Side slope of hill X		River front X
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5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

- Shallow water table (less than 1.5m deep)
- Dolomite, sinkhole or doline areas
- Seasonally wet soils (often close to water bodies)
- Unstable rocky slopes or steep slopes with loose soil
- Dispersive soils (soils that dissolve in water)
- Soils with high clay content (clay fraction more than 40%)
- Any other unstable soil or geological feature
- An area sensitive to erosion

YES X	
YES X	
YES X	
	NO X
	NO X
	NO X
YES X	NO
YES X	

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

b) are any caves located on the site(s) NO X

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	Longitude (E):
°	°

c) are any caves located within a 300m radius of the site(s) NO X

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	Longitude (E):
°	°

d) are any sinkholes located within a 300m radius of the site(s) NO X

If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	Longitude (E):
°	°

If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 3)? NO X

Please note: The Department may request specialist input/studies in respect of the above.

7. GROUND COVER

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

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % =	Natural veld with scattered aliens % = 100%	Natural veld with heavy alien infestation % = 100	Veld dominated by alien species % =	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % =

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site NO X

If YES, specify and explain:

N/A	
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Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site. NO X

If YES, specify and explain:

N/A	
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Are there any special or sensitive habitats or other natural features present on the site? YES

If YES, specify and explain:

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Part of the proposed site is located within the area that is classified as irreplaceable (Critical Biodiversity Area) in terms of the Gauteng Conservation Plan Version 3.3 of 2011.

The Eco-00 Ecological Conditional Requirement Report, February 2014 (Appendix G) revealed that this area was designated as a Critical Biodiversity Area due to the presence of Orange-listed plant habitat, Red-listed mammal habitat, Red-listed bird habitat, as well as the presence of primary vegetation. The state of the environment has however changed due to the activities (illegal dumping as well as the spreading of the soil heap and rubble prior to construction) that have occurred on the greater site (for the West End Office Park). These activities have made it quite impossible to confirm the presence of threatened red-listed species on site. It has also resulted in the loss of a Critical Biodiversity Area on southern part of the site.

The site is located within 100m from the Hennops River and within a wetland buffer zone (GDARD, 2011). According to the Eco-00 Ecological Conditional Requirement Report of February 2014, Hennops River, as a riverine ecosystem, is not considered to be of high ecological value as the river is currently in a highly modified state as a result of the large loss of natural habitat, biota and basic ecosystems has occurred.

The above information indicate that the proposed site is no longer located on a sensitive environment or habitat and the site is not likely to have sensitive features as it possibly did before.



Figure 2: Ecological Map

Was a specialist consulted to assist with completing this section YES

If yes complete specialist details

Name of the specialist:	Karin van der Walt		
Qualification(s) of the specialist:	B.Tech (Nature Conservation) Tshwane University of Technology (2006)		
Postal address:	PO Box 74785, Lynnwood Ridge		
Postal code:	0040		
Telephone:	012 349 1307	Cell:	072 607 8613
E-mail:	Karin@sefsa.co.za	Fax:	012 349 1229
Are any further specialist studies recommended by the specialist?			<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, specify:	N/A		
If YES, is such a report(s) attached?			<input type="checkbox"/> YES <input type="checkbox"/> NO
If YES list the specialist reports attached below			

Signature of specialist: _____ Date: _____

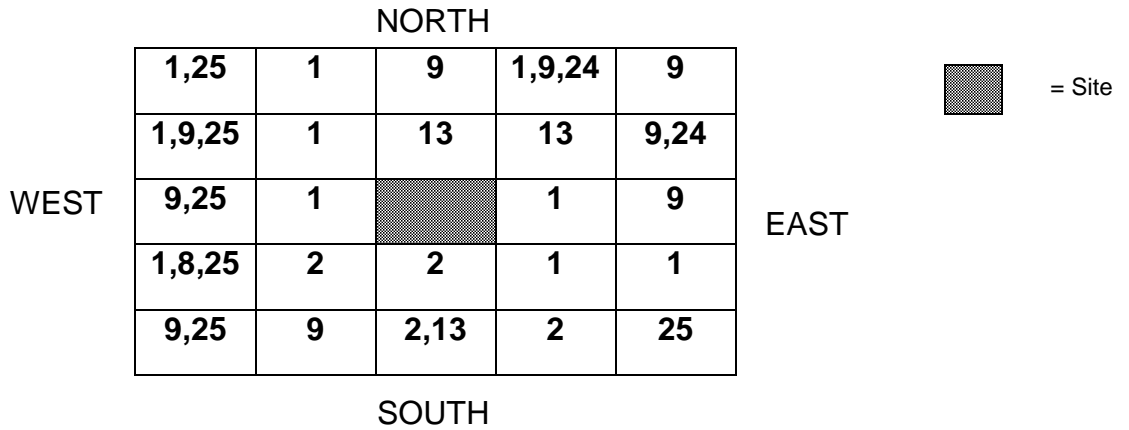
Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line	25. Major road (4 lanes or more) ^N
26. Sewage treatment plant ^A	27. Landfill or waste treatment site ^A	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33. Spoil heap or slimes dam ^A	34. Small Holdings	
Other land uses (describe):				

NOTE: Each block represents an area of 250m X250m



Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an ^A and with an ^N respectively.

Have specialist reports been attached
If yes indicate the type of reports below

YES

Top Soil Survey ECO-1 Report
Eco-00 Ecological Conditional Requirement Report

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

City of Tshwane Metropolitan Municipality (CTMM) is the biggest of five (5) municipal districts that make up the Gauteng Province of South Africa. Its area comprises of area comprising 34.65% of the province, with a population density of 463.88 persons per square kilometre. The 2011 Stats SA Census Data indicates that although CTMM is the largest District within the Gauteng Province, it is only home to 23.81% of the province's population. The contribution of the CTMM household population to the Gauteng Province's household total is only 23.32%.

The CTMM is mostly composed out of urban area which covers about 92.27% of the municipality. Please refer to Figure 3 below.

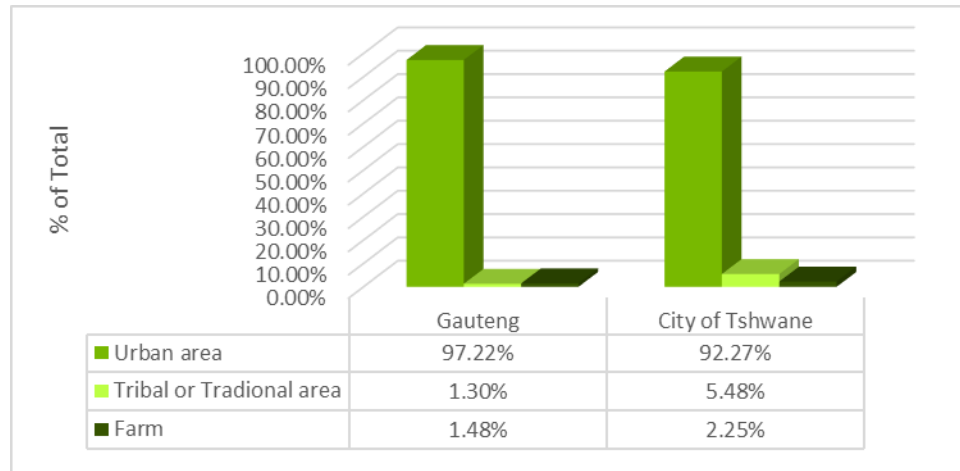


Figure 3: Geography type in the City of Tshwane and Gauteng, 2011

It is evident from Figure 4 below that the CTMM population in 2011 were composed of mostly Black African persons (75.51%) followed by 20.02% White persons. The same trend is noticed in the Gauteng Province (77.48% and 15.53% respectively). As of 2014 population of the CTMM was consisting of 23.18% of the child population (0 -14 years) and 71.93% was of the population was the working age (15 – 64 years). People within this age group normally have more work experience and usually fall within the higher skilled and higher salary bracket. The CTMM's unemployment rate decreased between 2001 and 2011 by 7.4%. The youth unemployment rate followed a similar trend, decreasing by 7.9%. With the CTMM consisting of most economically active age group, the decrease in the unemployment rate is very crucial due to the fact that the participation of such people in the economy enables them to contribute to the overall welfare of the society and the stimulation of economic growth through their taxes. Please see Figure 4 below for the unemployment rate in the CTMM in 2001 in comparison with the 2011 unemployment rate,

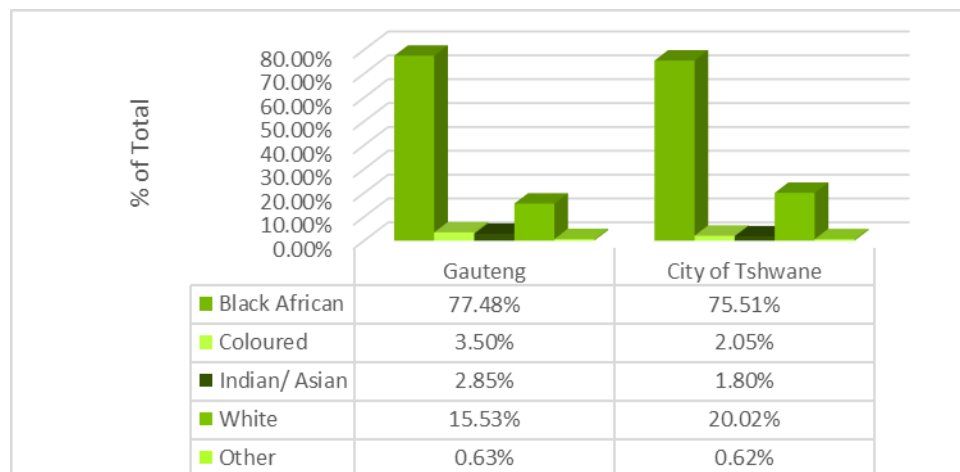


Figure 4 Population group in the City of Tshwane and Gauteng, 2011

The 2011 census survey revealed that the CTMM lacking behind the average level of sanitation delivery as the Gauteng Province, with 76.56% of households relying on flush toilets as compared to 83.12% for the province. The CTMM has 7.65% more households than the Gauteng province relying on pit latrines (with or without ventilation). Figure 5 below depicts the percentage of the all the types of sanitation systems used in the CTMM and the Gauteng province.

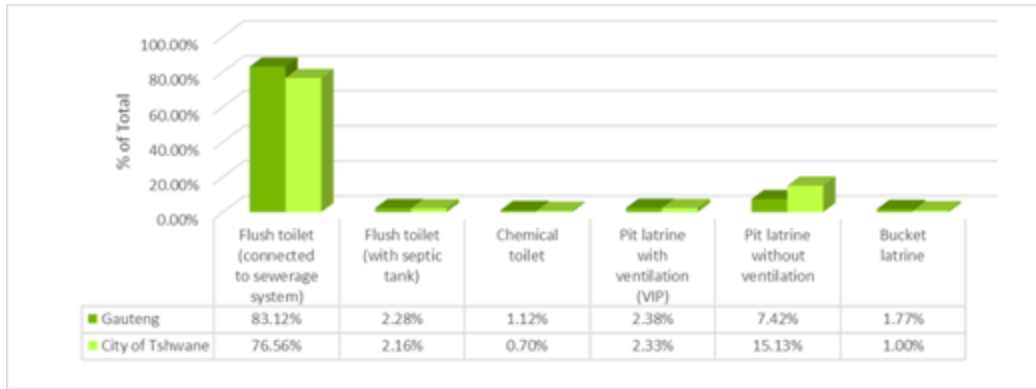


Figure 5 Sanitation in the City of Tshwane and Gauteng, 2011

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site-
 - (i) exceeding 5 000 m2 in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m2 in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Are there any signs of culturally (aesthetic, social, spiritual, environmental) 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 X
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If YES, explain:

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If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

N/A

Will any building or structure older than 60 years be affected in any way?
 Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

	NO X
	NO X

If yes, please attached the comments from SAHRA in the appropriate Appendix

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

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 site notice at a conspicuous place, on the boundary of a 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 the 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 an advertisement 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. LOCAL AUTHORITY PARTICIPATION

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 thirty (30) calendar days before the submission of the application to the competent authority (GDARD).

Has any comment been received from the local authority?

YES	
X	

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

The CoT stated that they are in support of the application subject to the consideration and adherence to the recommendations that they made. The recommendations are mainly emphasising that the Environmental Management Plan and the Rehabilitation Plan need to be implemented correctly to prevent the possible negative impacts associated with the proposed project. Adequate maintenance and monitoring plan must be implemented to monitor post-construction rehabilitation, particularly with regards to erosion control and vegetation reinstatement.

It is recommended that the storm water management on site needs to aim the fast and efficient disposal of water into the surrounding and existing drainage systems. The applicant must ensure that storm water entering the surrounding the surrounding drainage system is not contaminated by spilled chemicals.

The CoT requests that the Flood line Certificate indicating the 1:100 year flood lines position against the proposed project be submitted to them for perusal. The CoT further stated that the applicant must comply with all the legislation that is applicable to the proposed project.

If "NO" briefly explain why no comments have been received

N/A

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least thirty (30) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES	
X	

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

The Gautrain Management Agency (GMA) expressed their concerns on the BAR not considering that the proposed project is located on dolomite and they requested for a detailed project specific dolomite investigation to be undertaken as part of the BA process. It is further stated the Draft BAR did not conform to the requirements of Revision 3 of the Gautrain Water Management Plan Guidelines.

The GMA provided other impacts that need to be included in the Final BAR and be addressed in the EMPr.

If "NO" briefly explain why no comments have been received

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment 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 and ratepayers associations. 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.

The practitioner must record all comments and respond to each comment of the public / interested and affected party before the application is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued to those persons detailed in 1(b) to 1(f) above

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from persons detailed in Point 2 and 3 above

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report

Appendix 9 – Copy of the register of I&APs

Appendix 10 – Comments from I&APs on the application

Appendix 11 - Other

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

- 1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
- 4) Each alternative needs to be clearly indicated in the box below
- 5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives "insert No. of duplicates" times
(complete only when appropriate)

Section D Alternative No. "insert alternative number" (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? YES X NO
If yes, what estimated quantity will be produced per month? (to be confirmed in final BAR) m³

How will the construction solid waste be disposed of (describe)?
All the pipeline construction waste will be collected in skips on site and disposed of at a registered landfill site

Where will the construction solid waste be disposed of (describe)?
At the nearest registered landfill site.

Will the activity produce solid waste during its operational phase? YES X NO
If yes, what estimated quantity will be produced per month? (To be confirmed in the final BAR) m³

How will the solid waste be disposed of (describe)?
Municipal services will be utilised for the collection and disposal of the waste generated on site during the construction.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity? (Not Applicable) YES NO

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?
Waste will be disposed of in a registered landfill site.

Note: 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 applicant 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? YES NO X
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? YES NO X
If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Describe the measures, if any, that will be taken to ensure the optimal reuse or recycling of materials:
Measures are included in the EMPr.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO X

If yes, what estimated quantity will be produced per month? m³

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)? YES NO

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

If yes, what estimated quantity will be produced per month? m³

If yes describe the nature of the effluent and how it will be disposed.

Note that if effluent is to be treated or disposed on site 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? YES NO X

If yes, provide the particulars of the facility:

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

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

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

--

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?

	NO X
--	------

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

	m ³
--	----------------

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?

YES	NO
-----	----

Will the activity produce any effluent that will be treated and/or disposed of on site?

	NO X
--	------

If yes describe how it will be treated and disposed of.

--

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO X
--	------

If yes, is it controlled by any legislation of any sphere of government?

YES	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.

If no, describe the emissions in terms of type and concentration:

--

2. WATER USE

Indicate the source(s) of water that will be used for the activity

Municipal X	
----------------	--

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month: (to be confirmed in the final BAR)

	liters
--	--------

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?

	NO X
--	------

If yes, list the permits required

--

If yes, have you applied for the water use permit(s)?

YES	NO
-----	----

If yes, have you received approval(s)? (attached in appropriate appendix)

YES	NO
-----	----

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

The sewerage pipeline will not need power supply
--

If power supply is not available, where will power be sourced from?

N/A

4. ENERGY EFFICIENCY

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

N/A

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

N/A

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

Summarise the issues raised by interested and affected parties.

No comments were received from the Interested and Affected Parties during the commenting period between 03 July 2014 and 14 August 2014. Comments received were only from the CoT and GMA, as stated in Section C 2 and 3 above. Detailed comments are included in the Comments and Responses Report (CRR) attached to this report.

Summary of response from the practitioner to the issues raised by the interested and affected parties
(A full response must be provided in the Comments and Response Report that must be attached to this report):

N/A

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

The criteria for the description and assessment of environmental impacts were drawn from the EIA Regulations. Activities within the framework of the proposed development and their respective construction and operational phases, give rise to certain impacts. For the purpose of assessing these impacts, the project has been divided into three phases from which impacting activities can be identified, namely:

- a) *Construction phase*: All the construction related activities on site, until the contractor leaves the site;
- b) *Operational phase*: All activities, including the operation and maintenance of the proposed development; and
- c) *Decommissioning phase*: All decommissioning activities on site, until the contractor leaves the site.

The activities arising from each of these phases have been included in the impact tables. This is to identify activities that require certain environmental management actions to mitigate the impacts arising from them. The criteria against which the activities were assessed are given in the next section.

Assessment Criteria

The assessment of the impacts has been conducted according to a synthesis of criteria required by the integrated environmental management procedure.

Extent

The physical and spatial scale of the impact is classified as:

- a) *Footprint*: The impacted area extends only as far as the activity, such as footprint occurring within the total site area;
- b) *Site*: The impact could affect the whole, or a significant portion of the site;
- c) *Regional*: The impact could affect the area including the neighbouring farms, the transport routes and the adjoining towns;
- d) *National*: The impact could have an effect that expands throughout the country (South Africa); and
- e) *International*: Where the impact has international ramifications that extend beyond the boundaries of South Africa.

Duration

The lifetime of the impact, that is measured in relation to the lifetime of the proposed development.

- a) *Short term*: The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than that of the construction phase;
- b) *Short to Medium term*: The impact will be relevant through to the end of a construction phase;
- c) *Medium term*: The impact will last up to the end of the development phases, where after it will be entirely negated;
- d) *Long term*: The impact will continue or last for the entire operational lifetime of the development, but will be mitigated by direct human action or by natural processes thereafter; and
- e) *Permanent*: This is the only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

Intensity

The intensity of the impact is considered by examining whether the impact is destructive or benign, whether it destroys the impacted environment, alters its functioning, or slightly alters the environment itself. The intensity is rated as:

- a) *Low*: The impact alters the affected environment in such a way that the natural processes or functions are not affected;
- b) *Medium*: The affected environment is altered, but functions and processes continue, albeit in a modified way; and

- c) High: Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

Probability

This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time. The classes are rated as follows:

- a) Improbable: The possibility of the impact occurring is none, due either to the circumstances, design or experience. The chance of this impact occurring is zero (0%);
- b) Possible: The possibility of the impact occurring is very low, due either to the circumstances, design or experience. The chances of this impact occurring is defined as 25%;
- c) Likely: There is a possibility that the impact will occur to the extent that provisions must therefore be made. The chances of this impact occurring is defined as 50%;
- d) Highly Likely: It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up before carrying out the activity. The chances of this impact occurring is defined as 75%; and
- e) Definite: The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on. The chance of this impact occurring is defined as 100%.

Mitigation

The impacts that are generated by the development can be minimised if measures are implemented in order to reduce the impacts. The mitigation measures ensure that the development considers the environment and the predicted impacts in order to minimise impacts and achieve sustainable development.

Determination of Significance – Without Mitigation

Significance is determined through a synthesis of impact characteristics as described in the above paragraphs. It provides an indication of the importance of the impact in terms of both tangible and intangible characteristics. The significance of the impact “without mitigation” is the prime determinant of the nature and degree of mitigation required. Where the impact is positive, significance is noted as “positive”. Significance is rated on the following scale:

- a) No significance: The impact is not substantial and does not require any mitigation action;
- b) Low: The impact is of little importance, but may require limited mitigation;
- c) Medium: The impact is of importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels; and
- d) High: The impact is of major importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

Determination of Significance – With Mitigation

Determination of significance refers to the foreseeable significance of the impact after the successful implementation of the necessary mitigation measures. Significance with mitigation is rated on the following scale:

- a) No significance: The impact will be mitigated to the point where it is regarded as insubstantial;
- b) Low: The impact will be mitigated to the point where it is of limited importance;
- c) Low to medium: The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels;
- d) Medium: The impact is of major importance but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels;
- e) Medium to high: Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw; and
- f) High: The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option or entire project proposal unacceptable.

Assessment Weighting

Each aspect within an impact description was assigned a series of quantitative criteria. Such criteria are likely to differ during the different stages of the project's life cycle. In order to establish a defined base upon which it becomes feasible to make an informed decision, it was necessary to weigh and rank all the criteria.

Ranking, Weighting and Scaling

For each impact under scrutiny, a scaled weighting factor is attached to each respective impact (Figure 6). The purpose of assigning such weights serve to highlight those aspects considered the most critical to the various stakeholders and ensure that each specialist's element of bias is taken into account. The weighting factor also provides a means whereby the impact assessor can successfully deal with the complexities that exist between the different impacts and associated aspect criteria.

Simply, such a weighting factor is indicative of the importance of the impact in terms of the potential effect that it could have on the surrounding environment. Therefore, the aspects considered to have a relatively high value will score a relatively higher weighting than that which is of lower importance.

Identifying the Potential Impacts Without Mitigation Measures (WOM)

Following the assignment of the necessary weights to the respective aspects, criteria are summed and multiplied by their assigned weightings, resulting in a value for each impact (prior to the implementation of mitigation measures).

Extent	Duration	Intensity	Probability	Weighting Factor (WF)	Significance Rating (SR)	Mitigation Efficiency (ME)	Significance Following Mitigation (SFM)
Footprint 1	Short term 1	Low 1	Probable 1	Low 1	Low 0-19	High 0,2	Low 0-19
Site 2	Short to medium 2	Low to medium 2	Possible 2	Low to medium 2	Low to medium 20-39	Medium to high 0,4	Low to medium 20-39
Regional 3	Medium term 3	Medium 3	Likely 3	Medium 3	Medium 40-59	Medium 0,6	Medium 40-59
National 4	Long term 4	High 4	Highly Likely 4	Medium to high 4	Medium to high 60-79	Low to medium 0,8	Medium to high 60-79
International 5	Permanent 5	High 5	Definite 5	High 5	High 80-100	Low 1,0	High 80-100

Figure 6: Description of biophysical assessment parameters with its respective weighting

Equation 1:

Significance Rating (WOM) = (Extent + Intensity + Duration + Probability) x Weighting Factor

Identifying the Potential Impacts With Mitigation Measures (WM)

In order to gain a comprehensive understanding of the overall significance of the impact, after implementation of the mitigation measures, it was necessary to re-evaluate the impact.

Mitigation Efficiency (ME)

The most effective means of deriving a quantitative value of mitigated impacts is to assign each significance rating value (WOM) a mitigation effectiveness rating. The allocation of such a rating is a measure of the efficiency and effectiveness, as identified through professional experience and empirical evidence of how effectively the proposed mitigation measures will manage the impact. Thus, the lower the assigned value the greater the effectiveness of the proposed mitigation measures and subsequently, the lower the impacts with mitigation.

Equation 2:

Significance Rating (WM) = Significance Rating (WOM) x Mitigation Efficiency

or WM = WOM x ME

Significance Following Mitigation (SFM)

The significance of the impact after the mitigation measures are taken into consideration. The efficiency of the mitigation measure determines the significance of the impact. The level of impact is therefore seen in its entirety with all considerations taken into account.

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Proposal

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Soil disturbance and erosion	Low to medium	<ul style="list-style-type: none"> There should be no prolonged storage or stockpiling of any soil or construction debris that could wash into the adjacent watercourse; Implementation of anti-erosion measures such as the construction of berms to reduce the water velocity is essential; Vegetation should only be cleared in areas necessary for the progression of the development and open spaces should be re-vegetated following construction; Topsoil and subsoil must be kept totally separate during excavation and must be stored in separate stockpile; The stormwater outlets must be installed as per the approved Stormwater Management Plan. Prepare and implement a landscape rehabilitation plan 	Low

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

		<p>with indigenous vegetation to stabilize river banks and abate further soil erosion; and</p> <ul style="list-style-type: none"> • The implementation of the pipeline should preferably be done during the drier winter months of the year. 	
Siltation of the watercourse	Low to Medium	<ul style="list-style-type: none"> • Berms must be placed at the bottom of all the stockpiles; • On completion of the construction, bare soil must be rehabilitated and covered with vegetation to prevent erosion; • The stormwater outlets must be installed as per the approved Stormwater Management Plan. • Measures outlined in the approved EMPr are to be adhered to and an independent Environmental Control Officer is to be appointed to oversee construction and ensure adherence to the EMPr; • Erect a silt fence around any stockpiles in order to trap sediment and prevent stockpile sediment loss; • Implement the Rehabilitation Plan that forms part of this report; and • The implementation of the pipeline should preferably be done during the drier winter months of the year. 	Low to Medium
Possible loss of indigenous vegetation	Low to Medium	<ul style="list-style-type: none"> • Clearing of vegetation must be undertaken with an ECO on site; • Vegetation should only be cleared in areas necessary for the implementation of the proposed project and the area should be re-vegetated post construction (as per the Rehabilitation Plan); • Indigenous plants must be used for the rehabilitation of the site; • Mitigation measures in the EMPr must be complied with; and • The implementation of the pipeline should preferably be done during the drier winter months of the year. 	Low
Increase in ambient noise levels	Low to Medium	<ul style="list-style-type: none"> • Construction must be restricted to normal working hours (7:00 to 17:00) during weekdays and 08:00 to 15:00 on Saturdays. No work on public holidays and Sundays; • All construction equipment must be switched off when not in use; • All construction equipment must be kept in good working order; and • Prepare and implement a landscape rehabilitation plan with indigenous vegetation to stabilize river banks and abate further soil erosion. 	Low
Pollution of the watercourse	Low to Medium	<ul style="list-style-type: none"> • The sewerage pipeline material to be used must be SABS approved; • Municipal specifications must 	Low

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

		be followed; <ul style="list-style-type: none"> The sewerage pipeline must be checked for detection at frequencies recommended by the authorities; Sewerage pipeline leakages must be reported to the municipality as soon as possible; and Corrective action must be implemented as recommended by the EMPr and the authorities. 	
Increase in the demand for municipal services	Low to Medium	<ul style="list-style-type: none"> The project proponent must comply with all the municipal specifications; and Should the project proponent intend to change the capacity of the proposed connection, an approval must be obtained from the authorities. 	Low to Medium
Temporary job creation	Low	<ul style="list-style-type: none"> Positive impact. No mitigation necessary. 	N/A

Alternative 1

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
As above			

Alternative 2

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

The following specialist reports were used:

- Top Soil Survey ECO1, February 2014
- Eco-00 Ecological Conditional Requirement Report, February 2014

The reports are attached in Appendix G of this report.

3. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts. **Not Applicable**

Proposal

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Decommissioning and closure not envisioned at this point			

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

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Alternative 1

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Decommissioning and closure not envisioned at this point			

Alternative 2

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

N/A

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

The proposed construction of the sewerage pipeline and stormwater features, if managed properly, will have a minimal impact on the landscape and bank erosion as well as the pollution of the watercourse. The magnitude of these impacts will be greater when combined with the impacts of the overall development (including the on-going construction of the West End office park). Some of the possible accumulative impacts are indicated below.

4.1 Destabilisation of Structural Integrity of the Gautrain Viaduct

Source and description of the impact:

The site for the proposed project is located on the Dolomite area. The possible impacts associated with activities that entail trenching in the Dolomite area include the formation of cavities and voids resulting in sinkholes and dolines. Sinkholes and dolines may result in the damage of the Gautrain infrastructure. The above may happen if the proposed project and other projects/developments in the area are undertaken without implementing adequate mitigation measures in order to prevent the percolation of water that may result in the dissolving of the mineral dolomite.

Table 1: Destabilisation of Structural Integrity of the Gautrain

Activity	Construction		
Nature of the impact	Formation of cavities and voids		Status -
Receiving environment	Site and the Gautrain viaduct		
Magnitude	Extent	Regional (3)	
	Intensity	High (5)	
	Duration	Permanent (5)	
	Probability	Likely (2)	
Significance	Without mitigation (WOM)	$(Extent + Intensity + Duration + Probability) \times Weighting\ Factor$ $(3 + 5 + 5 + 2) \times 4 = 60$ Medium to High	
	With mitigation (WM)	$WOM \times ME = WM$ $60 \times 0.4 = 24$	
Significance With Mitigation (WM)	Low to Medium		

Mitigation Measures

- A site specific Water Management Plan must be compiled and be submitted to the GMA and Council of Geosciences for review and comments;
- All the construction and operational activities must be undertaken in compliance with the Water Management Plan;
- Rehabilitation must be undertaken as per the Rehabilitation Plan and ponding of water must be prevented in the rehabilitated area;
- Monitoring and Maintenance Plan must be implemented during the operational phase of the project. Regular monitoring and maintenance must be undertaken to ensure that there is no ponding on the stormwater outlets as well as leakages of the infrastructure;
- No construction activities must take place within the Gautrain reserve;

- Soil erosion prevention measure must be effectively implemented throughout the site; and
- Only the pipeline material recommended by the Gautrain Water Management Plan Guidelines..

Significance of the impact:

The significance of this impact is regarded as medium to high without mitigation and low to medium with mitigation. Implementation of the approved EMPr and Water Management Plan will ensure that impacts are minimised as indicated above. Collective effort is crucial in the success of the mitigation measures.

5. ENVIRONMENTAL IMPACT STATEMENT

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

Proposal

5.1. Soil disturbance and erosion

Source and description of the impact:

Clearing of vegetation and the digging of trenches for the installation of the sewerage pipeline which would result in soil stockpiles. This will result in disturbed and bare soil that is likely to be susceptible to erosion. The increased run-off by the water discharged by the stormwater outlets may result in erosion and degradation of the river banks.

Table 2: Soil disturbance and erosion

<i>Activity</i>	Clearing of vegetation for construction		
<i>Nature of the impact</i>	Exposed soils susceptible to erosion	Status	-
<i>Receiving environment</i>	Site and area surrounding the adjacent watercourse		
<i>Magnitude</i>	<i>Extent</i>	Site (2)	
	<i>Intensity</i>	Medium (3)	
	<i>Duration</i>	Short to medium term (2)	
	<i>Probability</i>	Likely (3)	
<i>Significance</i>	<i>Without mitigation (WOM)</i>	<i>(Extent + Intensity + Duration + Probability) x Weighting Factor</i> (2 + 3 + 2 + 3) x 3 = 30 Low to Medium	
	<i>With mitigation (WM)</i>	<i>WOM x ME = WM</i> 30 x 0.6 = 18	
<i>Significance With Mitigation (WM)</i>	Low		

Mitigation Measures

- There should be no prolonged storage or stockpiling of any soil or construction debris that could wash into the adjacent watercourse;
- Implementation of anti-erosion measures such as the construction of berms to reduce the water velocity is essential;
- Vegetation should only be cleared in areas necessary for the implementation of the proposed project i.e. the pipeline corridor; and the area should be re-vegetated post construction (as per the Rehabilitation Plan);
- Topsoil and subsoil must be kept totally separate during excavation and must be stored in separate stockpile;
- The stormwater outlets must be installed as per the approved Stormwater Management Plan;
- Prepare and implement a landscape rehabilitation plan with indigenous vegetation to stabilize river banks and abate further soil erosion; and
- The implementation of the pipeline should preferably be done during the drier winter months of the year.

Significance of the impact:

The significance of this impact is regarded as low to medium without mitigation and low with mitigation. To this end, any open spaces within the site subsequent to development will be rehabilitated and will consist of indigenous vegetation.

5.2. Siltation of the watercourse

Source and description of the impact:

Exposed soil may be eroded and transported by the increased run-off and result in an increased silt burden on the watercourse. The proposed stormwater features will further increase the amount of the run-off into the river and will possibly increase the soil deposition.

Table 3: Siltation of the watercourse

<i>Activity</i>	Clearance of vegetation and stockpiling		
<i>Nature of the impact</i>	Increased potential for sedimentation / siltation	Status	-
<i>Receiving environment</i>	Adjacent watercourse		

<i>Magnitude</i>	<i>Extent</i>	Site (2)
	<i>Intensity</i>	Medium (3)
	<i>Duration</i>	Short to Medium term (2)
	<i>Probability</i>	Likely (3)
<i>Significance</i>	<i>Without mitigation (WOM)</i>	$(Extent + Intensity + Duration + Probability) \times Weighting\ Factor$ $(2 + 3 + 2 + 3) \times 3 = 30$ Low to Medium
	<i>With mitigation (WM)</i>	$WOM \times ME = WM$ $30 \times 0.8 = 24$
<i>Significance With Mitigation (WM)</i>	Low to Medium	

Mitigation Measures

- Berms must be placed at the bottom of all the stockpiles;
- On completion of the construction, bare soil must be rehabilitated and covered with vegetation to prevent erosion;
- The stormwater outlets must be installed as per the approved Stormwater Management Plan;
- Measures outlined in the approved Environmental Management Programme (EMPr) are to be adhered to and an independent Environmental Control Officer is to be appointed to oversee construction and ensure adherence to the EMPr;
- Erect a silt fence around any stockpiles in order to trap sediment and prevent stockpile sediment loss; and
- Prepare and implement a landscape rehabilitation plan with indigenous vegetation to stabilize river banks and abate further soil erosion; and
- The implementation of the pipeline should preferably be done during the drier winter months of the year.

Significance of the impact:

The significance of this impact is low to medium without the application of applicable mitigation measures and is low with the application of applicable mitigation measures.

5.3. Possible loss of the indigenous vegetation

Source and description of the impact:

The clearing of vegetation along the proposed route of the pipeline, which may leave the area susceptible to increased stormwater runoff following periods of heavy rainfall, especially if construction is to take place in the summer (rainy) season in Gauteng.

Table 4: Possible loss of the indigenous vegetation

<i>Activity</i>	Clearing of vegetation for construction		
<i>Nature of the impact</i>	Loss of indigenous vegetation	Status	-
<i>Receiving environment</i>	Ecosystem around the site		
<i>Magnitude</i>	<i>Extent</i>	Site (2)	
	<i>Intensity</i>	Medium to High (3)	
	<i>Duration</i>	Short to medium term (2)	
	<i>Probability</i>	Highly likely (4)	
<i>Significance</i>	<i>Without mitigation (WOM)</i>	$(Extent + Intensity + Duration + Probability) \times Weighting\ Factor$ $(2 + 3 + 2 + 4) \times 2 = 22$ Low to Medium	
	<i>With mitigation (WM)</i>	$WOM \times ME = WM$ $20 \times 0.6 = 13.2$	
<i>Significance With Mitigation (WM)</i>	Low		

Mitigation Measures

- Clearing of vegetation must be undertaken with an ECO on site;
- Vegetation should only be cleared in areas necessary for the progression of the development and open spaces should be re-vegetated following construction;
- Indigenous plants must be used for the rehabilitation of the site;
- Mitigation measures in the EMPr must be complied with; and
- The implementation of the pipeline should preferably be done during the drier winter months of the year.

Significance of the impact:

This impact is seen as having a significance of low to medium without mitigation and low with mitigation measures.

5.4. Pollution of the watercourse

Source and description of the impact:

During the operational phase, there may be leakages in the sewerage pipeline. Depending of the magnitude of the spillage, the sewerage may flow to the watercourse and result in the pollution of the water resource and ultimately eutrophication. Pollutants may enter the stormwater system through the stormwater inlets located in the West End Office Park. The pollutants may include the hydrocarbons and other pollutants that may occur on the surfaces on which water that collect into the stormwater inlet flows

Table 5: Pollution of the watercourse by sewerage			
Activity	Sewerage pipeline and stormwater system usage		
Nature of the impact	Pollution of the watercourse	Status	-
Receiving environment	The adjacent river		
Magnitude	Extent	Regional (3)	
	Intensity	High (5)	
	Duration	Short to medium term (2)	
	Probability	Possible (2)	
Significance	Without mitigation (WOM)	(Extent + Intensity + Duration + Probability) x Weighting Factor (3 + 5 + 2 + 2) x 3 = 36 Low to Medium	
	With mitigation (WM)	WOM x ME = WM 36 x 0.8 = 28.8	
Significance Mitigation (WM)	With	Low-Medium	
Mitigation Measures			
<ul style="list-style-type: none"> The pipeline material to be used must be SABS approved; Municipal specifications must be followed when installing the sewerage pipeline; The pipeline must be checked for leakages at frequencies recommended by the authorities; The vicinity of the stormwater inlets must always be cleared of all the potential pollutants; Sewerage pipeline leakages must be reported to the municipality as soon as possible; and Corrective action must be implemented as recommended by the EMPr and the authorities. 			
Significance of the impact:			
This impact is seen as having a significance of low to medium without mitigation and low with mitigation measures.			
5.4. Increase in ambient noise levels			
Source and description of the impact:			
The site personnel and the construction equipment that will be used during the digging of the trenches for the sewerage pipeline.			
Table 6: Increase in noise levels			
Activity	Movement of construction equipment and related construction activities		
Nature of the impact	Increase in noise levels	Status	-
Receiving environment	Surrounding areas		
Magnitude	Extent	Regional (3)	
	Intensity	Low to medium (2)	
	Duration	Short term (1)	
	Probability	Likely (3)	
Significance	Without mitigation (WOM)	(Extent + Intensity + Duration + Probability) x Weighting Factor (3 + 2 + 1 + 3) x 3 = 27 Low to Medium	
	With mitigation (WM)	WOM x ME = WM 27 x 0.6 = 16.2	
Significance With Mitigation (WM)		Low	
Mitigation Measures			
<ul style="list-style-type: none"> Construction must be restricted to normal working hours (7:00 to 17:00) during weekdays and 08:00 to 15:00 on Saturdays. No work on public holidays and Sundays; All construction equipment must be switched off when not in use; All construction equipment must be kept in good working order; and Prepare and implement a landscape rehabilitation plan with indigenous vegetation to stabilize river banks and abate further soil erosion. 			
Significance of the impact:			
This impact is deemed to be low to medium prior to the implementation of mitigation measures. However, should all mitigation be properly adhered to, this impact may be reduced to low.			
5.5. Disturbance to the avifaunal habitat			
Source and description of the impact:			
Habitats of the avifauna may be disturbed during the construction phase, resulting in the escape of the relocation of the avifauna. When the avifauna is moving it may collide or strike into the Gautrain that is in motion, which may lead to the death of some of these organisms. Destruction of the habitat may result in the interference with the breeding activities.			
Table 6: Disturbance to the avifaunal habitat			
Activity	Vegetation clearance and construction related activities		

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

<i>Nature of the impact</i>	Avifaunal relocation	Status	-
<i>Receiving environment</i>	Surrounding areas		
<i>Magnitude</i>	<i>Extent</i>	Regional (3)	
	<i>Intensity</i>	Low (1)	
	<i>Duration</i>	Short term (1)	
	<i>Probability</i>	Likely (3)	
<i>Significance</i>	<i>Without mitigation (WOM)</i>	<i>(Extent + Intensity + Duration + Probability) x Weighting Factor</i> (3 + 1 + 1 + 3) x3 = 24 Low to Medium	
	<i>With mitigation (WM)</i>	<i>WOM x ME = WM</i> 24 x 0.8 = 19.2	
<i>Significance With Mitigation (WM)</i>	Low		

Mitigation Measures

- It is recommended that the construction activities commence during the winter months to minimise interference with breeding activities of the avifauna utilising the trees;
- No wild animal may under any circumstance be handled, removed or be interfered with by construction workers;
- No avifauna or any other wild animal may under any circumstance be hunted, snared, captured, injured or killed. This includes animals perceived to be vermin. Checks of the surrounding areas must be regularly undertaken to ensure no traps have been set. Any snares or traps found on or adjacent to the site must be removed and disposed of.

Significance of the impact:

This impact is deemed to be low to medium prior to the implementation of mitigation measures. However, should all mitigation be properly adhered to, this impact may be reduced to low.

5.6. Increase in the demand for municipal services

Source and description of the impact:

On operation, the proposed sewerage pipeline will contribute to the increase in the demand for municipal services as it will connect into the existing municipal main sewerage pipeline.

Table 7. Increase in the demand for municipal services

<i>Activity</i>	Connecting to the main municipal sewerage pipeline		
<i>Nature of the impact</i>	Increase pressure on the sewerage services system	Status	-
<i>Receiving environment</i>	Surrounding area		
<i>Magnitude</i>	<i>Extent</i>	Regional (3)	
	<i>Intensity</i>	Low to Medium (2)	
	<i>Duration</i>	Long Term (4)	
	<i>Probability</i>	Highly Likely (4)	
<i>Significance</i>	<i>Without mitigation (WOM)</i>	<i>(Extent + Intensity + Duration + Probability) x Weighting Factor</i> (3 + 2 + 4 + 4) x3 = 39 Low to Medium	
	<i>With mitigation (WM)</i>	<i>WOM x ME = WM</i> 27 x 1.0 = 39	
<i>Significance With Mitigation (WM)</i>	Low to Medium		

Mitigation Measures

- The municipal specifications must be adhered to; and
- Should the project proponent intend to change the capacity of the proposed connection, an approval must be obtained from the authorities.

Significance of the impact:

This impact is rated as low to medium with or without mitigation.

5.7. Temporary job creation

Source and description of the impact:

The construction phase of the project will see a need for the hiring construction staff.

Table 8. Temporary job creation

<i>Activity</i>	Construction of the sewerage pipeline and construction		
<i>Nature of the impact</i>	Opportunity for employment for local people	Status	+
<i>Receiving environment</i>	Surrounding area		
<i>Magnitude</i>	<i>Extent</i>	Regional (3)	
	<i>Intensity</i>	Low to medium (2)	
	<i>Duration</i>	Short term (1)	
	<i>Probability</i>	Possible (2)	

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

<i>Significance</i>	<i>Without mitigation (WOM)</i>	<i>(Extent + Intensity + Duration + Probability) x Weighting Factor</i> (3 + 2 + 1 + 2) x 2 = 16 Low
	<i>With mitigation (WM)</i>	N/A
<i>Significance With Mitigation (WM)</i>	Positive impact	
Mitigation Measures N/A		
Significance of the impact: This impact is regarded as a positive impact for the economy of the area.		

Alternative 1

N/A. There is no alternative to the proposed route due to that the proposed sewerage pipeline route is the shortest route between the connection points of the West End Office Park and the municipal sewerage pipeline. This route is compatible to the layout plan for the West End Office Park and its location will enable easy access to the service because of the short route and the gravity factor. The proposed route will result in minimal social and environmental impacts as there is no people in the vicinity and the area is already disturbed by other activities.

Alternative 2

No-go (compulsory)

The no-go alternative would be to not undertake the construction of the sewerage pipeline and the stormwater infrastructure. This would leave the state of the environment as it is and the West End office park would not be able to access these basic services necessary for the operation of the office park.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

With appropriate mitigation measures implemented during both the construction and operational phases, the potential impacts of the proposed project can be reduced to within acceptable levels for the continuation of the project.

Should the proposed project be approved, it will enable the proper functioning of the West End office park, which will bring more opportunities in the area and improve the aesthetic value of the area.

For alternative:

N/A

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

The West End office park needs sanitation in order to perform its function as a fully serviced office park. The proposed pipeline route is the shortest distance between the municipal sewerage pipeline connection point and the West End office park sewerage connection point. The location of the existing stormwater outlets and the site gradient influenced selection of the points for the location of the proposed stormwater features.

The selection of the preferred sewerage pipeline alternative and the stormwater features was also informed by the Municipal Master Plan for the area. .

7. 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	
X	

If "NO", indicate the aspects that require further assessment 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:

- All appropriate mitigation measures outlined in the attached EMPr are to be adhered to, as the EMPr is a legally binding document.

- The rehabilitation plan must for a condition of the Environmental Authorisation.
- An approved site specific Water Management Plan must be implemented on site.
- An independent Environmental Control Officer (ECO) must be appointed to manage the implementation of the EMPr during phase. Environmental Audit reports must be compliant and be available for inspection.

8. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

If the EAP answers yes to Point 7 above then an EMP is to be attached to this report as an Appendix
EMPr attached

Yes X

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed; and