



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, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. 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, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. 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.
6. 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.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. 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 application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. 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.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

N/A

Is a closure plan applicable for this application and has it been included in this report?

N/A

If no, state reasons for not including the closure plan.

A closure plan is not required for this development as it will be permanent. The developer has no intention to decommission the shopping mall or residential units.

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

Yes

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person?

Yes

See attached Interested & Affected Party Register under Appendix E

If no, state reasons for not attaching the list.

N/A

Have State Departments including the competent authority commented?

In process

If no, why?

The Draft BAR has been circulating with comments to be included in the Final BAR.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

The Meyerton Mall and Residential Development, Midvaal Municipality.

Project Description:

Panama Properties Eleven (Pty) Ltd propose to construct the Meyerton Mall and Residential Development. The proposed development will take place in three phases. Phase 1 is the construction of 117 residential units (see Spatial Development Plan attached under Appendix C). Phase 2 will be the construction of an additional residential area in the northern portion the property with a density of 40 units / hectare. Phase 3 will be the construction of the commercial aspect, in the southern portion of the property. Apart from the internal roads allowing access to the property off Boundary Road and Begonia Street, the remainder of the property will remain un-developed and be left as "open space".

Phase 1 Residential – 3 hectares
Phase 2 Residential – 4.7 hectares
Phase 3 Commercial – 6.7 hectares
Undeveloped – 20 hectares

The development includes the construction of a culvert across a delineated unchannelled valley-bottom wetland in order to gain access to the commercial aspect in the southern half of the property.

The Midvaal Development Planning and Housing Department approved a layout plan and development controls in 2013, subject to the conditions of an Environmental Authorisation / Environmental Management Plan (see approval letter attached under Appendix I). Environmental Authorisation (EA) was originally granted for the project in 2006 but has since expired. The previous EA is attached under Appendix I and the original layout is included in Appendix C (alternative layout).

In terms of services, the development will have access to the bulk municipal water supply. There is no spare capacity at the Meyerton Waste Water Treatment Works (WWTWs) to accept raw sewage from the development and therefore a private package plant is proposed. The Meyerton WWTWs is currently being upgraded (civil engineering work anticipated to be finished by the end of 2016¹) and therefore the onsite package plant will be a temporary sewage disposal option until a service agreement is in place with the Municipality. A Service Agreement was signed with the Midvaal Municipality in December 2013 for the provision of potable water to the development as well as a bulk sewer connection, once the upgrade of the Meyerton WWTWs is complete. The Service Agreement is attached under Appendix I.

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
<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

A Water Use Authorisation is required in terms of section 21 of the National Water Act 36 of 1998. A General Authorisation (GA) has already been granted for the proposed private package plant, which will be used as a temporary sewage disposal method (attached under

¹ Breitenbach M. "Meyerton wastewater extension project 'on schedule'" **Engineering News** (June 2016).

Appendix F). Since the development will occur within 500m of a wetland with the culvert crossing the wetland, a section 21 (c) & (i) Water Use Authorisation is also required.

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

YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO

If yes, have you received approval(s)? (attach in appropriate appendix)
(The Water Use Authorization needs to be amended to include section 21(c) & (i) water uses)

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:
The Environmental Conservation Act 73 of 1989	National	09 June 1989
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended)	National & Provincial	27 November 1998
Environmental Impact Assessment Regulations GN983 (Listing Notice 1)	National & Provincial	04 December 2014
National Water Act 36 of 1998	National & Provincial	26 August 1998
National Environmental Management: Biodiversity Act	National	31 May 2004
The National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)	National & Provincial	06 March 2008
National Heritage Resources Act, 1999 (Act No. 45 of 1965 (NHRA))	National & Provincial	April 1999
Occupational Health and Safety Act 85 of 1993	National	23 June 1993

Legislation, policy of guideline	Description of compliance
Midvaal Municipal Bylaws	To be adhered to during construction and operational phase. Refer to http://www.midvaal.gov.za/index.php/resources-2/local-laws-and-policies to get a copy of the bylaws.

3. ALTERNATIVES

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.

Please describe the process followed to reach (decide on) the list of alternatives below

"Alternatives" are defined in the NEMA EIA Regulations (2014) as a different means of meeting the general purpose and requirements of the activity. Alternatives were assessed according to the Department of Environmental Affairs and Tourism's *Assessment of Alternatives and Impacts Guidelines*². Alternatives considered were both reasonable and feasible to meet the general purpose and requirements of the proposed development.

Initially, the applicant intended to develop a larger portion of the property. This original plan has been included as the alternative layout and is attached under Appendix C. In the alternative (i.e. Alternative 1) layout:

- Erf 1134 (7 568m³), adjacent to Boundary Road, was to be fully developed. On receipt of the Wetland Assessment, a significant portion of erf 1134 was identified as a Valley Bottom Wetland and has therefore been excluded completely from development in the preferred layout.

² DEAT (2006) Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations, 2006. Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

- Erf 1135 (5 351m³), adjacent to Pierneef Road, was to be fully developed. In order to retain as much of the indigenous grassland on the property as possible, erf 1135 has been excluded completely from development in the preferred layout to reduce fragmentation of the central indigenous grassland area (as per vegetation specialist recommendation in the Biodiversity Assessment).
- The development footprints of all other aspects (residential Phase 1 & 2 as well as the commercial component) have been reduced in the preferred layout to increase the conservation of the indigenous vegetation. The residential erfs in the preferred layout will comprise of 20% naturally occurring indigenous grassland in the preferred layout (i.e. no lawn grass).
- The applicant originally anticipated tying into the municipal bulk sewerage pipeline, which passes through the centre of the site. After discussions with the municipality, the lack of capacity at the existing Meyerton WWTW's dictated the requirement for a private, onsite package plant to be constructed to service the development. The package plant will be a temporary sewage treatment method until the WWTW's has been upgraded. The package plant is therefore included in the preferred development layout (attached under Appendix C).

The alternative layouts are discussed in more detail in the table below. Both alternatives include the proposed provincial interchange (K83), which is a registered servitude across the property. It is unknown at this stage when the interchange will be constructed, if ever, however it is understood that there are no immediate plans in place. This servitude, including a 30m building line will therefore remain undeveloped and the existing indigenous grassland retained.

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other (provide details of "other")	Description
1	Proposal (preferred)	<p>The preferred alternative takes into account the findings of the Wetland and Biodiversity assessments (summarised in section B and attached under Appendix G of the BAR). The northern portion of the property will be accessed off Begonia Street and will be comprised of residential units (7.7ha). The proposed Meyerton Mall will be located in the southern portion of the property (6.7ha). A new culvert will be constructed off Boundary Road to provide access to the Mall. The total development footprint will therefore be 14.4 hectares.</p> <p>The preferred layout is attached under Appendix C of the BAR.</p>
2	Alternative 1	<p>The residential component of the development in the alternative layout originally involved the transformation of the entire erf (9.8ha). In the layout alternative, the commercial component is much larger (7.9ha). Two erfs were zoned for "special" use (1.3 ha). The total development footprint is therefore 19 hectares and will result in the loss of approximately 1300m² of wetland.</p> <p>The alternate layout is attached under Appendix C of the BAR.</p>
3	No-Go	<p>The development of the property will not go ahead and will inevitably lead to the abandonment of the proposal. The property will continue to be used for illegal dumping of general waste and spoil material, which is currently taking place across the site but more prominent in the northern portion of the property. It is likely that informal residents will establish on the large piece of vacant land in an urban area. The vacant land will therefore have the potential to be misused to the detriment of the general public residing and working in Meyerton. The section of the Klip River will</p>

		however remain open to the public, who currently use the western bank of the river for recreational purposes.
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In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

N/A

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 (preferred)

Size of the activity:	
Residential Phase 1	3 ha
Residential Phase 2	4.7 ha
Commercial	6.7 ha
Total development area:	14.4 ha
Total open space	20 ha

Alternatives:

Alternative 1 (if any)

Residential Phase 1	3.8 ha
Residential Phase 2	6 ha
Commercial	7.9 ha
Total development area:	19 ha
Total open space	15.4 ha
N/A	

Alternative 2 (if any)

Ha/ m²

or, for linear activities:

Proposed activity

Length of the activity:	N/A
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Alternatives:

Alternative 1 (if any)

N/A

Alternative 2 (if any)

N/A

m/km

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

Proposed activity

Size of the site/servitude:	N/A
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Alternatives:

Alternative 1 (if any)

N/A

Alternative 2 (if any)

N/A

Ha/m²

5. SITE ACCESS

Proposal

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

YES	NO
	x
95m	

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

Describe the type of access road planned:

A Traffic Assessment was carried out by Trinamics Engineers to comment on the accesses to the site and the necessary road upgrading (Appendix G). There is existing access to the northern portion of the property off Jan Neethling Street (indicated in Figure 1). An additional access point is required to access the southern portion of the property (off Boundary Road).

The Traffic Assessment determined that the following intersection would be affected by the extra traffic generated by the proposed development in the preferred layout alternative. The location of the intersections and new access points directly associated with the property are illustrated in Figure 1 below for ease of reference:

1. Existing Intersection Pierneef Blvd / Boundary
The intersection needs to be signalised, and lanes added.
2. Existing north-eastern access to commercial and residential off Pierneef Blvd
It is operated as a 2-way stop on the side roads. The intersection need not be signalised, but the eastern access needs to be upgraded to as shown in the Traffic Assessment (pg 11).

3. New south-western access to Shopping Centre off Boundary Rd (D878)
 This is a new 3-legged intersection providing the southern access to traffic to and from the proposed shopping centre, as well as a small residential portion. The intersection needs to be signalised.

Figure 1: Aerial image showing the affected intersection and proposed new access points labelled according to the numbering listed above and below (source: Google Earth Pro, 2017).



Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

The access road off Boundary Road (intersection labelled 3 in the Figure above) passes through a valley-bottom wetland, which was delineated by the wetland specialist (see Figure 4 in the Wetland Assessment attached under Appendix G). The location of the proposed access road through the wetland has been assessed by the wetland specialists and further discussed under Section B8 of this BAR.

Alternative 1

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

YES	NO
	x
95m	

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

Describe the type of access road planned:

The same upgrades as the preferred layout alternative, described above, are proposed for the alternative layout as well as an additional access point off Pierneef Blvd. A new 3-legged intersection providing access to the bulk of traffic to and from the proposed shopping centre is required at the point labelled "a" in Figure 1. The intersection needs to be signalised.

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

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

Section A 6-8 has been duplicated

Number of times

(only complete when applicable)

6. LAYOUT 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 to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
 - A4 size for activities with development footprint of 10sqm to 5 hectares;
 - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
 - A2 size for activities with development footprint of >20 hectares to 50 hectares);
 - A1 size for activities with development footprint of >50 hectares);
- The following should serve as a guide for scale issues on the layout plan:
 - A0 = 1: 500
 - A1 = 1: 1000
 - A2 = 1: 2000
 - A3 = 1: 4000
 - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity 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, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) 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);
- Where a watercourse is located on the site at least one cross section of the watercourse must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

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)

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.

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:
(Including Physical Address and Farm name, portion etc.)

Portion 81 of the Farm Rietfontein 364IQ

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):
-26.578839 °	28.018976 °

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):
°	°
°	°
°	°

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

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	T	0	I	R	0	0	0	0	0	0	0	0	3	6	4	0	0	0	8	1
ALT. 1	T	0	I	R	0	0	0	0	0	0	0	0	3	6	4	0	0	0	8	1

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Flat	1:50 – 1:20 <input checked="" type="checkbox"/>	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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4. LOCATION IN LANDSCAPE

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

Ridgeline	Plateau	Side slope of hill/ridge	Valley	Plain <input checked="" type="checkbox"/>	Undulating plain/low hills	River front
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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 <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO
YES	NO <input checked="" type="checkbox"/>
YES	NO <input checked="" type="checkbox"/>
YES	NO <input checked="" type="checkbox"/>
YES	NO <input checked="" type="checkbox"/>
YES	NO <input checked="" type="checkbox"/>

(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).

b) are any caves located on the site(s)

YES	NO <input checked="" type="checkbox"/>
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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)

YES	NO <input checked="" type="checkbox"/>
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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)

YES	NO <input checked="" type="checkbox"/>
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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 4)?

YES	NO <input checked="" type="checkbox"/>
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Please note: The Department may request specialist input/studies in respect of the above.

It is to be noted that the property was previously zoned "Agricultural" however consent has already been received in terms of the provisions of the Subdivision of Agricultural Land Act 70 of 1970.

7. GROUNDCOVER

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 % =	Natural veld with heavy alien infestation % = 95	Veld dominated by alien species % =	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % = 5

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

YES	NO
X	

If YES, specify and explain:

The Biodiversity Company carried out a Biodiversity Assessment, which is attached under Appendix G. The findings of the assessment are summarized as follows:

- The Gauteng C-Plan indicates that the area along the Klip River and its banks are classified as an Ecological Support Area (ESA). A portion of the southern portion of the project area is classified as a Critical Biodiversity Area (CBA; Figure 2).
- The proposed project area was superimposed on the ecosystem protection level map to assess the protection status of the area. The protection level of terrestrial ecosystems associated with the proposed development was rated as endangered (Figure 3).
- The project area was superimposed in the terrestrial ecosystem threat status. The threat status of terrestrial ecosystem associated with the proposed development is rated as Vulnerable (Figure 4).
- The entire property is situated in the Soweto Highveld Grassland vegetation type. According to the South African National Biodiversity Institute (SANBI), the Soweto Highveld Grassland ecosystem is listed in the national list of ecosystems that are threatened and in need of protection under the “vulnerable” category³. Mucina & Rutherford consider the ecosystem to be “endangered”⁴.
- Three different vegetation communities were identified in the project area during the November 2016 survey (Figure 5).
 - Semi-natural grassland (shaded in green). Variable in its ecological integrity and structure. The likelihood of encountering red-data plant species in this area is moderate to high.
 - Riparian zone associated with the Klip River (shaded in yellow). The vegetation is within a modified state with a large number of alien invasive plant species identified.
 - Disturbed area (shaded in red). Seriously modified areas with the likelihood of encountering red-data plant species considered low. An area designated as a CBA in the Gauteng C-Plan falls into a disturbed area. The vegetation community in this portion of the project area was dominated by the alien invasive tree species *Robinia pseudoacacia* (Black locust).
- Two plant species of conservation concern were recorded on the site during the November 2016 survey.
 - *Hypoxis hemerocallidea* (Star-flower), listed as declining on the Red List of South African Plants (SANBI, 2016). It is found abundantly within the semi-natural grasslands and riparian zones of the study site. The plant was recorded growing in small clumps ranging in number from 1 to 50 individuals (Figure 6).
 - *Crinum bulbispermum* (Vaal River Lily) is a plant species of conservation concern that was not on the list of expected species, but was recorded in semi-natural grasslands and the riparian zones throughout in the project area (Figure 7).

³ Government Notice No. 1002 published in government Gazette No. 34809 on the 09th December 2011 “National Environmental Management: Biodiversity Act (10/2004): National list of ecosystems that are threatened and in need of protection”.

Figure 2: The location of the project area in relation to the Gauteng Conservation Plan's CBA and ESA areas (source: The Biodiversity Company, 2017).

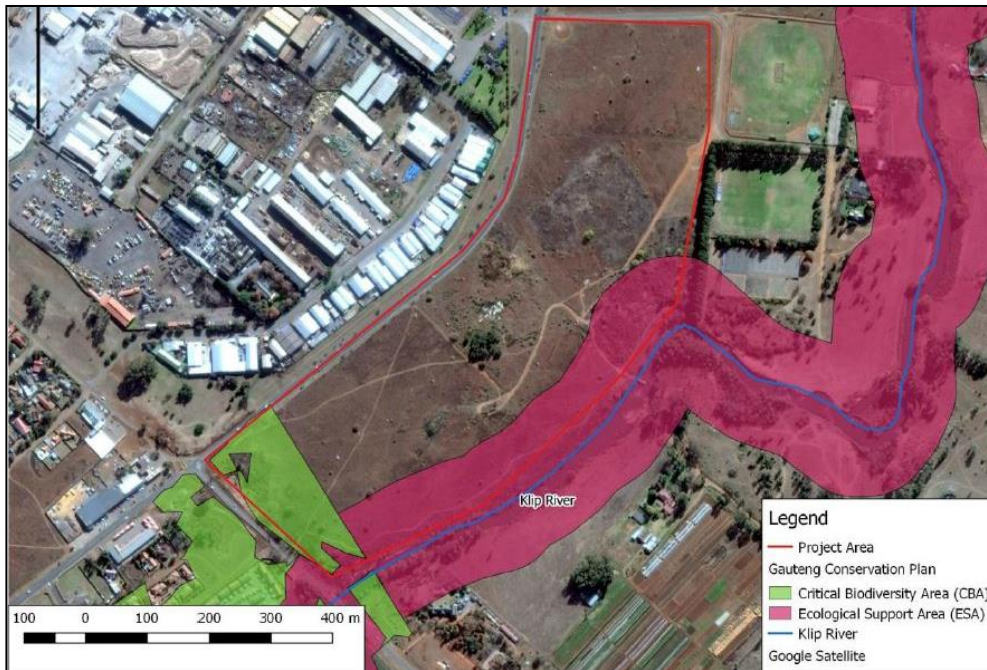
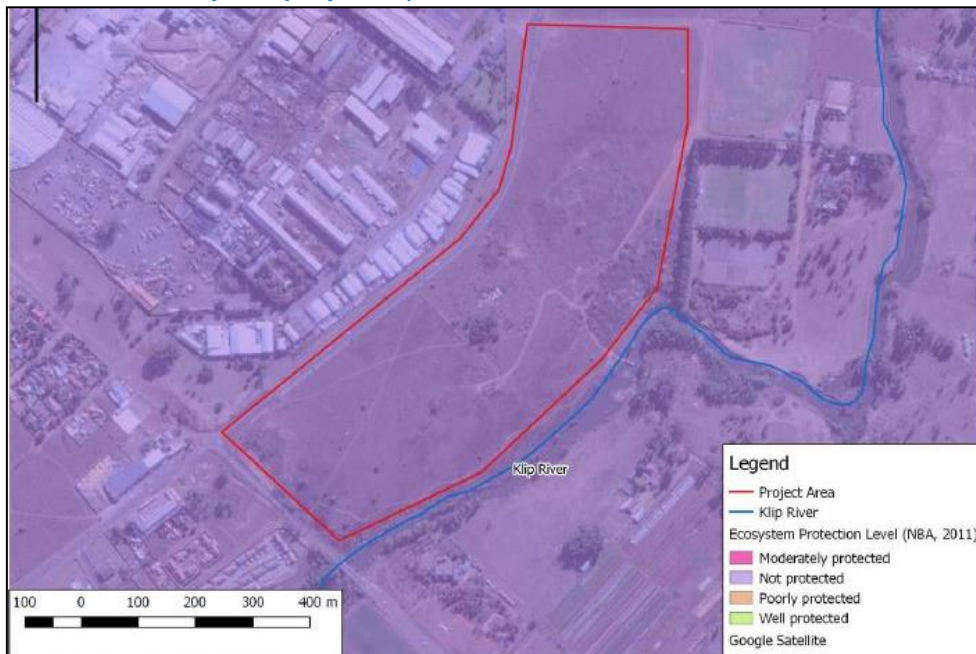


Figure 3: Project area superimposed on terrestrial ecosystem protection level (NBA, 2011; source: The Biodiversity Company, 2017).



⁴ Mucina, L. & Rutherford, M.C. (eds). Reprint 2011. The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.

Figure 4: Project area superimposed on terrestrial ecosystem threat status (NBA, 2011; source: The Biodiversity Company, 2017).



Figure 5: Vegetation communities identified within the project area during the November 2016 survey (source: The Biodiversity Company, 2017).



Figure 6: Location and proportional distribution of *H. hemerocallidea* in the project area (source: The Biodiversity Company, 2017).

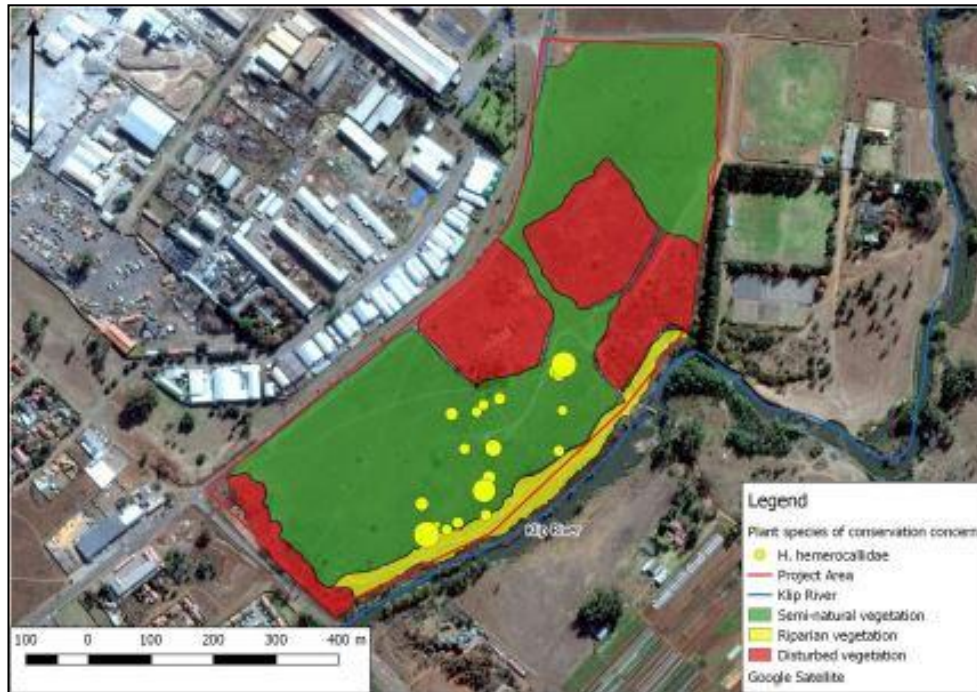
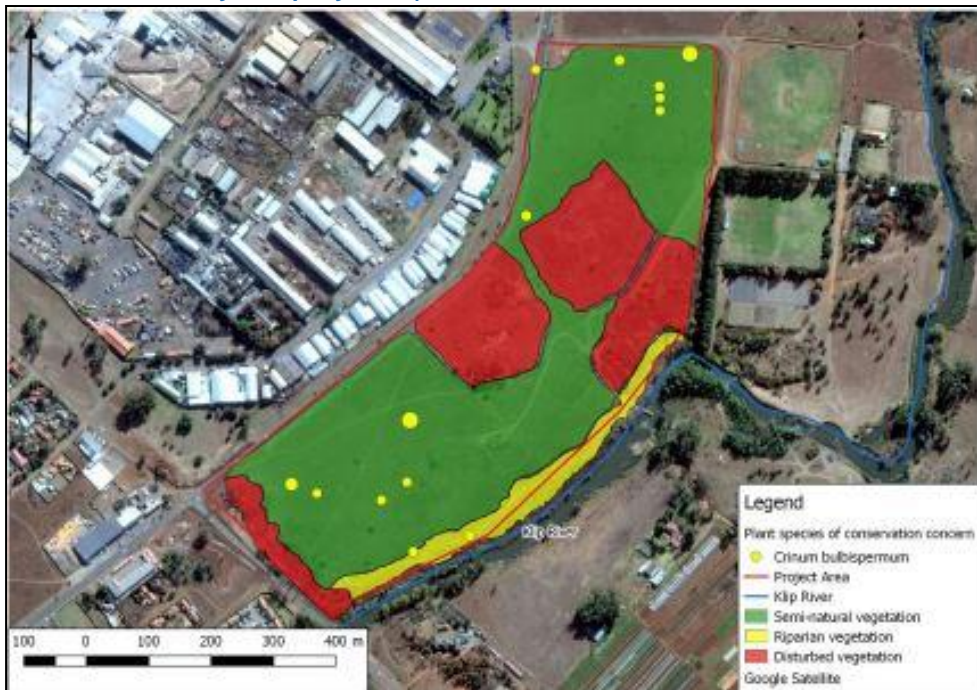


Figure 7: Location and proportional distribution of *Crinum bulbispermum* in the project area (source: The Biodiversity Company, 2017).



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.

YES	NO X
-----	---------

If YES, specify and explain:

Are there any special or sensitive habitats or other natural features present on the site?

YES	NO
X	

If YES, specify and explain:

a. Vegetation Sensitivity

A site sensitivity map was included in the Biodiversity Assessment, attached under Appendix G (Figure 8). The site sensitivity is determined primarily by the vegetation assessment and not by the faunal assessment. The location of the site in the Endangered Soweto Highveld Grassland vegetation community, together with the presence of plant species of conservation concern was the main driver of site sensitivity.

Figure 8: Site Sensitivity based on the outcomes of the desktop and field assessments (source: The Biodiversity Company, 2017).



b. Aquatic & Wetland Assessments

The Biodiversity Company carried out an Aquatic and Wetland Assessment for the site (attached under Appendix G). The findings of the Aquatic Assessment are as follows:

- The property is situated in the quaternary catchment C22E, within the Upper Vaal Water Management Area (WMA 8).
- The focus for the study is two sites on the Klip River which feeds into the Vaal River.
- The activities in the area and local land uses have had impacts to the aquatic system and visible disturbances were moderate.
- *In situ* water quality analyses were conducted at the two Meyerton sites (see section 7.1). Conductivity levels at both sites were above recommended target water quality guidelines. Possible causes of the high conductivity levels include industrial and domestic discharges, urban surface run-off and effluents from agricultural practices. Conductivity levels may have had a limiting factor on aquatic biota at the time of the survey.
- The instream habitat integrity in the Klip River reach is considered to be a Class C, or moderately modified: A loss and change of natural habitat and biota have occurred but the basic ecosystem functions are still predominantly unchanged.
- The riparian habitat integrity is considered to be a Class D, or largely modified: A large loss of natural habitat, biota and basic ecosystem functions has occurred.
- Biotic integrity at both sampling sites was categorised as seriously modified (PES Class E/F).
- The fish species present range from tolerant (*Tilapia sparrmanii*) to moderately intolerant (*Labeo capensis*) of flow and physico-chemical modifications. The presence of the two moderately intolerant fish species, *Labeo capensis* and *Labeobarbus aeneus* in the Klip River show the importance of the river to resident fish populations despite the level of water quality impairment found at site.

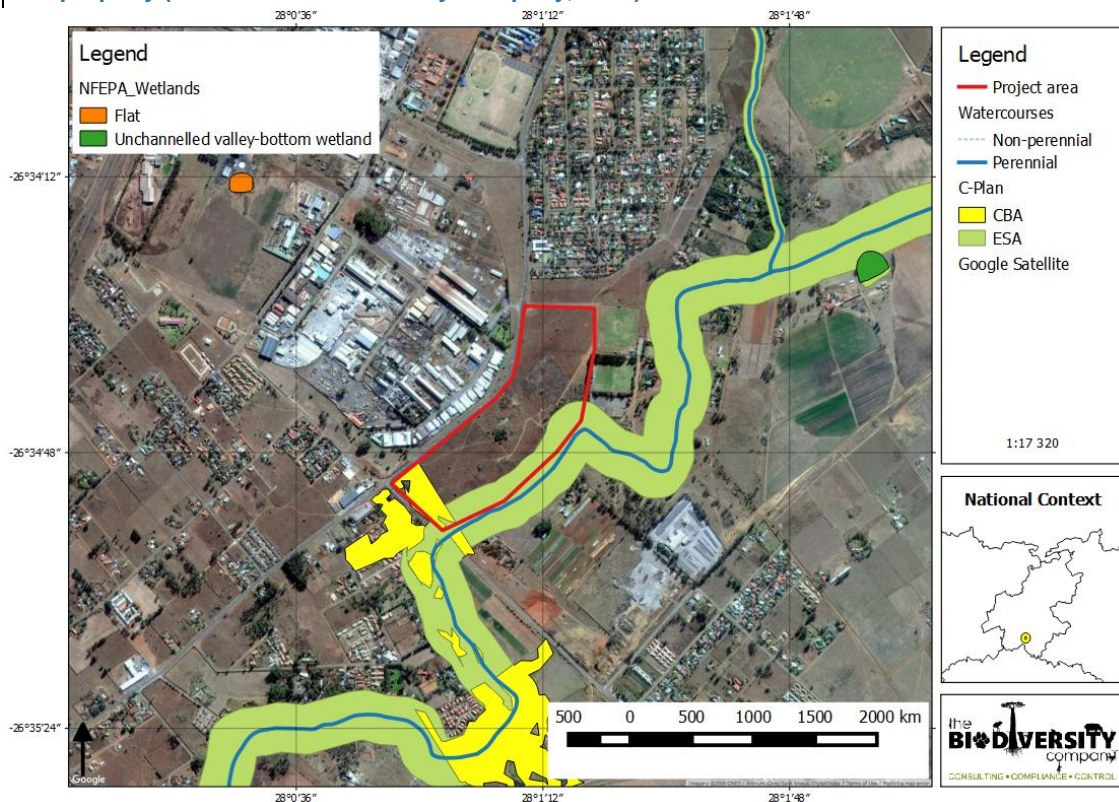
- The results from the fish assessment indicate the fish community structure at each site is in largely modified condition.
- The Present Ecological State at the upstream site was considered to be “seriously modified (PES Score of E) and the downstream site as “largely modified” (PES Score of D).

Potential impacts on the river ecosystem associated with the proposed development are listed in section 8.1 of the Aquatic Assessment with mitigation measures provided in section 8.2. These impacts and mitigation measures have been included in the Impact Assessment under Section E of the BAR and included in the Draft EMPr (Appendix H).

The findings of the Wetland Assessment are as follows:

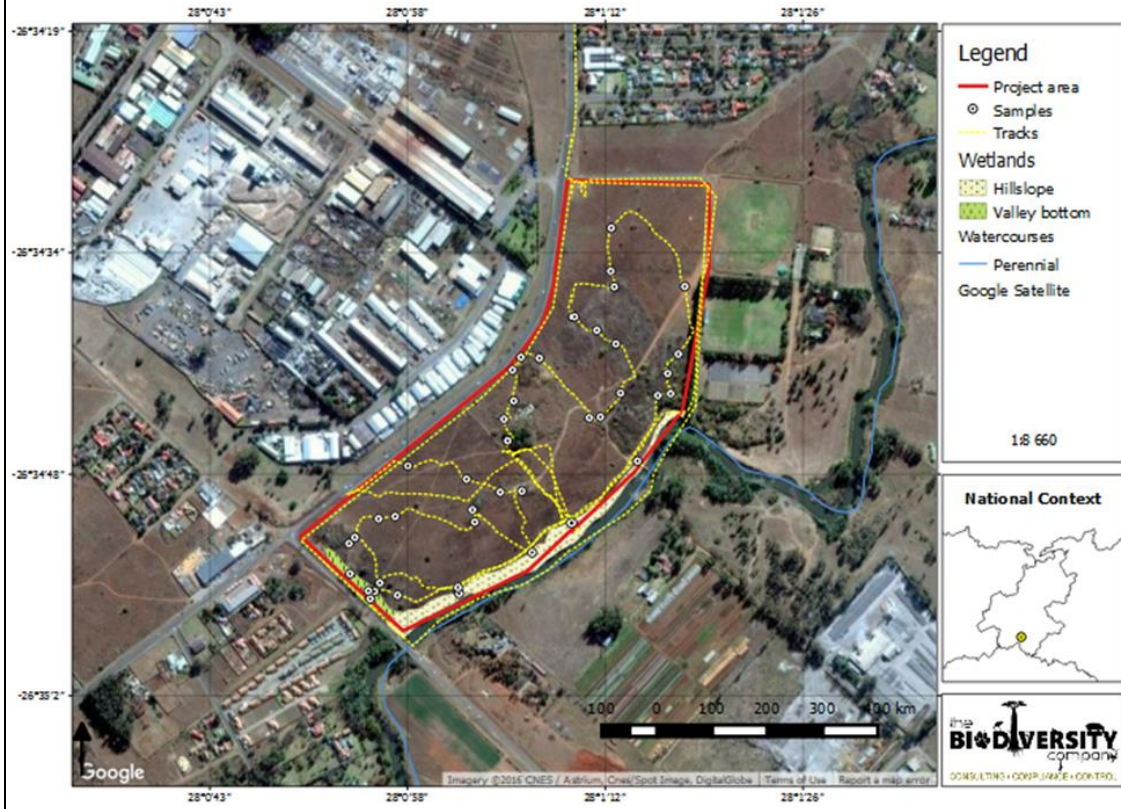
- The desktop delineation identified the location of two Freshwater Ecosystem Priority Areas (FEPA) type wetlands within 500m of the project area (Figure 9).
- The Gauteng C-Plan indicates that the project area is primarily classified as a Critical Biodiversity Area (CBA), with smaller portions of Ecological Support Areas (ESA) delineated by GDARD (see Figure 9 below).

Figure 9: The location of the desktop delineated FEPA wetlands, CBA and ESA's associated with the property (source: The Biodiversity Company, 2016).



- The desktop findings were ground-truthed and the DWAF (2005) wetland guidelines implemented. All wetland and watercourse/ riparian features identified within the study area were classified as “Inland Systems”.
- Two Hydrogeomorphic (HGM) Units were delineated by the wetland specialist (hillslope and unchannelled valley-bottom wetlands). Please see Figure 10 below showing the location of these wetlands.

Figure 10: Shaded areas show the delineated wetland areas associated with the project area (source: The Biodiversity Company, 2016).



- Existing impacts on the wetland system were identified and include historical developments, numerous access routes have been constructed across the project area creating preferential flow paths and the inadequate management of stormwater has caused these routes to erode. Selected areas have been excavated, for what appears to fulfil the requirements of a landfill area. This has altered the topography of the area, resulting in changes to the hydrological regime for the catchment. Extensive dumping has taken place across the project area, this has resulted in likely sources of contamination.
- The overall WET-Health scores for the wetland system are tabulated below.

Table 1: The overall WET-Health scores for the wetland systems associated with the property (source: The Biodiversity Company, 2016).

HGM unit	Overall PES	Description
Valley bottom wetland	C	Moderately modified. A moderate change in ecosystem processes and loss of natural habitats has taken place but the natural habitat remains predominantly intact.
Hillslope seepage wetland		

As per the GDARD requirements for within urban areas, a 30m buffer zone has been prescribed by the specialists to server as a “barrier” between the proposed development and the wetland systems. Apart from the culvert crossing the valley-bottom wetland to gain access to the commercial aspect of the development, the 30m development buffer has been adhered to in the preferred layout.

Potential impacts on the wetlands associated with the proposed development are listed in section 7 of the Wetland Assessment with mitigation measures provided in section 7.1. These impacts and mitigation measures have been included in the Impact Assessment under Section E of the BAR and included in the Draft EMPr (Appendix H).

Was a specialist consulted to assist with completing this section

YES	NO
X	

If yes complete specialist details

Name of the specialist:

The Biodiversity Company (PTY) Ltd

Qualification(s) of the specialist: SACNASP Registered, Pr Sci Nat (400213/11), Certificate of Competence: Mondi Wetland Assessments, Certificate of Competence: Wetland WET-Management, SASS 5 Accredited, EcoStatus Application for rivers and streams.

Postal address: 420 Vale Ave, Ferndale

Postal code: 2194

Telephone: / Cell: 081 319 1225

E-mail: peter@thebiodiversitycompany.com Fax:

Are any further specialist studies recommended by the specialist? YES NO
X

If YES, specify: N/A

If YES, is such a report(s) attached? YES NO

If YES list the specialist reports attached below
N/A

Signature of specialist: See page 2 of the report for signature Date: January 2017

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 ^N	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):	35. Petrol Filling Station			

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH						
	(15)	(15)	(9)	(8)	(1)	
	(15)	(15)	(1) (9)	(20)	(1) (2)	
WEST	(15)	(15)		(2) (1)	(2) (1)	EAST
	(35) (9)	(9)	(7) (2)	(2) (1) (8) (7)	(7) (1)	
	(1)	(9)	(2) (9)	(2) (1) (7)	(1) (7)	
SOUTH						

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

YES	NO
X	

If yes indicate the type of reports below

- Baseline Aquatic Assessment (The Biodiversity Company, October 2016),
- Wetland Assessment (The Biodiversity Company, October 2016), and
- Biodiversity Assessment (The Biodiversity Company, January 2017).

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.

A Market Research Report was prepared by Urban Studios to describe the socio-economic characteristics of the Meyerton area as well as determining the market potential for the proposed development. The report is attached under Appendix G. The information below has been extracted from the report:

- There are approximately 14 000 households within the primary trade area of the proposed Meyerton Shopping Centre.
- The age profile represents a young to middle age group with the majority of people in the 20 to 54 year age category (87%).
- 44% of the population are white and 55% are black.
- The majority of the population speak an African language, followed by 44% Afrikaans speaking.
- 50% of the adult population are employed and 18% are unemployed.
- 32% of the working population are occupied in white collar occupations and blue collar workers represent almost 17% of the market.
- The Manufacturing sector represents 20%, followed by private households and retail and wholesale represents (12%).
- 36% of the adult population have an education of matric and/or higher.
- 55% of the dwelling units are houses and 26% are informal units.
- The average monthly income of the study area is between R10 000 and R20 000 per month.
- 40% of the households fall within the LSM⁵ 7-10 category.

The Market Research Report concluded that “there is currently a high percentage of retail expenditure that flow out of the Meyerton economy and the proposed community shopping centre will capture some of the outflow”. The following is recommended:

- A retail development of ±20 000m² is currently warranted and will grow to 21 500m² by 2016-2018;
- Meyerton can only sustain one large shopping centre and the proposed site will be ideal for such a one-stop retail facility;
- The correct tenant mix need to be provided in order to create critical mass;
- The Midvaal area will continue to grow in future and is mainly driven by a sound economic and political platform.

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

⁵ LSM = Living Standard Measurement – a South African classification used countrywide by marketers, property developers and analysts.

The LSM categories are derived from SAARF AMPS: Jan 11-Dec 11.					
LSM 1	R 1 225	LSM 5	R 3 811	LSM 9	R 20 446
LSM 2	R 1 772	LSM 6	R 6 156	LSM 10	R 31 867
LSM 3	R 2 181	LSM 7	R 10 548		
LSM 4	R 2 782	LSM 8	R 14 438		

- (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?

If YES, explain:

YES	NO
	X

N/A

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?

YES	NO
	X
YES	NO
	X

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

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

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

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.

Was the draft report submitted to the local authority for comment?

YES	NO
X	

If yes, has any comments been received from the local authority?

YES	NO
	X

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

N/A

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

Draft report is in circulation. Comments received on the Draft will be included in the Final BAR.

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	NO
X	

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

General comments and queries have been received from Interested and Affected Parties during the notification process. All comments received so far have been included in the Comments and Response table under Appendix E.

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

N/A

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process 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 flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report 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 as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from interested and affected parties

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

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 times complete only when appropriate)

Section D Alternative No. (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	NO
x	
$\pm 15 \text{ m}^3$	

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

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

Since there is no existing infrastructure on the property, there will be no decommissioning / demolition of old infrastructure and the construction phase will only result in the production of general construction waste. Waste will be stored in various skips in a waste management area near the construction camp. Since the development will take place in phases, there is not anticipated to be a significant increase in the volume of construction waste produced.

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

General waste will be disposed of at a registered landfill site by an appointed construction contractor or by a certified waste contractor.

Will the activity produce solid waste during its operational phase?

YES	NO
x	
$\pm 200 \text{ m}^3$	

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

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

General household waste will be generated by the various residential units with the shopping centre producing general solid waste. Rates will be paid by the residents for the Municipality to collect and dispose of the general waste into the municipal waste stream. Should the municipal waste stream not be utilized for the shopping centre component, the individual tenants are to organize for a certified waste contractor to collect and safely dispose of the waste.

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?

YES	NO
	x

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

N/A

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:

N/A

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 <input checked="" type="checkbox"/>
m ³	
YES	NO

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

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

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

Yes	NO <input checked="" type="checkbox"/>
m ³	

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

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 <input checked="" type="checkbox"/>
-----	---

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:

N/A

Liquid effluent (domestic sewage)

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

YES	NO <input checked="" type="checkbox"/>
m ³	
YES	NO

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

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

With reference to the Service Agreement attached under Appendix F, the Midvaal Municipality confirmed that there is currently no capacity at the Meyerton WWTW's to accommodate the sewage expected to be generated from the proposed development. The developer is to construct a private package plant to effectively treat and dispose of the treated effluent into the Klip River (condition 3.8 of the Service Agreement). The council will then take-over the sewer reticulation system once the Meyerton WWTW's is upgraded (condition 3.9 of the Service Agreement).

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

YES <input checked="" type="checkbox"/>	NO
--	----

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

Pending the upgrade of the Meyerton WWTW's, a private package plant will be constructed on the site (26°34'49.88"S; 28°01'07.00"E). The Engineering Service Report is attached under Appendix G and describes the proposed sewer disposal for the proposed development. The development will be done in phases with a total of 8 640m³ per month of raw sewage being produced, once the development is complete. Famsystem Technology have designed the package plant with the design specifications provided in Appendix G. The plant will produce effluent in accordance to the General Limits prescribed by DWS, allowing for irrigation of the effluent water in the areas designated to green open space. The Famsystem FMP is the treatment system proposed for the continuous treatment of sewage (Figure 11).

A General Authorisation has already been granted for the package plant by DWS and is attached under Appendix F of the BAR.

Figure 11: Photograph showing the Famsystem FMP, proposed for the Meyerton development (source: Famsystem).



Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES <input checked="" type="checkbox"/>	NO
YES	NO <input checked="" type="checkbox"/>

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 construction there will be emissions released from the construction vehicles and dust from the construction activities. During operation there will be minimal emissions released from the vehicles of people using the facility.

2. WATER USE

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

Municipal <input checked="" type="checkbox"/>	Directly from water board	groundwater	river, stream, dam or lake	other	the activity will not use water
--	---------------------------	-------------	----------------------------	-------	---------------------------------

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

N/A 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?

YES <input checked="" type="checkbox"/>	NO
--	----

If yes, list the permits required

A General Authorization (GA) has already been granted for the private package plant which will be used as a temporary sewage disposal alternative at the site. The GA is attached under Appendix F. Since the development will be occurring within 500m of a wetland and the access road crosses the wetland, a new Water Use Authorisation is required for:
- Section 21 (c) "impeding/diverting the flow of a watercourse"
- Section 21 (i) "altering the characteristics of a watercourse"

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

YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO

If yes, have you received approval(s)? (attached in appropriate appendix)
(The Water Use Authorization needs to be amended to include section 21(c) & (i) water uses)

3. POWER SUPPLY

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

The Midvaal Municipality will be providing the power source for the development (see condition 4 of the Service Agreement attached under Appendix F).

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, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts as well as the impacts of not implementing the activity (Section 24(4)(b)(i)).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

Comments received to date we received at the notification stage of the project. Issues raised include:

- (a) The market feasibility of the proposed development (Frade, June 2016);
- (b) Disposal of the treated effluent into the Klip River (Frade & Sabath, June 2016); and
- (c) Security for nearby residents during the construction phase (Brunton, July 2016).

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)

(A full response must be provided in the Comments and Response Report that must be attached to this report):

The full comments and response table is included under Appendix E. The response from the EAP is as follows:

- (a) A Market Assessment Report was compiled by Urban Design and summarized in section B9 of the BAR. The Report concluded that there was sufficient demand in the Meyerton / Midvaal area for the proposed shopping mall.
- (b) The impact of the private package plant discharging treated effluent into the Klip River has been addressed by the aquatic specialist and included in the impacts table below.
- (c) Security during construction has been included as a temporary impact in the table below.

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

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

Impacts have been assessed qualitatively and quantitatively, looking at the duration / frequency of the activity and likely impacts associated with that activity during both construction and operation. If the activity happens frequently, the risk of the associated impact occurring is much higher than if the activity happens less frequently. The geographical extent of the impact is assessed i.e. will the impact be restricted to the point of occurrence or will it have a local or regional effect. Impacts are also reviewed looking at severity levels and consequences should the impact occur i.e. will the severity be low, medium or high and then probability of the impact occurring is taken into account.

Whether or not the impact can be mitigated and the extent to which it can be avoided, managed, mitigated or reversed is assessed i.e. the probability of occurrence after mitigation has been applied. This also takes into account likelihood of human error based on construction and operational auditing experience i.e. even though spills can be completely mitigated against and prevented, there is always a small chance that spills will still occur (residual risk). Based on all of these factors, the impact is then rated to determine its significance. For example, an impact can have a regional affect with severe environmental implications, however the probability of it occurring is very low and the implementation of the proposed mitigation measures means that the ultimate rating is medium or low.

Please see below a description of the scoring. The full impact scoring tables detailing how the significance rating was calculated can be found in Appendix I.

Scoring of Impacts	
Duration / Frequency of activity likely to cause impact	0 = No impact 1 = short term / once off 2 = medium term / during operation 3 = long term / permanent
Geographical Extent	0 = No impact 1 = point of impact / restricted to site 2 = local / surrounding area 3 = regional
Severity (level of damage caused) if impact were to occur	0 = No impact 1 = minor 3 = medium 5 = major
Probability of impact without mitigation	1 - 5 = low. 6 - 10 = medium. 11 - 14 = high.
Significance before application of Mitigation Measures	A score of between 1 and 5 is rated as low. A score of between 6 and 10 is rated as medium. A score of between 11 and 14 is rated as high.
Will activity cause irreplaceable loss of resources?	10 = Yes 0 = No
Mitigation measures	0 = No impact - 5 = can be fully mitigated - 3 = can be partially mitigated - 1 = unable to be mitigated
Probability of impact after mitigation	0 = No impact 1 = Low 2 = Medium 3 = High
Significance after application of Mitigation Measures	A score of between 1 and 5 is rated as low. A score of between 6 and 10 is rated as medium. A score of between 11 and 14 is rated as high.

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 (Preferred Alternative)

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
General construction impacts				
1. Generation of emissions from construction vehicles.	4 (low)	All construction vehicles must be fitted with the appropriate silencers and exhausts. Emissions generated from these vehicles will be negligible and are not expected to significantly affect surrounding residents / businesses.	0 (low)	low
2. Dusty conditions generated by construction vehicles travelling over exposed soil.	5 (low)	The development will take place in three phases, which will reduce the amount of exposed soil on the property at any one time. A water cart must however be available to dampen dusty surfaces and suppress dust. Water is to be obtained from a municipal source however if water is abstracted from a water resource, a section 21a Water Use Authorisation is required from DWS. Dust levels should be strictly monitored and a shade cloth installed around the perimeter of the construction area, to reduce the	2 (low)	low

		<p>amount of dust being blown outside the construction footprint. Stockpiles with the potential to generate dust during high wind conditions are to be covered.</p> <p>A complaints register is to be kept on site in the environmental file and any complaints received are to be rectified accordingly and timeously.</p>		
3. Temporary increase in waste and litter in the area due to the construction process.	4 (low)	Littering will not be permitted on site with waste being managed through the implementation of the EMPr attached under Appendix H. An independent Environmental Control Officer (ECO) will monitor the site on a monthly basis.	0 (low)	low
4. Contamination of the surrounding environment due to inappropriate storage and usage of hazardous materials and substances (cement, fuel etc.)	6 (med)	Although there is not anticipated to be a significant volume of hazardous waste produced on the site during construction, materials such as oil, paint and diesel are still considered hazardous and are to be stored within a secure area in the construction camp. The storage area will be a hard surfaced, bunded and covered to prevent rain ingress. Cement mixing must be done on a hard surface that is protected from stormwater runoff. Cement should only be mixed in areas where concrete will be poured in the future and not on virgin soil (i.e. designated open space areas).	2 (low)	low
5. Improper disposal of construction waste i.e. illegal burying or dumping of rubble/waste around the site preventing effective rehabilitation.	5 (low)	Contractors will be required to dispose of construction waste and rubble at an appropriate landfill site. Steel material can be taken to a scrap yard for recycling. Delivery notes and safe disposal certificates to prove appropriate disposal will be required during the construction audits conducted by an independent ECO. No waste is to be dumped or buried on / adjacent to the property. All previously illegally dumped waste across the property is to be removed and disposed of at a registered landfill.	1 (low)	low
6. Insufficient number of toilet facilities resulting in unsanitary conditions on site.	4 (low)	Appropriate and sufficient toilet facilities will be provided by the contractor and will be controlled through the implementation of the EMPr.	0 (low)	low
7. Inappropriate disposal of toilet waste resulting in the contamination of the environment	5 (low)	Toilet facilities must be provided by a registered company and all sewage must be disposed of at an appropriate facility. Safe disposal certificates must be available on request. Any spills must be immediately contained and the spilled material disposed of appropriately. Toilets are not to be located near the demarcated	1 (low)	low

		environmentally sensitive areas (wetland areas and within the 1:100 year floodline of the Klip River).		
8. Generation of noise.	4 (low)	All construction vehicles will be fitted with standard silencers. The noise generated will be a temporary impact during construction. Work is to be carried out during normal working hours unless prior permission is obtained and the adjacent residents notified.	2 (low)	low
9. Speeding construction vehicles creating unsafe working conditions endangering pedestrians utilizing the surrounding road network.	4 (low)	Speed limits must be obeyed and enforced around the surrounding road networks. A points-men may be required near the new access points into the property. A complaints register is to be maintained on site in the environmental file. Complaints are to be addressed timeously and effectively and monitored by the ECO.	0 (low)	low
10. Construction activities negatively impacting on adjacent residential properties located to the north and east of the property (security, waste, noise etc.).	6 (med)	Security has been raised as a concern by an adjacent resident. Although this impact cannot be fully mitigated, the construction area is to be fenced to prevent workers from wandering off site. No properties are located directly adjacent to the property, which will therefore reduce the risk. Construction activities are to be carried out during normal working hours unless prior permission is obtained and the adjacent residents notified. A complaints register is to be maintained on site in the environmental file. Large construction vehicles should not utilize the access roads during peak morning and afternoon times.	3 (low)	low
11. Unsustainable sourcing of raw materials such as gravel, sand, water etc. which could result in the promotion of illegal mining operations which can cause significant damage to the environment.	5 (low)	The implementation of the EMPr will manage these issues. Contractors must provide proof of sustainable sourcing of materials i.e. permits for quarries and sand winning operations from which stone and sand have been obtained.	1 (low)	low
Impact on watercourses				
12. Construction activities encroaching into the sensitive areas associated with the Klip River (hillslope wetland and riparian areas). Construction activities could result in physical damage of the watercourse.	7 (med)	The wetland specialist prescribed a 30m buffer around the hillslope wetland to protect the ecological and hydrological integrity of the wetland. The preferred layout is located well outside of this recommended buffer (>60m). As requested by the Midvaal Municipality during the previous EIA application, the 1:100 year floodline associated with the Klip River has been calculated and development excluded from this area. The floodline is included in the layouts in	3 (low)	low

		<p>Appendix C. The dynamics associated with the flooding of the river will therefore be protected and there will be no clearing of the stabilising riparian vegetation along the banks of the river.</p> <p>The proposal includes the upgrading of Jan Neethling Street, within the property boundaries. There is an existing dirt track which is located within the 1:100 year floodline. There will be no construction within the watercourse or clearing of riparian vegetation. The dirt road will be formalised during Phase 1 of the development.</p> <p>Construction workers are to undergo training upon arrival on site informing them where this “no-go” area is located and the restrictions posed. Proof of training is to be retained in the environmental file.</p>		
13. Loss of the Klip River being available as a recreational area by the local community.	5 (low)	<p>During the public participation phase, members of the community stated that the Klip River was used for fishing / picnics etc. and is currently open to the public. Sections of the Klip River will remain open to the public during construction and operation of the development. Only the residential and commercial areas will be fenced off from the public for security reasons (i.e. not the green open space areas). There is an existing public road (Jan Neethling Street) allowing public access to the river.</p>	1 (low)	low
14. The loss of unchannelled valley-bottom wetland adjacent to Boundary Road during the construction of the culvert to access the southern portion of the property.	9 (med)	<p>Erf 1134 (7 568m²), adjacent to Boundary Road has been excluded completely from development in the preferred layout, reducing the loss of wetland from 2000m² to 970m². The construction of the access road across the wetland, however, cannot be avoided.</p> <p>The wetland specialist has rated this impact as “low” provided the specific access route mitigation measures are adhered to (listed in section 7.1 of the Wetland Assessment attached under Appendix G). These measures have been included under section 2.4 of the EMPr (Appendix H). Under section 8 of the Wetland Assessment, the specialist states that although the system is in a moderately modified state, the entire valley-bottom wetland should be rehabilitated during construction.</p> <ul style="list-style-type: none"> • The existing informal crossing must be decommissioned; • The new access must restore the connectivity of the system; 	8 (med)	low

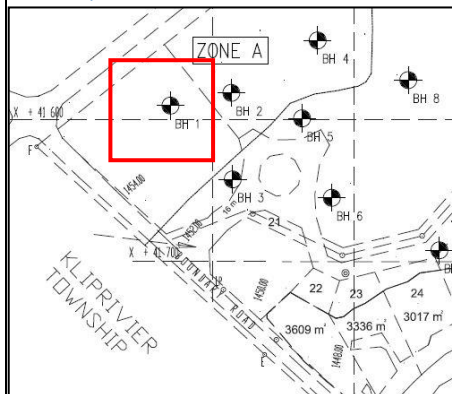
		<ul style="list-style-type: none"> • Removal of alien vegetation from the remainder of the system; and • Incorporate stormwater discharge from Boundary Road into the rehabilitation of the system. <p>Using the mitigation hierarchy, this impact has been minimized in the preferred layout and the area impacted restored and rehabilitated to improve connectivity and flow through this valley-bottom wetland. The hydrology of the system is currently a Class C / “moderately modified” (section 6.2 of the Wetland Assessment) and can therefore be improved with the recommended rehabilitation measures.</p>		
15. Erosion caused by extended periods of exposed soil prior to rehabilitation being carried out. This could result in excess sediment washing into the watercourses reducing the quality during construction in particular during the construction of the culvert across the wetland.	5 (low)	Stormwater control measures are to be implemented early on in the construction process once the initial earthworks are complete. These measures are included under section 2.5 of the attached EMPr. The 30m wetland buffer recommended by the specialist will serve as a natural barrier between the construction activities and the watercourses (section 6.3 of the Wetland Assessment). Temporary erosion control is required around the proposed new access across the valley-bottom wetland in the south of the property. This includes the erection of a silt fence around the valley-bottom wetland down the southern portion of the property. The fence is to be strategically placed near the construction of the access road to catch excess sediment from washing into the wetland during high rainfall events. Exposed areas, particularly watercourse banks, are to be rehabilitated and re-vegetated with indigenous vegetation as soon as possible during construction.	1 (low)	low
Impacts on indigenous vegetation				
16. Clearance of 11.6 hectares of semi-natural vegetation and 2.8 hectares of disturbed vegetation within the Soweto Highveld Grasslands.	10 (med)	The preferred layout will result in the clearance of 11.6 hectares of “semi-natural” vegetation from within the Soweto Highveld Grassland ecosystem (section 6.2.1 of the Biodiversity Assessment). The remaining 2.8 hectares cleared has been classified as “disturbed” by the specialist will also be cleared in the preferred layout. The remaining 20 hectares of the property will not be developed and will be protected as a conservation area for Soweto Highveld Grassland. The clearance of vegetation is unavoidable however the impact has	9 (med)	low

		been reduced in the preferred layout.		
17. Damage or removal of rare and/or endangered fauna from the site.	10 (med)	<p>Two plant species of conservation concern were recorded on the site during the November 2016 survey (see Figures 6 & 7 above). These are <i>H. hemerocallidea</i> and <i>C. bulbispermum</i>. Although the footprint of the development has been reduced in the preferred layout, these two plant species still occur in the preferred development footprint.</p> <p>Approximately 85 <i>H. hemerocallidea</i> specimens and 53 <i>C. bulbispermum</i> specimens will need to be relocated by a suitably qualified vegetation specialist into the onsite conservation area.</p> <p>Section 7.3.1 of the Biodiversity Assessment lists mitigation measures associated with the vegetation communities. These have been included in section 2.4 of the attached EMPr and includes the following:</p> <ul style="list-style-type: none"> • Prior to construction commencing, all plant species of conservation concern should be clearly demarcated. • Protected plant species should be carefully avoided during construction activities. • If impacts on plant species of conservation concern cannot be avoided then the client needs to apply for the necessary exemption or authorisation for the relocation of the plants to an alternative location (red data rescue). <p>This impact cannot be fully avoided but has been minimised in the preferred layout. Plants can be relocated to the green “open space” areas within the property, which represent a similar habitat to where the plant species are found currently.</p>	9 (med)	low
18. Clearance of 7 580m ² of vegetation from within a Critical Biodiversity Area (CBA) identified in the Gauteng Conservation Plan.	11 (high)	<p>The exclusion of erf 1134 from development in the preferred layout has reduced the clearance of vegetation within a CBA from 13 195m² to approximately 7 580m². The relevant CBA runs along the southern boundary of the property (see Figure 2) and is associated with the valley-bottom wetland. The CBA's are mapped at a desktop level based on the biodiversity characteristics of the area, spatial configuration and the requirements for meeting biodiversity pattern and ecological process targets (section 4.1 of the Biodiversity Assessment).</p>	10 (med)	low

		After the site inspection, carried out by the vegetation specialist in November 2016, this portion of the property was mapped as “disturbed” habitat (see Figures 2 and 5). The vegetation in this area has been seriously modified and the likelihood of encountering red-data plant species was considered low. The proposed new access road will result in the decommissioning of the existing informal crossing and aims to increase connectivity of the wetland system (section 8 of the Wetland Assessment). The biodiversity characteristics and ecological processes associated with the valley-bottom wetland system will therefore be improved, provided that the recommended mitigation measures are used during construction (section 2.4 of the EMPr).		
19. Encroachment of alien vegetation into areas disturbed during construction.	6 (med)	Disturbed areas are more susceptible to alien invasive species encroachment. The site is therefore to be kept clear of alien species, which are to be monitored on a continuous basis. Soils and other material used during construction must be free of alien seedbanks. Measures to reduce alien infestation have been included in section 2.4 of the attached EMPr. Category 1, 2 and 3 invader plants, in terms of CARA, are to be removed from the entire property. Alien vegetation is to be concentrated on the areas mapped “disturbed” in Figure 5 above. These areas are dominated by the invasive tree species <i>Robinia pseudoacacia</i> (Black Locust).	2 (low)	low
Operational impacts				
20. The increase in hardened surfaces has the potential to increase the amount of stormwater runoff into the adjacent watercourses resulting in downstream flooding.	8 (med)	As stated above, the 30m buffer associated with the wetlands will act as a natural “barrier” reducing the velocity of stormwater and capturing any waste or sediment contained in the runoff. Stormwater is addressed on pages 4 & 8 of the Engineering Services Report attached under Appendix G of the BAR. There will be underground piping of stormwater with erosion protection at the outlets. The stormwater pipes associated with the site are to be checked on a regular basis during operation to ensure that they do not become blocked by sediment or waste.	4 (low)	low
21. Polluted stormwater discharging into the watercourses impacting	8 (med)	Since the site will be developed for residential and commercial purposes, there should not be a large amount of	5 (low)	low

the water quality.		polluted runoff entering the watercourses. Waste water will be directed into the onsite sewage treatment works prior to its discharge into the Klip River (temporary until connected to municipal system).		
22. Package Plant discharging poor quality effluent directly into the Klip River contributing to over-eutrophication and reducing quality.	9 (med)	<p>According to the sampling results in section 7.0 of the Aquatic Assessment, the current state of the Klip River associated with the development, is considered “seriously modified”. The condition of the aquatic invertebrates was considered “largely to seriously modified” due to poor water quality and habitat integrity modifications. The fish community structure indicates “slightly modified” conditions within the system. An Aquatic Monitoring Programme has been recommended by the specialist to ensure that the current status of the Klip River does not degrade further with the input of treated effluent.</p> <p>As stated in sections 3.7 – 3.9 of the Service Level Agreement attached under Appendix F of the BAR, the package plant is a temporary until such a time that the Meyerton Wastewater Treatment Works is upgraded (in progress). The Midvaal Municipality have confirmed that the development can then tie in with the bulk sewer pipeline, traversing the property, and the package plant will be decommissioned.</p> <p>Information on the proposed package plant is attached under Appendix G of the BAR. A Famsystem FMP design is proposed, which has proven itself in operation around South Africa and even in export applications (section 3 of the Meyerton Development Sewage Treatment Works Document attached under Appendix G). The advantages of this design include:</p> <ul style="list-style-type: none"> • Continuous treatment ensures a more steady effluent, ensuring that quality standard is more controlled; • The plant is suitable to handle fluctuating flows both daily and longer term variations due to changes in the occupation of the houses such as weekends and holiday periods. • The plant does not have any bottom outlets so that it is not possible that by accidental breakage major leaks could occur. 	6 (med)	low

		The treated effluent will comply with the General Limit Values for discharge of domestic wastewater as set out in the relevant General Authorisation published in terms of section 39 of the National Water Act, 36 of 20086.		
23. Pressure on the municipal water supply.	7 (med)	This impact cannot be avoided however, the Midvaal Municipality have confirmed bulk water supply is available (section 2 of the Service Level Agreement attached under Appendix F of the BAR). This confirmation of capacity is therefore proof that there is sufficient water in the area to accommodate the proposed development.	5 (low)	low
24. Increase in the amount of vehicles access the area impacting morning and afternoon peak traffic hours.	7 (med)	A Traffic Impact Assessment has been carried out to determine any necessary road upgrades to accommodate the increase in traffic (attached under Appendix G). Provided that the road upgrades listed in section 8 of the TIA, and summarised in section 5.0 of the BAR, are adhered to, the traffic engineer support the development.	3 (low)	low
25. Long-term stability of the proposed structures on the property, which has the potential to be underlain by dolomite ⁷ .	9 (med)	A Geotechnical Investigation Report including a dolomite stability assessment was carried out to ensure that the structures constructed will not undermine the stability of any dolomite underlying the site (attached under Appendix G of the BAR). Table 1 of the Geotechnical Investigation summarises the findings from the borehole drillings. There is localised dolomite found at a depth of between 8 – 15m in the south-west corner of the property (see location of BH1 in the figure below).	5 (low)	low



⁶ Government Gazette No. 36820 No. 665 dated 06 September 2013. General Authorisation for the “Discharge of Waste or Water Containing Waste into a Water Resource Through a Pipe, Canal, Sewer or other Conduit; and Disposing in any Manner of Water which Contains Waste from, or which has Been Heated in any Industrial or Power Generation Process”.

⁷ Typically comprises clay, chert and wad. The latter is a manganese rich soil which is highly water sensitive and erodible and is associated with many of the problems associated with the stability of dolomitic terrain (section 3 of the Geotechnical Investigation Report attached under Appendix G).

		<p>This area has been excluded from development in the preferred layout alternative and therefore no specific maintenance and monitoring plan is required. With reference to the borehole logs in Appendix 1 of the Geotechnical Investigation, the dolomite layer reduces in size significantly in BH2 with no dolomite found in BH3 and BH4, where construction of the commercial aspect will take place.</p> <p>Since there is no development in the south-west corner, no further dolomite stability assessment or footprint investigations are required and the impact has been rated as "low".</p>		
26. Employment opportunities, upgrading of road infrastructure, new residential houses to satisfy increasing housing demand in the Meyerton area.	0	These are positive impacts associated with the development.	0	0

Alternative Layout

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
General construction impacts				
Construction related impacts 1 – 11 remain the same for both the preferred and alternate layout.	-	Mitigation measures for impacts 1 – 11 remain the same for both preferred and alternative layouts.	-	-
Impact on watercourses				
12. Construction activities encroaching into the sensitive areas associated with the Klip River (hillslope wetland and riparian areas). Construction activities could result in physical damage of the watercourse.	7 (med)	Since all construction activity is located outside the 1:100 year floodline in the alternate layer, the impact significance and mitigation measures remain the same as the preferred alternative.	3 (low)	low
13. Loss of the Klip River being available as a recreational area by the local community.	6 (med)	Similar to the preferred layout, the public will be able to access the Klip River to continue with recreational activities. The green "open space", where the public are permitted, is however reduced from 20 hectares to 15.4 hectares in the alternate layout.	4 (low)	low
14. The loss of unchannelled valley-bottom wetland adjacent to Boundary Road.	11 (high)	There will be a loss of approximately 2000m ² of valley-bottom wetland should the alternative layout be authorised. Any construction on erf 1134 would result in infilling of wetland and construction within the recommended 30m buffer. This erf has therefore been excluded in the preferred layout.	13 (high)	med

15. Erosion caused by extended periods of exposed soil prior to rehabilitation being carried out. This could result in excess sediment washing into the watercourses reducing the quality during construction.	6 (med)	Similar to the preferred layout, stormwater control measures are to be implemented early on in the construction process. Specific attention would however, be required in the south-western corner of the property where construction would take place within and directly adjacent to the valley-bottom wetland. Construction on erf 1134 would have the potential of blocking stormwater drainage from Pierneef Boulevard and surrounding road networks where the stormwater is currently directed into this valley-bottom wetland, which drains into the Klip River. This impact has been rated as more significant in the alternative layout.	5 (low)	low
Impacts on indigenous vegetation				
16. Clearance of 14 hectares of semi-natural vegetation and 5 hectares of disturbed vegetation from within the Soweto Highveld Grassland.	10 (med)	The preferred layout will result in the clearance of 14 hectares of semi-natural vegetation from within the Soweto Highveld Grassland ecosystem. The remaining 5 hectares cleared has been classified as "disturbed" by the specialist will also be cleared in the alternative layout. The remaining 15.5 hectares of the property will not be developed and remain Soweto Highveld Grassland. The clearance of vegetation is unavoidable however the impact has been rated as having higher significance in the alternative layout due to the greater area being cleared.	9 (med)	low
17. Damage or removal of rare and/or endangered fauna from the site.	10 (med)	Approximately 90 <i>H. hemerocallidea</i> specimens and 57 <i>C. bulbispermum</i> specimens will need to be relocated by a suitably qualified vegetation specialist. Specialist recommendations listed in the table above therefore apply to both layout alternatives. There are however slightly more plants that need to be relocated in the alternative layout.	9 (med)	low
18. Clearance of 13 195 m ² of vegetation from within a Critical Biodiversity Area (CBA) identified in the Gauteng Conservation Plan.	12 (high)	Erf 1134 falls entirely within the CBA and would therefore result in the clearance of 7 568m ² of vegetation, which has been avoided in the preferred layout alternative. The footprint of the mall on erf 1135 has also been reduced slightly in the preferred layout. Approval of the alternative layout will therefore result in significantly more vegetation from being cleared within the CBA.	11 (high)	low
19. Encroachment of alien vegetation into areas disturbed during	6 (med)	The same mitigation measures are applicable for the preferred and alternative layouts.	2 (low)	low

construction.				
Operational impacts				
20. The increase in hardened surfaces has the potential to increase the amount of stormwater runoff into the adjacent watercourses resulting in downstream flooding.	8 (med)	The impact will be slightly more significant for the alternative layout as there will be construction of hard surfaces in erf 1134, within the recommended 30m buffer. There will therefore be a reduced natural "barrier" to slow stormwater velocity running off hard surfaces into the valley-bottom wetland and Klip River. Similar stormwater management infrastructure is proposed as well as erosion protection infrastructure.	6 (med)	low
Operational impacts 21 – 24 remain the same for both preferred and alternative layouts.	-	Mitigation measures for impacts 21 – 24 remain the same for both preferred and alternative layouts.	-	-
25. Long-term stability of the proposed structures on the property, which has the potential to be underlain by dolomite.	11 (high)	The Geotechnical Investigation Report found localised dolomite in the south-west corner of the property (i.e. underneath erf 1134). The dolomite was found at a depth of 8 – 15m and although it is bedrock, at a lower risk of collapse, an additional dolomite stability assessment and footprint investigations would need to be carried out, should the alternative layout be approved. Further engineering input is required for construction in this corner of the property and therefore the impact remains "highly significant".	10 (high)	low
Operational impact 26 remains the same for both preferred and alternative layouts.	-	Mitigation measures for impact 26 remains the same for both preferred and alternative layouts.	-	-

No Go

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. There will be no general construction-related impacts.	-	Not applicable.	-	-
2. There are a number of informal dirt roads traversing the site, which the public use to access the Klip River. This has resulted in a number of small informal crossings over the valley-bottom wetland, reducing connectivity.	11 (high)	Formalisation of the dirt roads and associated stormwater control infrastructure is required.	10 (med)	low
3. Illegal dumping of waste on site will continue.	9 (med)	During the site visit, there was a significant amount of illegal dumping noted on the site. The property is unfenced and there are a number of informal tracks into the centre of the site. Illegal dumping has been noted	8 (med)	low

		as a current impact on the aquatic resources in section 6.2 of the Wetland Assessment. The property needs to be fenced and entry and exit onto the site managed to prevent illegal dumping.		
4. Informal settlements are beginning to establish on the vacant land.	8 (med)	The landowner has been notified and the informal settlements removed from the property. It is likely that more undesirables will establish on the property, which may become a safety risk for the existing surrounding residential homes and businesses.	7 (med)	low

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

<p>The following specialist reports were used to fill in the above tables and are attached under Appendix G:</p> <ul style="list-style-type: none"> • Baseline Aquatic Assessment (The Biodiversity Company, October 2016), • Wetland Assessment (The Biodiversity Company, October 2016), • Biodiversity Assessment (The Biodiversity Company, January 2017), • Traffic Impact Assessment & Addendum (Trinamics Engineers; April 2013), • Meyerton Shopping Centre Retail Potential (Urban Studios, April 2013), • Geotechnical Investigation Report (ARQ; December 2007), • Civil Engineering Services Report (Trinamics Civils, April 2013), and • Meyerton Development: Sewage Treatment Works (Farmsystem Technology; November 2013).
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Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

The information in this report is based on findings of the specialist reports listed above. The design drawings and layouts have been provided to the EAP by the project manager. The EAP is therefore satisfied that there are no gaps in knowledge relating to this assessment.

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.

Preferred				
Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
1. Demolition of infrastructure resulting in waste accumulation on site and surrounding sensitive environmental features (vegetation & watercourses).	5 (low)	All infrastructure demolished must be removed and the rubble be disposed of at a licensed landfill site. There is to be no material buried or burnt on the site.	1 (low)	low
2. Exposed soil becoming prone to erosion and sedimentation of adjacent river and wetlands.	6 (med)	The disturbed area is to be ripped and the natural vegetation type (Soweto Highveld Grassland) re-established. Any erosion control infrastructure is to remain in place along the valley-bottom wetland to prevent sedimentation. No indigenous vegetation that was planted during construction of the Meyerton development is to be removed in the decommissioning process.	2 (low)	low
3. Decommissioning of the	6 (med)	Once the Meyerton Development has	2 (low)	low

package plant resulting in soil and groundwater contamination from accidental raw sewage spills.		been connected to the municipal bulk sewer line, the raw sewage remaining in the package plant is to be treated and discharged according to the DWS guidelines. The entire system is to be flushed with the water, which is to be treated as “dirty” / grey water and disposed of accordingly (i.e. not discharged into the nearby water resources). A waste water specialist is to be contracted to carry out the decommissioning to ensure that there is no indirect environmental damage. The area is to be ripped and rehabilitated using indigenous landscaping, increasing the green open space area.		
4. Decommissioning of package plant being a nuisance to surrounding residents (noise, dust, smells etc.).	4 (low)	This is a temporary impact. Residents are to be notified about when the plant will be decommissioned and the duration. Due to the size of the package plant it is unlikely to take more than 1 day to decommission.	0 (low)	low

Alternative Layout

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Decommissioning impacts 1 – 4 listed above are applicable to the preferred and alternative layout.	-	Mitigation measures 1 – 4 are applicable to the preferred and alternative layout.	-	-

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

Not applicable

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

Not applicable

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:

- **General increase of waste to the nearby landfill.**
Waste generated during construction is expected to be negligible. Any wood or steel which can be recycled or used by the surrounding community is to be recycled / distributed amongst them. This is a temporary impact generated during the construction period.
- **Additional nutrient loading into the Klip River by the package plant.**
Sections 3.1 and 8 of the Aquatic Assessment states that local land uses have already impacted on the aquatic system. The current altered state of the water quality is largely due to the anthropogenic influence, which includes mining and inputs from the existing municipal WWTWs. As a result, the instream and riparian habitat and biotic integrity of the Klip River have undergone modification.
The discharge from the package plant was rated as having a “moderate” risk rating by the aquatic specialist (section 8.1 of the Baseline Aquatic Assessment). As stated in sections 3.7 – 3.9 of the Service Level Agreement attached under Appendix F of the BAR, the package plant is a temporary until such a time that the Meyerton Wastewater Treatment Works is upgraded (in progress). The impact is temporary and has been assessed through the Water Use Authorisation application, which was approved by DWS in March 2012 (attached under Appendix F).

The total sewage volumes processed by the plant will be 250 m³ per day.

- Additional shopping mall putting pressure on existing small businesses in the Meyerton area. This cumulative impact was raised as a concern by some of the neighbouring businesses during the public participation phase of the project. The proposed Shopping Mall aims to attract consumers who are seeking a retail experience (i.e. restaurants, clothing lines etc.) and spending time at the Mall. The existing smaller businesses offer a different experience for consumers (i.e. a quick visit to buy something specific, consumers would rather go to the hardware store instead of visiting the shopping mall). The Retail Potential Report, attached under Appendix G, carried out an extensive study to determine the market potential of the proposed development. It was concluded that Meyerton can only sustain one large shopping centre and that the proposed shopping mall is located at an ideal site for this facility (section 11 of the Retail Potential Report). There is a demand to establish a 20 000m² shopping mall at the site (section 10 of the Retail Potential Report).

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

General construction impacts were rated between low and medium prior to any mitigation measures being taken into account. Provided that the EMPr, attached under Appendix H, is adhered to and the site regularly audited by a suitably qualified Environmental Control Officer (ECO), the significance of all the general construction related impacts were rated as “low”. These are short-term impacts that will cease once construction is complete.

On receipt of the Wetland and Aquatic Assessments, erf 1134 was excluded from the development layout to ensure that the recommended 30m buffer is maintained from the unchannelled valley-bottom wetland (section 6.3 of the Wetland Assessment). The impact during the construction phase of the activity on the Klip River and associated wetlands was therefore rated as having “low” significance, after mitigation measures have been applied.

The loss of 970m² of unchannelled valley-bottom wetland due to the construction of the access road off Boundary Road, was rated as having “medium” significance since the impact could not be fully mitigated. Specialist recommendations on the design of the structure will however increase the connectivity of the system (current impact) with the rehabilitation of the remainder of the wetland area improving the currently “moderately modified” state of the wetland. The wetland specialist has rated this impact as “low”, provided the specific access route mitigation measures are adhered to (listed in section 2.4 of the EMPr).

On receipt of the Biodiversity Assessment, erf 1136 was also excluded from the development layout to increase the open space connectivity through the centre of the site. 20% of all residential areas are to remain as indigenous grassland (i.e. not landscaped but all alien vegetation removed). Development of the commercial aspect was also reduced by approximately 1 hectare. The clearance of indigenous vegetation has therefore been reduced in the preferred layout. 14.4 hectares of vegetation will be cleared, which includes clearance of vegetation from a portion of a CBA and therefore this remains a “medium” rated impact, after mitigation. Although the number of plants of conservation concern that require relocation has been reduced in the preferred layout, approximately 138 plant species need to be relocated to other suitable areas on the property (medium significance).

During the operational phase of the Meyerton Mall and Residential Development, impacts have been rated as having “low” significance after mitigation. Although the operation of the private package plant discharging treated effluent into the Klip River is a temporary impact, until the existing municipal WWTW's is upgraded, the impact remains a “medium” rated impact, after mitigation. The treated effluent will comply with the General Limit Values for discharge of domestic wastewater into a water resource and an Aquatic Monitoring Programme will be in place to monitor the current status of the Klip River.

Alternative Layout

Similar to the preferred layout, general construction impacts were rated between low and medium prior to mitigation measures being taken into account. Provided that the EMPr, attached under Appendix H is adhered to and the site regularly audited by a suitably qualified ECO, the significance of all the general construction related impacts were rated as low.

Impacts on the watercourses and indigenous vegetation are the same as the preferred layout however the significance of some of the impacts increases for the alternative layout. There is a greater permanent loss of unchannelled valley-bottom wetland with the development of erf 1134. This impact is therefore rated as “highly significant” after mitigation. The larger development footprint associated with the alternative layout results in the clearance of 19 hectares of indigenous vegetation (medium significance) with 13 195m² being cleared within a CBA (high significance). Approximately 147 plant species need to be identified and relocated to other suitable areas on the property (medium significance).

During operation, the significance of most impacts for both the preferred and alternative layouts remain the same. The increase in stormwater running off the hard surfaces into the watercourses remains a “medium” rated impact after mitigation. This is due to the close proximity of the development to the valley-bottom wetland system, in the southern portion of the property. The long-term stability of the structures on erf 1134 remains highly significant due to the findings of the Geotechnical Investigation (localised dolomite underneath erf 1134). Further dolomite stability assessments and footprint investigations are to be carried out in this section, should the alternative layout be approved.

No-go (compulsory)

The property will remain undeveloped and therefore there will be no construction-related impacts or loss of indigenous grassland. There are a number of existing social impacts which will continue (significant illegal dumping and informal settlement establishment). From an environmental side, there are a number of informal crossings across the valley-bottom wetland from the public accessing the site. The formalisation of one access point, designed to the wetland specialist recommendations, will increase the connectivity of the system.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

Based on the Environmental Impact Statement above, no highly significant impacts are likely to occur after the implementation of mitigation measures and adherence to the attached EMPr. 20 hectares of the property will remain as indigenous grassland, where species of conservation concern will be relocated during the construction phase. Capacity will become available at Meyerton WWTWs, which is currently being upgraded. This will result in the decommissioning of the package plant and the avoidance of the cumulatively impact of treated effluent discharge into the Klip River.

For alternative:

Development of erf 1134, will result in a greater loss of wetland area and further geotechnical assessments to ensure the long-term stability of the structures in this corner of the property (localised dolomite area). An additional 4.5 hectares of vegetation would also be cleared from the site, increasing the significance of the loss of indigenous vegetation. The alternative layout does not take into consideration some of the findings of the specialist reports and therefore has more of an impact on the sensitive features on site than the preferred layout.

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 following lists the overall reasons why the preferred layout alternative should be authorised:

- Reduced footprint (14.4 ha cleared compared to 19 ha);
- Erf 1134 remaining undeveloped reducing the loss of valley-bottom wetland and increasing the buffer between development and the wetland;
- Erf 1134, situated on a localised dolomite area, remaining undeveloped;
- Erf 1136 remaining undeveloped, increasing the open space connectivity of the indigenous grassland;
- Erf 1137 – 1147 & erf 1170 (residential) incorporating 20% of the indigenous grassland, increasing the amount of green open space; and

- Access road across the unchannelled valley-bottom wetland designed according to specialist recommendation, increasing the currently poor connectivity of the system and rehabilitation of the remaining wetland area (section 2.4 of the EMPr).

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

Not applicable

8. RECOMMENDATION OF THE 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 as bound by professional ethical standards and the code of conduct of EAPASA).

YES	NO
X	

If "NO", indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):

N/A

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 following conditions are recommended by the EAP to be included in the Environmental Authorisation:

Stakeholders, Properties & Services

- As standard construction practice the engineer and contractor should identify all existing services that may be affected prior to construction (specifically the location of the municipal sewer pipeline passing through the site).
- Preference is to be given to the local residents once employment opportunities are available (construction and operational).

Traffic & Construction Vehicles

- The contractor must take into consideration the potential movements of the surrounding residents and businesses.
- Appropriate signage and trench demarcation must be used to cordon off construction areas.
- All construction vehicles should be fitted with the appropriate silencers and exhausts.
- Speed limits must be obeyed.

Housekeeping, waste management, storage and materials handling

- Littering must not be permitted on site.
- Waste dumped on the site illegally is to be removed and disposed of at a register landfill site by the developer during construction.
- All hazardous materials and substances should be stored within a secured area in the construction camp. The storage area should be a hard surfaced, bunded and covered area.
- Cement mixing must be done on a hard surface that is protected from stormwater runoff and outside the 30m wetland buffer.
- Appropriate and sufficient toilet facilities must be provided by the contractor.
- Toilet facilities must be provided by a registered company and all sewage must be disposed of at an appropriate facility. Safe disposal certificates must be kept on record.

Dust and erosion control

- A water cart should be available to dampen dusty surfaces and suppress dust, if necessary.
- Exposed soil should be rehabilitated and re-vegetated as soon as possible.
- Areas exposed to erosion must be protected through the use of sand bags, berms and efficient construction processes i.e.: limiting the extent (footprint) and duration period that areas are exposed.

Stormwater management and protection of watercourses

- The engineer/contractor must ensure that only clean stormwater runoff enters the surrounding environment. Any contaminated run off must be collected and disposed of.
- Once construction is complete, it must be ensured that no material whatsoever is left near the river or near the banks where it may be washed into the watercourses in a high flood event. It is

recommended this material be removed from site entirely if it is not used in the construction process.

- A 30m buffer around the valley-bottom wetland is to be maintained (excluding development of the access road).
- Specialist recommendations to be incorporated into the design of the culvert to ensure increased connectivity of the wetland system.

Vegetation Clearing

- The contractor must ensure that invasive species do not gain a foothold until the indigenous vegetation has had time to re-establish itself.
- Alien vegetation is to be removed from the green open space during construction.
- Only the minimum area required for that phase of the development may be cleared of vegetation.
- The area to be cleared is to be clearly demarcated to prevent excessive clearance.

Protection of Heritage Resources

- Attention is drawn to the South African Heritage Resources Act, 1999 which, requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT (as per notice 792 of 2012, or the updated version of this guideline)

As per the Guideline on Need and Desirability “what is needed and desired for a specific area should primarily be strategically and democratically determined beyond the spatial extent of individual EIAs”⁸. In this regard, a Market Research Report was prepared by Urban Studios to assess the development potential for a shopping centre at the proposed site in Meyerton (report attached under Appendix G). The development potential for proposed site has considered the following (sections 9 & 10 of the Market Research Report):

- The Midvaal Municipal area has experienced a per annum population growth of 4%. This is regarded as high growth and is mainly driven by the expansion of the broader Vereeniging and Johannesburg areas as well as urbanisation;
- Industrial growth in the area has also increased demand for housing in Meyerton;
- Development along the very busy R59 highway between Vereeniging and Johannesburg is a strong driver of the local economy;
- There is currently no one-stop shopping facility in Meyerton;
- The Meyerton area will continue to grow in the future and is mainly due to its good location in terms of the broader market of Gauteng South.
- The proposed site received a retail micro location rating of 73%. This is regarded as a **good retail location** for the purposes of a large community shopping centre.
- A high percentage of the potential retail spend in Meyerton currently flow out to other local economies
- Cognisance need to be taken of the other proposed shopping centre on the corner of Morris & Meyer Road, although it is currently experiencing road upgrading problems. The town of Meyerton will only be able to sustain on large community shopping facility.
- The estimated turnover of the shopping centre is R540 million per annum and will create ±500 permanent job opportunities.

Urban Studios concluded that there is currently a high percentage of retail expenditure that flow out of the Meyerton economy and the proposed community shopping centre will capture some of the outflow. The following is recommended for the proposed site:

- A retail development of ±20 000m² is currently warranted and will grow to 21 500m² by 2016-2018;
- Meyerton can only sustain one large shopping centre and the proposed site will be ideal for such a one-stop retail facility;
- The correct tenant mix need to be provided in order to create critical mass;
- The Midvaal area will continue to grow in future and is mainly driven by a sound economic and political platform.

⁸ DEA (2010), Guideline on Need and Desirability, Integrated Environmental Management Guideline Series 9, Department of Environmental Affairs, Pretoria.

Meyerton was identified as one of 21 existing and potential development nodes along or adjoining the Vaal River and its key tributaries in the Midvaal Spatial Development Framework (SDF; May 2016). The Midvaal SDF also recognises Meyerton as a major urban node which holds the Central Business Development area within the municipality. "It can be described as the commercial hub of the Midvaal area"⁹. The proposed shopping centre and space for business opportunities will therefore contribute to the growth of Meyerton as a development node. A development opportunity identified in the SDF was that it may be viable to reroute cargo flights from the OR Tambo International Airport to the Vereeniging airport, which would hold opportunities for extensive industrial and commercial development around Meyerton. The growth of Meyerton is therefore a realistic and short-term vision in the Midvaal SDF.

A comparison between 2001 and 2011 data illustrates that the urban areas (such as Meyerton) and nearby agricultural holdings are the focus of the majority of municipal residential growth (indicating urbanisation). This poses major challenges to service provision, infrastructure supply, demand for residential options and informal settlement generation and growth (MLM Migration Plan, 2013). The residential component of the proposed development will therefore assist in meeting the anticipated demand of residential growth in the Meyerton area.

Provided that the development does not encroach into the floodplain of the Klip River, the proposal is considered a sustainable development which has taken into consideration the environmental characteristics of the property, economic feasibility and social aspect.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACITIVITY IS EXPECTED TO BE CONCLUDED)

Construction will commence immediately after the Environmental Authorisation is granted but will be complete in phases. It is anticipated that each phase will be constructed a year apart with the entire development being complete by the end of 2019. The Meyerton Mall & Residential Development will be permanent.

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) (must include post construction monitoring requirements and when these will be concluded.)

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

⁹ Section 5.5.1 of the Midvaal Local Municipality Spatial Development Framework (May 2016).

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

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) – *(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)*

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.

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