

FINAL
BASIC ASSESSMENT (BA) REPORT
FOR
THE PROPOSED DELMORE PARK EXTENSION 7 RESIDENTIAL
DEVELOPMENT, EKURHULENI METROPOLITAN MUNICIPALITY (EMM),
GAUTENG

For submission to:

**GAUTENG DEPARTMENT OF AGRICULTURE AND RURAL
DEVELOPMENT**



Prepared for:

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SEF Ref No. 505539

GDARD Ref No: GAUT 002/13-14/E0201

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Gauteng Department of Agriculture and Rural Development (GDARD)

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2010 (Version 1)

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

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2010.
 2. This application form is current as of 2 August 2010. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
 3. **A draft Basic Assessment Report must be submitted to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken. The draft reports must be submitted to the relevant State Departments and on the same day, two CD's of draft reports must also be submitted to the Competent Authority (GDARD) with a signed proof of such submission of draft report to the relevant State Departments.**
 4. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
 5. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
 6. An incomplete report shall be rejected.
 7. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
 8. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
 9. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
 10. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
-

DEPARTMENTAL DETAILS

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

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

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

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(For official use only)

File Reference Number:

Application Number:

Date Received:

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

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

Yes X

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

Yes x

if no, state reasons for not attaching the list.

Refer to the I&AP database

SECTION A: ACTIVITY INFORMATION

1. ACTIVITY DESCRIPTION

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

Basic Assessment (BA) Process for the proposed Delmore Park Extension 7 Residential Development, Ekurhuleni Metropolitan Municipality (EMM), Gauteng

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 X	NO
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If yes, describe the legislation and the Competent Authority administering such legislation

Comment will be sought from the Department of Water Affairs in relation to any applicable water use licenses

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

YES	NO X
YES	NO

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

The need for a WULA will depend the comments/ requirements received from the DWA.

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act No. 107 of 1998 as amended	National & Provincial	27 November 1998
National Water Act, 1998 (Act No. 36 of 1998) (NWA)	National (DEA) and Provincial (GDARD)	1 October 1998
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA)	National (SAHRA) and Provincial Heritage Resources Agency	1 April 2000
National Environmental Management Act, 1998 (Act No.107 of 1998)	National [Department of Environmental Affairs (DEA)] and Provincial (GDARD)	29 January 1999

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National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)	National (DEA) and Provincial (GDARD)	1 July 2009
National Environmental Management: Biodiversity, 2004 (Act No. 10 of 2004) (NEM:BA)	South African National Biodiversity Institute (1 September 2004
National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEMAQA)	EMM	11 September 2005
Constitution of the Republic of South Africa Act, 1996 (Act No 108 of 1996)	National	4 February 1997
Development Facilitation Act, 1995 (Act No. 67 of 1995)	EMM	22 December 1995
DEA Guidelines on Public Participation	National (DEA)	10 October 2012
DEA Guidelines on Alternatives	National (DEA)	2004
DEA Guidelines on Need & Desirability	National (DEA)	2004
Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)	Department of Regional and Land Affairs	9 March 2001
Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000)	National and Provincial	30 November 2000

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.

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, operational or other (provide details of "other")	Description
1	Proposal	<p>The proposed activity entails the establishment of a residential development, Delmore Park Extension 7. The development will consist of 254 stands on approximately 14 ha of land on Portion 396 of the Farm Driefontein 85 I.R. in Boksburg, Gauteng.</p> <p>It is the applicant's intention to develop the following:</p> <p>254 stands, i.e.</p> <ul style="list-style-type: none"> • 248 Residential 1; • 3 Institution; • 1 Municipal; • 1 Educational; and • 1 Private Open Space and Roads. <p>3, 1 hectares of land will be allocated for road use. A maximum of 673 residential units will be built.</p> <p><u>Access to the proposed site</u></p> <p>Currently, access to the site is obtained off Commissioner Street via Du Preez Street which leads to Delmore Extension 2. A line of no access will apply to the western boundary up to the entrance to the township as well as on the southern and eastern boundary of the township as proposed. Internal access roads will be provided. The northern and southern roads being 13m wide and the linking roads being 10,5m wide.</p> <p><u>Electrical Supply</u></p> <p>EMM has previously indicated that the development in the area will be supplied with 11kV from the nearby Central Vertical substation.</p>

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		<p><u>Site Location</u></p> <p>The proposed site is located to the south of Delmore Park Extension 2 and north of Commissioner Street, Boksburg. The site falls under the jurisdiction of EMM. The northern portion falls under ward 33 and the southern portion falls under ward 34 of EMM.</p> <p><u>Services</u></p> <p>EMM will be responsible for the bulk infrastructure for the proposed township development (water supply, sanitation, and waste management). Stormwater from the proposed township will be discharged into the Elsburg Spruit. Elsburg Spruit functions as regional drainage system for the Delmore area.</p>
2	<p>Land Use Alternatives (Agricultural, Industrial)</p>	<p>One potential alternative land use is agricultural use. No agricultural potential specialist study was undertaken as it was not deemed necessary as the site consist of old mining land and not supportive of agricultural conditions. Agriculture is also not in line with the present land uses surrounding the area which includes housing and mining, and consequently this alternative is not deemed to be feasible.</p> <p>The feasibility studies undertaken by VIP Consulting Engineers include information on the council's Integrated Development Plan (IDP) which points out that the site should be used for "Residential" purposes, which is a priority development in EMM. Furthermore, the proposed development is in line with the council's planning policies. The feasibility studies also indicate that there is supporting amenities such as schools, clinics, churches and police stations located in the surrounding area.</p> <p>According to the EMM's RSDF, an industrial type development is also an option, however based on the surrounding residential land use, the will be incompatable with the area. The EMM have also requested that the stand sizes are similar to the existing residential area, which has been achieved through the current township layout.</p> <p>There are also work opportunities within the Central Business District's (CBD) and industrial areas of surrounding towns and cities like Germiston and Boksburg. This indicates that the alternative chosen for the site is the most feasible.</p>

No go Alternative

One of the options to be considered for this report is one of no development at all. That means leaving the site in its present state. The site is currently degraded and not utilised for anything meaningful. The commercial value of the site is currently very low as it does not produce any natural resources or have any realised real estate value. There will always be a need for formalised housing. The present conditions in which residents of informal settlements are living (densely packed shacks) do not constitute an environment that is safe and healthy. The lack of adequate services and infrastructure exacerbates this situation.

Formalising the site into a sustainable low-cost housing development will benefit those people living in and around the site... With the burgeoning population, and the ever-increasing need for space for housing increasing, it is evident that if the no action alternative is explored that the present site will become an informal settlement.

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

Not Applicable

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

4. PHYSICAL SIZE OF THE ACTIVITY

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

Proposed activity
Alternatives:
 Alternative 1 (if any)
 Alternative 2 (if any)

Size of the activity:
144 000 m² (14 ,4ha)



or, for linear activities:

Length of the activity:

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Proposed activity

Internal access roads will be provided. The northern and southern roads being 13m wide and the linking roads being 10,5m wide.

Alternatives:

Alternative 1 (if any)
Alternative 2 (if any)



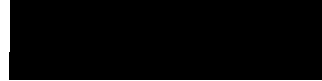
Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

Proposed activity

Size of the site/servitude:
144 000 m² (14,4 ha)
It should be noted that, however, the proposed internal roads will be 3.14 hectares in size.

Alternatives:

Alternative 1 (if any)
Alternative 2 (if any)



5. SITE ACCESS

Proposal

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

YES	NO
X	

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

Describe the type of access road planned:

N/A

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

Alternative 1

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

YES	NO
m	

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

Describe the type of access road planned:

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

Alternative 2

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

YES	NO
m	

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

Describe the type of access road planned:

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

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

Section A 6-8 has been duplicated N/A Number of times

(only complete when applicable)

6. SITE OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached as **Appendix A** to this document. The site or route plans must indicate the following:

- the scale of the plan, which must be at least a scale of 1:2000 (scale cannot be larger than 1:2000 i.e. scale cannot be 1:2500 but could where applicable be 1:1500)
- the property boundaries and numbers of all the properties within 50m of the site;
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- the exact position of each element of the application as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, septic tanks, storm water infrastructure and telecommunication infrastructure;
- walls and fencing including details of the height and construction material;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites including (but not limited thereto):
 - Rivers and wetlands;
 - the 1:100 and 1:50 year flood line;

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- ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- for gentle slopes the 1m contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- the positions from where photographs of the site were taken.
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the 32m position from the bank to be clearly indicated)

7. SITE PHOTOGRAPHS

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix. It should be supplemented with additional photographs of relevant features on the site, where applicable. **(Please refer to Appendix B)**

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. Please refer to **Appendix C for Site Layout Plans.**

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Further:

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route times

Instructions for completion of Section B for location/route alternatives

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

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

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

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

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

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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:

The proposed site is located to the south of Delmore Park Extension 2 and north of Commissioner Street, Boksburg, Gauteng. The site falls under the jurisdiction of EMM. The northern portion falls under ward 33 and the southern portion falls under ward 34 of EMM.

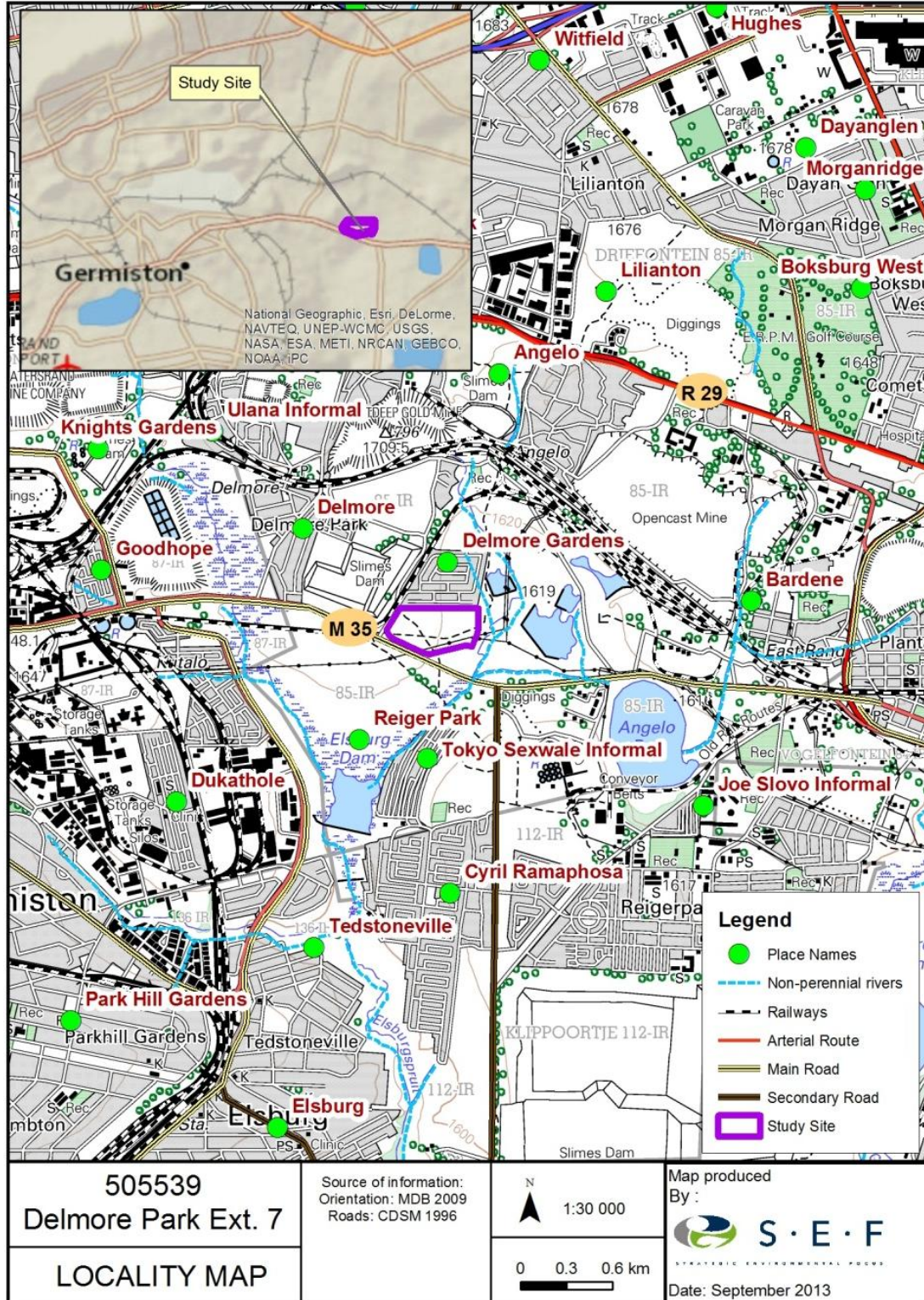


Figure 1: Locality Map

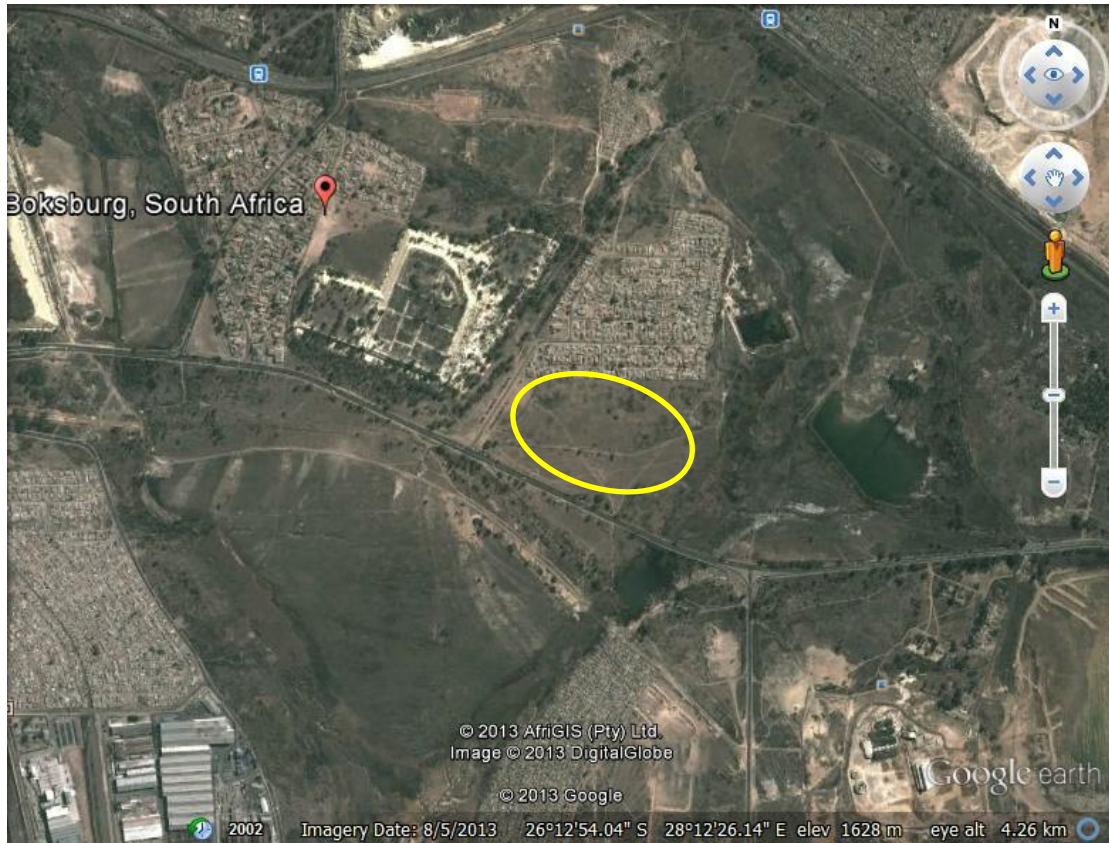


Figure 2: Google Image of Delmore Ext 7

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°12'55.864"S	28°12'30.212"E

In the case of linear activities:

Alternative:	Latitude (S):	Longitude (E):
• Starting point of the activity		
• Middle point of the activity		
• End point of the activity		

For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix **There are not route Alternatives.**

Addendum of route alternatives attached

N/A

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

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Shallow water table (less than 1.5m deep)

YES	NO X
YES	NO X
YES	NO
YES	NO x
YES	NO x
YES	NO x
YES	NO x
YES x	NO

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

(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 X
-----	---------

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

Latitude (S):

Longitude (E):

c) are any caves located within a 300m radius of the site(s)

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

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

Latitude (S):

Longitude (E):

d) are any sinkholes located within a 300m radius of the site(s)

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

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

Latitude (S):

Longitude (E):

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

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 3)?

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

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

7. GROUND COVER

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

A Basic Ecological Assessment was previously undertaken in 2008 for the proposed project. During the field survey, numerous separate portions were delineated based on the homogeneity of their floral composition. The site was divided into two zones according to the vegetation as illustrated in Figure 3 below.

Two distinct vegetation zones (Zone 1 and 2) supporting different plant communities were identified. The vegetation species composition of the proposed site is characterised by a low diversity in vegetation species occurring on the study site which can be attributed to high levels of disturbance e resulting in low ecological sensitivity. The conservation status of the study site can be ranked as low as very little remnants of secondary grasslands is present, however an increase of alien invasive species is apparent. The probability of endemic species occurrence on and around the proposed site is ranked as low as there are no distinguishable areas of endemic species occupancy on the proposed site and adjacent areas.

The absence of suitable habitat within the study site reduces the probability of both floral and faunal species occurrence. Based on these findings, the probability of species occurrence in and around the proposed site has been determined and classified as low. Please refer to Appendix G for the Basic Ecological Assessment Report.

Zone 1: This portion is situated to the east of Du Preez Street and was observed to represent a heavily disturbed site with evidence of alien and invasive plant species and domestic waste. The upper most

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section of Zone 1 has a significant number of *Rhus lancea* trees and *Cynodon dactylon* grass. Plant species diversity was extremely poor, as indicated by a few *Eragrostis* spp, *Pennisetum clandestinum* and mostly *Cynodon dactylon* grass species. While the forb component consisted mostly of a few pioneer species such as *Bidens pilosa* and *Tagetes minuta*. The only other plant species noticed during the field visit were *Gazania krebsiana* and *Indigofera* spp.



Figure 1: Vegetation in Zone 1

The remaining section of Zone 1 was located at the southern boundary along the M46 road and on eastern boundary adjacent to a medium density residential area. In this portion signs of human activity, through the dumping of domestic waste, excavations and movement of heavy machinery were evident. There was also an evident encroachment of the area by *Tagetes minuta* and other forbs, *Acacia baileyana*, was the only tree species identified on site. Due to the low species diversity and the disturbed nature of the site, the study area was described as an area of a low conservation importance and low ecological function.

Zone 2: Consists of secondary grassland dominated by *Hyperhenia*, *Eragrostis* and *Themeda* species. The grassland also showed signs of encroachment from *Tagetes minuta* forbs and high levels of disturbance in the form of foot paths and domestic waste dumping. The presence of borrows and paths in the study area indicating of rodent activity while the high number of mole hills signal the possible presence of moles. Even with the occurrence of secondary grassland on the site. The area had a low conservation importance and ecological function with a low sensitivity classification.



Figure 2: Vegetation in Zone 1

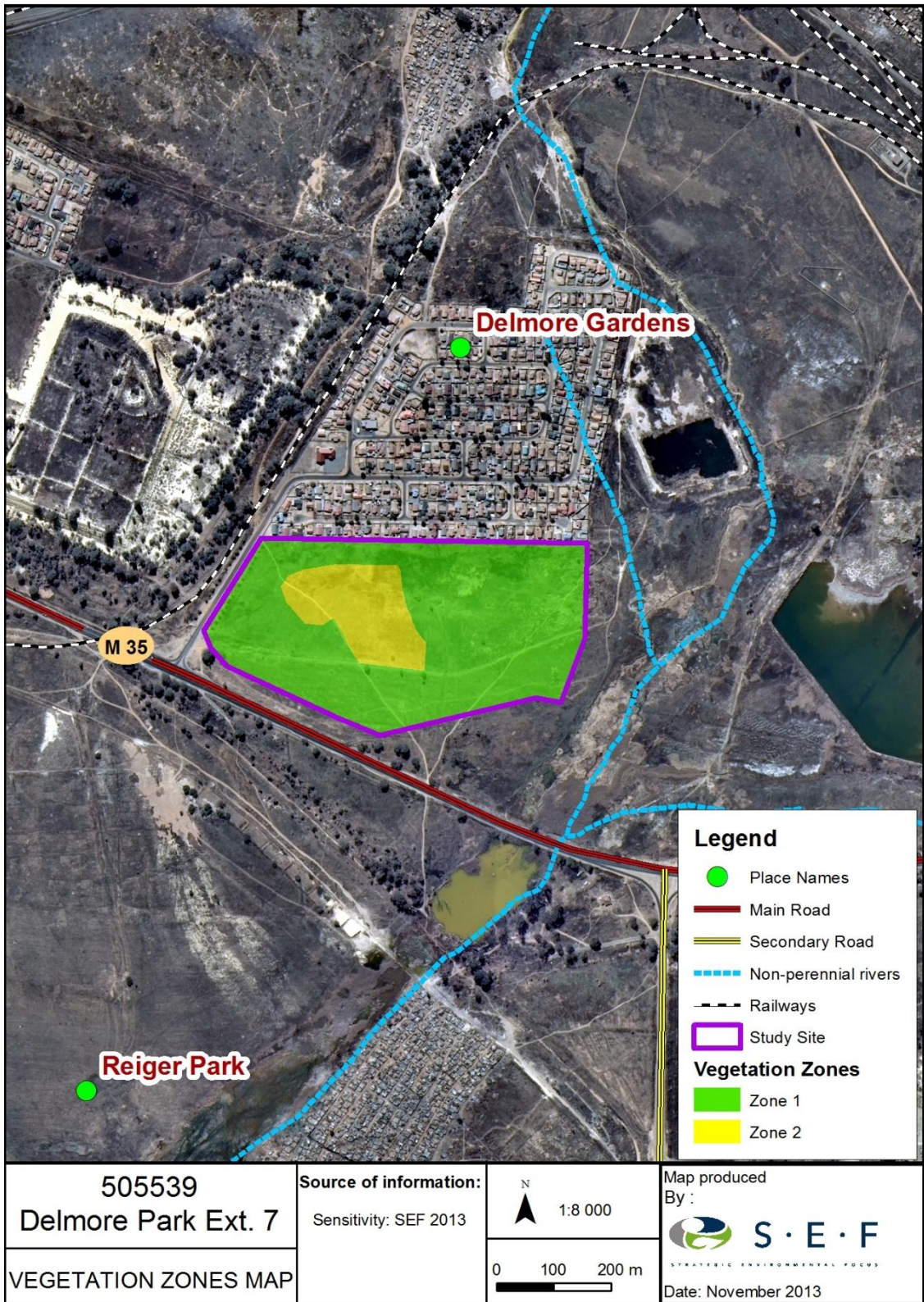


Figure 3: Vegetation Zones

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 % = 100%	Veld dominated by alien species % =	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % =

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

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Are there any rare or endangered flora or fauna species (including red list species) present on the site YES NO
 If YES, specify and explain:

Not Applicable

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

If YES, specify and explain:

Not Applicable

Are there any special or sensitive habitats or other natural features present on the site? NO

Was a specialist consulted to assist with completing this section YES NO

If yes complete specialist details

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

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

If YES, specify: _____
 If YES, is such a report(s) attached? YES NO
 If YES list the specialist reports attached below

The following specialist studies have previously been undertaken and the reports are appended in Appendix G of this Final BAR.

- **Basic Ecological Assessment (Prepared by Urban Dynamics, November 2007);**
- **Geotechnical Investigation (Intraconsult Consulting Engineers and Geologists, August 2008);**
- **Cultural Heritage Impact Assessment (Strategic Environmental Focus, 3 September 2008); and**
- **Traffic Impact Assessment (Infragen Consulting Engineers (Pty) Ltd, June 2008).**

Additional to the above, the following reports have also been appended to this Final BAR.

- **Electrical Report (24 January 2008); and**
- **Services Report 9 July 2008).**

Signature of specialist: _____ Date: _____

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


8. LAND USE CHARACTER OF SURROUNDING AREA

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

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line ^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):				

NOTE: Each block represents an area of 250m X250m

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NORTH					 = Site
33	1	9	9;2	1	
33	1	9	9;2	1	
1	1		1;2	1;6	
1	25;1	25;1	1;2	1	
1	1	1;10	1;25;2	25;1;15	
SOUTH					

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

More

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

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.

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Ekurhuleni is highly urbanised, with 99, 4% of the population living in urban settlements ranging from informal settlements to elite urban residential suburbs. With a Population density of 1609 persons/km². The municipality has a total population of just fewer than 3, 2 million individuals, 78, 7% of whom are black African. Whites make up 15, 8%, and other race groups comprise the remaining 5, 5%. There are just over 1 million households in Ekurhuleni with an average of 2, 9 persons per household. The percentage of residents residing in formal households is 77, 4%. In terms of employment, there are about 1, 6 million economically active individuals (i.e. those who are employed or unemployed but looking for work) residing within the municipality. Of these, 28, 8% are unemployed. When the youth (15–34 years) are considered, there are about 840 000 economically active individuals, 36, 9% of whom are unemployed. .

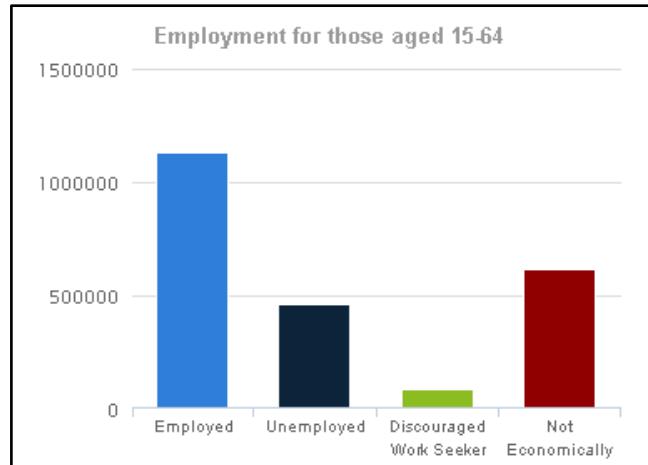


Figure 4: Employment for those aged 15-64

According to the Spatial Development Plan, 2005, the proposed development is in an urban area, and is well within the development boundary, therefore in areas favourable for the proposed development. As the proposed development is located near several industrial areas, mining activities, as well as the CBD of the EMM, the development is central to areas of employment, thus reducing travelling time and costs for people living there but working in the aforementioned surrounding areas. In addition, the development is located in close proximity to several major traffic arterials such as Commissioner Street, Elsburg road, the R29, and Rondebult avenue. The proposed development aims to construct bonded housing in an area where non-expensive housing is lacking. The proposed development is aimed at construction of 695 housing units which are affordable for the local people, with each house being priced between R220 000 and R400 000.

The existing bulk infrastructure in the area is capable of sustaining the above mentioned development; however financial provisions are available should upgrades be required to accommodate future growth in the area. The areas surrounding the site predominantly consist of mining and industrial activities, with several mine dumps and slimes dams. There are a few residential developments to the north and west of the site, with informal developments to the south and further north acting as an extension to the existing residential housing.

The proposed development will create employment opportunities for the local community during both the construction and operational phases of the development. The construction phase will create short to medium term employment opportunities for skilled and unskilled labourers, as well as training opportunities for unskilled labourers. As the development is near to several informal settlements, it is possible for unemployed people in these areas to be provided with jobs, and hence improved financial stability.

The operational phase will create fewer but more permanent employment opportunities for the local community, again affording people within the area better financial stability. The development will also allow for safer living conditions and access to basic civil services, to local people who require it, such as those currently residing in the informal settlements. This in turn will make land available for future housing developments.

SOCIO-ECONOMIC VALUE OF THE ACTIVITY

Please note that this information was supposed to form part of the application form submitted to the Gauteng Department of Agriculture and Rural Development (GDARD). It is now submitted as an addendum to the Application Forms.

What is the expected capital value of the activity on completion?	R 90 000 000.00	
What is the expected yearly income that will be generated by or as a result of the activity?	R 90 000 000.00	
Will the activity contribute to service infrastructure?	YES X	NO
Will the activity contribute to a public amenity	YES X	NO

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Total number of new employment opportunities to be created in the development phase of this activity.	300
Of these opportunities how many are:	
Women	90 (30%)
People with disabilities	
Female	Circumspection
Male	Circumspection
Youth	
Female	50
Male	150
What is the expected value of the employment opportunities during the development phase?	R 3000 000.00
What percentage of this will accrue to previously disadvantaged individuals?	100%
Total number of new employment opportunities to be created in the operational phase of this activity.	100
Of these opportunities how many are:	
Women	50
People with disabilities	
Female	Unknown
Male	Unknown
Youth	Unknown
Female	Unknown
Male	Unknown
What is the expected current value of the employment opportunities during the first 10 years?	R 10 000.00
What percentage of this will accrue to previously disadvantaged individuals?	100%

10. CULTURAL/HISTORICAL FEATURES

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

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

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

The Provincial Heritage Resources Agency- Gauteng (PHRAG) will be informed of the proposed project. And proof provided with the Final Basic Assessment Report .

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?

YES	NO X
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If YES, explain:

A cultural heritage survey of the Delmore Park, Ext 7 development identified no heritage features adjacent to the proposed development. There is no archaeological reason why development may not proceed as planned. However, attention is drawn to the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) which requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

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:

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

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 **Not applicable.**

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The Environmental Assessment Practitioner must follow any relevant guidelines adopted by the competent authority in respect of public participation and must at least –

- 1(a) Fix a site notice at a conspicuous place, on the boundary of a property where it is intended to undertake the activity which states that an application will be submitted to the competent authority in terms of these regulations and which provides information on the proposed nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations on the application may be made;
- 1(b) inform landowners and occupiers of adjacent land of the applicant's intention to submit an application to the competent authority;
- 1(c) inform landowners and occupiers of land within 100 metres of the boundary of the property where it is proposed to undertake the activity and whom may be directly affected by the proposed activity of the applicant's intention to submit an application to the competent authority;
- 1(d) inform the ward councillor and any organisation that represents the community in the area of the applicant's intention to submit an application to the competent authority;
- 1(e) inform the municipality which has jurisdiction over the area in which the proposed activity will be undertaken of the applicant's intention to submit an application to the competent authority; and
- 1(f) inform any organ of state that may have jurisdiction over any aspect of the activity of the applicant's intention to submit an application to the competent authority; and
- 1(g) place an advertisement in one local newspaper and any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these regulations.

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Section 54(2)(e) of the NEMA regulations states the following:

The person conducting a Public Participation Process must take into account any guidelines applicable to public participation as contemplated in Section 24 J of the Act and must give a notice to all potential I&APs of the application which is subjected to public participation by using reasonable alternative methods as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to:

- Literacy;
- Disability; or
- Any other disadvantage.

All the public participation documents have been compiled in English. Adjacent landowners have been personally consulted,.

Section 54(7) of the NEMA regulations states that:

When complying with this regulation, the person conducting a Public Participation Process must ensure that

- Information containing all relevant facts in respect of the application is made available to potential I&APs; and
- Participation by potential I&APs is facilitated in such a manner that all potential I&APs are provided with reasonable opportunity to comment on the application.

Public Participation has been conducted in terms of the legislative requirements as follows:

- One Site Notice was placed at conspicuous place, on the boundary of a property, where the activity is proposed to be undertaken. The Site Notice stated that an application would be submitted to the competent authority in terms of the NEMA regulations, provided information on the proposed nature and location of the activity, stated where further information on the proposed activity can be obtained and the manner in which representations on the application may be made;

Site notice position	Latitude	Longitude
	26°12'47.60"S	28°11'48.82"E
Date placed	17 January 2014	

- A newspaper advert was placed in the Boksburg Advertiser newspaper on 17 January 2014. Proof of advertisement has been attached in this Final BAR as Appendix 3 of Appendix E.
- The Landowner (in this case, the Tortello Investments No. 120 (Pty) Ltd) was informed of the Environmental Application Process on 07 October 2013. Proof of such notification is attached in Appendix 2 of Appendix E. Occupiers of adjacent land (within 100 m) have also been notified, and proof of such notification has been provided for in this Final BAR.
- The Ward Councillors of all affected wards have been informed of the project. Other organisations that represent the community have been notified.
- The EMM have been informed of the project via the Township Application Process, further comment has been sought as part of this Basic Assessment Process. State Departments have been identified which may have jurisdiction over any aspect of the activity of the client's intention to submit an application to the competent authority. A list of State Departments has been attached to this Final BAR as Appendix 2 of Appendix E.
- The Draft BAR was left in a public venue (at the Reiger Park Library, Reiger Park Civic centre) and was also posted on SEF's website at <http://www.sefsa.co.za> on 17 January 2014;
- Flyers, letters to inform immediately affected I&AP were also distributed on 17 January 2014; and
- The Final BAR has also been left in a public venue (at the Reiger Park Library, Reiger Park Civic centre) and has been posted on SEF's website at <http://www.sefsa.co.za> on 17 January 2014.

A period of 30 days was provided for commenting to I&APs for the review of the Draft Basic Assessment Report (BAR) (17 January 2014 to 16 February 2014), and 40 days to the State Departments (17 January 2014 to 26 February 2014). Thus far, comments and concerns from I&APs have not been received. Should comment however be sent to SEF, this will be forwarded to the GDARD directly for consideration.

Public Announcement of the Final Basic Assessment Report

The Final BAR has been submitted to the GDARD and registered I&APs simultaneously. Registered I&APs have a period of 21 days (03 March 2014 to 02 April 2014) during which time to submit any additional comments on this Final BAR directly to the GDARD (and a copy to SEF).

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority (GDARD).

Has any comment been received from the local authority?

YES	NO
	X

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

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

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

The project was announced on 17 January 2014. State Departments were provided with 40 calendar days to comment on the notification documentation until (from 17 January 2014 to 26 February 2014). There have not been any comments from the State Departments received thus far. However follow-ups to these Department has been made via emails and faxes in an effort to obtain comments.

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):

Not Applicable

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

The project was announced on 17 January 2014. The general public/ Interested and Affected Parties (I&APs) were provided with 30 calendar days to comment on the notification documentation (from 17 January 2014 to 16 February 2014). There have not been any comments from I&APs received thus far.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

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

5. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued to those persons detailed in 1(b) to 1(f) above (**landowner and any organ of state**).

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from persons detailed in Point 2 and 3 (**local municipality and other stakeholders**)

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs

Appendix 10 – Comments from I&APs on the application

Appendix 11 - Other

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

Section D has been duplicated for alternatives

N/A

 times
(complete only when appropriate)

Section D Alternative No.

N/A

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

YES X	NO
Volumes of waste that will be generated during the construction phase are still yet not available.	

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

The contractor will be responsible for the removal and disposal of all waste produced during the construction phase of the development. The waste will be disposed of in a registered waste disposal site.

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

The contractor will be responsible for the removal and disposal of all waste produced during the construction phase of the development. The waste will be disposed of in a registered waste disposal site.

Will the activity produce solid waste during its operational phase?
If yes, what estimated quantity will be produced per month?

YES X	NO
Volumes of waste that will be generated during the construction phase are still yet not available.	

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

The EMM will be responsible for the removal and disposal of all solid waste produced by the development during its operation.

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)?

Not Applicable

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:

During construction, waste will be separated at source and disposed of at relevant suitably licensed facilities. Waste should be separated into recyclable and non-recyclable materials and distributed for recycling where applicable. During the construction phase, construction waste will be used as fill material and as foundation for the proposed upgrades where possible. The re-use of construction waste materials will minimise the amount of waste that will need to be disposed of at registered municipal waste facilities. Only inert, non-hazardous construction material will be re-used.

Liquid effluent (other than domestic sewage)

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

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

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

m3

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

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

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

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

Yes	NO X
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.

Not Applicable

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA

Will the activity produce effluent that will be treated and/or disposed of at another facility?

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

If yes, provide the particulars of the facility:

Facility name:

Contact person:

Postal address:

Postal code:

Telephone:

E-mail:

Cell:

Fax:

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

Liquid effluent (domestic sewage)

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

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

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

m³

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

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

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

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

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

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

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

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

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

If yes, 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:

The activity itself will not contribute directly to emissions released into the atmosphere except possible short-term dust emissions during construction, due to vegetation removal, wind and movement on site. Mitigation measures have been prescribed for the minimisation of the dust impact.

2. WATER USE

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

Municipal X	Directly from water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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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: 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	NO X
------------------------------------------------------------------------------------	------------	-----------------------

If yes, list the permits required

If yes, have you applied for the water use permit(s)?	YES	NO X
-------------------------------------------------------	-----	-----------------------

If yes, have you received approval(s)? (attached in appropriate appendix)	YES	NO X
---------------------------------------------------------------------------	-----	-----------------------

3. POWER SUPPLY

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

EMM indicated that the development in the area will be supplied with 11kV from the nearby Central Vertical substation.

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

4. ENERGY EFFICIENCY

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

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Appropriate structural designs, energy effective building construction and orientation, have not been considered to date due to the small scale of construction that is needed. A comprehensive Environmental Management Programme (EMPr) has been attached (refer to Appendix H) and will form part of the pre-construction phase of the proposed development the following recommendations regarding structural designs are however made by the Environmental Assessment Practitioner (EAP):

- Use of building material originating from sensitive environmental resources should be minimised, e.g. no tropical hardwood may be used.
- Building material should be legally obtained by the supplier, e.g. wood must have been legally harvested, sand should be obtained only from legal borrow pits and from commercial sources.
- Building material that can be recycled/ reused should be used rather than building material that cannot.
- Use highly durable material for part of the building that is unlikely to be changed during the life of the buildings (unlikely to change due to e.g. renovation, fashion, changes in family life cycle) is highly recommended.

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

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

The developer has ensured that the environmental issues were taken into account in all phases of the project, including the planning phase. The recommendations made in the EMPr will be taken into consideration. The proposed development will blend in with the surrounding environment and ensure that all possible alternative energy sources have been taken into account.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2006, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

A CRR will be appended in the Final BAR.

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

A CRR will be appended in the Final BAR.

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

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

2.1 Approach to Assessment of Impacts

The EAP in association with the relevant specialists will provide an outline of the approach used in the study. Assumptions and sources of information will also be clearly identified.

2.2.1 Impact Identification and Assessment

The EAP must make a clear statement, identifying the environmental impacts of the construction, operation and management of the proposed development. As far as possible, the EAPs must quantify the suite of potential environmental impacts identified in the study and assess the significance of the impacts according to the criteria set out below. Each impact will be assessed and rated. The assessment of the data must, where possible, be based on accepted scientific techniques, failing which the specialist is to make judgements based on his/ her professional expertise and experience.

2.2.2 Assessment Procedure: Proposed Impact Assessment Methodology

For the purpose of assessing impacts, the project will be divided into two phases from which impacting activities can be identified, namely:

Construction Phase: All the construction related activities on site, until the contractor leaves the site.

Operational Phase: All activities, including the operation and maintenance of the proposed development.

The activities arising from each of these phases will be included in the impact assessment tables. This is to identify activities that require certain environmental management actions to mitigate the impacts arising from them. The assessment of the impacts will be conducted according to a synthesis of criteria required by the integrated environmental management procedure.

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Extent The physical and spatial scale of the impact.	Footprint	The impacted area extends only as far as the activity, such as footprint occurring within the total development area.
	Site	The impact could affect the whole, or a significant portion of the site.
	Regional	The impact could affect the area including the neighbouring farms, the transport routes and the adjoining towns.
	National	The impact could have an effect that expands throughout the country (South Africa).
	International	Where the impact has international ramifications that extend beyond the boundaries of South Africa.
Duration The lifetime of the impact, that is measured in relation to the lifetime of the proposed development.	Short Term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than that of the construction phase.
	Short-Medium Term	The impact will be relevant through to the end of a construction phase.
	Medium Term	The impact will last up to the end of the development phases, where after it will be entirely negated.
	Long Term	The impact will continue or last for the entire operational lifetime of the development, but will be mitigated by direct human action or by natural processes thereafter.
	Permanent	This is the only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.
Intensity Is the impact destructive or benign, does it destroy the impacted environment, alters its functioning, or slightly alter the environment itself?	Low	The impact alters the affected environment in such a way that the natural processes or functions are not affected.
	Medium	The affected environment is altered, but functions and processes continue, albeit in a modified way.
	High	Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.
Probability The likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time.	Improbable	The possibility of the impact occurring is none, due either to the circumstances, design or experience. The chance of this impact occurring is zero (0%).
	Possible	The possibility of the impact occurring is very low, due either to the circumstances, design or experience. The chances of this impact occurring is defined as 25%.
	Likely	There is a possibility that the impact will occur to the extent that provisions must therefore be made. The chances of this impact occurring is defined as 50%.
	Highly Likely	It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up before carrying out the activity. The chances of this impact occurring is defined as 75%.
	Definite	The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on. The chance of this impact occurring is defined as 100%.

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

Determination of Significance – Without Mitigation – Significance is determined through a synthesis of

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

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

No significance: The impact is not substantial and does not require any mitigation action;

Low: The impact is of little importance, but may require limited mitigation;

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

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

Determination of Significance – With Mitigation – Determination of significance refers to the foreseeable significance of the impact after the successful implementation of the necessary mitigation measures. Significance with mitigation will be rated on the following scale:

No significance: The impact will be mitigated to the point where it is regarded as insubstantial;

Low: The impact will be mitigated to the point where it is of limited importance;

Low to medium: The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels;

Medium: Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw;

Medium to high: The impact is of major importance but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels; and

High: The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option or entire project proposal unacceptable.

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

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

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

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

Figure 5: Description of bio-physical assessment parameters with its respective weighting

Identifying the Potential Impacts Without Mitigation Measures (WOM) – Following the assignment of the necessary weights to the respective aspects, criteria are summed and multiplied by their assigned weightings, resulting in a value for each impact (prior to the implementation of mitigation measures).

$$\text{Equation 1: Significance Rating (WOM)} = (\text{Extent} + \text{Intensity} + \text{Duration} + \text{Probability}) \times \text{Weighting Factor}$$

Identifying the Potential Impacts With Mitigation Measures (WM) – In order to gain a comprehensive understanding of the overall significance of the impact, after implementation of the mitigation measures, it will be necessary to re-evaluate the impact.

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

Thus, the lower the assigned value the greater the effectiveness of the proposed mitigation measures and subsequently, the lower the impacts with mitigation.

Equation 2: Significance Rating (WM) = Significance Rating (WOM) x Mitigation Efficiency
 Or
 WM = WOM x ME

Significance Following Mitigation (SFM) – The significance of the impact after the mitigation measures are taken into consideration. The efficiency of the mitigation measure determines the significance of the impact. The level of impact will, therefore, be seen in its entirety with all considerations taken into account.

2.2.3 Integration of Specialist's Input

In order to maintain consistency in the impact assessment, it is suggested that all potential impacts to the environment (or component of the environment under review) should be listed in a table similar to the example shown below (more than one table will be required if impacts require assessment at more than one scale). The assessment parameters used in the table should be applied to all of the impacts and a brief descriptive review of the impacts and their significance will then be provided in the text of the specialist reports and consequently in the BAR.

Table 1: Example of an Impact Table

Impact source(s)		Status	
Nature of impact			
Reversibility of impact			
Degree of irreplaceable loss of resource			
Affected stakeholders			
Magnitude	Extent		
	Intensity		
	Duration		
	Probability		
Significance	Without mitigation		
	With mitigation		

2.2.4 Mitigation Measures

Mitigation measures will be recommended in order to enhance benefits and minimise negative impacts and they will address the following:

- **Mitigation objectives:** what level of mitigation must be aimed at: For each identified impact, the specialist must provide mitigation objectives (tolerance limits) which would result in a measurable reduction in impact. Where limited knowledge or expertise exists on such tolerance limits, the specialist must make an “educated guess” based on his/ her professional experience;
- **Recommended mitigation measures:** For each impact the specialist must recommend practicable mitigation actions that can measurably affect the significance rating. The specialist must also identify management actions, which could enhance the condition of the environment. Where no mitigation is considered feasible, this must be stated and reasons provided;
- **Effectiveness of mitigation measures:** The specialist must provide quantifiable standards (performance criteria) for reviewing or tracking the effectiveness of the proposed mitigation actions, where possible; and
- **Recommended monitoring and evaluation programme:** The specialist is required to recommend an appropriate monitoring and review programme, which can track the efficacy of the mitigation objectives. Each environmental impact is to be assessed before and after mitigation measures have been implemented. The management objectives, design standards, etc., which, if achieved, can eliminate, minimise or enhance potential impacts or benefits. National standards or criteria are examples, which can be stated as mitigation objectives.

Once the above objectives have been stated, feasible management actions, which can be applied as mitigation, must be provided. A duplicate column on the impact assessment tables described above will indicate how the application of the proposed mitigation or management actions has reduced the impact. If the proposed mitigation is to be of any consequence, it should result in a measurable reduction in impacts (or, where relevant, a measurable benefit).

2.3 Approach to the Assessment of Cumulative Impacts

Cumulative impacts can arise from one or more activities. A cumulative impact may result in an additive impact i.e. where it adds to the impact which is caused by other similar impacts or an interactive impact i.e. where a cumulative impact is caused by different impacts that combine to form a new kind of impact. Interactive impacts may be either countervailing (the net adverse cumulative impact is less than the sum of

the individual impacts) or synergistic (the net adverse cumulative impact is greater than the sum of the individual impacts). Possible cumulative impacts of the project have been evaluated in this Final BAR. In addition, various other cumulative impacts e.g. other external impacts that could arise from the project will be further investigated in the Final BAR.

The assessment of cumulative impacts on a study area is complex, especially if many of the impacts occur on a much wider scale than the site being assessed and evaluated. It is often difficult to determine at which point the accumulation of many small impacts reaches the point of an undesired or unintended cumulative impact that should be avoided or mitigated. There are often factors which are uncertain when potential cumulative impacts are identified.

2.3.1 Steps in Assessing Cumulative Impacts

The assessment of cumulative impacts will not be done separately from the assessment of other impacts. Cumulative impacts however, tend to have different time and space dimensions and therefore require specific steps. This may even mean that some of the actions in the assessment process, that preceded general impact identification, may have to be revisited after potential cumulative impacts have been identified. This will ensure that the scope of the Final BAR process is adequate to deal with the identified cumulative impacts.

Three (3) general steps, which are discussed below, will be recommended to ensure the proper assessment of cumulative impacts.

2.3.2 Determining the Extent of Cumulative Impacts

To initiate the process of assessing cumulative impacts, it is necessary to determine what the extent of potential cumulative impacts will be. This will be done by adopting the following approach:

- Identify potentially significant cumulative impacts associated with the proposed activity;
- Establish the geographic scope of the assessment;
- Identify other activities affecting the environmental resources of the area; and
- Define the goals of the assessment.

2.3.3 Describing the Affected Environment

The following approach is suggested for the compilation of a description of the environment:

- Characterise the identified external environmental resources in terms of their response to change and capacity to withstand stress;
- Characterise the stresses affecting these environmental resources and their relation to regulatory thresholds; and
- Define a baseline condition that provides a measuring point for the environmental resources that will be impacted on.

2.3.4 Assessment of Cumulative Impacts

The general methodology which is used for the assessment of cumulative impacts should be coherent and should comprise of the following:

- An identification of the important cause-and-impact relationships between proposed activity and the environmental resources;
- A determination of the magnitude and significance of cumulative impacts; and
- The modification, or addition, of alternatives to avoid, minimize or mitigate significant cumulative impacts.

A. CONSTRUCTION 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 construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

1. Increased Traffic

During the construction phase, vehicles that are used for construction purposes will be travelling outside the boundaries of the site in order to retrieve materials used on site. This will influence the traffic on Du Preez Street and Commissioner Road. The construction vehicles are heavy duty and thus travel at a lower speed than the rest of the traffic that use Commissioner Road. These impacts would include the delivery of construction supplies, staff and equipment. This impact would be of short duration as it would be restricted to the construction period.

Currently, access to the site is obtained off Commissioner Street via Du Preez Street which leads to Delmore Extension 2.

Commissioner Street (M46/ K110):

This is an east west Class 2 provincial road which connects the Germiston and Boksburg centres with one another. Past its intersection with Witfield Road. This road is known as the Lower Boksburg Road. In the vicinity of the site,

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Commissioner street is a 4 lane individual road with additional right turn and/ or left turn slip lanes at most of its intersections. Between its intersections with Simon Bekker road and Leon Ferreira Drive, the peak hour volumes of Commissioner Street varies between 2900 and 1800 vehicle per hour (vph) (total both directions).

Du Preez Street:

Du Preez Street is a 2 lane Class 4 collector street which forms a signalised T intersection with Commissioner Street. It is a relative short street which provides access to existing Delmore Park Extension 2 as well as an informal settlement located to the north of the proposed Township. The current traffic volumes on Du Preez Street are of low order i.e. approximately 160 and 110 vph (total both directions) for the AM and PM peaks respectively.

Table 2: Traffic Impact Assessment

Impact source(s)	Delivery of construction supplies, staff and equipment		Status	-
Nature of impact	Traffic Congestion			
Reversibility of impact	The impact is reversible			
Degree of irreplaceable loss of resource	Medium			
Affected stakeholders	Road users			
Magnitude	Extent	Site 2		
	Intensity	Low 1		
	Duration	Short Term 1		
	Probability	Highly Likely 4		
	Weighting factor	Medium 3		
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(2+1+1+4) \times 3 = 24$		L- M
	With mitigation	$WOM \times ME = WM$ $24 \times 0.6 = 14.4$		L

Mitigation measures:

- Vehicular movement beyond the site boundaries must be limited during peak hour traffic, i.e. between 07:00-09:00am, and 16:00-18:00pm.
- Construction of the access points must take into consideration the width of the current access road, and its limited space.
- Construct the road network of the residential development according to relevant specifications.
- Ensure that the necessary signage and traffic measures are implemented for safe and convenient access to the mixed use development.
- All road infrastructures must be designed and conducted according to the standards of the EMM.

2. Potential Ground and/ or Surface Water Pollution

Hydrocarbons-based fuels or lubricants spilled from construction vehicles, construction materials that are not properly stockpiled, and litter deposited by construction workers may be washed into the non-perennial river or off-site wetland, surface and ground water bodies. Stripping of topsoil will result in increased runoff of sediment from the site into watercourses associated with the study area. Should appropriate toilet facilities not be provided for construction workers at the construction crew camps, the potential exists for surface and groundwater resources and surrounds to be contaminated by raw sewerage. While it is acknowledged that the impacts associated with the proposed activities will be negligible, every effort should still be taken so as to limit additional contributions.

Table 3: Ground and/ or Surface Water Pollution Assessment

Impact source(s)	Building Material (concrete and/or cement)		Status	-
Nature of impact	Construction materials may pollute the surface and/or ground water around the site.			
Reversibility of impact	The impact is reversible and can be mitigated to a large extent			
Degree of irreplaceable loss of resource	Low			
Affected stakeholders	Surrounding Communities			
Magnitude	Extent	Site 2		
	Intensity	Low 1		
	Duration	Short Term 1		
	Probability	Probable 1		
	Weighting Factor	Medium 3		
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(2+1+1+1) \times 3 = 15$		L
	With mitigation	$WOM \times ME = WM$ $15 \times 0.2 = 3$		L

Mitigation measures:

- Construction vehicles are to be maintained in good working order to reduce the potential for leaks and spills.
- Oil residues must be treated with an oil absorbing substance, such as Dritzit or similar, until the material has been removed. This polluted material must then be disposed of at licensed waste disposal site.

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- Storage of potentially hazardous substances should be above the 1:100 year floodline, or otherwise agreed with the Environmental Control Officer (ECO).
- Contractor/s must provide regularly serviced chemical toilets for the construction workers.
- Ablutions must be placed at least 200m from the water resource edge, and in areas where they will not get knocked over easily or result in ground/surface water contamination.
- No materials may be discharged from the construction camp.
- Underground services should be designed in such a way that will least disturb the ground surfaces should maintenance be required.
- An adequate environmental sensitive storm water management plan must be implemented during the construction phase to ensure the controlled flow of water on site.

3. Soils erosion and stability

The proposed site is primarily underlain by quartzitic and conglomerate rock of the Turfontein Subgroup of the Witwatersrand Supergroup which outcrops in the middle of the site and hillwash overlaying shallow sub-outcrop in the east. The west of the site hosts a low lying wetland comprising of loose gullywash overlying quartzite bedrock. (Intraconsult, July 2008).

The portion of site is comprised of the following, as detailed in the Geotechnical Investigation Report as appended in Appendix G of this Final BAR:

- The ground surfaces drains south eastwards towards the floodplain.
- An extensive fill mound dominating the north eastern sector.
- Reasonable quality ground with the exception of the large fill which will be expensive to fill.

The site is generally characterised by the following:

- Thick, open textured, aeolian deposits overlying ferricrete and or relatively deep residual quartzite (very locally shale);
- Very thin, porous colluvial deposits overlying shallow quartzitic bedrock which outcrops intermittently; and
- Thick lacustrine, alluvial and gully wash deposits comprising the full depth of the observed profile.

Table 4: Soils erosion and stability Impact Assessment

Impact source(s)	Soil mismanagement	Status	-
Nature of impact	Soil erosion and instability		
Reversibility of impact	The impact is irreversible but can be mitigated		
Degree of irreplaceable loss of resource	High		
Affected stakeholders	Not Applicable		
Magnitude	Extent	Site 2	
	Intensity	Medium 3	
	Duration	Long Term 4	
	Probability	Highly Likely 4	
	Weighting Factor	Low to Medium 2	
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(2+3+4+4) \times 2 = 26$	L-M
	With mitigation	$WOM \times ME = WM$ $26 \times 0.2 = 5.2$	L

Mitigation measures:

- The construction phase should preferably take place in the dry winter months.
- Vegetation clearing must be kept to a minimum, and all areas cleared of vegetation must be re-vegetated as soon as the construction phase is completed.
- As much vegetation as possible should remain on site wherever possible to help decrease surface water flow velocity, and increase filtration.
- In order to ensure that minimal soil removal occurs with vegetation clearance, it is recommended that vegetation be harvested as close to ground level as possible. Through this method, the existing seed bank, stolons, rhizomes and runners and additional supply of organic matter which will be beneficial during the early stages of vegetation reinstatement, will be retained.
- In areas where vegetation clearing is required, surface water velocity must be dissipated using metre drains at appropriate intervals.
- No stockpiles or construction materials may be stored or placed within any drainage line on site, or in areas where water naturally accumulates.
- The temporary storage of topsoil, inert spoil, fill etc. must be above the 1:20 year floodline or at least 20m from the dam's edge.
- Stockpiles must not exceed more than 2m in height.
- Stockpiles must not be stored for excessively long periods. If it is found that a stockpile will be stored for long periods then it must not exceed a vertical horizontal ratio or 1:1,5m to prevent compaction.
- Any stockpile stored for long periods must be retained in a bermed area.
- Stockpiles must be covered during excessively windy conditions.
- All recommendations made by the geotechnical engineer must be implemented during the construction phase, and/or where applicable.
- All foundation excavations should be inspected by a Geotechnical Engineer prior to placing any concrete, or commencement of backfilling.

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- Regular checks on the quality and compaction of the backfill below slab level (and on terraces) should be conducted.
- All water bearing services must be provided with flexible couplings where pipes enter the buildings.
- Appropriate damp proofing and ground water control precautions should be implemented below all structures, paved areas, and any exposed excavated surfaces on terraces.
- It is recommended that all construction materials should be imported.

4. Flora and Fauna Displacement

Removal of alien vegetation will be initiated during the construction phase. The surface will be cleared to facilitate service provisions to the proposed development. The area is impacted on and not in a pristine condition and there is evidence of construction site rubble at various locations of the site which implies that the site was used as a camp site for previous construction work.

Table 5: Fauna and Flora

Impact source(s)	The removal of alien vegetation as a result of the construction activities		Status	-
Nature of impact	Vegetation clearance to facilitate buildings and roads infrastructure			
Reversibility of impact	The impact is irreversible but can be mitigated			
Degree of irreplaceable loss of resource	High			
Affected stakeholders	Not Applicable			
Magnitude	Extent	Site 2		
	Intensity	Medium 3		
	Duration	Medium Term 3		
	Probability	Definite 5		
	Weighting Factor	Medium to High 4		
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(2+3+3+5) \times 4 = 52$		M
	With mitigation	$WOM \times ME = WM$ $52 \times 0.4 = 20.8$		L-M

Mitigation measures:

- Vegetation clearance must be kept to a minimum.
- No littering must take place on site or in the surrounding areas.
- No insecticides or any form of pesticides must be used during the construction phase. More natural means of combating insects and vermin should be implemented.
- Re-vegetation of the remaining area within the development should be with indigenous species. Indigenous flora (grasses, sedges and trees) is easy to maintain and will recreated suitable habitats on the site to facilitate the maintenance and diversity of species that previously occurred.
- The landscaped area should be maintained throughout the operational phase.
- The proposed open space areas planned as part of the development, should only use indigenous species

5. Noise

Noise will be generated during the construction phase. Some of the activities which could constitute a noise nuisance during construction are power tools, driving, loading and offloading, vehicle hooters and reverse sirens. This impact is specifically important in this development because of the proximity to the existing residential properties.

Table 6: Noise Impact Assessment

Impact source(s)	Power tools, driving, loading and offloading, vehicle hooters and reverse sirens		Status	-
Nature of impact	Noise nuisance may be caused to the surrounding communities (especially Delmore Gardens to the immediate north of the site)			
Reversibility of impact	The impact is irreversible but can be mitigated			
Degree of irreplaceable loss of resource	N/A			
Affected stakeholders	Surrounding existing communities			
Magnitude	Extent	Site 2		
	Intensity	Medium 3		
	Duration	Short Term 1		
	Probability	Definite 5		
	Weighting Factor	Medium 3		
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(2+3+1+5) \times 3 = 33$		L- M
	With mitigation	$WOM \times ME = WM$ $33 \times 0.8 = 26.4$		L- M

Mitigation measures:

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- All reasonable precautions must be taken to minimise noise generated on site.
- Construction vehicles must be kept in good working order so as not to generate excessive noise.
- The contractor may not use sound amplification equipment on site.
- Activities which will lead to excessive noise should be limited to take place during the day.
- Construction activities must be limited to normal working hours during the week, i.e. 07:00am until 17:00pm.
- If construction is required on the weekend, permission to do so must be granted from the adjacent land owners beforehand.
- Construction vehicles must be kept in good working condition at all times to prevent becoming the source of excess noise.
- The construction crew must abide by the National Noise laws and the local "by-laws" regarding noise.

6. Employment creation

The proposed development will create employment opportunities for the local community during the construction phase of the development. The construction phase will create short to medium term employment opportunities for skilled and unskilled labourers, as well as training opportunities for unskilled labourers. As the development is near to several informal settlements, it is possible for unemployed people in these areas to be provided with jobs, and hence improved financial stability.

Table 7: Employment

Impact source(s)	Construction Activities		Status	+
Nature of impact	Employment			
Reversibility of impact	The impact is irreversible			
Degree of irreplaceable loss of resource	Not Applicable			
Affected stakeholders	Area Interested and Affected Parties (I&APs) from Delmore and outside Delmore.			
Magnitude	Extent	Regional 3		
	Intensity	Low 1		
	Duration	Short Term 1		
	Probability	Highly Likely 4		
	Weighting Factor	Medium to High 4		
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(3+1+1+4) \times 4 = 40$		M
	With mitigation	Not applicable		

Mitigation measures:

N/A

7. Increase in ambient dust levels

Construction activities, such as vegetation clearing, vehicles travelling on exposed surfaces, excavations and earthworks will result in elevated ambient dust levels within the area during the construction phase. Increased dust levels may adversely affect persons working and/or residing in the nearby area.

Table 8: Increase in ambient dust levels

Impact source(s)	Construction activities on site such as vegetation clearing, excavations, etc.		Status	-
Nature of impact	Increased ambient dust levels			
Reversibility of impact	The impact is irreversible but can be mitigated			
Degree of irreplaceable loss of resource	N/A			
Affected stakeholders	Surrounding land owners and occupiers of land as well as construction workers			
Magnitude	Extent	Regional 3		
	Intensity	Medium 3		
	Duration	Medium Term 3		
	Probability	Definite 5		
	Weighting Factor	Medium to High 4		
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(3+3+3+5) \times 4 = 56$ Medium		M
	With mitigation	WOM x ME = WM $56 \times 0.6 = 33.6$ Low to Medium		L - M

Mitigation Measures:

- Appropriate dust suppression methods must be applied.
- All vehicles transporting materials that can be blown off (i.e. soil and rubble) must be covered with a tarpaulin, and speed limits of 20km/h should be adhered to;

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- Exposed soil stockpiles shall be covered, kept damp or protected using organic binding agents or alternative techniques that are not water intensive.
- The clearing of vegetation must be kept to a minimum and only undertaken where and when required.
- Avoid unnecessary movement of construction vehicles on exposed soils.
- Vehicles travelling on unsurfaced roads must travel at a speed that creates minimal dust entrainment.

8. Visual impact

Construction activities will cause unsightly views as the soils are exposed. Stockpiles, site offices and construction equipment will add to the visual intrusion. The visual intrusion will decrease with time as the development of the development nears completion and the construction activities will be cleared. Given the speed at which the motorists travel, the views of the construction activities will have an impact. Traffic congestion that is associated with this road will prolong the experience of the motorists' visual intrusion.

Parcels of exposed soil will define the construction areas of the different zones and will be a dominant feature during the construction phase. The construction site will appear dispersed with construction equipment, material stockpiles and ancillary components. Large construction equipment may be used for the construction of complex buildings. Extensive earthworks will be necessary to grade the sites and possible dust clouds may be generated by the activities. Delivery vehicles and trucks will frequently deliver building material to the site. The intensity of the impact on visual receptors during the construction phase is considered to be medium.

Table 9: Visual impact of construction activities on visual receptors

Impact source(s)	Construction activities including construction camps, material lay down yards, stockpiles, cranes, scaffolding, delivery vehicles and dust.		Status	-
Nature of impact	Views of the construction activities which are out of character with the surrounding landscape and will affect the sense of place negatively.			
Reversibility of impact	Partially reversible through the implementation of adequate visual mitigation measures during the construction phase.			
Degree of irreplaceable loss of resource	Low			
Affected stakeholders	Surrounding land owners, motorists travelling along Commissioner and Du Preez Streets.			
Magnitude	Extent	Regional 3		
	Intensity	Medium 3		
	Duration	Short to Medium term 2		
	Probability	Highly likely 4		
	Weighting Factor	Medium to High 4		
Significance	Without mitigation	(Extent + Intensity + Duration + Probability) x WF (3+3+2+4) x 4 = 48 Medium	M	
	With mitigation	WOM x ME = WM 48 x 0.6 = 28.80 Low to Medium	L - M	

Mitigation measures

- Protect identified trees specimens.
- Utilise the existing screening capacity of the site and improve it by enclosing the construction site and stockyards with a dark green or khaki brown shade cloth of at least 20% density and at least 3 metres high, as an additional screen.
- Keep the construction sites and camps neat, clean and organised in order to portray a tidy appearance.
- Remove rubble and other construction rubbish off site as soon as possible or place it in containers in order to keep the construction site free from additional unsightly elements.
- Dust suppression techniques should be implemented especially on windy days, preferably using biodegradable binding agents.
- If practically possible, locate construction camps in areas that are already disturbed or where it is not necessary to remove established vegetation.
- Retain the existing vegetation cover of the site through selective clearing, where practical.
- Exposed soil must be covered or 'camouflaged' using a biodegradable soil mat and vegetation cover to reduce the duration of visible scarring of the landscape.
- Rehabilitation of all stripped and damaged areas must be implemented as soon as practically possible.
- It is suggested that construction should start and stop during normal working hours without starting too early or continuing until late into the night to avoid night-time visual impacts, also avoid working over weekends and holiday periods.
- If construction is necessary during night-time, light sources should be directed downwards and inwards away from sensitive view points and roads to prevent obtrusive lighting.
- The construction camp (if required) must be placed in areas that will least impact adjacent land owners.
- Down lighting must be used wherever possible to prevent light impacting the adjacent landowners.

9. Crime, safety and security

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

During construction, there will be an influx of construction workers and associated persons into the area, which may have a resultant impact on increased crime and/or criminal activity within the community. Construction workers will also have to commute to site, thus increasing the demand for taxi services within the community which may further facilitate unwanted groups/ criminals accessing the area/ community.

Construction activities could lead to injuries to staff or the public. Where heavy equipment is used, dangerous situations are created and the risk of injury increases. Additionally, the activities of the construction personnel may, potentially, contribute to an increase in the level of crime in the area.

Table 10: Increase in crime, safety and security

Impact source(s)	The congregation of construction workers on site and the risk of storage and use of heavy-duty equipment for construction activities.		Status	-
Nature of impact	Safety of personnel & equipment, Safety and security			
Reversibility of impact	NA			
Degree of irreplaceable loss of resource	NA			
Affected stakeholders	Local community members including schools and businesses			
Magnitude	Extent	Regional 3		
	Intensity	Medium 3		
	Duration	Short to medium term 2		
	Probability	Likely 3		
	Weighting Factor	Medium to High 4		
Significance	Without mitigation	(Extent + Intensity + Duration + Probability) x WF (3+3+2+3) x 4 = 44 Medium	M	
	With mitigation	WOM x ME = WM 44 x 0.8 = 35.2 Low	L - M	

Mitigation measures

- The Contractor will have to ensure that the development site is secure at all times. Security guards must be present and visible at all times during the day and at night.
- Limit access to the site. The public are not to have access to the development site.
- To prevent the influx of people to the area, the employment of temporary staff must not take place at on site. This process must be facilitated outside of the local community, if temporary staff is to be employed.
- Ensure that the contact details of the police or relevant security company, ambulance service and fire brigade are available on site.
- No informal trading will be allowed on the site or in close proximity to the site (i.e. along Commissioner and Du Preez Streets).
- Do not allow for the congregation of vagrants on or near the site.

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

The following specialist studies have previously been undertaken and the reports are appended in Appendix G of this Final BAR.

- **Basic Ecological Assessment (Prepared by Urban Dynamics, November 2007);**
- **Geotechnical Investigation (Intraconsult Consulting Engineers and Geologists, August 2008);**
- **Cultural Heritage Impact Assessment (Strategic Environmental Focus, 3 September 2008); and**
- **Traffic Impact Assessment (Infragen Consulting Engineers (Pty) Ltd, June 2008).**

Additional to the above, the following reports have also been appended to this Final BAR.

- **Electrical Report (24 January 2008); and**
- **Services Report 9 July 2008).**

3. 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:

B. OPERATIONAL PHASE

1. Traffic Impact Assessment

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Access to the proposed residential development can only occur from Du Preez Street. Ingress and egress during the operational phase will be left in left out of Du Preez Street. Essentially, the proposed residential development is proposed to cater for the current traffic making use of Du Preez Street and Commissioner Road travelling from the adjacent residential development.

A PWV 13 road is proposed to be developed east of the proposed site. Please refer to the Layout Plan in Appendix C. For the proposed development, it is assumed that a large portion of the proposed houses would own a private vehicle, but who would not necessarily use the vehicle to commute to/ from work within the peak hours. Trip generation rate used = 0.6 trips per unit with 80/20 directional split.

Table 11: Traffic Impact Assessment

Impact source(s)	Vehicles	Status	-
Nature of impact	Traffic Congestion		
Reversibility of impact	The impact is reversible		
Degree of irreplaceable loss of resource	Medium		
Affected stakeholders	Landowners		
Magnitude	Extent	Site 2	
	Intensity	Medium 3	
	Duration	Permanent 5	
	Probability	Highly Likely 4	
	Weighting Factor	Medium 3	
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(2+3+5+4) \times 3 = 42$	M
	With mitigation	$WOM \times ME = WM$ $24 \times 0.6 = 25.2$	L-M

Mitigation measures:

- Access points to the site must be kept clear to allow for efficient flow in and out of the development.
- Introduce speed reducing elements at the entrance to the development
 - ✓ *Speed humps; and*
 - ✓ *Appropriate reduction in speed from 80 km/h speed limit prescribed for Du Preez Street and Commissioner Road as you approach the residential development.*
- Ensure that roads in the vicinity of the site are in a good condition and report any damages to the road surface or traffic signs to the responsible authority.

2. Ground and/ or Surface Water Impacts

An increase in traffic will contribute to an increase in contamination of roadside soils due to particulates from tyres, brake and road wear, petrochemical products leaking from vehicles. The impacts which these objects might have on the surrounding environments can be mitigated by implementing the corrective measures.

Storm water runoff will affect water quality, water quantity, habitat and biological resources, and the aesthetic appearance of the water resources. These include short-term changes in water quality during and after storm events including temporary increases in the concentration of one or more pollutants, toxics or bacteria levels. Long-term water quality impacts caused by the cumulative effects associated with repeated storm water discharges from a number of sources. Physical impacts due to erosion, scour, and deposition associated with increased frequency and volume of runoff that alters aquatic habitat.

Table 12: Ground and/ or Surface Water Impacts

Impact source(s)	Particulates from tyres, brake and road wear & petrochemical products leaking from vehicles, storm events including temporary increases in the concentration of one or more pollutants, toxics or bacteria levels.	Status	-
Nature of impact	Contamination, erosion, scour, and deposition		
Reversibility of impact	The impact is irreversible but can be mitigated		
Degree of irreplaceable loss of resource	Low		
Affected stakeholders	The proposed development itself		
Magnitude	Extent	Site 2	
	Intensity	Medium 3	
	Duration	Long Term 4	
	Probability	Definite 5	
	Weighting Factor	Medium 3	
Significance	Without mitigation	$(Extent + Intensity + Duration + Probability) \times WF$ $(2+3+4+5) \times 3 = 42$	M
	With mitigation	$WOM \times ME = WM$ $42 \times 0.6 = 8.4$	L-M

Mitigation measures:

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

- If excessive spillage of oil and fuel etc. should occur due to accidents, it should be cleaned-up immediately.
- Regular monitoring and maintenance of the road to ensure that foreign items are collected and suitably disposed of e.g. collection and disposal of debris.
- Stormwater infrastructure must be designed in such a manner that surface water flow i.e. is limited; and
- Tenants/ Owners must ensure their vehicles are in good working condition so as to prevent the unnecessary leaks of fuels, oils, or other motor vehicle lubricants.

3. Noise

This impact is as assessed in the Construction Phase.

Mitigation measures:

- The development must abide by the National Noise laws and the local "by-laws" regarding noise.

4. Visual Impact

The development will require appropriate signage in order to advertise the activity. This advertising could be regarded as a visual intrusion to the motorists. However, this also adds to the advertising potential of a visually obstructive sign as the commercial brand is open to a larger viewer market.

Mitigation measures:

- The development's boundary walls and access points must be made as aesthetically pleasing as possible.
- The development should blend in with the surrounding environment as far as possible.
- The development must be well maintained, including boundary walls and entrance points so they do not become aesthetically unpleasant.
- Landscaping using indigenous vegetation must be utilised where applicable, to not only enhance the aesthetics of the site, but unify the development with its surroundings.
- All landscaped areas must be regularly maintained.
- Keep the property neat and litter free at all times and maintain the landscaped areas.
- Supply sufficient garbage bins at the commercial facilities, restrooms, restaurants and food outlets.
- Ensure that the garbage bins are collected to one place on the site and is collected by the relevant authority on a regular basis.
- The landscaping must be a combination of indigenous plants consisting of low ground covers, shrubs and lawn together with high growing trees.
- Minimize illumination by directing all lighting towards the ground and inwards away from the boundaries;
- Limit the area of advertising signage.
- Avoid stark white florescent lighting.
- Avoid high wattage flood lighting.

5. Crime, safety and security

The congregation of vagrants on site could lead to a potential for criminal activity. Hence this needs to be avoided at all costs in order to ensure the safety and security of the public that use the mixed use development as well as the surrounding communities.

Table 13: Increase in crime, safety and security

Impact source(s)	Commercial development that provide a platform for criminals and vagrants to come together; and emergencies occurring during the operational phase.		Status	+
Nature of impact	Safety of personnel & equipment, Safety and security			
Reversibility of impact	NA			
Degree of irreplaceable loss of resource	NA			
Affected stakeholders	Local community members including schools and businesses			
Magnitude	Extent	Regional 3		
	Intensity	Medium 3		
	Duration	Short to medium term 2		
	Probability	Likely 3		
	Weighting Factor	Medium to High 4		
Significance	Without mitigation	(Extent + Intensity + Duration + Probability) x WF (3+3+2+3) x 4 = 44 Medium		M
	With mitigation	WOM x ME = WM 44 x 0.8 = 35.2 Low		L - M

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Mitigation measures

- Staff must regularly be informed of the necessary safety procedures and be competent in the work they are employed to do;
- Ensure that staff is familiar with the Occupational Health and Safety Policy and the Health, Safety, Security and Environmental Policy of the relevant contractor/developer;
- All the necessary safety regulations must be abided by including building codes and the fire practice requirements;
- Provide adequate facilities on site to treat emergencies to staff and/or the public;
- Ensure that the contact details of the police and/or Security Company, ambulance services and fire brigade are available on site;
- Do not allow for the congregation of vagrants on the site; and
- CCTV systems are to be installed.

6. Taxable land portion for EMM

Vacant land within the Gauteng urban edge is a valuable commodity and resource. It is imperative that this kind of resource is not left vulnerable to the causes and effects of urban decay and its negative economic and social implications. Development of the proposed Delmore Ext 7 will transform a property, of which a large area can be classified as derelict in character, to an investment in the area and a resource to the surrounding community. The developed property will also create a taxable land portion, benefiting the local municipality.

Table 14: Taxable land portion for EMM

Impact source(s)	The properties development		Status	+
Nature of impact	Transformation of property			
Reversibility of impact	NA			
Degree of irreplaceable loss of resource	NA			
Affected stakeholders	Local community members including schools and businesses			
Magnitude	Extent	Regional 3		
	Intensity	Medium 3		
	Duration	Short to medium term 2		
	Probability	Likely 3		
	Weighting Factor	Medium to High 4		
Significance	Without mitigation	(Extent + Intensity + Duration + Probability) x WF (3+3+2+3) x 4 = 44 Medium		M
	With mitigation	WOM x ME = WM 44 x 0.8 = 35.2 Low		L - M

No Mitigation measures are required.

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:

1. Stormwater runoff

Increased stormwater runoff due to the increase in paved surfaces, and vegetation loss from this development and other developments in the area.

2. Ground or Surface water contamination

Ground or Surface water contamination due to vehicles on site, and construction and operational waste, this could impact on the surrounding water systems.

3. Traffic

Increasing traffic that already exist from the adjacent community during both normal and peak hour traffic. Contribute to the decrease in air quality due to the contribution of vehicle-entrained dust emissions, and motor vehicle emissions.

4. Visual

The general visual and light intrusion caused by the proposed development.

5. Socio-economic

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

Positive cumulative impact that will result from the proposed development include:

- Socio-economic upliftment due to the provision of formal housing and job creation.

6. Noise Pollution

An increase in noise can be expected during the operational phase due to the increase in carrying capacity of the roads. It is anticipated that the proposed development will not significantly increase the cumulative noise impact associated with the current existing roads. .

5. 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.

At present it is not anticipated that the proposed development will ever be decommissioned in its entirety. Ongoing maintenance and upgrades, where necessary, will be carried out. In the unlikely event that decommissioning is necessary, it is recommended that a detailed decommissioning strategy and rehabilitation plan is prepared and implemented.

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

6. 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

All negative impacts identified for the proposed development can be mitigated provided the proposed mitigation measures are correctly implemented.

Construction Phase

During construction phase, various impacts were identified. These include Traffic, Ground and Surface Water Pollution, Soils erosion and stability, Flora and Fauna, Noise, Employment, Increase in dust, Visual, Crime, Safety and Security. Majority of the impacts identified under construction phase were LOW to MEDIUM IN SIGNIFICANCE before mitigation measures except employment creation which is positive by itself before any mitigation measure. With mitigation measures in place all the identified impacts can be minimised into LOW IN SIGNIFICANCE.

Operational Phase

Traffic, Ground and Surface water, Noise, Visual, Crime, Safety and Security impacts. Taxable land portion for EMM were among the identified impacts to be expected during operational phase. Their impacts were MEDIUM IN SIGNIFICANCE before mitigation measures. With mitigation measures, their impacts can further be reduced into a LOW IN SIGNIFICANCE.

Decommission Phase

There is at present no intention or indication of future intentions, to decommission the proposed development.

No- Go Alternative

None of the impacts identified for the proposed activity will occur (including positive and negative impacts) if the proposed activity does not proceed. Should the authorities decline the application, the 'No-Go' option will be followed and the status quo of the site will remain. As a result, the site would continue to deteriorate which at present does not support or create suitable habitats for both flora and fauna. It will also provide an opportunity for the expansion of the informal settlement. It is a norm that once people start living in an area without formal services in place, the environment degradation is inevitable.

Alternative 1

Alternative 2

No-go (compulsory)

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

7. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The proposed activity entails the establishment of a residential development, Delmore Park Extension 7. The development will consist of 254 stands on approximately 14 ha of land on Portion 396 of the Farm Driefontein 85 I.R. in Boksburg, Gauteng.

It is the applicant's intention to develop the following:

254 stands, i.e.

- 248 Residential 1;
- 3 Institution;
- 1 Municipal;
- 1 Educational; and
- 1 Private Open Space and Roads.

3, 1 hectares of land will be allocated for road. A maximum of 673 residential units will be built.

Access to and from the proposed residential development will be obtained from Du Preez Street along the western boundary of the proposed township. EMM has previously indicated that the development in the area will be supplied with 11kV from the nearby Central Vertical substation. EMM will be responsible for the bulk infrastructure for the proposed township development (water supply, sanitation, and waste management).

For alternative:

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.

Vacant land within the Gauteng urban edge is a valuable commodity and resource. It is imperative that this kind of resource is not left vulnerable to the causes and effects of urban decay and its negative economic and social implications. This is already taking place. Please refer to Appendix B for the site photos.

Development of the proposed project will transform the property, of which a large area can be classified as derelict in character. Not only will the development provide housing but it will additionally provide employment during the construction phase.

The preferred alternative is best suited to the site position and site layout for the proposed development and will provide the best opportunity for implementing the proposed mitigation measures.

Should the project be approved, implementation of the mitigation measures identified in this report will greatly reduce the risk the development could have on the environment.

8. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner).

YES	NO
X	

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

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

The following conditions must be included in the environmental authorisation:

- The site design and layout as well as building procedures must be implemented as listed in the Geotechnical Report and the NHBRC Home Building Manual and in accordance to the recommendations as set out within the attached Geotechnical Report (Appendix G).
- The EMPr will be binding on all managers and contractors operating/ utilising the site (See Appendix H).
- All recommendations contained in all the Specialist Studies Reports as appended in this Final BAR as Appendix H must be adhered to during the construction and operational phases of the development.
- Schedule the construction process to limit obstruction to traffic flows during peak traffic hours.
- Activities which will lead to excessive noise should be limited to take place during the day.
- Implement erosion control measures where applicable.
- Construction camp to be erected where it will have the least environmental impact.
- Maintenance done on construction vehicles must be done in such a manner to prevent spillage of fuel and oils.

BASIC ASSESSMENT REPORT [REGULATION 22(1)]

- After the completion of construction, any possible soil compaction and spillage of substances within the construction camp must be rehabilitated.
- No construction workers are permitted to be accommodated overnight on the site or in the site construction camp except for appointed security personnel.
- Appointment of an ECO.
- Re-vegetate open spaces and rehabilitate after construction has taken place
- Only indigenous vegetation should be utilised during rehabilitation.
- Non-hazardous material should be recycled and utilised in other construction processes.
- Visible remains of concrete as a result of construction must be physically removed and disposed of as building wastes.
- All reasonable precautions must be taken to minimise noise generated on site.
- Construction vehicles must be kept in good working order so as not to generate excessive noise.
- During construction all staff must be adequately identified.
- Section 21 c and i water uses should be applied for should stormwater be disposed of in the Elsburg Spruit.

9. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

If the EAP answers yes to Point 7 above then an EMP is to be attached to this report as an Appendix. Please refer to Appendix H for a copy of the Environmental Management Programme (EMPr).

EMPr attached

YES
X

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

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

Appendix A:	Site plan(s)
Appendix B:	Photographs
Appendix C:	Facility illustration(s)
Appendix D:	Route position information
Appendix E:	Public participation information
Appendix F:	Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information
Appendix G:	Specialist reports
Appendix H:	EMPr
Appendix I:	Other information

CHECKLIST

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

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