

Basic Assessment Report

Draft

**PROPOSED RESIDENTIAL
DEVELOPMENT REFERRED TO AS
EQUESTRIA EXT 214 SITUATED ON
PORTION 535 OF THE FARM THE
WILLOWS 340 JR, EQUESTRIA,
CITY OF TSHWANE, GAUTENG
PROVINCE**

June 2017



Social and Environmental Consultants



Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**
4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**
5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.
6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
8. An incomplete report may lead to an application for environmental authorisation being refused.
9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**
10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.
11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.
12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.
13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

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

Administrative Unit of the of the Environmental Affairs Branch
 Ground floor Diamond Building
 11 Diagonal Street, Johannesburg
 Administrative Unit telephone number: (011) 240 3377

~~Department central telephone number: (011) 240 2500~~

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

(For official use only)

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

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

The draft BAR has been submitted to GDARD together with the GDARD application form in order to register the project.

Is a closure plan applicable for this application and has it been included in this report? NO

if not, state reasons for not including the closure plan.

The proposed project/application is for the development of a residential development.

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

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

If no, state reasons for not attaching the list.

Have State Departments including the competent authority commented? NO

If no, why?

The draft BAR has been submitted to GDARD together with the GDARD application form in order to register the project. The draft BAR will go out for public review from 07 November to 07 December 2016. All state departments will receive the draft report on 07 November 2016, together with the GDARD application from submission.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

The proposed development of a Residential Township to be established on Portion 535 of the Farm the Willows 340-JR, Equestria, City of Tshwane, Gauteng Province: Referred to as "Equestria Ext 214 Development".

Select the appropriate box

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

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

YES	NO
	X

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

If yes, have you applied for the authorisation(s)?
If yes, have you received approval(s)? (attach in appropriate appendix)

YES	NO
YES	NO

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:

Planning

- Local Government: Municipal Structures Act, 1998, Act 117 of 1998:** Sets the functions of municipalities and indicates that they must seek to achieve the integrated, sustainable and equitable social and economic development by ensuring integrated development planning and promotion of bulk infrastructure development and services.
- Gauteng Spatial Development Framework, 2000:** The Gauteng Spatial Development Framework is intended to guide decisions relating to the location and nature of physical development in Gauteng; Equestria, has been indicated as a Long Term Densification Area.
- Tshwane Metropolitan Spatial Development Framework, (RSDF), 2012:** The City of Tshwane (COT) embarked on processes to compile seven Regional Spatial Development Frameworks (RSDF's) for the administrative planning regions of the metropolitan area in 2011. The study area is located within Planning region six (6). A Spatial Development Framework must: Indicate where public and private development infrastructure investment should take place, Indicate desired development and land use patterns for different areas, Indicate where development of particular land uses should be discouraged or restricted, Provide broad indication of the areas where priority spending should take place, Shall provide guidelines for development and land use decision-making by the municipality. The RSDF is not the sole mechanism in determining the suitability of any potential change in land use,

but should be used in conjunction with requirements as may be determined by infrastructure and other relevant aspects that may not be contained in the RSDF. Development proposals, whether in line with these documents or on merit, should only be supported if infrastructure to the satisfaction of the local authority can be provided in line with the overall IDP.

- **Pretoria Structure Plan 1993:** The site lies in Cell 26 (Pretoria East) of the Pretoria Structure Plan, 1993. The area within which it is situated has been earmarked for low-density residential development (i.e. densities ranging between 3 and 25 dwelling units per hectare).

The proposed development is in line with the above guideline.

- **Integrated Development Plan for Planning Zone 10 (IDP):** Planning Zone 10 consist of a large area broadly defined as the east of Pretoria and more recently referred to as the “new east”.
- Development objectives in Zone 10:
 - Protect the residential character and quality of life of the zone by guarding against intrusion of conflict land uses.
 - Ensure orderly and balanced provision for the various land uses by applying sound town planning principles.

The IDP is also in line with the SMDF which focuses on integration and densification – this is accomplished by bringing the workplace and place of residence closer to each other.

According to the IDP, substantial area of vacant land exist in this planning zone that should be available for residential expansion, with a degree of infill development between township and smaller parcels of land.

- **Spatial Development Framework (SDF) for Willow Glen Agricultural Holdings:** The SDF for the Willow Glen Agricultural Holdings earmarks Holding 181 for low density residential development (i.e densities between 16-25 units per hectare)

The proposed development is in line with the SDF.

Environmental assessment

- **National Environmental Management Act, (Act No. 107 of 1998) (NEMA),** the EIA Regulations of April 2017: The act determines the processes, principles and criteria for consideration of applications, i.e. it is applicable in its entirety.

The listed activities that apply to this application is as follows:

<p><i>GN R.327 Listed Notice 1, (April 2017)</i></p>	<p><i>Activity 12:</i></p>	<p>The development of – (ii) Infrastructure or structures with a physical footprint of 100 square meters or more: Where such development occurs – c) if no development setback exists, within 32 meters of a watercourse, measured from the edge of a watercourse:</p>
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<p><i>GN R.327 Listed Notice 1, (April 2017)</i></p>	<p><i>Activity 17:</i></p>	<p>Development – (v) if no development setback exists, within a distance of 100 meters inland of a water mark of an estuary, whichever is the greatest, • In respect of: f) infrastructure or structure with a development footprint of 50 square meters or more</p>
<p><i>GN R.327 Listed Notice 1, (April 2017)</i></p>	<p><i>Activity 9</i></p>	<p>The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water - • with an internal diameter of 0,36 metres or more; or • with a peak throughput of 120 litres per second or more, excluding where: such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or railway line reserve.</p>

In order to be in a position to develop the proposed Equestria Ext 214 Development, the Applicant needs to obtain Environmental Authorisation from the Gauteng Department of agriculture and Rural Development (GDARD), to lawfully undertake the above listed activity, listed in Listing Notice 1 of the Environmental Impact Assessment Regulations, 2017, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and which came into effect in December 2015.

Activity 12 and 17 of Listing Notice 1 is triggered since the development is impacted on by the 1:100-year flood line, that is situated on the south-western border of the site. Activities 9, triggered due to the municipal requirement for services.

Activities triggered in Listing Notice 1 of the 2017 NEMA Regulations require an independent environmental assessment (Basic Assessment Process) to be conducted. BATHO EARTH Environmental Consulting was appointed to undertake the Basic Assessment Process, as described below.

Aims of the Basic Assessment Process: The aims of the Basic Assessment Process are to:

- Identify important physical, biological, social, economic and cultural aspects of the environment that may be affected by the proposed retirement village development;
- Provide Interested and Affected Parties (I&APs) the opportunity to comment on the development proposals;
- Provide information on the methodology adopted in assessing the potential impacts that have been identified, including any specialist studies that have been undertaken;
- Assess the potential negative and positive environmental issues, potential impacts including cumulative impacts of the proposed development alternatives on the surrounding environment, and the I&APs issues and concerns that have been raised with respect to the proposed development;
- Provide the necessary mitigation measures to ensure that all identified environmental impacts are kept to a minimum and include these in an Environmental Management Plan

- (EMP) for the Construction and Operational Phase of the retirement village project; and
- Provide the decision-making authorities with information in an accurate, unbiased and credible manner to enable a reliable and informative decision to be made with regards to the Environmental Decision for the Equestria Ext 214 Development.

Waste

- **National Waste Act, 2008 (Act No. 58 of 2008):** The Waste Act repealed Section 20 of the Environment Conservation Act, 1989 (Act No. 73 of 1989) (ECA) and introduced new provisions regarding the licensing of waste management activities. In terms of the Waste Act the Minister has published a list of waste management activities that have, or are likely to have, a detrimental effect on the environment.

The proposed Equestria Ext 214 Development township development will not trigger any Waste Management Activities.

Heritage resources

- **National Heritage Resources, Act, 1999, Act 25 of 1999:** Sets requirements for assessment of impacts on the cultural and heritage assets, the processes to be followed in notifying the competent authority and the elements of a report on the assessment.

The proposed Equestria Ext 214 Development township development will not trigger any Heritage Activities.

Roads, transport and advertising

- **Road Traffic Act, 1989, Act 29 of 1989:** The establishment of new intersections and determination of traffic requirements, primarily through implementation of the traffic impact assessment recommendations.

See attached for the Environmental Management Programme (EMPr).

Workers health and well-being

- **Occupational Health and Safety Act, 1993, Act 85 of 1993:** Considerations to be incorporated into the construction phase environmental management plan during the EIA process.

See attached for the Environmental Management Programme (EMPr).

Biophysical environment

- **National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004),** The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. As part

of its implementation strategy, the National Spatial Biodiversity Assessment was developed.

- **National Spatial Biodiversity Assessment,** The National Spatial Biodiversity Assessment (NSBA) classifies areas as worthy of protection based on its biophysical characteristics, which are ranked according to priority levels.

Please refer to the 1:100 year floodline done for the proposed development

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3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

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

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

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

The application is for the proposed development of a Residential Township to be established on Portion 535 of the Farm the Willows 340-JR, Equestria, City of Tshwane, Gauteng Province: Referred to as "Equestria Ext 214 Development".

The applicant proposes to develop 25 units per ha, to be zoned Residential 3. Further land uses catered for include public open space and roads.

Project Locality and Size

The property is situated on the southern side of Stellenberg Road, within the Willowglen Agricultural Holdings commonly known as Equestria, Pretoria East. The site is approximately 500m to the east of Solomon Mahlangu Drive and the Makro Store Silver Lakes. Simon Vermooten Road is to the east and the N4 to the south.

The size of the development site is 1,9887ha in extent.

Project Description

The study site is currently zoned *agricultural (please refer to Appendix A)*. A Town planning application has been lodged with the City of Tshwane Municipality to obtain the following land-uses rights: (Please refer to the figure 1 below):

	Zoning	Density	Height	Coverage
ERF 1	'Special' for dwelling units	Maximum density of 25 units per ha	2 storeys provided that it may be increased with the consent of the municipality	As per the approved SDP.
ERF 2	'Public Open Space'			

The development will aim to have a total of 33 houses on the property. The Township is affected by the 1:100 year flood line. Please refer to Appendix G.

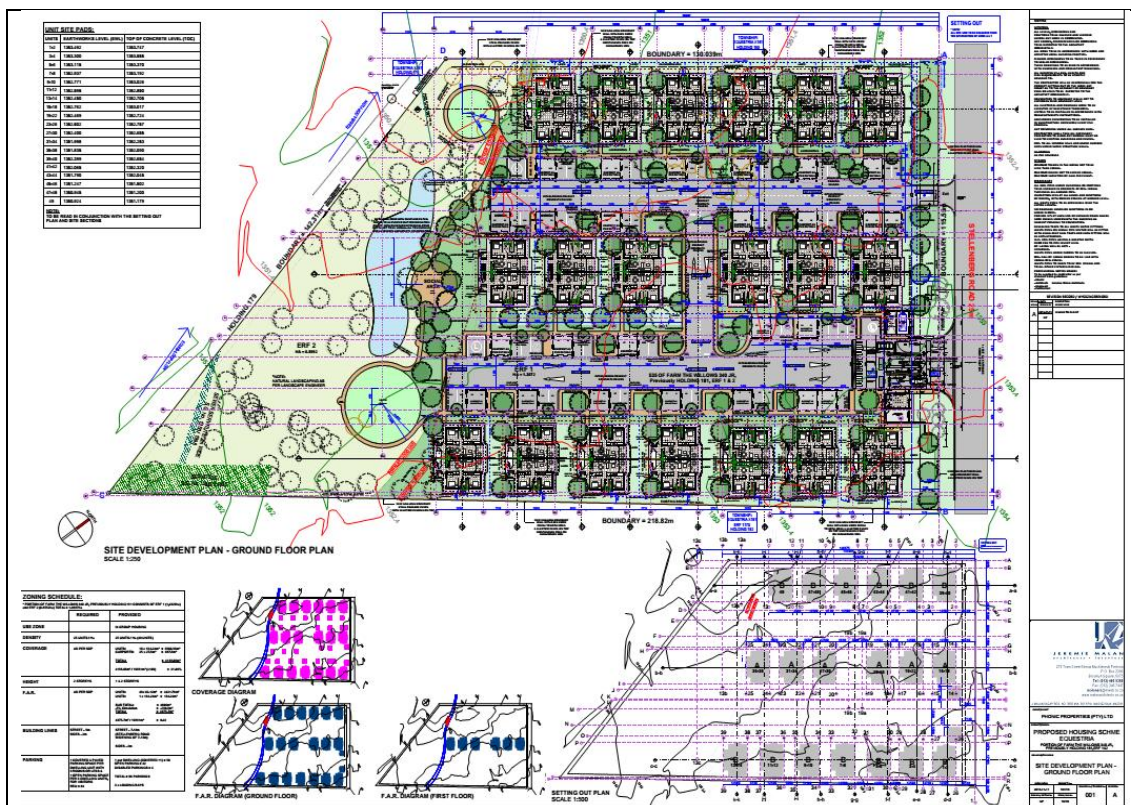


Figure 1: Draft Site Development Plan: Equestria Ext 214

Access

It is consequently foreseen that access to the development will be provided via Stellenberg Road

Land Use:

The present land use of the property is a dwelling house with associated outbuildings. The area in which the site is situated comprises of dwelling houses on agricultural holdings, vacant land and number of residential townships (mostly cluster housing developments). Leopard Rock Residential Estate is bordered directly to the east of the property. Please refer to the **figure 2** below.

Services:

The proposed township lies within an established residential neighborhood and services such as storm water drainage, water, sewage and electricity is available.

Electricity -

Please refer to Appendix F for the communication e-mails between City of Tshwane and Engineers (Mr S Mouton). The total electrical link service requirement for Equestria Ext 214 has been estimated as 155 kVA. City of Tshwane confirmed capacity is available at the Wapadrand Substation (123/11kV) station.

Water and Sanitation:

Please refer to Appendix F, for the official letter from City of Tshwane: Office of Water and Sanitation, that the municipality has no objection to the application, with reference to specific conditions that has to be adhered to.

Stormwater:

Please refer to Appendix F, for the official letter from City of Tshwane: Roads and Stormwater Division, stating that the layout plan is acceptable.

1: 100 year flood line:

The southern part of the site is affected by the 1:50 & 1:100 year flood line and shall be zoned "Public Open Space". Please refer to Appendix G for a copy of the Flood line determination done on the said property. Please also refer to Figure 2 below.

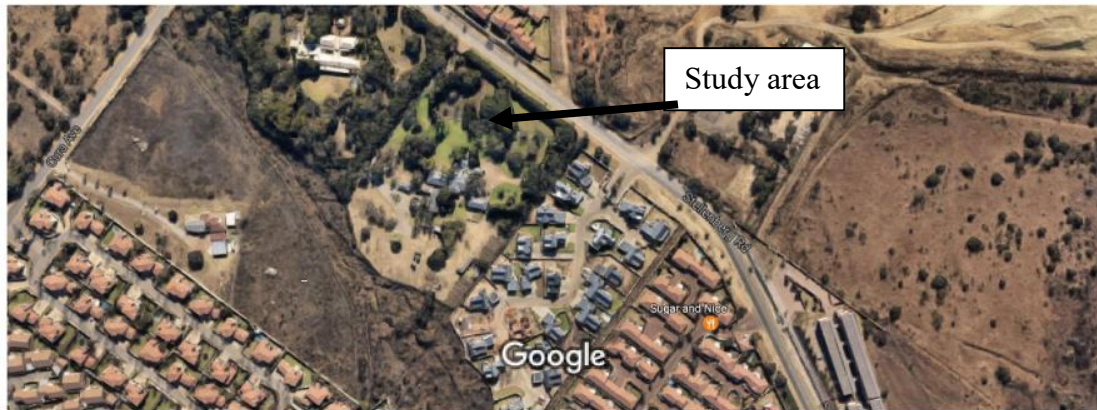


Figure 2: Showing the surrounding land use and the 1:100 year flood line.

Alternatives Considered

In terms of the EIA Regulations (2010) Section 31(2)(g), an EIR is required to provide a Description of identified potential alternatives to the proposed activity, including advantages and disadvantages that the proposed activity or alternative may have on the environment and the community that may be affected by the activity.

Where possible alternatives have been identified and investigated.

Location Alternative

The applicant *PHONIC PROPERTIES* is also the property owner of Portion 535 of the Farm the Willows 340-JR, Equestria, Gauteng Province: Referred to as the Equestria Ext 214 development.

For this reason, no further location alternatives will be considered and the proposed development is restricted to the farm applied for.

The proposed site is considered feasible and reasonable for the following reasons:

1. From an ecological perspective, the study area is considered to be of low sensitivity as a result of the increased level of disturbance and habitat transformation within and surrounding the study area;
2. The proposed residential development is commercially feasible and is a requirement for the long term economic viability of the area;
3. The development will promote housing opportunities.
4. The development will establish viable communities with convenient access to economic opportunities, infrastructure and social services;

Provide a description of the alternatives considered

No.	Alternative type, either alternative:	Description
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BASIC ASSESSMENT REPORT [REGULATION 23(1)]

	site on property, properties, activity, design, technology, energy, operational or other (provide details of "other")	
1	Proposal: Preferred affordable housing layout	<p>PHONIC PROPERTIES propose the development of a residential township on Portion 535 of the Farm the Willows 340-JR, Equestria, City of Tshwane, Gauteng Province: Referred to as "Equestria Ext 214 Development</p> <p>The development proposal is to develop 25 units per ha, to be zoned Residential 3. Further land uses catered for include public open space and roads.</p> <p>The preferred layout plan accommodates on site storm water, sufficient open space areas, and affordable service provision.</p>
2	Alternative 1 Energy efficiency alternative	<p>The following energy efficiency alternative usages are proposed for the development and could be implemented:</p> <ul style="list-style-type: none"> • Use of low voltage or compact fluorescent lights. • Install large north-facing windows in buildings where possible. • Use of solar water heating system in buildings.
3	Alternative 2 Minimise visual impacts during site establishment.	<p>The new residential development on site would have a visual impact due to the site's location in close proximity to the road and adjacent neighbors.</p> <p>The following mitigation measures should be implemented to reduce the visual impacts.</p> <ul style="list-style-type: none"> • Planning of appropriate site layout, materials stockpiling and waste disposal management ahead of construction. • Adhering to good housekeeping during the construction phase to ensure that construction camps and sites are well organised, material is neatly stacked and waste is regularly removed. <p>The potential visual impact of the proposed houses is further reduced by the fact that the site is located within an approved area for residential development. Furthermore, the number of viewers in the surrounding area is low, including a small number of residential and farmer owners/ managers and workers as well as few vehicles passing through the area on a daily basis.</p>

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

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

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 (**Total environmental (landscaping, parking, etc.) and the building footprint**)

Size of the activity:

1,9887ha

Alternatives:

Alternative 1 (if any)

1,9887ha

Alternative 2 (if any)

1,9887ha

Ha/ m²

or, for linear activities:

Proposed activity

Length of the activity:

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

m/km

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

Proposed activity

Size of the site/servitude:

1,9887ha

Alternatives:

Alternative 1 (if any)

1,9887ha

Alternative 2 (if any)

1,9887ha

Ha/m²

5. SITE ACCESS

Proposal

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

YES	NO
X	
m	

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

Describe the type of access road planned:

It is consequently foreseen that access to the development will be provided via Stellenberg Road.

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

Alternative 1

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

YES	NO
X	
m	

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

Describe the type of access road planned:

It is consequently foreseen that access to the development will be provided via Stellenberg Road.

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

Alternative 2

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

YES	NO
X	
m	

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

Describe the type of access road planned:

It is consequently foreseen that access to the development will be provided via Stellenberg Road

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

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

Section A 6-8 has been duplicated

Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
 - A4 size for activities with development footprint of 10sqm to 5 hectares;
 - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
 - A2 size for activities with development footprint of >20 hectares to 50 hectares);
 - A1 size for activities with development footprint of >50 hectares);
- The following should serve as a guide for scale issues on the layout plan:
 - A0 = 1: 500
 - A1 = 1: 1000
 - A2 = 1: 2000
 - A3 = 1: 4000
 - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
 - Rivers and wetlands;
 - the 1:100 and 1:50 year flood line;
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

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

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

7. SITE PHOTOGRAPHS

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

8. FACILITY ILLUSTRATION

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

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route times

Instructions for completion of Section B for location/route alternatives

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

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

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

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

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

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

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

1. PROPERTY DESCRIPTION

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

The proposed development of a Residential Township to be established on Portion 535 of the Farm the Willows 340-JR, Equestria, City of Tshwane, Gauteng Province: Referred to as "Equestria Ext 214 Development".

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):

S 25.45'53.59"

E 28.20'40.97"

In the case of linear activities:

Alternative:

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

Latitude (S):

Longitude (E):

°	°
°	°
°	°

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

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

Addendum of route alternatives attached

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	T	0	J	R	0	2	8	5	0	0	0	0	0	1	8	1	0	0	0	0	
ALT. 1																					
ALT. 2																					
etc.																					

T0JR02850000018100000

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
X						

The site slopes down to the east with a gradient of 4% to 5% and is partially developed with a residential dwelling and associated buildings. Located on the north-western corner of the site.

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
				X		X

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

Shallow water table (less than 1.5m deep)

Dolomite, sinkhole or doline areas

Seasonally wet soils (often close to water bodies)

Unstable rocky slopes or steep slopes with loose soil

Dispersive soils (soils that dissolve in water)

Soils with high clay content (clay fraction more than 40%)

Any other unstable soil or geological feature

An area sensitive to erosion

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

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

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):**

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

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

Regional geology

Relly, Milner & Sheddon was employed to conduct a geotechnical survey. The conclusion of the study is that:

"No geotechnical conditions are encountered on this site that prevent township establishment provided appropriate design and construction modifications are implemented to overcome problem of highly expansive clay."

The geotechnical report was submitted with the original township application in November 2006.

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)?

YES	NO
	X

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

7. GROUNDCOVER

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

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

Natural veld - good condition % =	Natural veld with scattered aliens % =	Natural veld with heavy alien infestation	Veld dominated by alien species % =	Landscaped (vegetation) 80%
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure 20%	Bare soil % =

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

Are there any rare or endangered flora or fauna species (including red list species) present on the site

YES	NO
	X

If YES, specify and explain:

--

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.

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

If YES, specify and explain:

--

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

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

If YES, specify and explain:

<p>From an ecological perspective, the study area is considered to be of low sensitivity as a result of the increased level of disturbance and habitat transformation within and surrounding the study area, the loss of ecological connectivity to open space areas in the region and the low probability of faunal Species of Conservation Concern (SCC) or any other floral SCC.</p>

Was a specialist consulted to assist with completing this section

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

If yes complete specialist details

Name of the specialist:

Qualification(s) of the specialist:

Postal address:

Postal code:

Telephone:

E-mail:

	Cell:	
	Fax:	

Are any further specialist studies recommended by the specialist?

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

If YES, specify:

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

If YES list the specialist reports attached below

YES	NO
-----	----

--

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):				

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

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

NORTH						
W E S T	Private Residential Estate	Private Residential Estate	Vacant Land	Vacant Land	Residential Complex	E A S T
	Road Slellenberg	Road Slellenberg	Road Slellenberg	Road Slellenberg	Road Slellenberg	
	Road	One Singel Dwelling house/plot		Private Resident/Estate	Residential house	
	Road	Floodline	1:100 year flood	1:100 year floodline	1:100 year floodline	
	Complex	Complex	Residential Estate	Complex	Residential house	
SOUTH						

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

= Site

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

Flood line Determination
Geotechnical Map
Town planning Application

9. SOCIO-ECONOMIC CONTEXT

The City of Tshwane (CoT) embarked on processes to compile seven Regional Spatial Development Frameworks (RSDFs) for the administrative planning regions of the metropolitan area in 2011. The study area falls within Planning Region four (4). The following is a short profile of the region, and represents only a summary of the most salient points. The focus falls on the following issues: The location and main features of the particular region (physical, natural, social and cultural) and a description of the predominant built form and land use; General development trends; Major opportunities and potential of the region; and Major problems currently experienced.

The study area is situated in Region 6, Ward 85. Region 6 is located in the south east of the City. It includes developed urban areas in the north-west and rural areas in the remainder of the region. The south-eastern section of this region has the highest income per capita and could be considered the fuel injection of the city. However, there is also a huge concentration of people in the north east quadrant, representing low and no-income groups. It is also one of the regions with the greatest development pressure. There is a high dependency on private motor vehicles, from the southern section of the region, placing a high demand on the road infrastructure.

Region 6 had a total population of 605 556 people in 2011 (Stats SA Census 2011). Wards 40, 85, 86, 91 and 101 have the highest population. These high population and density (see figure below) wards are located in a previously disadvantaged area, requiring a specific focus in terms of service delivery and the creation of sustainable human settlements.

The urban areas in the north west of the region have the highest densities. The remainder of the region is predominantly low density and rural in nature.

The age groups from 20 to 39 years are the largest, with a substantial portion of the population being under 4 years of age. The majority of people in this region are within the economically active age group. This means a relatively low dependency ratio, as most people in this area should be able to access employment. The latter however depends on the number of job opportunities and access to areas of economic activity. The level of employment will also depend on the levels of education in the region.

Around 22% of the economically active population in the region is unemployed.

A total of 44377 dwelling units, around 22% of dwelling in the region, are informal.

In conclusion, Region 6 is a mix of low density rural areas and high density urban areas. Education and employment levels are close to the average for most of the other regions in the CoT. There is however an internal duality, with some of the highest income areas in the CoT being combined with low income and extensive rural areas

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-

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

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

Are there any signs of culturally (aesthetic, social, spiritual, environmental) or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or close (within 20m) to the site?
If YES, explain:

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

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:

The draft BAR will be submitted to SHARA for comments and approval.
No artifacts of archaeological significance were found on the site. From a heritage point of view it was therefore recommend that the proposed development can continue. However, it is recommended that should archaeological sites or graves become exposed during construction work, it should immediately be reported to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of the finds can be made.

Will any building or structure older than 60 years be affected in any way?

YES	NO X
YES	NO X

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

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

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

2. LOCAL AUTHORITY PARTICIPATION

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

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

YES	NO
X	

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

YES	NO
	X

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

Public Participation for the proposed project commenced on 24 May 2017 through the following means:

- Site Notices erected on site
- Visiting ALL adjacent landowners and providing them with a BID
- Informing all state department via e-mail of the development
- Advert placed in the Krugersdorp News.

Comments received Local Authority:

City of Tshwane stated that they would like to register on the project database and would submit comments.

Response: Batho Earth registered the speaker of Region 6 on the project database.

Batho Earth also contacted the Ward Councillor for Ward 85 (Ms Cllr Jacqui Uys), a copy of the report will also be delivered to the office of Region 6 for the councillor of Ward 85.

The draft BAR will go out for public review from 07 November – 07 December 2016. All state departments will receive the draft report on 07 November 2016, together with the GDARD application submission.

Please refer to the issues and response report as attached as part of the Public Participation folder for all comments received and process followed.

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

--

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):

Public Participation for the proposed project commenced on 24 May 2017 through the following means:

- Site Notices erected on site
- Visiting ALL adjacent landowners and providing them with a BID
- Informing all state department via e-mail of the development
- Advert placed in the Krugersdorp News.

The draft BAR will go out for public review from 07 November – 07 December 2016. All state departments will receive the draft report on 07 November 2016, together with the GDARD application submission.

Please refer to the issues and response report as attached as part of the Public Participation folder for all comments received and process followed.

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

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

Section D has been duplicated for alternatives times
(complete only when appropriate)

Section D Alternative No. (complete only when appropriate for above)

The following information applies to all alternatives

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

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

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

This cannot be determined at this stage

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

Construction material (e.g. cement and raw materials) will be stored in designated areas on the site, in a neat and orderly manner. Such areas for the storage of construction material are to be ratified by the appointed Environmental Control Officer (ECO) and are to be secured for security purposes. The volumes of raw construction material to be stored cannot be estimated at this stage.

The solid waste produced during the construction phase, will be taken and collected from site by means of skip waste containers. This will be the responsibility of the developer.

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

The construction solid waste will be disposed of at a registered Municipal landfill site, of the City of Tshwane Metropolitan Municipality..

Will the activity produce solid waste during its operational phase?

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

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

This cannot be determined at this stage

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

The solid waste produced during the operational phase will be collected from the development by the local municipality on a regular basis and will be disposed of at their registered landfill site.

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

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)?

The construction solid waste will be disposed of at a registered Municipal landfill site, of the City of Tshwane Metropolitan Municipality.

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:

Municipal garbage includes glass, tin, paper, food residues, yard trimmings, textiles, and plastics. The most common disposal methods pollute land, water, or air to some degree. Approximately 62% of municipal waste is placed in landfills. If the waste is dumped untreated, it can promote the proliferation of rats, flies, and other vermin, encourage growth of disease-carrying organisms, contaminate surface and underground water, scar the land, and pre-empt open space. To reduce the bulk of solid waste burning of paper, plastic, and other components is often resorted to, either in open dumps or incinerators. Fly ash, noxious gases, and chemical contaminants can thus be released into the air. Management of solid waste therefore presents an increasingly acute problem. Recycling of solid wastes not only facilitates disposal, but conserves energy, cuts pollution, and preserves natural resources.

Presently, the applicant has not considered the re-use or recycling of materials as part of the development proposal. During the construction phase, waste should be managed according to the following Waste Disposal Management Plan (as well as the Waste stream system presented in the EMPr):

The following procedures must be adhered to, in order to control and manage builder's wastes generated on the premises:

- Rubble material will be removed from the construction site frequently and disposed of at an approved dumping site.
- Sufficient containers will be on the construction site to handle the amount of litter, wastes, rubbish debris and builders wastes generated on the site.
- These containers will be emptied frequently to avoid rodents, insects or any other organisms accumulating on the site and becoming a health hazard to adjacent properties.
- No wastes will remain on the construction site for more than two (2) weeks.

Material to be used as backfill during a later building phase will be covered with a layer of soil to prevent litter from flying away and unhygienic conditions developing on the rubbish dumps.

During the operational phase of the established township, waste will be collected by the City of Tshwane Municipal Services.

The following **recycling programme** is proposed:

Each unit is supplied with 3 large, black plastic bins. Each bin is individually marked for plastic, tins and glass. Once a week (or an appropriate time period determined by the body corporate), an independent or commercially operating provider, collects the separated waste, at a central waste collection point outside the development.

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
m ³	
YES	NO

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

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

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

Yes	NO
	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.

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
-----	----

BASIC ASSESSMENT REPORT [REGULATION 23(1)]

	X
--	----------

If yes, provide the particulars of the facility:

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

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

--

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?

This cannot be determined at this stage
--

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.

The activity will not produce any effluent that will be treated and/or disposed of on site.

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:

Limited dust will be generated during the construction phase of the project, due to the movement of trucks and construction activities on site.

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
-----------------------	------------------------------	-------------	-------------------------------	-------	------------------------------------

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:

This cannot be determined at this stage
--

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
YES	NO

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

3. POWER SUPPLY

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

Please refer to Appendix F for the communication e-mails between City of Tshwane and Engineers (Mr S Mouton). The total electrical link service requirement for Equestria Ext 214 has been estimated as 155 kVA. City of Tshwane confirmed capacity is available at the Wapadrand Substation (123/11kV) station.

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:

A comprehensive, broad based Environmental Management Programme (EMPr) is however included in this report and must form part of the pre-construction and construction phases of the proposed development. The following basic energy-saving techniques can be used to reduce building energy use, and as such, are brought to the attention of the developer:

- Ensure that the planned building configuration takes maximum advantage of the site and climate. Bermed, or partially buried, construction can moderate building temperature, save energy, and preserve open space.
- Reducing cooling loads by eliminating undesirable solar heat gain.
- Reducing heating loads by using desirable solar heat gain. Using day lighting through building windows can displace artificial lighting, reduce energy costs, and is associated with improved occupant health, comfort, and productivity.
- Using natural light as a substitute for (or complement to) electrical lighting.
- Using natural ventilation whenever possible.
- Using more efficient heating and cooling equipment to satisfy reduced loads.
- As the preliminary layout is refined, ensure that access to daylight continues to be optimized. Consider perimeter access to light and views, roof monitors, skylights, and light shelves.
- Develop material specifications and a building envelope configuration that maximizes energy performance. Consider window shape and placement, shading devices, differentiated façades, reflective roofing, fabric roofs, induced ventilation, night time cooling ventilation, and selective glazing.
- Continue energy analyses, including multiple runs of similar products (e.g., various glazings and insulation levels) to determine best project-specific options. In addition to first cost, consider durability and long-term energy performance.

The following recommendations regarding structural designs are brought to the attention of the developer:

1. Use of building material that requires excessive amounts of energy to manufacture should be minimised.
2. Use of building material originating from sensitive or scarce environmental resources should be minimised. E.g. no tropical hardwood may be used.
3. Building material should be legally obtained by the supplier, e.g. wood must have been legally harvested, and sand should be obtained only from legal borrow pits and from commercial sources.
4. Building material that can be recycled / reused should be used rather than building material that can not.
5. Use highly durable building material for parts of the building that is unlikely to be changed during the life of the building (unlikely to change due to e.g. renovation, fashion, changes in family life cycle) is highly recommended.

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

The following Architectural principles are provided to encourage the applicant and the developer, to ensure the buildings on site or both energy efficient and make effective use of alternative energy sources: Solar power should be considered for heating hot water systems. Gas could be considered for cooking. Recommendations for improving energy efficiency are provided as follows:

- building orientation,
- use of local material,
- sufficient glazing protection,
- natural ventilation principles, and
- potential rain water harvesting.

Further emphasis must be placed on indoor environmental quality (IEQ) through electrical efficiency of lighting as well as air-conditioning. The maximised use of natural light and ventilation will play a significant part in this aspect. Direct access by occupants to external views should be maximised by a large plan-width of the house. Allowance must be made for screening of glazed areas to reduce glare (enhancing the IEQ) - this will also assist with the buildings 'air tightness'. Water efficient flush-masters must be incorporated in the building with the hand-wash-basins being fit with time-controlled flush-masters.

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

Public Participation for the proposed project commenced on 26 October 2016 through the following means:

- Site Notices erected on site
- Visiting ALL adjacent landowners and providing them with a BID
- Informing all state department via e-mail of the development
- Advert placed in the Krugersdorp News.

City of Tshwane stated that they would like to register on the project database and would submit comments.

Response: Batho Earth registered the speaker of Region 6 on the project database.

Batho Earth also contacted the Ward Councillor for Ward 85 (Ms Cllr Jacqui Uys), a copy of the report will also be delivered to the office of Region 6 for the councillor of Ward 85.

The draft BAR will go out for public review from 07 November – 07 December 2016. All state departments will receive the draft report on 07 November 2016, together with the GDARD application submission.

Please refer to the issues and response report as attached as part of the Draft Basic Assessment Report for all comments received and process followed.

Summary of response from the practitioner to the issues raised by the interested and affected parties (including the manner in which the public comments are incorporated or why they were not included)
(A full response must be provided in the Comments and Response Report that must be attached to this report):

Please refer to the issues and response report as attached as part of the Draft Basic Assessment Report for all comments received and process followed.

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

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

The potential impacts of the proposed development were identified through a desktop study, a site visit, and technical studies (geotech, floodline assessment, civil and electrical service provision). In this draft Basic Assessment Report, the potential impacts are broadly identified and outlined. An assessment of the potential impacts anticipated to date; are provided, identifying the impacts that are potentially significant to the receiving environment, and recommending management and mitigation measures to reduce the impacts.

In general, it is recognised that every development has the potential to pose various risks to the environment as well as to the residents or businesses in the surrounding area. Therefore, it is important that these possible risks are taken into account during the planning phase of the development. Risks and key issues were identified and addressed through an internal process based on similar developments, and an environmental evaluation.

Previous experience has shown that it is often not feasible or practical to only identify and address possible impacts. The rating and ranking of impacts is often a controversial aspect because of the subjectivity involved in attaching values to impacts.

The proposed development of a Residential Township to be established on Portion 535 of the Farm the Willows 340-JR, Equestria, City of Tshwane, Gauteng Province: Referred to as "Equestria Ext 214 Development". by changing the entire property into an residential complex.

The potential impacts of the proposed development were identified through a desktop study, a site visit, specialist studies and comments received during the public participation process.

SIGNIFICANCE DESCRIPTION

METHODOLOGY

The identification and assessment of environmental impacts is a multi-faceted process, which combines quantitative and qualitative descriptions and evaluations. It involves the application of scientific measurements and professional judgment to determine the significance of environmental impacts associated with the proposed project. The process involves consideration of inter alia: the purpose and need for the project; views and concerns of interested and affected parties, general public interest; and environmental legislation and guidelines. The generic criteria and systematic approach used to identify, describe and

assess impacts are outlined below. The assessment of the impacts will be conducted according to a synthesis of criteria required by the integrated environmental management procedure.

a) Nature of impact

This is an appraisal of the type of effect the proposed activity would have on the affected environmental component. Its description should include receiving environment and how it is impacted. Is the impact destructive, or not?

b) Extent

The physical and spatial size of the impact, which is classified as:

- Local: The impacted area extends only as far as the activity, e.g. a footprint of proposed activity.
- Site: The impact could affect the whole, or a measurable portion of the above mentioned property.
- Regional: The impact could affect the area including the

neighbouring farms the transport routes and the adjoining towns.

c) Duration

- The lifetime of the impact; this is measured in the context of the life-time of the proposed project.

- Short term (0-5 years):

The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than any proposed phases.

- Medium term (5-15 years):

The impact will last up to the end of the phases, where after it will be entirely negated.

- Long term (duration of operation):

The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter.

- Permanent:

The only class of impact, which is considered 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

This will be a relative evaluation within the context of all the activities and the other impacts within the framework of the project. Does it destroy the impacted environment, alter its functioning, or render it slightly altered? These are rated as:

- None: No known impacts
- 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 function and process continue, albeit in a modified way.
- High: Function or process of the affected environment is disturbed to the extent that it temporarily or permanently ceases.

- Probability

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

- Improbable: The possibility of the impact occurring is very low, due to the circumstances, design or experience.
- Probable: There is a possibility that the impact will occur to the extent that provisions must be made to mitigate the impacts.
- Highly probable: It is most likely that the impacts will occur at some or other stage of the development. Plans must be drawn up before the undertaking of the activity.
- Definite: The impact will take place regardless of any prevention plans, and thus mitigatory actions or contingency plans must be relied on to contain the effect.

- Determination of significance

Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale and therefore indicates the level of mitigation required. The classes are rated as follows:

- No significance: The impact is not substantial and does not require any mitigatory action.
- Low : The impact is of minimal importance, but may require limited mitigation.
- Medium: The impact is of importance and therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
- High: The impact is of great importance. Failure to mitigate, with the objective reducing the

impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

- g) Status

Taking all the criteria into account, the status of the impact will either be classified as a positive or negative impact.

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

Proposal Preferred alternative – Applicable to ALL Alternatives

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Socio Economic – <u>Construction</u> phase and <u>Operational</u> phase			
<p>Impact on ambient noise levels: <i>Nature of Impact:</i> Noise shall occur during construction of the residential township</p> <p><i>Extent of Impact:</i> The impact would be of local extent</p> <p><i>Duration of Impact:</i></p> <ul style="list-style-type: none"> • Short term during the construction period • Long term during the operational period <p><i>Intensity of Impact:</i> The intensity of the Impact will be High without mitigation and Medium with mitigation during the construction phase. The intensity of the Impact will be Medium without mitigation.</p> <p><i>Probability of Impact:</i> Highly probable</p>	Medium(-)	<p>1) Construction shall be limited to day time hours (i.e. 08h00 to 17h00).</p> <p>2) Noise Control Regulations such as limiting noise disturbance to between 08h00 to 17h00 on weekdays and Saturdays shall be adhered to.</p> <p>3) Construction noise shall be controlled by the implementation of a Environmental Management Programme (EMPr) (Refer to the EMPr attached).</p>	Medium(-)
<p>Impact on visual aesthetics: <i>Nature of Impact:</i> As the site is situated on a plot, impact will be evident.</p> <p><i>Extent of Impact:</i> The impact would be of site extent</p> <p><i>Duration of Impact:</i> Short term during the construction period</p> <p><i>Intensity of Impact:</i> The intensity of the Impact will be Low without mitigation and Very Low with mitigation during the construction phase. No impacts are foreseen during the operational phase.</p>	Medium(-)	<p>1) The visual impact experienced during the construction phase would be relatively short term and be mitigated by good housekeeping and regular removal of rubble on the site.</p> <p>2) Solid waste shall be managed in accordance with the requirements of relevant legislation.</p> <p>3) An approved EMPr shall be adhered to in order to minimize the visual impacts of construction phase activities.</p>	Low(-)

<p>Impact on heritage resources: Nature of Impact Due to the disturbed nature of the proposed site, no heritage features or potential heritage/ archaeological significance are found on site. Construction activities could however destroy the context of heritage/ archaeological resources, should any be uncovered. Archaeological features that are located below the soil surface may be disturbed during excavations as part of the construction period.</p> <p><i>Extent of Impact:</i> The impact would be of site extent</p> <p><i>Duration of Impact:</i> Short term during the construction period</p> <p><i>Intensity of Impact:</i> The intensity of the Impact will be Low without mitigation and Very Low with mitigation during the construction phase. No impacts are foreseen during the operational phase.</p>	<p>Low(-)</p>	<p>Should any fossils, coins, human remains, articles of value or antiquities and other items of archaeological or paleontological significance, be uncovered during construction the local Heritage Authority shall be contacted immediately, as per the National Heritage Resources Act, 1999 (Act No. 25 of 1999).</p>	<p>Very Low(-)</p>
<p>Impact of construction workers on local community safety and security: <i>Nature of Impact:</i> Building rubble on site and excavations may pose a safety risk. Irregular removal of domestic waste from the construction camp may pose health risks. If domestic waste is not regularly removed it may pose a health risk by attracting vermin to the site.</p> <p><i>Extent of Impact:</i> The impact would be of site extent</p> <p><i>Duration of Impact:</i></p> <ul style="list-style-type: none"> • Short term during the construction period Long term during the operational period 	<p>Medium (-)</p>	<ol style="list-style-type: none"> 1) No construction staff shall remain on site after hours or overnight except for a night security guard if required. NO farm workers are allowed to stay on site. 2) A register of construction staff shall be maintained by the developer. 3) Adequate provision must be made for sanitation for the construction workers. Chemical toilets on site are to be emptied weekly. 4) The construction site must be kept in a clean and orderly state at all times. 	<p>Low (-)</p>

<p><i>Intensity of Impact:</i> The intensity of the Impact will be High without mitigation and Medium with mitigation during the construction phase. The intensity of the Impact will be Medium without mitigation and Low with mitigation during the operational phase</p> <p><i>Probability of Impact:</i> Highly probable</p>			
<p>Impact of construction activities on local traffic flows and the state and condition of local roads: <i>Nature of Impact:</i> An increase in traffic will be experienced during the construction period in terms of trucks, construction vehicles etc. The traffic associated with the development will impact on road users of the surrounding roads. There will be an increase in vehicular movement during the construction period. <i>Extent of Impact:</i> The impact would be of local extent <i>Duration of Impact:</i></p> <ul style="list-style-type: none"> • Short term during the construction period • Long term during the operational period <p><i>Intensity of Impact:</i> The intensity of the Impact will be High without mitigation and Medium with mitigation during the construction phase. <i>Probability of Impact:</i> Highly probable</p>	High (-)	<ol style="list-style-type: none"> 1) Relevant regulations relating to traffic management (especially speeding and behaviour at intersections) shall be adhered to. 2) No overloading of trucks shall occur. 3) All roads used for access during construction activities shall be left in an acceptable condition on completion of the project. 4) Ensure that construction vehicles are under the control of competent personnel. 5) Vehicular traffic during construction activities must be limited to a maximum speed of 30 km/hr on site. 6) All access roads must be demarcated, and only existing roads are to be used as far as possible. 7) Access to the development be provided via the Stellenberg Road. 8) Adherence to all mitigation measures and proposed road upgrades as stipulated in the traffic impact assessment report. 	Medium (-)
<p>Impact of proposed development on job creation, capacity building and skills transfer: <i>Nature of Impact:</i> Jobs are anticipated to be created during the construction phase and few permanent jobs thereafter. The proposed development shall bring direct and indirect economic opportunity to the region.</p>	Low (+)	Provisions to provide jobs to local (Mamelodi-based) workers shall be maximised.	Low (+)

Biophysical – Construction phase and Operational phase

<p>Impact on Flora and Flora: <i>Nature of Impact:</i> The current land use on site, is a one dwelling residential plot transformed into a landscaped garden. From an ecological perspective, the study area is considered to be of low sensitivity for the Transformed Grassland Habitat Unit and moderately low sensitivity for the Modified Egoli Granite Grassland Habitat Unit, mainly as a result of the increased level of disturbance and habitat transformation within and surrounding the study area, the loss of ecological connectivity to open space areas in the region and the low probability of faunal Species of Conservation Concern (SCC) or any other floral SCC.</p> <p><i>Duration of Impact:</i> • Permanent</p> <p><i>Intensity of Impact:</i> The intensity of the impact is considered to be Low to Very Low during the construction phase.</p> <p><i>Probability of Impact:</i> Highly</p>	<p align="center">Low (-)</p>	<ol style="list-style-type: none"> 1) Movement of construction personnel shall be restricted to the construction site. 2) During construction contaminated water and soil shall be disposed of appropriately as to prevent any damage to flora. 3) No fires are to be ignited with the intent to destroy or flush out any fauna present on site and in the surrounding area. 4) All recommendations and arrangements as suggested by the competent authority (GDARD) must be adhered to. 7) It is recommended that site clearing take place in a phased manner (where possible) to allow for any faunal species present to move away from the study area to surrounding open space areas. 8) No trapping or hunting of any faunal species are to take place during the construction phase within the study area or within the surrounding area. 10) As far as possible, indigenous grassland species, including grasses, should be used as part of the landscaping of the project and it is recommended that <i>Cynodon dactylon</i> be used instead of <i>Pennisetum clandestinum</i> (kikuyu) for any lawned areas. 11) Informal fires by construction personnel within the study area should be prohibited 12) Edge effect control needs to be implemented within construction areas, with specific consideration to erosion control and alien floral species management 13) Alien vegetation must be removed from the study area 	<p align="center">Low(-)</p>
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		14) Establishment of reintroduced vegetation must be monitored during the operational phase.	
<p>Impact on the 1:100 year flood line:</p> <p><i>Nature of Impact:</i> The development site is impacted on by a 1:100 year flood line that traverse the border of the site.</p> <p><i>Extent of Impact:</i> The impact would be of local extent</p> <p><i>Duration of Impact:</i> • Permanent</p> <p><i>Intensity of Impact:</i> The intensity of the impact is considered to be Medium to Low.</p> <p><i>Probability of Impact:</i> Probable</p>	Medium (-)	<p>1) Ensure that as far as possible all infrastructure is placed outside of the flood line and buffer areas.</p> <p>2. Ensure that as far as possible all infrastructure is placed outside of the flood line areas.</p> <p>3. No construction to take place within Erf 2 – flood line.</p> <p>4. Keep all demarcated sensitive zones outside of the construction area off limits during any development phases.</p> <p>5. Limit the footprint area of the construction activity to what is absolutely essential in order to minimise environmental damage.</p> <p>6. Edge effects of activities including erosion and alien/weed control need to be strictly managed in these areas.</p> <p>7. It must be ensured that all hazardous storage containers and storage areas comply with the relevant SABS standards to prevent leakage. All vehicles must be regularly inspected for leaks. Re-fuelling must take place on a sealed surface area to prevent ingress of hydrocarbons into topsoil.</p> <p>8. All spills should they occur, should be immediately cleaned up and treated accordingly.</p> <p>9. Appropriate sanitary facilities must be provided for the life of the construction and all waste removed to an appropriate waste facility.</p> <p>10. Implement effective waste management in order to prevent construction related waste from entering the riparian environment.</p> <p>11. Implement alien vegetation control program within riparian areas.</p> <p>12. Monitor all areas for erosion</p>	Low (-)

<p>Soil disturbances and instability: <i>Nature of Impact:</i> During the construction process of the development earthworks are required.</p> <p><i>Extent of Impact:</i> The impact would be of local and site-specific extent</p> <p><i>Duration of Impact:</i></p> <ul style="list-style-type: none"> • Short term during construction period • Long term during operational period <p><i>Intensity of Impact:</i> The intensity of the Impact will be very low</p> <p><i>Probability of Impact:</i> Probable</p>	<p>Medium(-)</p>	<p>and incision.</p> <ol style="list-style-type: none"> 1) Soil excavated during trenching should be stockpiled in layers and replaced in the same order when backfilling. 2) The recommendations and mitigation measures as proposed by the Geologist must be implemented. 3) Excavation and installations should be carried out when the soil is at its driest. 4) Non-ferrous materials should be used in any underground service works. 5) The construction site is to be clearly demarcated. In order to successfully avoid the major impacts caused by erosion, construction during the rainy season (November to March) should be avoided. 6) The foundation recommendations must be according to the National Home Builders Registration Council HOME Builders Manual (1999) for poultry facilities and structures. 8) All other mitigation measures required for the construction of a township should be implemented. 	<p>Very Low(-)</p>
<p>Impact on Surface Water <i>Nature of Impact:</i> The alteration of the land to streets, roofs and paved areas changes the behaviour of surface water run-off. The percentage of the entire area where infiltration takes place is drastically reduced as roofs and paved areas allow no infiltration. The volume of the surface run-off for any given rainstorm is increased, and will enter into the canal.</p> <p><i>Extent of Impact:</i> The impact would be of local extent</p> <p><i>Duration of Impact:</i></p> <ul style="list-style-type: none"> • Short term during construction 	<p>Medium(-)</p>	<ol style="list-style-type: none"> 1) Storm water management should be implemented. 2) Erosion prevention measures should be implemented to prevent erosion of soil surfaces during construction. Care should be taken that topsoil is not washed away during high rainfall events, after the removal of the trees and ground cover vegetation, and before the reestablishment of vegetation and during the installation of the infrastructure and services. 	<p>Low(-)</p>

<p>period</p> <ul style="list-style-type: none"> • Long term during operational period <p><i>Intensity of Impact:</i> The intensity of the Impact will be medium without mitigation and low with mitigation during the construction phase. The intensity of the Impact will be Low without mitigation and no impacts are foreseen should mitigation measures be implemented during the operational phase.</p> <p><i>Probability of Impact:</i> Probable</p>			
<p>Impacts related to Surface Water Pollution</p> <p><i>Nature of Impact:</i> 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 surface water bodies. Should appropriate toilet facilities not be provided for construction workers at the construction crew camps, the potential exists for surface water resources and surrounds to be contaminated by raw sewerage.</p> <p><i>Extent of Impact:</i> The impact would be of site extent</p> <p><i>Duration of Impact:</i></p> <ul style="list-style-type: none"> • Short term during construction period • Long term during operational period <p><i>Intensity of Impact:</i> The intensity of the Impact will be medium without mitigation and low with mitigation during the construction phase. The intensity of the Impact will be Low without mitigation and no impacts are foreseen should mitigation measures be implemented during the operational phase.</p>	Medium	<ol style="list-style-type: none"> 1) Construction vehicles are to be maintained in good working order, to reduce the probability of leakage of fuels and lubricants. 2) A walled concrete platform, dedicated store with adequate flooring or bermed area should be used to accommodate chemicals such as fuel, oil, paint, herbicide and insecticides, as appropriate, in well-ventilated areas. 3) Storage of potentially hazardous materials should be above the 100 year flood line, or as agreed with the ECO. These materials include fuel, oil, cement, etc. Sufficient care must be taken when handling these materials to prevent pollution. 4) Surface water draining off contaminated areas containing oil and petrol would need to be channelled towards a sump which will separate these chemicals and oils. 5) Concrete must be mixed on mixing trays only, not on exposed soil. 6) Concrete shall be mixed only in areas, which have been specially demarcated for this purpose. All concrete that is spilled outside these areas shall 	Low

<p><i>Probability of Impact:</i> Probable</p>		<p>be promptly removed by the Contractor and taken to an approved dumpsite.</p> <p>7) After all the concrete mixing is complete all waste concrete shall be removed from the batching area and disposed of at an approved dumpsite.</p> <p>8) Storm water shall not be allowed to flow through the batching area. Cement sediment shall be removed from time to time and disposed of in a manner as instructed by the Consulting Engineer.</p> <p>9) Portable septic toilets must be provided and maintained for construction crews. Maintenance must include the removal without sewerage spillage.</p> <p>10) Under no circumstances may ablutions occur outside of the provided facilities.</p> <p>11) At all times care should be taken not to contaminate surface water resources.</p> <p>12) No uncontrolled discharges from the construction crew camps to any surface water resources shall be permitted. Any discharge points need to be approved by the relevant authority.</p>	
<p>Impact on Ground Water Potential erosion of soil and pollution of ground water sources from spillages of hazardous materials (oils, paints, fuel).</p>	<p>Medium(-)</p>	<p>1) The use of drip-trays under stationary plant, correct storage of hazardous materials, the use of spill-kits on site, and procedure for cleaning up and disposal of any spillages that may occur.</p>	<p>Low(-)</p>
<p>Storm water Management It is good practice to implement sound storm water management around each building and it is therefore suggested that the precautions presented are considered to limit the amount of moisture reaching the foundation and thereby reducing the risk of foundation movement occurring.</p>	<p>Medium(-)</p>	<p>1) All water bearing service must be provided with flexible couplings where pipes enter the buildings</p> <p>2) A 1200mm wide apron paving must be provided around the perimeter of the structures. Joints between the paved areas and the walls of the buildings should be sealed with a flexible sealant to prevent moisture reaching the</p>	<p>Low(-)</p>

		<p>foundations</p> <p>3) Storm water management around the structures must facilitate the efficient disposal of excess water from the site.</p> <p>4) No flower beds, garden taps, trees or down pipe discharges must be allowed adjacent to the structures, and must be placed as far away as possible.</p>	
<p>Impacts on Air Quality:</p> <p>The development may impact on the air quality of the area. Dust will be generated and existing levels will increase as a result of the construction of the residential units and the installation of services for the township.</p> <p>Internal roads will be paved and hence, no impacts are foreseen during the operational phase of the development.</p> <p><i>Extent of Impact:</i> The impact would be of local extent</p> <p><i>Duration of Impact:</i></p> <ul style="list-style-type: none"> • Short term during the construction period <p><i>Intensity of Impact:</i> The intensity of the Impact will be Medium without mitigation and Low with mitigation during the construction phase.</p> <p><i>Probability of Impact:</i> Highly probable</p>	Medium	<p>1) Appropriate dust abatement measures must be implemented to prevent dust pollution. Topsoil stockpiles must be watered regularly to prevent wind-blown dust. Construction should preferably take place during summer when wind and dry conditions are not eminent.</p>	Low
<p>Impacts of waste generation on site to the biological environment</p> <p>Potential pollution of the site with solid waste generated during site clearance and construction (paper, plastic, timber, wire, cement bags and building rubble).</p>	High	<p>1) Solid waste to be removed on a weekly basis, no burning of waste will be allowed on site. Recycling must be encouraged.</p>	Medium

No Go

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
This option is the safe option and would ensure that the environment is not impacted upon any more than is currently the case. It is important to state that this assessment has concentrated on the current condition of the area, which is vacant one stand residential property. 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 be low residential.	NEGATIVE	The consideration of the no-go option can be justifiably dismissed as an alternative due to the following: Need and desirability of the project to the local people; and The environmental impacts expected by the proposed residential development can be mitigated to acceptable / satisfactory standards.	NEGATIVE	HIGH

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

Flood line Determination Geotechnical Map Town Planning Application

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

The BAR will be submitted within the required timeframes. The development is currently in the <u>planning phase</u> . The project will only be registered with GDARD in June 2017. Public Participation Process will commenced in May 2017. The draft BAR will go out for public review from 07 November to 07 December 2016 . All state departments will receive the draft report together with the GDARD application from submission

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

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

Proposal Preferred Alternative

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Should the residential township be demolished, the	Neutral	Recycle materials as appropriate. Any hazardous substances	Neutral	High

materials used and its associated infrastructure would need to be disposed of at an approved landfill site. However, no decommissioning is proposed for the foreseeable future.		must be removed and disposed of following the requirements of relevant legislation.		
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Alternative 1 Energy efficiency alternative

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Due to the low impact of Energy efficiency on the environment and the proposed site it is not anticipated the proposed alternative will impact nor have an impact during the decommissioning and closure phase of the proposed development.	Neutral	Due to the nature of this development, no mitigating measures exist (applicable to all phases).	Neutral	High

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

Flood line Determination
Geotechnical Map
Town Planning Application

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

This is not applicable to the proposed Equestria Ext 214 Development.

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:

Cumulative impacts result from actions which may not be significant on their own but which are significant when added to the impact of other similar actions. The anticipated impacts resulting from the construction and implementation of the affordable housing development, could potentially result in cumulative negative effects when taking the following into consideration:

- The proposed development will add to existing road users in the area and will have an impact on traffic.
- The proposed development will add pressure on services in the area.
- Impacts related to sedimentation and siltation are likely to increase during the construction and operational phase of the proposed development.

- Construction impacts may further lead to nuisance noise impacts. It is essential that the EMPr for the construction phase be implemented to minimise the impact of construction activities on the environment.
- Increased light pollution from high density residential homes, as well as external lighting (street lights, etc).
- The construction and subsequent operational activities will be the source of various waste streams which must be managed appropriately.
- Probable increase in crime during construction activities.

The potential cumulative impacts are rated to be of Local extent, Temporary duration during construction, Permanent Duration during operation, Medium intensity and Probable occurrence. The significance of this impact is considered to be Medium - High. Mitigation can limit the significance to medium.

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

- Housing provision,
- Economic land utilisation and
- Job creation.

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Proposal

This report is intended to offer an objective assessment of the concerns, which were raised during the basic assessment phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed development on the environment, of which we are part, and the probability of the impacts manifesting themselves. Ultimately the report should allow the relevant authority the opportunity to make an informed decision regarding the development and the various options.

The reasons for selecting the preferred alternative are as follows:

- The proposed site is owned by the applicant.
- The proposed site is not conservation worthy.
- The overall significance of the environmental impacts associated with the proposed alternative/development, with the implementation of mitigation measures, range from Low-Medium (-) to Very Low (-) with the exception of the impact of the proposed development on job creation, capacity building and skills transfer which has a Low(+) significance.

The site is impacted on by a 1:100 year flood line, however the flood line with buffer zone was incorporated into the Site Development Plan, and Erf 2 will be zoned Public Open Space. No development will take place within the floodline.

No artifacts of archaeological significance were found on the site

The evaluation of the potential impacts of the proposed Equestria Ext 214 Development on the environment, reveals that construction activities will have the most significant impact. These would include impacts associated with dust generation, noise from machinery, erosion, risk of hydro-carbon contamination and waste management and impacts on the dry river bed to the south of the site. Mitigation measures have been provided that can control the extent, intensity and frequency of the impacts such that their impact is minimized. If the

proposed mitigation and management measures are implemented appropriately, the preliminary overall impact of the proposed residential township is considered to be low, of local extent, of temporary duration with a High probability of occurring.

It is the opinion of BATHO EARTH Environmental Consulting that there are no environmental impacts emanating from the proposed activity that cannot be adequately managed. The management of the negative impacts will require the implementation of the necessary mitigatory measures detailed in the Environmental Management Plan (EMPR,) of this report.

Alternative 1 Alternative 2 – Energy efficiency alternative

Energy efficiency alternatives are proposed and encouraged, as for the “normal way of business” with regards to sustainable development and energy efficiency usage in South Africa. Property owners can benefit from becoming more efficient through:

- More efficient resource utilization resulting in savings in electricity and lower operational costs,
- The potential to align with future green rating systems and international energy efficiency Standards
- Insulation from an electricity price that is expected to climb significantly in the near future, and
- Marketing opportunities through the potential to establish a name as a “green” property developer.

Alternative 2 Minimise visual impacts during site establishment

Visual impacts during site establishment and during the construction of the units can be avoided and can merely be effectively be mitigated by strategic planning in terms of site layout strategies and adhering to good housekeeping at all times during construction.

No-go (compulsory)

This option is the safe option and would ensure that the environment is not impacted upon any more than is currently the case. It is important to state that this assessment has concentrated on the current condition of the area, which is vacant agricultural land. Should the authorities decline the application, the ‘No-Go’ option will be followed and the status quo of the site will remain (vacant, susceptible to illegal squatting). Overall, based on an assessment of all the strategic planning frameworks for the study area, the need for housing in the area, and the availability of services to the site; it is argued by the applicant that the Equestria Ext 214 Development offers a greater benefit to the Equestria community. The revenue generation ultimately translates into more economic income for the local economy than what is possible through the current land use.

The proposed application is situated within a developing area where infill development and densification are taking place; and where housing complexes (residential estates) have already been developed (Leopard Rock Residential Estate). Available land and existing engineering services are utilised more effectively as different residential opportunities (i.e. typologies and densities) are located in close proximity to employment opportunities and public transport facilities. The applicant thus argues that the proposed development is sustainable and in-line with the existing development trends in the study area.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The application is for the proposed development of a Residential Township to be established on Portion 535 of the Farm the Willows 340-JR, Equestria, City of Tshwane, Gauteng Province: Referred to as “Equestria Ext 214 Development”.

The applicant proposes to develop 25 units per ha, to be zoned Residential 3. Further land uses catered for include public open space and roads.

Project Locality and Size

The property is situated on the southern side of Stellenberg Road, within the Willowglen Agricultural Holdings commonly known as Equestria, Pretoria East. The site is approximately 500m to the east of Solomon Mahlangu Drive and the Makro Store Silver Lakes. Simon Vermooten Road is to the east and the N4 to the south.

The size of the development site is 1,9887ha in extent.

Project Description

The study site is currently zoned agricultural (please refer to Appendix A). A Town planning application has been lodged with the City of Tshwane Municipality to obtain the following land-uses rights: (Please refer to the figure 1 below):

	Zoning	Density	Height	Coverage
ERF 1	'Special' for dwelling units	Maximum density of 25 units per ha	2 storeys provided that it may be increased with the consent of the municipality	As per the approved SDP.
ERF 2	'Public Open Space'			

The development will aim to have a total of 33 houses on the property. The Township is affected by the 1:100 year flood line. Please refer to Appendix G.

Potential negative environmental issues and impacts have been identified, and can be effectively mitigated and monitored, significantly reducing the risk of the majority of the impacts to “low” on the environment. The majority of the impacts anticipated during the construction phase will be short term in nature.

No Heritage value was identified on site.

From an ecological perspective, the study area is considered to be of low sensitivity as a result of the increased level of disturbance and habitat transformation within and surrounding the study area, the loss of ecological connectivity to open space areas in the region and the low probability of faunal Species of Conservation Concern (SCC) or any other floral SCC.

The site is impacted on by a 1:100 year flood line, however the flood line with buffer zone was incorporated into the Site Development Plan, and Erf 2 will be zoned Public Open Space. No development will take place within the floodline.

Environmentally responsible development on site can transform the study area into an investment in the area.

Various mitigation methods (including proposals contained in the specialist studies) to reduce the significance of the potential environmental impacts have been included in the EMP for the development, and should be implemented.

The social benefits of the proposed development must be accompanied by enforceable and strictly monitored Site Development Plan and Landscape Development Plans. The approval processes of these plans will enable the Municipality to ensure that a proper development will take place with due consideration of the surrounding approved land uses.

For alternative:

Alternative 2 – energy sufficiency usage

This will however, require the adherence to the above-mentioned mitigatory measures. It must be noted that no construction and operational activities will commence on-site prior to obtaining a Record of Decision from GDARD.

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

The developer has investigated the need for an housing development in the Equestria area. Considering the objectives of the applicable strategic planning frameworks for the area, the applicant and town planner have motivated that there is a pressing need for such a development within City of Tshwane area of jurisdiction. An housing development will be an asset to the community, since the area provides various work opportunities, but no housing.

The proposed development will contribute to the utilization of the application site by formalizing acceptable land use in accordance with the development framework for the area. The need and desirability of the proposed development is motivated in terms of the site context, surrounding approved land uses, available engineering services as well as in terms of the relevant planning policies. The need and desirability is furthermore demonstrated through compliance with the various proposals of the planning policies and development controls.

The site is impacted on by a 1:100 year flood line, however the flood line with buffer zone was incorporated into the Site Development Plan, and Erf 2 will be zoned Public Open Space. No development will take place within the floodline.

City of Tshwane Municipality will provide all the necessary services, i. e. water, sewerage and roads to the proposed township. Electricity will also be obtained from Tshwane.

The minimal environmental constraints of the property, the economic climate of the regional area, and the specific needs of the target market (i.e. middle income) further motivate that the proposed development is a reasonable and feasible alternative for the property.

The No-Go option is not considered a suitable alternative when compared to Alternative 1, in terms of the potential socio-economic benefits that will be lost without development of the proposed units.

As such, it is contended that the Preferred Layout Alternative (Alternative 1) represents

the best option for the future of Portion 535 of the Farm the Willows 340-JR, Equestria, City of Tshwane, Gauteng Province: Referred to as "Equestria Ext 214 Development" in terms of maximising positive impacts - especially on the local socio-economic environment, and in terms of minimising negative impacts on the natural environment, and on aspects such as traffic generation and service provision.

It is the opinion of Batho Earth Environmental Consulting that there are no environmental impacts studied in this investigation, emanating from the proposed activity that cannot be adequately managed. The management of the negative impacts will require the implementation of the necessary mitigatory measures detailed in the Environmental Management Programme (EMPr, refer to Appendix G) of this report.

Should the project be approved, implementing the mitigation measures identified in Section E of this report, and the EMPr, will greatly reduce the risk the development could have on the environment. Once the Basic Assessment Report has been approved by GDARD, it is a legally binding document.

It is further recommended that an Environmental Control Officer (ECO) should be appointed by the Applicant/developer to ensure that the construction phase is implemented according to the recommendations of the EMPr and complies with the Conditions of Approval as to be contained in the Environmental Authorisation for the project, should it be approved. The ECO should submit audit reports to GDARD on a 6-monthly basis, or as-and-when required.

7. SPATIAL DEVELOPMENT TOOLS

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

THIS IS NOT APPLICABLE TO THE PROPOSED MOGALE EXT 28 DEVELOPMENT

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).

YES	NO
X	

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

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

All recommendations contained within the Geotechnical Assessment must be adhered to.

All recommendations contained within the Floodline Assessment must be adhered to.
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All recommendations contained within the Service and Electrical reports must be adhered to.
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All the various mitigation proposals that are recommended to reduce the significance of the anticipated environmental impacts are included into the EMPr and must be implemented. An ECO should be appointed by the Applicant, to ensure that the construction of services and buildings is implemented according to the recommendations of the EMP and complies with the conditions of approval as contained within the Environmental Authorisation for the project. The ECO should submit audit reports to GDARD at the end of each logical construction phase (e.g. after installation of services and again after building of houses, and associated infrastructure has been completed).
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The **Environmental Management Programme (EMPR)** will be binding on all managers and contractors operating/utilizing the site.

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

Need for Housing:

There is presently a high demand for housing in the whole of Tshwane but especially in the eastern suburbs of Pretoria. For various reasons this part of the city has experienced considerable growth and in comprises the most popular residential areas for new housing developments. Development in this area has already expanded up to and in certain areas beyond Pretoria's municipal boundary.

Until a few years ago, there was a considerable demand for dwelling houses on "special Residential" erven. However, with the high cost of providing engineering services, rising building costs and the need for security, there is now a bigger demand for an a trend to provide smaller and more practical sized erven and dwelling units in security complexes within a managed environment. Both full-title and sectional title dwelling units in security complexes are currently regarded as the best investment in the residential market.

With the growth in the property market, the time is now right to proceed with the proposed residential development and to utilize the property more effectively.

The development proposed for the site is that of "dwelling units" within a security complex.

Desirability of the propose development:

The proposed development is considered desirable for the following reasons:

- The site is easy accessible via local and regional roads, i.e. N4 freeway interchange at Simon Vermooten and north link.
- The development will support the current housing need, trend and market. It will add diversity to the residential structures of Equestria and provide the consumer with a broader and choice of housing options at a more affordable rate.
- The nature and extent of the proposed development will be compatible with surrounding uses and support the concept of more compact city in order to combat urban sprawl.
- The proposed land use/rights is in line with Council guidelines and National guidelines such as the IDP

Taking into account the contextual characteristics of the area and the accessibility of the application site, the proposed township for which there is a proven need, could be regarded as desirable and strategically situated within a developing and sought-after residential area.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

Over the next 7 years.

(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

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

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

EMPr attached

Yes

SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information – NA

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

Flood line Assessment

Town planning Report

Geo-tech drawings

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

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

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