

BASIC ASSESSMENT REPORT
FOR THE
PROPOSED EAST-WEST LINK ROAD
RE-ALIGNMENT, CITY OF
JOHANNESBURG, GAUTENG

COMMENT PERIOD: 31 OCTOBER 2017 to 30 NOVEMBER 2017

Proponent:

Steyn City Properties (Pty) Ltd.



STEYN CITY

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EXECUTIVE SUMMARY

The development of Porcupine Avenue from the border of Riverside View Extension 35 up to Runnymead Road was authorised by the Gauteng Department of Agriculture and Rural Development (GDARD) on 25 February 2016 (Gaut: 002/15-16/E0053).

In addition to above 2016 Authorisation, sections of the road were also authorised as part of separate processes (Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022)

However, a small section of the authorised alignment (just before the intersection between 10th Road and Runnymead Road) impacts on the existing Equestrian Centre within Steyn City. It is therefore necessary to redesign this section. The proposed re-alignment involves the bending of the road so that it no longer impacts on Steyn City.

Two alternative re-alignment options will be assessed as part of the authorisation process. The preferred option (**the Proposal**) occurs on the Remaining Extent of Farm Diepsloot 388-JR within Ward 96 of the City of Johannesburg Metropolitan Municipality. The property is owned by Johannesburg Property Company (JPC) and the area (Porcupine Park) is currently managed through a management agreement which is in place between City of Johannesburg and Steyn City Properties (Pty) Ltd (previously known as Golden Creek Investments (Pty) Ltd.

The overall East West Link Road will carry high volumes of traffic and it will function as an important link in the greater road network. The aim of the road as a whole is to assist with the distribution and alleviation of traffic in this area of Johannesburg. The road has been planned as a Class 3 Arterial Road and will be managed by Johannesburg Roads Agency (JRA), once constructed. The applicant in terms of the environmental authorisation process is Steyn City Properties (Pty) Ltd.

1. Need for the Project

Sustainable development is directly linked to the provision of a safe and efficient road network. Currently there is a lack of linkage between the eastern and western section of the northern part of Johannesburg. Further, due to increased development in the area (for example, Steyn City as well as Riverside View Extension X28 – both approved previously), there is a need to create an east-west link road which links William Nicol Drive to the east with the corner of 10th Avenue and Runnymead Avenue to the west. A number of authorisation processes was previously conducted for this and was approved by various authorisations (Gaut: 002/15-16/E0053; Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022). It is envisaged that the East West Link Road will carry high volumes of traffic and it will function as an important link in the greater road network. Therefore, the

East West Link Road will assist with the distribution and alleviation of traffic in this area of Johannesburg.

However, a small section of the authorised alignment impacts on the existing Equestrian Estate within Steyn City. It is therefore necessary to redesign this section. The proposed re-alignment involves the bending of the road so that it no longer impacts on Steyn City.

The need for this re-alignment is therefore as follows:

- Improved capacity and traffic flow for the area.
- Improved east-west linkage for the area.
- Decreased impacts on existing infrastructure; and
- Economic and social benefits related the road not impacting on Steyn City.

2. Environmental Sensitivity

An Ecological Habitat Assessment was undertaken and found that whilst patches of grassland in fair condition remain, the proposed re-alignment will not result in loss of any unique ecosystems. Two plant species *Hypoxis hemerocallidea* and *Boophone disticha* that are not threatened but listed as Declining are visibly frequent at the site and larger study area and could be conserved in the larger study area (Porcupine Park) and relocated from the footprint, if the development is approved. There appears to be no loss of any threatened species, if the re-alignment is approved.

3. Impact Assessment

A detailed impact assessment has been undertaken and assessed the types of impact, duration of impacts, likelihood of potential impacts as well as the overall significance of the impact occurring. Most impacts have a low significance once mitigation measures were applied.

Based on the impact assessment undertaken as well as the findings of the specialist study and the need for the project, it is the opinion of the EAP, that **the Proposal** be approved.



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

Kindly note that:

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

DEPARTMENTAL DETAILS

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

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

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

(For official use only)

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

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

Not Applicable. This document constitutes the Basic Assessment Report (BAR) which will be subjected to 30 days' public review. The final submission of the Basic Assessment Report to the Gauteng Department of Agriculture and Rural Development (GDARD) will take place within 90 days of the submission of the application form.
--

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

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

The proposed activity does not involve a Closure and thus, no closure plan is required.

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?

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

If no, state reasons for not attaching the list.

A full Interested and Affected Party (I&AP) Database is included in Annexure E9 and includes State Departments.

Have State Departments including the competent authority commented? X

If no, why?

Not yet applicable. The aim of public participation is to allow State Departments as well as Interested and Affected Parties and opportunity to review this document. All comments received during the public review period will be submitted as part of the final submission of the BAR to GDARD.
--

SECTION A: ACTIVITY INFORMATION

1. Proposal or Development Description

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

Proposed East-West Link Road Re-alignment, City of Johannesburg, Gauteng

In order to put the information contained in the Basic Assessment Report (BAR) in context, a short background is provided below.

The development of Porcupine Avenue from the border of Riverside View Extension 35 up to Runnymead Road was authorised by the Gauteng Department of Agriculture and Rural Development (GDARD) on 25 February 2016 (Gaut: 002/15-16/E0053). A copy of the Authorisation is included in Appendix F1.

In addition to above 2016 Authorisation, sections of the road were also authorised as part of separate processes (Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022) (see Figure 1 below).

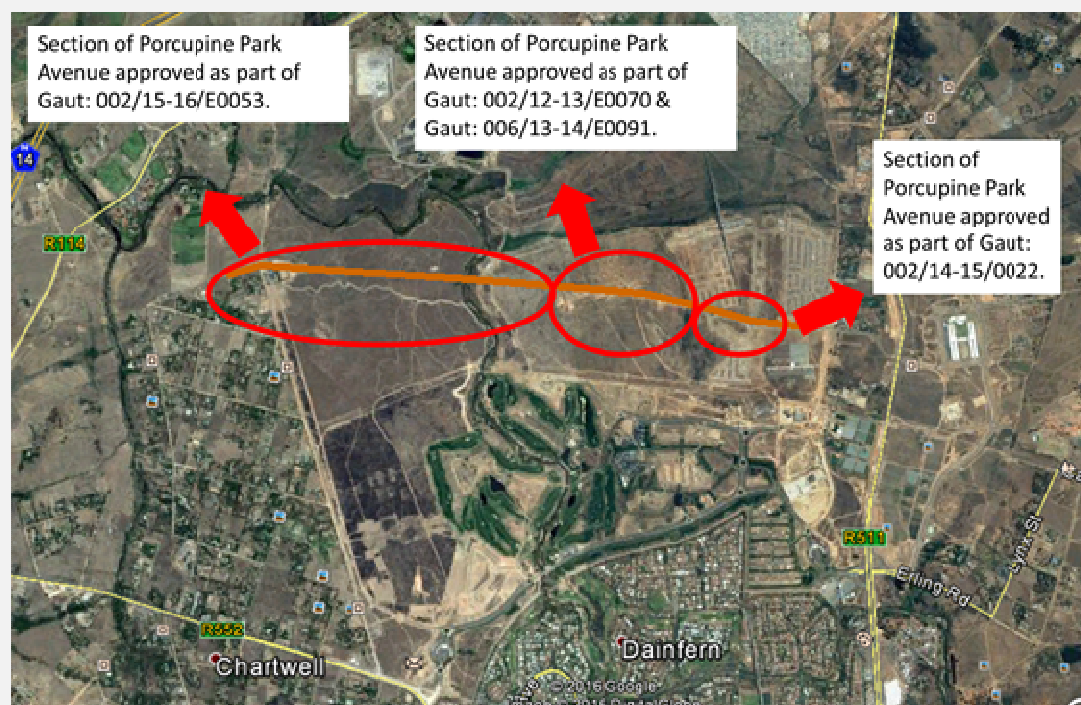


Figure 1: Previously Authorised Sections

However, a small section of the authorised alignment (the intersection between 10th Road and Runnymead Road) impacts on the existing Equestrian Centre within Steyn City. It is therefore necessary to redesign this section. The proposed re-alignment involves the bending of the road so that it no longer impacts on Steyn City.

Two alternative re-alignment options will be assessed as part of the application process. The preferred option (**the Proposal**) occurs on the Remaining Extent of Farm Diepsloot 388-JR within Ward 96 of the City of Johannesburg Metropolitan Municipality. The property is owned by Johannesburg Property Company (JPC) and the area (Porcupine Park) is currently managed through a management agreement which is in place between City of Johannesburg and Steyn City Properties (Pty) Ltd (previously known as Golden Creek Investments (Pty) Ltd).

The overall East West Link Road will carry high volumes of traffic and it will function as an important link in the greater road network. The aim of the road as a whole is to assist with the distribution and alleviation of traffic in this area of Johannesburg. The road has been planned as a Class 3 Arterial Road and will be managed by Johannesburg Roads Agency (JRA) once the road is constructed. The applicant in terms of this application is however, Steyn City Properties (Pty) Ltd.

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
	✓

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

Not Applicable.

The proposed re-alignment does not cross any watercourses and as such no Water Use Licence Application (WULA) is required for Section 21 (c) and (i) Water Uses of the National Water Act, 1998 (Act No 36 of 1998). A Water Use License (WUL) process however was undertaken previously for the main alignment (which is not being re-aligned) and was authorised on 12 January 2016 (License Number: 01/A21C/CI/4694). A copy of this is included in **Annexure F2**.

The proposed activity does not trigger any other legislation and as such no further authorisations/licences are required.

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

N/A

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

N/A

2. Applicable legislation, policies and/or guidelines

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998
Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)	National (DEA) Provincial (GDARD)	4 December 1996
National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended	National (DEA) Provincial (GDARD)	18 December 2014
Environmental Impact Assessment Regulations (GN R 982 of 4 December 2014) (as amended by GN 326 of 7 April 2017)	National (DEA) Provincial (GDARD)	8 December 2014 (as amended on 7 April 2017)
Listing Notice 1 (GN R 983 of 4 December 2014) (as amended by GN 327 of 7 April 2017)	National (DEA) Provincial (GDARD)	8 December 2014 (as amended on 7 April 2017)
Listing Notice 3 (GN R 985 of 4 December 2014) (as amended by GN 324 of 7 April 2017)	National (DEA) Provincial (GDARD)	8 December 2014 (as amended on 7 April 2017)
Need & Desirability Guideline (Notice 891 of 2014)	National (DEA) Provincial (GDARD)	20 October 2014
Public Participation Process Guideline (GN R 807 of 10 October 2012)	National (DEA) Provincial (GDARD)	10 October 2012
National Heritage Resource Act (NHRA), 1999 (Act No. 25 of 1999)	Provincial Heritage Resources Agency – Gauteng (PHRA-G)	28 April 1999
National Water Act (NWA) (Act No. 36 of 1998)	Department of Water and Sanitation (DWS)	20 August 1998

Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy or guideline	Description of compliance
<p>Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)</p>	<p>Section 24 of the Constitution states that – <i>“Everyone has the right to -</i> <i>a) an environment that is not harmful to their health or well-being; and</i> <i>b) have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –</i> <i>(i) Prevent pollution and ecological degradation;</i> <i>(ii) Promote conservation; and</i> <i>(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”</i></p> <ul style="list-style-type: none"> • A Basic Assessment Process including an Impact Assessment has been undertaken to ensure that negative impacts on the environment can be mitigated satisfactorily.
<p>National Environmental Management Act, 1998 (NEMA) (Act No. 107 of 1998), as amended</p>	<p>The NEMA is the umbrella framework for all environmental legislation primarily to assist with implementing the environmental rights of the Constitution. The NEMA provides fundamental principles required for environmental decision making and to achieve sustainable development. It also makes provision for duty of care to prevent, control and rehabilitate the effects of significant pollution and environmental degradation, and prosecute environmental crimes. These principles must be adhered to, and taken into consideration during the impact assessment phase.</p> <p>Section 24D and 24(2) of the NEMA makes provision for the publication of list and associated regulations containing activities identified that may not commence without obtaining prior environmental authorisation from the competent authority.</p> <p>The Act also requires that no person may commence an activity listed or specified unless the competent authority has granted an environmental authorisation of that activity.</p> <ul style="list-style-type: none"> • A Basic Assessment Process including an Impact Assessment has been undertaken to ensure that negative impacts on the environment can be mitigated satisfactorily. This assessment is in line with the requirements of NEMA and the associated EIA Regulations. • Further, other important aspects of NEMA such as sustainability principles such as the “Polluter Pays” and “the Precautionary Principle” have also been taken into account in the assessment of the impacts of the proposed development. • The commencement of the activity will not take place unless authorised by the competent authority.
<p>Environmental Impact Assessment Regulations (GN R 982 of 4 December 2014) (as amended by GN 326 of 7 April 2017)</p>	<p>The purpose of the EIA Regulations, 2014 is to regulate the procedure and criteria as contemplated in Chapter 5 of NEMA relating to the preparation, evaluation, submission, processing and consideration of, and decision on, applications for environmental authorisations for the commencement of activities, subjected to environmental impact assessment, in order</p>

	<p>to avoid or mitigate detrimental impacts on the environment, and to optimise positive environmental impacts.</p> <ul style="list-style-type: none"> • The Basic Assessment Process undertaken for the proposed East-West Link Road Re-alignment is in line with the requirements of the EIA Regulations.
<p>Listing Notice 3 (GN R 985 of 4 December 2014) (as amended by GN 324 of 7 April 2017)</p>	<p>In terms of Listing Notice 3, the proposed re-alignment triggers Activity 4 and 12 of the Listing Notice 3.</p> <ul style="list-style-type: none"> • In line with the requirements of Listing Notice 3 of the EIA Regulations, 2014 (as amended), these activities have been included in the Application. • A Basic Assessment Process in line with the requirements of the EIA Regulations, 2014 (as amended) is being undertaken.
<p>Need & Desirability Guideline (Notice 891 of 2014)</p>	<p>The Department of Environmental Affairs (DEA) published a guideline on determining the need and desirability of a proposed development. This document provides information and guidance considering the need and desirability in terms of NEMA, the EIA Regulations, the NEM: AQA, and NEM: WA. It also aims to assist Environmental Assessment Practitioners (EAPs) to prepare a well-structured and complete application and reports in order, and to assist the competent authorities to ensure that need and desirability are given due consideration during every EIA application, to expedite and ensure well-informed decision-making.</p> <ul style="list-style-type: none"> • Section E, Part 9 of this report includes an assessment of the need and desirability of the proposed development which takes into account the Guidelines.
<p>Public Participation Process Guideline (GN R 807 of 10 October 2012)</p>	<p>The DEA also published guidelines for public participation. However, these specifically relate to the EIA Regulations, 2010.</p> <ul style="list-style-type: none"> • Section C of this report provides information on the public participation process. Where applicable, the guideline assisted in ensuring all the necessary I&APs were identified. However, as mentioned, these guidelines specifically relate to the EIA Regulations, 2010.
<p>National Heritage Resource Act (NHRA), 1999 (Act No. 25 of 1999)</p>	<p>The National Heritage Resources Act (25 of 1999) was promulgated for the protection of National Heritage Resources and the empowerment of civil society to conserve their heritage Resources.</p> <p>In terms of Section 38 of this act, certain listed activities require authorisation from provincial agencies including “The construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length.”.</p> <ul style="list-style-type: none"> • As such, a copy of the Basic Assessment Report will be uploaded to the South African Heritage Resources Agency (SAHRIS) to obtain comment from PHRA-G. However, it should be noted that no Heritage Impact Assessment Report has been compiled as the original East-West

	Link has already been approved and the re-alignment only constitutes a small section of this. A copy of the SAHRA approval is provided in Appendix F4.
National Water Act (NWA) (Act No. 36 of 1998)	<p>The National Water Act (NWA) (36 of 1998) regulates the surface and subsurface water of South Africa. The purpose of the act is to ensure that South Africa's water resources are protected, used, developed, conserved, managed and controlled.</p> <ul style="list-style-type: none"> No Water Use Licence Application is required in terms of the NWA, as the proposed re-alignment does not cross any watercrossings however the Department of Water and Sanitation (DWS) has been notified of the development and provided with an opportunity to comment.

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.

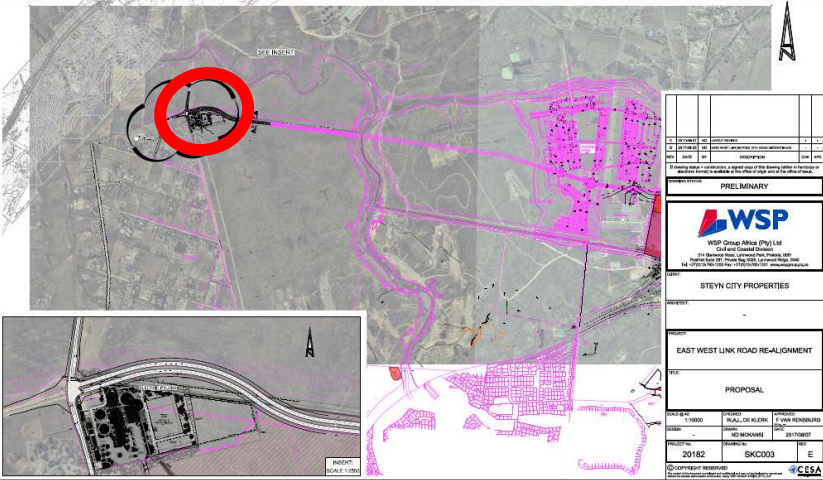

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

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

<p>WSP did an assessment of the western section of the East-West Link Road. Potential alternatives were developed as part of the planning process and took into account the several constraints which need to be taken into account in the alignment. These constraints are as follows:</p> <ul style="list-style-type: none"> Eskom Servitudes that are north of the boundary wall of Steyn City. Eskom pylons also to the north of the boundary wall of Steyn City. The already constructed Steyn City Equestrian Centre which are affected by the original approved route and need to be taken into account in the re-alignment. Porcupine Park is situated to the north of the proposed East West Link Road. This area is an environmentally sensitive area. Therefore, the road cannot be aligned further to the north.
--

Provide a description of the alternatives considered

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other (provide details of "other")	Description
1	Proposal	<p>The proposed section that will be re-aligned is the western section of the road which commences just east of Runnymead Road.</p> <p>As part of the Proposal, a small section of the road will curve northwards so to miss the existing Steyn City Equestrian Estate. It will then curve southwards and joins up with the existing Runnymead Road and 10th Road intersection.</p> <p>A map showing the Proposal circled in red (Figure 2) is provided below for context. A3 maps of the alternatives are included in Appendix A1.</p>  <p>Figure 2: Proposal</p>
2	Alternative 1	<p>With Alternative 1, Porcupine Avenue will be re-aligned east of the Jukskei River on Portion 5 of Farm of Diepsloot 388-JR. It will then run adjacent to the Steyn City boundary (within the Remaining Extent of Portion 1 of Farm Diepsloot 388-JR – i.e. Porcupine Park). It then will cross Runnymead Avenue slightly to the north of the existing Runnymead road and 10th road intersection. From the intersection, the road will curve to the south and then join the existing 10th road. This bend in the road will occur within Portion 25 of Farm Nietgedacht 535-JQ. Figure 3 shows the extent of the re-alignment in terms of Alternative 1. An A3 version is provided in Appendix A1.</p>  <p>Figure 3: Alternative 1</p>

		It should be noted that with Alternative 1, the full alignment of Porcupine Avenue will run within Porcupine Park and a much larger section of the road will have to be re-aligned. It is for this reason that this alternative is not preferred.
3	Alternative 2	
	Etc.	

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

Not Applicable.

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:

20 ha (5ha)

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Ha/ m²

or, for linear activities:

Proposed activity – **Proposal**

Length of the activity:

625m

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

3200m

m

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

Proposed activity - **Proposal**

Size of the site/servitude:

20 000m²

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

102 400 m²

m²

Please note that the road reserve width for both alternatives is 32m. This was used to calculate the area of the servitude footprint.

5. Site Access

Proposal

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

YES	NO
✓	
Not Applicable	

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

Describe the type of access road planned:

Please note:

The proposed development is a road re-alignment. Access to the proposed re-alignment is available through the existing Runnymede Avenue and 10th Road. No additional access roads are required.

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
✓	
Not Applicable	

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

Describe the type of access road planned:

Please note:

The proposed development is a road re-alignment. Access to the proposed re-alignment is available through the existing Runnymede Avenue and 10th Road. No additional access roads are required.

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
m	

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

Describe the type of access road planned:

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

Please see **Appendix A2** for a copy of the route plan for both the Proposal and the Alternative (Alternative 1). Please also see **Appendix A4** and **A5** for copies of various sensitivity maps.

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.

Please see **Appendix A3** for a copy of the Locality Map. Please note that a number of maps have been provided at different scales to ensure that all information required is indicated. Please also see **Appendix A4** for a copy of the sensitivity map.

7. Site photographs

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

Please see **Appendix B** for site photographs.

8. Facility Illustration

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

Please see **Appendix C** for Facility Illustrations.

SECTION B1: DESCRIPTION OF RECEIVING ENVIRONMENT – PROPOSAL

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

Please note that whilst the proposed development involves a linear activity, the environment in question is not significantly different along the route and as such, no duplication of Section B is required.

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)

Please note that Section B has been duplicated as follows:

1. Proposal
2. Alternative – Alternative 1

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 Remainder of Portion 1 of the Farm Diepsloot 388 J.R.

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):

<input type="text"/>	<input type="text"/>
----------------------	----------------------

In the case of linear activities:

Alternative: Proposal

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

Latitude (S):	Longitude (E):
25°57'28.35"S	27°58'38.03"E
25°57'25.24"S	27°58'29.82"E
25°57'27.63"S	27°58'19.79"E

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

Addendum of route alternatives attached

YES ✓

Please note:

For the preferred alternative, the re-aligned section is 625m in length, please see Annexure D for the coordinates along the route taken every 250m.

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL -	T	0	J	R	0	0	0	0	0	0	0	0	0	0	3	8	8	0	0	0	0	0	
ALT. 1																							
ALT. 2																							

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

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

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)	YES	NO ✓
Dolomite, sinkhole or doline areas	YES	NO ✓
Seasonally wet soils (often close to water bodies)	YES	NO ✓
Unstable rocky slopes or steep slopes with loose soil	YES	NO ✓
Dispersive soils (soils that dissolve in water)	YES	NO ✓
Soils with high clay content (clay fraction more than 40%)	YES	NO ✓
Any other unstable soil or geological feature	YES	NO ✓
An area sensitive to erosion	YES	NO ✓

(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 ✓
-----	---------

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

Latitude (S):	Longitude (E):
°	°

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

YES	NO ✓
-----	---------

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 ✓
-----	---------

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

Latitude (S):	Longitude (E):
°	°

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

6. Agriculture

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

YES	NO ✓
-----	---------

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

Please see **Appendix A5** for an agricultural sensitivity map.

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 % =50% ✓	Natural veld with heavy alien infestation % =40 ✓	Veld dominated by alien species % =10 ✓	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % =

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

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

YES	NO ✓
-----	---------

If YES, specify and explain:

Please note:

No endangered or rare flora or fauna species were identified by the Ecological Habitat Assessment which was undertaken. However, there are two plant species that are not threatened but listed as Declining that are present at the site. These declining plant species are *Boophone disticha* and *Hypoxis hemerocallidea*. Both species can be rescued and replanted locally. Thus, no nett loss.

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

YES	NO ✓
-----	---------

If YES, specify and explain:

Not applicable.

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

YES	NO ✓
-----	---------

If YES, specify and explain:

Please note:

The site is part of the grassland vegetation type, Egoli Granite Grassland that is of particular high conservation priority and listed Endangered according to the National List of Threatened Ecosystems (2011). However, the preferred re-alignment occurs in an area identified as having a low to medium sensitivity and has been impacted on historically.

Was a specialist consulted to assist with completing this section

YES ✓	NO
----------	----

If yes complete specialist details

Name of the specialist:

Ronaldo Retief Pr.Sci.Nat.

Qualification(s) of the specialist:

MSc. Zoology

Postal address:

PO Box 1401, Wilgeheuwel, Johannesburg

Postal code:

1736

Telephone:

087 985 0951

Cell: 072 666 6348

E-mail:

ronaldo@prismems.co.za

Fax: 086 601 4800

Are any further specialist studies recommended by the specialist?

YES	NO ✓
-----	---------

If YES, specify: **Not Applicable.**

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

YES	NO ✓
-----	---------

If YES list the specialist reports attached below

Not Applicable.

Signature of specialist:



Date:

23 October 2017

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

8. Land Use Character of Surrounding Area

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

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line ^N	25. Major road (4 lanes or more) ^N
26. Sewage treatment plant ^A	27. Landfill or waste treatment site ^A	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33. Spoil heap or slimes dam ^A	34. Small Holdings	
Other land uses (describe):	35. Equestrian Centre 36. Steyn City Phase 2 (in the process of being constructed) 37. Existing Road (10th Road)			

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						
	1, 7	2, 7	1, 2	1, 2	1, 2	1, 2	
	37	1, 7	1	1, 2	1,2	1	
WEST	7, 37	7,37			1, 2	1	EAST
	34	34	1, 35, 36	1, 35, 36	1, 2, 36	1, 36	
	34	34	1, 36	1, 36	1, 36	1, 36	
	SOUTH						



= Site

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

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

Have specialist reports been attached

YES ✓	NO
----------	----

If yes indicate the type of reports below

Please see **Appendix G** for a copy of the Ecological Habitat Assessment.

Please also note the following:

- The proposed re-alignment is in close proximity to the previously authorised road. A Heritage Impact Assessment was previously undertaken and approved by PHRA-G. The approval by PHRA-G is provided in **Appendix F4**. As such, no additional Heritage Impact Assessment has been conducted.
- The proposed re-alignment does not cross the wetland or any other watercrossings. As such no separate Wetland Assessment was undertaken.

9. Socio-Economic Context

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

The proposed development occurs within the City of Johannesburg in Gauteng. A summary of the socio-economic environment for the City of Johannesburg (obtain from StatsSA) is included below.

The City of Johannesburg Local Municipality is situated in Gauteng province and covers an area of 1 645km². The City is the provincial capital of Gauteng, the wealthiest province in South Africa. According to Census 2011 information, the area has a total population of 4,4 million of which 76,4% are black African, 12,3% are white people, 5,6% are coloured people, and 4,9% are Indian/Asian.

Figure 4 below shows that the majority of people in the area have either some primary school education (33.6%) or secondary education (30%). Only 20.8% of the population has completed secondary school and an even smaller percentage (5.3%) have higher education (Stats SA, 2017).

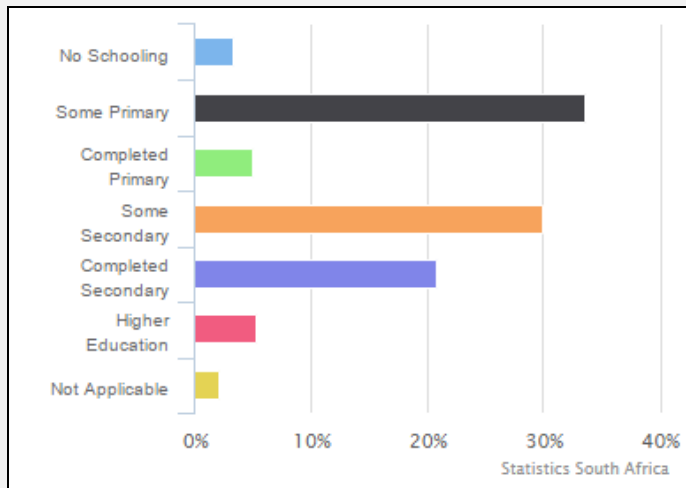


Figure 4: Highest Education Level (All Ages) (Stats SA, 2017).

Approximately 72.7% of the population are at a working age (15-64). Of those, approximately 52.6% (1 696 520 people) are employed (Figure 5). The unemployment rate for the area is 25%. Of the 1 228 666 economically active youth (15-35 years) in the area, 31,5% are unemployed. In terms of living conditions, there is 1 434 856 households in the municipality with an average household size of 2,8 persons per household. 64,7% of households have access to piped water, 26,9% have water in their yard and only 1,4% of households do not have access piped water (Stats SA, 2017).

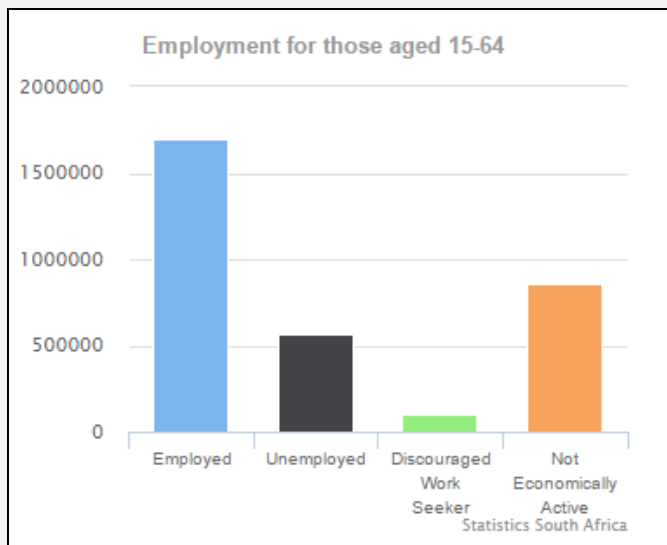


Figure 5: Employment for those aged 15-64 (Stats SA, 2017)

In addition to the above, the following planning documents and frameworks apply to the area and are discussed in more detail in the following subsections:

Regional Spatial Development Framework (RSDF), 2011: Administrative Region A:

The RSDF represents the prevailing spatial planning policy within the City of Johannesburg and is adopted in terms of the Municipal Systems Act, 2000 (Act No. 32 of 2000) as an integral component of the City's Integrated Development Plan (IDP).

The proposed re-alignment is situated within the City of Johannesburg Metropolitan Municipality in Region A. Region A, is one of seven administrative regions that make up the City of Johannesburg. It is located on the northern periphery of the City of Johannesburg Metropolitan area, bordered by Region C and Region E to the south, Mogale City Local Municipality to the west, City of Tshwane Municipality to the north and City of Ekurhuleni Municipality to the east. The Greater Diepsloot and Greater Ivory Park areas are classified as Marginalised areas and are among the most prioritised areas in terms of the Growth Management Strategy (GMS).

The proposed study site is situated in Sub-Area 3 of Region A according to the Regional Spatial Development Framework. Sub-Area 3 consists mainly of the Diepsloot Nature Reserve and the marginalized area of Diepsloot West and Extensions. The remainder of the sub area includes agricultural holdings and farm portions that fall within and outside the Urban Development Boundary (UDB). One of sub-area 3's main objectives is to improve access to Diepsloot and Extensions, hence the development of the planned K52 road, thereby reiterating the need to relocate the spots-facilities.

The Site falls outside of the Urban Development Boundary according to the 2010/2011 Regional Development Framework for region A,

The proposed study area is situated in the north-western side of Sub Area 3 (Diepsloot Precinct) within Region A and outside the Urban Development Boundary. Sub-Area 3 has three high priority development Objectives:

- To ensure socio-economic integration, infrastructure upgrading, consolidation and long-term sustainability of Diepsloot and Extensions.
- Strengthen the economic growth and social development of Diepsloot
- To enable access to housing and security of tenure in the contained Diepsloot and Extensions.

Gauteng Spatial Development Framework 2040 (GSDF)

The GSDF is part of the executive authority of the provincial government and an integral component of the governance structure of the province as a whole, and as such has to assist in ensuring the realization of national, regional, provincial and local development objectives. Some of the spatial imperatives and opportunities that will support the area include:

- Promote global connectivity by drawing on the key transit corridors that connect the City to the broader regional system; and
- Ensure future development contributes to, rather than reduces, levels of connectivity within the city.

The east-west link road aims to improve connectivity in the area and the re-alignment in particular, allows this connectivity to occur without impacting on existing infrastructure.

Site Context

In the context of the site, the East-West Link Re-Alignment is adjacent to the approved Steyn City development which is in the process of being constructed. Further, to the south-west of the road re-alignment, the community of Chartwell- North occurs which is primarily small holdings. Due to the increased development in the area, there is a need to create an East-West Link Road to link William Nicol Drive to the East and the corner of 10th Avenue and Runnymede Avenue to the West. However, the currently approved alignment would result in the destruction of the existing Equestrian Centre and thus the re-alignment is necessary.

Socio-Economic Motivation

Sustainable development is directly linked to the provision of a safe and efficient road network. Currently there is a lack of linkage between the eastern and western section of the northern part of Johannesburg. Further, due to increased development in the area (for example, Steyn City as well as Riverside View Extension X28 – both approved previously), there is a need to create an east-west link road which links William Nicol Drive to the east with the corner of 10th Avenue and Runnymede Avenue to the west. A number of authorisation processes was previously conducted for this and was approved by various authorisations (Gaut: 002/15-16/E0053; Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022). It is envisaged that the East West Link Road will carry high volumes of traffic and it will function as an important link in the greater road network. Therefore, the East West Link Road

will assist with the distribution and alleviation of traffic in this area of Johannesburg.

However, a small section of the authorised alignment impacts on the existing Equestrian Estate within Steyn City. It is therefore necessary to redesign this section. The proposed re-alignment involves the bending of the road so that it no longer impacts on Steyn City.

The need for this re-alignment is therefore as follows:

- Improved capacity and traffic flow for the area.
- Improved east-west linkage for the area.
- Decreased impacts on existing infrastructure; and
- Economic and social benefits related the road not impacting on the Equestrian Centre.

10. Cultural/Historical Features

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

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

(a) *the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*

(b) *the construction of a bridge or similar structure exceeding 50m in length;*

(c) *any development or other activity which will change the character of a site-*

(i) *exceeding 5 000 m2 in extent; or*

(ii) *involving three or more existing erven or subdivisions thereof; or*

(iii) *involving three or more erven or divisions thereof which have been consolidated within the past five years;*

or

(iv) *the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*

(d) *the re-zoning of a site exceeding 10 000 m2 in extent; or*

(e) *any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

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

If YES, explain:

YES	NO ✓
-----	---------

Not Applicable.

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:

No further specialist study was undertaken as part of this re-alignment however, as mentioned, the overall route (which is in the vicinity of the re-alignment) was previously approved and included a Heritage Impact Assessment. No heritage is expected in the vicinity of the re-alignment. Please refer to **Appendix F4** for a copy of the PHRA-G Approval.

Best practice mitigation measures will be included in the Environmental Management Programme (EMPr) in regards to potential finds. These include the following:

- If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.
- It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.
- The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.

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

YES	NO ✓
YES	NO ✓

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

Please see **Appendix F4**.

SECTION B2: DESCRIPTION OF RECEIVING ENVIRONMENT – ALTERNATIVE – ALTERNATIVE 1

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

Please note that whilst the proposed development involves a linear activity, the environment in question is not significantly different along the route and as such, no duplication of Section B is required.

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)

Please note that Section B has been duplicated as follows:

1. Proposal
2. Alternative – Alternative 1 (this section)

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

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

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

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

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

1. Property Description

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

Portion 5 of Farm of Diepsloot 388-JR.
The Remainder of Portion 1 of the Farm Diepsloot 388 J.R
Portion 25 of Farm Nietgedacht 535-JQ

2. Activity Position

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative: Latitude (S): Longitude (E):

In the case of linear activities:

Alternative: Proposal –

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

Latitude (S):

Longitude (E):

°	°
°	°
°	°

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

Addendum of route alternatives attached

Please note:

The alternative alignment is approximately 3.2km in length and as such, please see Annexure D for the coordinates along the route taken every 250m.

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL – Alternative 1	T	0	J	R	0	0	0	0	0	0	0	0	0	3	8	8	0	0	0	0	5
	T	0	J	R	0	0	0	0	0	0	0	0	0	3	8	8	0	0	0	0	0
	T	0	J	R	0	0	0	0	0	0	0	0	0	5	3	5	0	0	0	2	5

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

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

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
YES	NO ✓
YES ✓	NO
YES	NO ✓
YES	NO ✓
YES	NO ✓
YES ✓	NO

(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 ✓
-----	---------

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

Latitude (S):

Longitude (E):

--	--

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

YES	NO ✓
-----	---------

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 ✓
-----	---------

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

Latitude (S): _____ **Longitude (E):** _____

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

6. Agriculture

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

YES	NO ✓
-----	---------

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

Please see **Appendix A5** for an agricultural sensitivity map.

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 % =50% ✓	Natural veld with heavy alien infestation % =	Veld dominated by alien species % =45% ✓	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =1% ✓	Bare soil % =4% ✓

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 ✓
-----	---------

If YES, specify and explain:

Please note:
No endangered or rare flora or fauna species were identified by the Ecological Habitat Assessment which was undertaken. However, there are two plant species that are not threatened but listed as Declining that are present at the site. These declining plant species are *Boophone disticha* and *Hypoxis hemerocallidea*.

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

YES	NO ✓
-----	---------

If YES, specify and explain:

Not applicable.

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

YES ✓	NO
----------	----

If YES, specify and explain:

The site is part of the grassland vegetation type, Egoli Granite Grassland that is of particular high conservation priority and listed Endangered according to the National List of Threatened Ecosystems (2011).

Further, according to the Ecological Specialist Study undertaken, the alternative re-alignment traverses some medium-high sensitivity areas. It also crosses the Jukskei River as well as the small drainage line/wetland that occurs within the Porcupine Park area.

In addition, the alternative re-alignment traverses the full extent of the Porcupine Park area and it is for this reason that it is not preferred.

Was a specialist consulted to assist with completing this section

YES	NO
✓	

If yes complete specialist details

Name of the specialist: **Ronaldo Retief Pr.Sci.Nat.**
 Qualification(s) of the specialist: **MSc. Zoology**
 Postal address: **PO Box 1401, Wilgeheuwel, Johannesburg**
 Postal code: **1736**
 Telephone: **087 985 0951** Cell: **072 666 6348**
 E-mail: **ronaldo@prismems.co.za** Fax: **086 601 4800**

Are any further specialist studies recommended by the specialist?

YES	NO
	✓

If YES, specify: **Not Applicable.**

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

YES	NO
	✓

If YES list the specialist reports attached below
Not Applicable.

Signature of specialist:  Date: **23 October 2017**

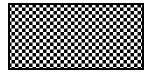
Please note: If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

8. Land Use Character of Surrounding Area

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

1. Vacant land	2. River, stream, wetland	3. Nature conservation area	4. Public open space	5. Koppie or ridge
6. Dam or reservoir	7. Agriculture	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	15. Light industrial
16. Heavy industrial ^{AN}	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport ^N	23. Train station or shunting yard ^N	24. Railway line ^N	25. Major road (4 lanes or more) ^N
26. Sewage treatment plant ^A	27. Landfill or waste treatment site ^A	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33. Spoil heap or slimes dam ^A	34. Small Holdings	
Other land uses (describe):	35. Equestrian Centre 36. Steyn City Phase 2 (in the process of being constructed) 37. Existing Road (10th Road) 38. Pump Station for Steyn City 39. Construction Area for Valuemax (in the process of being constructed)			

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



= Site

		NORTH												
	1, 7	2, 7	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2, 39	1, 2, 39	1, 2, 39	1, 39	1, 39
	37	1, 7	1	1, 2	1, 2	1	1	1	1, 2	38	1, 39	1, 39	1, 39	1, 39
WEST	7, 37	7, 37											1, 39	1, 39
	34	34	1, 35, 36	1, 35, 36	1, 2, 36	1, 36	1, 36	1, 2, 36	1, 2	1, 36	1, 39	1, 39	1, 39	1, 39
	34	34	1, 36	1, 36	1, 36	1, 36	1, 36	1, 36	1, 2	1, 39	1, 39	1, 39	1, 39	1, 39
		SOUTH												
		EAST												

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

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

Have specialist reports been attached

YES	NO
✓	

If yes indicate the type of reports below

Please see **Appendix G** for a copy of the Ecological Habitat Assessment.

Please also note the following:

- The proposed re-alignment is in close proximity to the previously authorised road. A Heritage Impact Assessment was previously undertaken and approved by PHRA-G. As such, no additional Heritage Impact Assessment has been conducted. Please see Appendix F4 for a copy of this approval.

9. Socio-Economic Context

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

The proposed development occurs within the City of Johannesburg in Gauteng. A summary of the socio-economic environment for the City of Johannesburg (obtain from StatsSA) is included below.

The City of Johannesburg Local Municipality is situated in Gauteng province and covers an area of 1 645km². The City is the provincial capital of Gauteng, the wealthiest province in South Africa. According to Census 2011 information, the area has a total population of 4,4 million of which 76,4% are black African, 12,3% are white people, 5,6% are coloured people, and 4,9% are Indian/Asian.

Figure 6 below shows that the majority of people in the area have either some primary school education (33.6%) or secondary education (30%). Only 20.8% of the population has completed secondary school and an even smaller percentage (5.3%) have higher education (Stats SA, 2017).

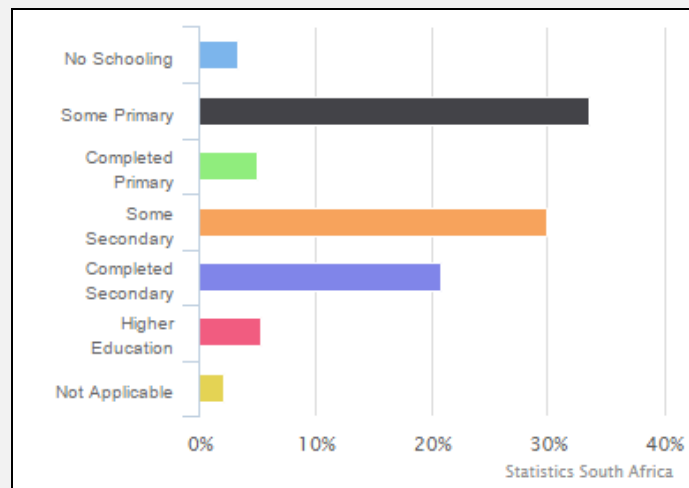


Figure 6: Highest Education Level (All Ages) (Stats SA, 2017).

Approximately 72.7% of the population are at a working age (15-64). Of those, approximately 52.6% (1 696 520 people) are employed (**Figure 7**). The unemployment rate for the area is 25%. Of the 1 228 666 economically active youth (15–35 years) in the area, 31,5% are unemployed. In terms of living conditions, there is 1 434 856 households in the municipality with an average household size of 2,8 persons per household. 64,7% of households have access to piped water, 26,9% have water in their yard and only 1,4% of households do not have access piped water (Stats SA, 2017).

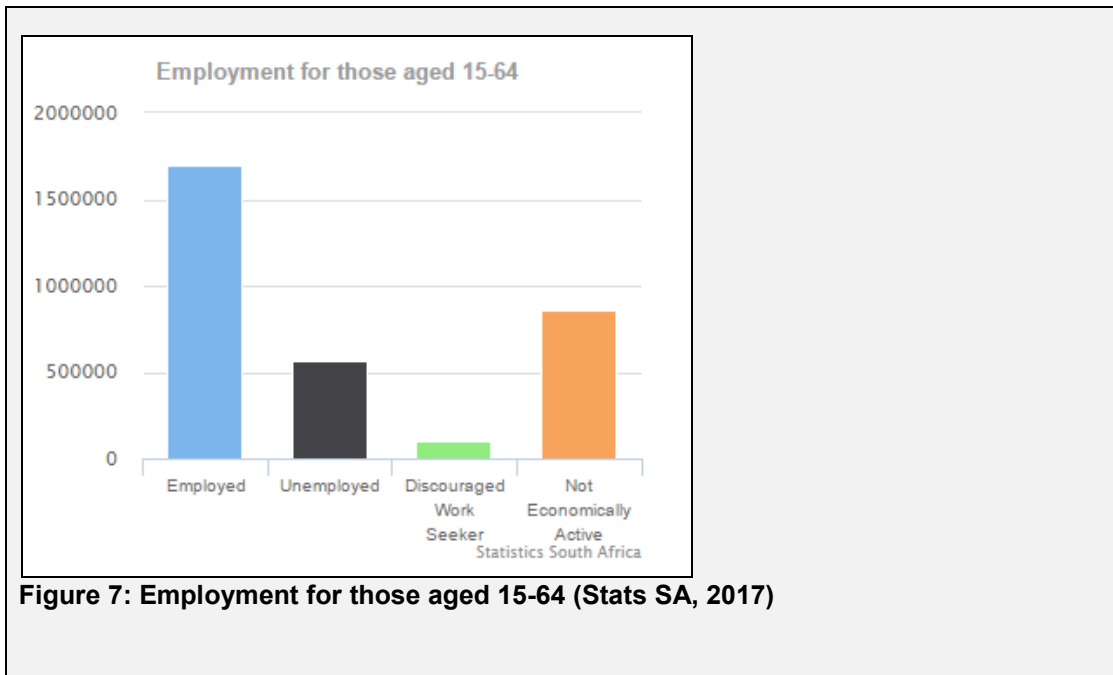


Figure 7: Employment for those aged 15-64 (Stats SA, 2017)

In addition to the above, the following planning documents and frameworks apply to the area and are discussed in more detail in the following subsections:

Regional Spatial Development Framework (RSDF), 2011: Administrative Region A:

The RSDF represents the prevailing spatial planning policy within the City of Johannesburg and is adopted in terms of the Municipal Systems Act, 2000 (Act No. 32 of 2000) as an integral component of the City's Integrated Development Plan (IDP).

The proposed re-alignment is situated within the City of Johannesburg Metropolitan Municipality in Region A. Region A, is one of seven administrative regions that make up the City of Johannesburg. It is located on the northern periphery of the City of Johannesburg Metropolitan area, bordered by Region C and Region E to the south, Mogale City Local Municipality to the west, City of Tshwane Municipality to the north and City of Ekurhuleni Municipality to the east. The Greater Diepsloot and Greater Ivory Park areas are classified as Marginalised areas and are among the most prioritised areas in terms of the Growth Management Strategy (GMS).

The proposed study site is situated in Sub-Area 3 of Region A according to the Regional Spatial Development Framework. Sub-Area 3 consists mainly of the Diepsloot Nature Reserve and the marginalized area of Diepsloot West and Extensions. The remainder of the sub area includes agricultural holdings and farm portions that fall within and outside the Urban Development Boundary (UDB). One of sub-area 3's main objectives is to improve access to Diepsloot and Extensions, hence the development of the planned K52 road, thereby reiterating the need to relocate the spots-facilities.

The Site falls outside of the Urban Development Boundary according to the 2010/2011 Regional Development Framework for region A,

The proposed study area is situated in the north-western side of Sub Area 3 (Diepsloot Precinct) within Region A and outside the Urban Development Boundary. Sub-Area 3 has three high priority development Objectives:

- To ensure socio-economic integration, infrastructure upgrading, consolidation and long-term sustainability of Diepsloot and Extensions.
- Strengthen the economic growth and social development of Diepsloot
- To enable access to housing and security of tenure in the contained Diepsloot and Extensions.

Gauteng Spatial Development Framework 2040 (GSDF)

The GSDF is part of the executive authority of the provincial government and an integral component of the governance structure of the province as a whole, and as such has to assist in ensuring the realization of national, regional, provincial and local development objectives. Some of the spatial imperatives and opportunities that will support the area include:

- Promote global connectivity by drawing on the key transit corridors that connect the City to the broader regional system; and
- Ensure future development contributes to, rather than reduces, levels of connectivity within the

city.

The east-west link road aims to improve connectivity in the area and the re-alignment in particular, allows this connectivity to occur without impacting on existing infrastructure.

Site Context

In the context of the site, the East-West Link Re-Alignment is adjacent to the approved Steyn City development which is in the process of being constructed. Further, to the south-west of the road re-alignment, the community of Chartwell- North occurs which is primarily small holdings. Due to the increased development in the area, there is a need to create an East-West Link Road to link William Nicol Drive to the East and the corner of 10th Avenue and Runnymede Avenue to the West. However, the currently approved alignment would result in the destruction of the existing Equestrian Centre and thus the re-alignment is necessary.

Socio-Economic Motivation

Sustainable development is directly linked to the provision of a safe and efficient road network. Currently there is a lack of linkage between the eastern and western section of the northern part of Johannesburg. Further, due to increased development in the area (for example, Steyn City as well as Riverside View Extension X28 – both approved previously), there is a need to create an east-west link road which links William Nicol Drive to the east with the corner of 10th Avenue and Runnymede Avenue to the west. A number of authorisation processes was previously conducted for this and was approved by various authorisations (Gaut: 002/15-16/E0053; Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022). It is envisaged that the East West Link Road will carry high volumes of traffic and it will function as an important link in the greater road network. Therefore, the East West Link Road will assist with the distribution and alleviation of traffic in this area of Johannesburg.

However, a small section of the authorised alignment impacts on the existing Equestrian Estate within Steyn City. It is therefore necessary to redesign this section. The proposed re-alignment involves the bending of the road so that it no longer impacts on Steyn City.

The need for this re-alignment is therefore as follows:

- Improved capacity and traffic flow for the area.
- Improved east-west linkage for the area.
- Decreased impacts on existing infrastructure; and
- Economic and social benefits related the road not impacting on the Equestrian Centre.

10. Cultural/Historical Features

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

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

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site-

(i) exceeding 5 000 m² in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years;

or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000 m² in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If YES, explain:

Not Applicable.

YES	NO ✓
-----	---------

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:

No specialist study was undertaken as part of this re-alignment however, as mentioned, the overall route (which is in the vicinity of the re-alignment) was previously approved and included a Heritage Impact Assessment. No heritage is expected in the vicinity of the re-alignment. Please refer to Appendix F4 for a copy of the PHRA-G approval.

Best practice mitigation measures will be included in the Environmental Management Programme (EMPr) in regards to potential finds. These include the following:

- If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.
- It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.
- The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.

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

YES	NO ✓
YES	NO ✓

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

Please refer to Appendix F4 for a copy of the PHRA-G approval.

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

The purpose of this document is to provide stakeholders with an opportunity to review and evaluate the Basic Assessment Report. All comments received will be included in the final submission of the Basic Assessment Report.

1. 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
----------	----

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

YES	NO ✓
-----	---------

The purpose of this document is to provide the reader with the required information for evaluation. Comments are pending based on this circulation.

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

Pending comment on this circulation.

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

Pending comment on this circulation

2. 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 ✓
-----	---------

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

Comments are pending based on this circulation.

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

The purpose of this document is to provide the reader with the required information for evaluation. Comments are pending based on this circulation.

The public participation process undertaken is as follows:

A detailed Interested and Affected Party (I&AP) Database was compiled and includes adjacent landowners as well as the affected ward councillor of the area as well as the Chartwell North Estates Home Owners Association and the Chartwell Country Estates Residents Association.. The database also includes organs of state that have jurisdiction over the site such as City of Johannesburg, Johannesburg Roads Agency, Department of Water and Sanitation, Johannesburg Water and Gauteng Department of Agriculture and Rural Development (GDARD).

As part of the combined notification and review, written notification in the form of a Background Information Document (BID) were emailed to all I&APs on the I&AP Database on 31 October 2017. In addition, a public participation map was compiled to show all adjacent landowners. Hand Delivery of BIDs took place on 31 October 2017.

Three site notices were also placed around the site on the same day. An advert was also placed in The Star on 31 October 2017.

The BID, advert and site notices provided a short background on the project and encouraged I&APs to register as I&APs. Information on the review of the Basic Assessment Report was also provided and a 30-day registration and review period was provided. All comments on the report will be included in the final submission of the Basic Assessment Report.

4. General Public Participation Requirements

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

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

5. Appendices for Public Participation

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

Appendix 1 – Proof of site notice

Refer to Appendix E1 for proof of the site notices that were placed during the combined notification and review period.

Appendix 2 – Written notices issued as required in terms of the regulations

Refer to Appendix E2 for a copy of the Background Information Document (BID) which has been circulated on 31 October 2017. Proof of the emails and hand delivery of BIDs which took place as part of the combined notification and review period will be included in the final submission of the Basic Assessment Report.

Appendix 3 – Proof of newspaper advertisements

Refer to Appendix E3 for a copy of newspaper notice which was placed in the Star on 31 October 2017.

Appendix 4 – Communications to and from interested and affected parties

Refer to Appendix E4 for comments received to date.

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

Pending

Appendix 6 - Comments and Responses Report

Refer to Appendix E6 the Comments and Responses Report. All further comments received during the

review of the Basic Assessment will be added to the Comments and Responses Report.

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

Pending

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

Not applicable.

Appendix 9 – Copy of the register of I&APs

Refer to Appendix E9 for a copy of the I&AP register.

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)

Please note that resource use and process details are not significantly different along the route or for each alternative and as such, no duplication of Section D is required.

1. Waste, Effluent, and Emission Management

Solid waste management

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

YES ✓	NO
Approximately 300m ³	

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

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

The building rubble and solid construction waste (such as sand, gravel, concrete and waste material) that cannot be used for filling and rehabilitation and other litter and waste generated during the construction phase will be removed from site and be disposed of safely and responsibly at a licensed landfill site.

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

Waste will be removed by a Certified Waste Management Company and be disposed of at a registered landfill site

Will the activity produce solid waste during its operational phase?

YES	NO ✓
Not applicable	

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

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

Not Applicable.

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	N/A ✓
-----	----------

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

Waste will be removed by a Certified Waste Management Company and be disposed of at a registered landfill site

Note: If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

YES	NO ✓
-----	---------

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 ✓
-----	---------

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:

A project specific EMPr has been compiled and is included in Appendix H. The EMPr includes a Waste Management Plan that aligns to the waste management hierarchy (reduce, reuse, recycle, recover, dispose/landfill).

Most activities included in the EMPr will focus on waste avoidance and reduction (for example, buying bulk to reduce the volume of packaging required) or waste recycling (for example, all waste generated on site will be separated into metal, paper, plastic, glass & contaminated paper, glass, plastic and polystyrene and will be recycled where possible).

In terms of construction rubble, the following will be undertaken:

- All construction rubble must be used on site as part of the existing development where possible, or must be taken off the construction site and disposed at an appropriate landfill.
- No material shall be left on site that may harm man or animals. Broken, damaged and unused nuts, bolts and washers shall be picked up and removed from site.
- Surplus concrete will not be dumped indiscriminately.
- Concrete water will be re-used in the batching process.

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 ✓
-----	---------

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

m³

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

Not applicable

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

YES	NO ✓
-----	---------

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

Not applicable

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

Not applicable.

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

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

YES	NO ✓
-----	---------

If yes, provide the particulars of the facility:

Facility name:

Not applicable

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:

Not applicable.

Liquid effluent (domestic sewage)

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

YES ✓	NO
----------	----

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

Exact volume not known

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

Please see note below.

During construction, chemical toilets will be put in place. These toilets will be cleaned and emptied regularly and effluent will be disposed of at a licensed facility. The generation of effluent will be minimal.

Please note that no effluent will be generated during the operational phase.

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

YES	NO
	✓

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

Not applicable.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO
	✓

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

YES	NO
	✓

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

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

Dust will be generated during the construction phase and will be regulated under the National Dust Control Regulations, 2013 (GN R 827).

2. Water Use

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

Municipal ✓	Directly from water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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Some water will be required for construction activities. However, no abstraction from groundwater or surface water will take place.

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

Not applicable.

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
	✓

If yes, list the permits required

Not applicable.

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

YES	NO
	✓

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

YES	NO
	✓

3. Power Supply

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

During construction, generators will be used where necessary.

No electricity is required during the operational phase of the proposed East-West Link Road Re-alignment.

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

Not applicable.

4. Energy Efficiency

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

No electricity is required and thus no design measures are necessary.

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

Not applicable.

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.

Pending. The purpose of the circulation of this document is to allow I&APs an opportunity to evaluate the Basic Assessment Report.

No issues have therefore been raised however, in obtaining contact details for an adjacent landowner, a query was raised regarding the electrical line servitude. This has been included in the Comments and Responses Report.

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):

Pending. The purpose of the circulation of this document is to allow I&APs an opportunity to evaluate the Basic Assessment Report.

As mentioned above, no issues have been raised to date however, a query in regards to the electrical line servitude was raised. It was explained to the I&AP in question that the proposed authorisation process related to East-West Link Road Re-alignment which does not continue past Runnymede Avenue/10th Road intersection. The electrical line servitude for this section was taken into account.

2. Impacts that may result from the Construction and Operational Phase

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

Impacts were identified in a number of ways including the following:

- Impacts associated with triggered activities contained in Listing Notice 1 and 3 of the EIA Regulations, 2014 (as amended) for which authorisation has been applied for;
- Impacts identified by specialists;
- An assessment of the project activities and components; and
- Issues highlighted by I&APs (both the general public and authorities).

The significance of the identified impacts was determined using the approach outlined below which is in line with the requirements of the EIA Regulations, 2014. Each impact was assessed for both the Proposal as well as Alternative 1. In some cases, impacts only applied to Alternative 1.

The **significance** of an impact is defined as the combination of the **consequence** of the impact occurring and the **probability** that the impact will occur. The nature and type of impact may be direct or indirect and may also be positive or negative, refer to **Table 1**: below for the specific definitions.

Table 1: Nature and type of impact.

		Nature and Type of Impact:	
IMPACT	Direct	Impacts that are caused directly by the activity and generally occur at the same time and place as the activity	✓/x
	Indirect	Indirect or induced changes that may occur as a result of the activity. These include all impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity	✓/x
	Cumulative	Those impacts associated with the activity which add to, or interact synergistically with existing impacts of past or existing activities, and include direct or indirect impacts which accumulate over time and space	✓/x
	Positive	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes will benefit significantly, and includes neutral impacts (those that are not considered to be negative)	✓
	Negative	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes will be comprised	x

Table 2: presents the defined criteria used to determine the **consequence** of the impact occurring which incorporates the extent, duration and intensity (severity) of the impact.

Table 2: Consequence of the Impact occurring.

CONSEQUENCE	Extent of Impact:	
	Site	Impact is limited to the site and immediate surroundings, within the study site boundary or property (immobile impacts)
	Neighbouring	Impact extends across the site boundary to adjacent properties (mobile impacts)
	Local	Impact occurs within a 5km radius of the site
	Regional	Impact occurs within a provincial boundary
	National	Impact occurs across one or more provincial boundaries
	Duration of Impact:	
	Incidental	The impact will cease almost immediately (within weeks) if the activity is stopped, or may occur during isolated or sporadic incidences
	Short-term	The impact is limited to the construction phase, or the impact will cease within 1 - 2 years if the activity is stopped
	Medium-term	The impact will cease within 5 years if the activity is stopped
	Long-term	The impact will cease after the operational life of the activity, either by natural processes or by human intervention
	Permanent	Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient
	Intensity or Severity of Impact:	
	Low	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are not affected
	Low-Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are modified insignificantly
Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are altered	
Medium-High	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes are severely altered	
High	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes will permanently cease	

The probability of the impact occurring is the likelihood of the impacts actually occurring, and is determined based on the classification provided in **Table 3**.

Table 3: Probability and confidence of impact prediction

PROBABILITY	Probability of Potential Impact Occurrence:	
	Improbable	The possibility of the impact materialising is very low either because of design or historic experience
	Possible	The possibility of the impact materialising is low either because of design or historic experience
	Likely	There is a possibility that the impact will occur
	Highly Likely	There is a distinct possibility that the impact will occur
	Definite	The impact will occur regardless of any prevention measures

The **significance** of the impact is determined by considering the consequence and probability without taking into account any mitigation or management measures and is then ranked according to the ratings

listed in **Table 4:**. The level of confidence associated with the impact prediction is also considered as low, medium or high (**Table 5:**).

Table 4: Significance rating of the impact.

Significance Ratings:	
Low	Neither environmental nor social and cultural receptors will be adversely affected by the impact. Management measures are usually not provided for low impacts
Low-Medium	Management measures are usually encouraged to ensure that the impacts remain of Low-Medium significance. Management measures may be proposed to ensure that the significance ranking remains low-medium
Medium	Natural, cultural and/or social functions and processes are altered by the activities, and management measures must be provided to reduce the significance rating
Medium-High	Natural, cultural and/or social functions and processes are altered significantly by the activities, although management measures may still be feasible
High	Natural, cultural, and/or social functions and processes are adversely affected by the activities. The precautionary approach will be adopted for all high significant impacts and all possible measures must be taken to reduce the impact

Table 5: Level of confidence of the impact prediction

Level of Confidence in the Impact Prediction:	
Low	Less than 40% sure of impact prediction due to gaps in specialist knowledge and/or availability of information
Medium	Between 40 and 70% sure of impact prediction due to limited specialist knowledge and/or availability of information
High	Greater than 70% sure of impact prediction due to outcome of specialist knowledge and/or availability of information

Once significance rating has been determined for each impact, management and mitigation measures must be determined for all impacts that have a significance ranking of Medium and higher in order to attempt to reduce the level of significance that the impact may reflect.

The EIA Regulations, 2014 specifically require a description is provided of the degree to which these impacts:

- can be reversed;
- may cause irreplaceable loss of resources; and
- can be avoided, managed or mitigated.

Based on the proposed mitigation measures the EAP will determined a mitigation efficiency (**Table 6:**) whereby the initial significance is re-evaluated and ranked again to affect a significance that incorporates the mitigation based on its effectiveness. The overall significance is then re-ranked and a final significance rating is determined.

Table 6: Mitigation efficiency

Mitigation Efficiency	
None	Not applicable
Very Low	Where the significance rating stays the same, but where mitigation will reduce the intensity of the impact. Positive impacts will remain the same
Low	Where the significance rating reduces by one level, after mitigation
Medium	Where the significance rating reduces by two levels, after mitigation
High	Where the significance rating reduces by three levels, after mitigation
Very High	Where the significance rating reduces by more than three levels, after mitigation

The reversibility is directly proportional the “Loss of Resource” where no loss of resource is experienced, the impact is completely reversible; where a substantial “Loss of resource” is experienced there is a medium degree of reversibility; and an irreversible impact relates to a complete loss of resources, i.e. irreplaceable (**Table 7**):

Table 7: Degree of reversibility and loss of resources

DEGREE REVERSIBILITY & LOSS OF RESOURCES	Loss of Resources:	
	No Loss	No loss of social, cultural and/or ecological resource(s) are experienced. Positive impacts will not experience resource loss
	Partial	The activity results in an insignificant or partial loss of social, cultural and/or ecological resource(s)
	Substantial	The activity results in a significant loss of social, cultural and/or ecological resource(s)
	Irreplaceable	The activity results in the complete and irreplaceable social, cultural and/or ecological loss of resource(s)
	Reversibility:	
	Irreversible	Impacts on natural, cultural and/or social functions and processes are irreversible to the pre-impacted state in such a way that the application of resources will not cause any degree of reversibility
	Medium Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if less than 50% resources are applied
	High Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if more than 50% resources are applied
	Reversible	Impacts on natural, cultural and/or social functions and processes are fully reversible to the pre-impacted state if adequate resources are applied

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.

Please note that the impact assessment provided below is a summary only and that the full impact assessment is contained in **Appendix I**. The full impact assessment provides an overview of both the probability of the impact occurring as well as the mitigation efficiency and as such gives an indication of the risk of the impact occurring as well as the risk that the mitigation will not be implemented/or be effective.

Table 8: Summary Impact Assessment for the Proposal

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	
Description	Nature			
Construction Phase				
Atmospheric Emissions	Dust emissions	Negative	Low	<ul style="list-style-type: none"> A speed limit of 20km/h must be maintained on all dirt roads. Dust suppression by means of either water or biodegradable chemicals.
	Emissions from vehicles and equipment (CO ₂ , NO _x , SO _x , VOC's etc.)	Negative	Low	<ul style="list-style-type: none"> In terms of transportation of workers and materials, collective transport to reduce individual car journeys where possible. All vehicles used during the project should be properly maintained and repaired. All vehicles and other machinery should comply with road worthy requirements in terms of allowable emissions.
Noise	Noise increase due to construction activities	Negative	Low	<ul style="list-style-type: none"> Equipment and/or machinery which will be used must comply with the applicable acceptable noise levels. Construction activities should be limited to daytime only.
Discharge to Water	Sewage	Negative	Low	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any watercourses, therefore such minimal impacts apply. Thus to manage impacts to surface watercourses, the following measures will be implemented. Chemical toilets must be supplied within the site camp. Ablution facilities (chemical toilets) are to be provided by the Contractor. Ablution facilities (chemical toilets) must be erected within 100m from any watercourse or wetland buffers. Toilets are to be secured to the ground, and must have a closing mechanism. Toilet paper must be provided at these facilities and must be serviced regularly. Certified contractors to maintain and remove chemical toilets regularly. The contractor must ensure that spillage does not occur when toilets are used and that waste is properly stored and disposed of. Discharge of waste into the environment and/or burial of waste are strictly prohibited. Washing of persons and effects, and ablution is only allowed at facilities provided. Wash areas (if applicable) are to be situated at least 100m away from any watercourse with shallow groundwater. Sanitary arrangements must be to the satisfaction of the PM, ECO, and the relevant authorities and legal requirements. Areas demarcated for eating must be cleaned on a daily basis, to ensure hygiene.

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
	Silt	Negative	Low	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Instability and erosion of steep slopes must be stabilised immediately. Re-vegetation in consultation with landscape architect and ECO should be done if required. To reduce the loss of material by erosion, disturbance must be kept to a minimum. If clearing of slopes occur within the rainy season, earth berms must be created along the up-slope side of the construction area. Where possible, natural vegetation should be retained to reduce the risk of erosion. Should erosion occur due to negligence on the part of the Contractor to apply the above measures, the Contractor will be responsible for reinstatement of the eroded area to its former state at his own expense. Any surface water pollution occurring as a result of this negligence will be cleaned up by the Contractor or a nominated clean up organisation at the expenses of the Contractor. Run-off containing high sedimentation loads must not be released into natural or municipal drainage systems. Silt fences must be used to stabilise the site, reduce erosion and silt entering the natural environment. No unchecked silt may enter the natural environment. Silt fences must be fit for purpose, effective and regularly maintained. 	Low
	Surface water run-off	Negative	Low	<ul style="list-style-type: none"> Storm water management during construction will be implemented however, as the preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands, construction stormwater from the preferred re-alignment is minimal. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Increased run-off during construction should be managed using berms, temporary cut-off drains, attenuation ponds or other suitable structures, in consultation with the ECO and resident Engineer. Cut off drains may not cause additional harm to environment. Care must be taken to consider their position and the receiving environment. Stormwater management system is to be installed as soon as possible following site establishment, to attenuate stormwater during the construction phase, as well as during the operational phase. Surface-water run-off and stormwater must be directed away from trenches and areas of excavation. 	Low
	Contamination of water from hazardous substances	Negative	Low	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Drip trays must be placed under all vehicles when immobile for longer than 24 hours. Vehicles suspected of leaking must be monitored and conduct a pre start-up inspection checklist. Drip trays must be checked and replaced for vehicles standing (parked) for prolonged periods. Drip trays must be of a sufficient size and volume to collect any hydrocarbon leakages from a stationary vehicle. Spill kits (absorbent material) must be available on site and in all vehicles that transport hydrocarbons for dispensing to other vehicles on the construction site. Spilled substances must be contained in impermeable containers for removal to a licensed hazardous waste 	Low

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)
Description	Nature			
			<ul style="list-style-type: none"> site. Hazardous materials of any nature must be stored at least 50m away from any water bodies. Contaminated wastewater to be contained, and removed to a registered site, to ensure water bodies on site are not contaminated. Significant spills should be reported to the Project Manager or Contractors Manager who should report this to the relevant authority 	
	Disturbance of natural system	Negative	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Ensure that no workers or equipment enter sensitive areas and associated buffers. 	Low
	Disturbance of aquatic ecological systems	Negative	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Ensure that no workers or equipment enter sensitive areas and associated buffers. 	Low
Waste Generation	Domestic waste	Negative	<ul style="list-style-type: none"> Waste recycling to be put in place. Solid waste shall only be stored in the designated general waste storage area which must be enclosed and impermeable. All solid waste shall be disposed of by a certified contractor, off-site, at an approved landfill site. The Contractor shall supply the ECO with a certificate of disposal for auditing purposes. 	low
	Construction waste	Negative	<ul style="list-style-type: none"> Litter (from outside the camp included) and concrete bags etc. must be collected and put into suitable closed bins on a daily basis. Construction rubble must be disposed of at a registered landfill site 	Low
	Hazardous waste	Negative	<ul style="list-style-type: none"> The classification of waste determines the handling methods and the ultimate disposal of the material. The contractor shall manage hazardous waste that are anticipated to be generated by his operations as follows: Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste. Only temporary storage of waste is allowed (once of storage of waste for a period less than 90 days). The volume of material should be limited to less than 80m3 of hazardous waste. Should this be exceeded the Norms and Standards for the Storage of Waste will need to be complied with. 	low
Soil Alteration	Loss of topsoil	Negative	<ul style="list-style-type: none"> Top soil should be separated and re-used where possible. The proposed re-alignment (the Proposal) is a shorter route and thus will have less of an impact on top soil within Porcupine Park. It therefore should be implemented. 	Low

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
	Loss of land capability	Negative	Low-Medium	<ul style="list-style-type: none"> The proposed site does not have a high agricultural potential nor is currently used for agriculture. No mitigation measures are therefore recommended or required. However, overall, the proposed re-alignment (the Proposal) is a shorter route and thus will have less of an impact. It therefore should be implemented. 	Low
	Alteration of topography	Negative	Medium	<ul style="list-style-type: none"> In general, the average slope of the preferred alternative (the Proposal) is 3.6% and thus slope alteration is expected to be at a minimum. However, any changes to topography must be properly designed. Stormwater management measures must be implemented to ensure these changes do not impact on stormwater. 	low
	Soil erosion	Negative	Low	<ul style="list-style-type: none"> In general, the average slope of the preferred alternative (the Proposal) is 3.6% and thus erosion related to steep slopes is expected to be at a minimum. However, any instability and erosion of steep slopes must be stabilised immediately. To reduce the loss of material by erosion, disturbance must be kept to a minimum. If clearing of slopes occur within the rainy season, earth berms must be created along the up-slope side of the construction area. Where possible, natural vegetation should be retained to reduce the risk of erosion. Should erosion occur due to negligence on the part of the Contractor to apply the above measures, the Contractor will be responsible for reinstatement of the eroded area to its former state at his own expense. Any surface water pollution occurring as a result of this negligence will be cleaned up by the Contractor or a nominated clean up organisation at the expenses of the Contractor. 	Low
	Soil pollution	Negative	Low	<ul style="list-style-type: none"> All vehicle/equipment maintenance and washing must be done in the workshop area, equipped with a bund wall and grease trap oil separator. Workshop area must be monitored for fuel and oil spills. Spills must be cleaned up immediately and remediated to the satisfaction of the ECO and PM. Spill kits must be comprehensive and available on site at all times. An adequate supply of absorbent material must be available to accommodate emergency spills. 	low
Resource Consumption	Electricity consumption	Not Applicable	None	<ul style="list-style-type: none"> No electricity usage is required. Generators will be used where necessary. 	None
	Water consumption	Negative	Low	<ul style="list-style-type: none"> Enforce water saving strategies. Environmental awareness training. 	low
	Fuel consumption	Negative	Low	<ul style="list-style-type: none"> Record and monitor fuel consumption regularly Reduce theft of fuel (increase security) 	low
	Raw materials consumption	Negative	Low-Medium	<ul style="list-style-type: none"> Promote effective use of raw material. 	low

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
Effects on Biodiversity	Loss of habitat	Negative	Low-Medium	<ul style="list-style-type: none"> The preferred re-alignment minimises the impact to Porcupine Park. The area that will be impacted upon is also less sensitive than the rest of Porcupine Park. It also does not impact on any wetlands or watercourses and therefore will not result in any loss of these habitats. It is therefore preferred and should be implemented. Exotic and invasive plants should be controlled and removed. 	Low
	Loss of fauna	Negative	Low	<ul style="list-style-type: none"> If the re-alignment is approved, construction contractors, sub-contractors and operators must ensure that no fauna taxa are unduly disturbed, trapped, hunted or killed All workers will undergo environmental awareness training to address potential human and wildlife interaction and the permissible reactions to this interaction. 	low
	Loss of flora	Negative	Low-Medium	<ul style="list-style-type: none"> Individuals of the Declining plant species <i>Boophane disticha</i> and <i>Hypoxis hemerocallidea</i> need to be relocated where applicable, to a suitable site nearby before the construction work of the development, if approved, is initiated. This should be done by suitably qualified persons to ensure the success of the rescue effort. Permits for relocation are to be obtained from GDARD for the rescue effort if necessary. 	Low
	Degradation of ecological systems	Negative	Low	<ul style="list-style-type: none"> The preferred re-alignment minimises the impact to Porcupine Park. The area that will be impacted upon is also less sensitive than the rest of Porcupine Park. It also does not impact on any wetlands or watercourses and therefore will not result in the ecological degradation of the area. It is therefore preferred and should be implemented. Dedicated implementation of the EMPr 	Low
	Disruption of natural corridors	Negative	Low	<ul style="list-style-type: none"> The preferred re-alignment minimises the impact to Porcupine Park. The area that will be impacted upon is also less sensitive than the rest of Porcupine Park. It also does not impact on any wetlands or watercourses and therefore limits the disruption of ecological corridors. It is therefore preferred and should be implemented. Dedicated implementation of the EMPr 	Low
Incidents, accidents and potential emergency situations	Pollution incidents	Negative	Low	<ul style="list-style-type: none"> Spill kits to be located in strategic areas for when needed Environmental awareness training 	low
	Health and safety	Negative	Low	<ul style="list-style-type: none"> 24 hour security and access control. Health and Safety awareness training. Contractor to submit a Health and Safety Plan, prepared in accordance with the Health and Safety Specification, for approval prior to the commencement of work. A Safety Agent should be appointed A Dedicated Occupational Health and Safety system to be implemented by Contractor's Safety Officer. To be monitored and audited by the Client's Safety Agent, in terms of the Construction Regulations (2003). 	low
	Storage of hydrocarbons	Negative	Low	<ul style="list-style-type: none"> Best practice regarding storage of substances Spill kits to be located in strategic areas for when needed Environmental awareness training Firefighting equipment must be accessible on site at all times. Display of emergency numbers 	low

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
	Fire	Negative	Low	<ul style="list-style-type: none"> Adhere to the appropriate emergency procedures Firefighting equipment must be accessible on site at all times. Display of emergency numbers In addition, designated smoking areas should be provided and there should be zero tolerance to smoking outside these areas. Cooking over open flames is not allowed. 	low
	Visual impact	Negative	Low	<ul style="list-style-type: none"> Suitable screening to be put in place during construction to minimise visual impacts. No littering to be allowed. Good housekeeping practices to be followed The construction footprint for the preferred alternative (The Proposal) is smaller and thus this alternative is preferred to minimise visual impacts to the site and neighbouring properties. 	Low
Social	Safety and security	Negative	Low	<ul style="list-style-type: none"> 24 hour access control to the site and 24 hour security. Workers found to be engaging in activities such as excessive consumption of alcohol, drug use or selling of any such items on site must be disciplined. 	Low
	Traffic disruptions	Negative	Low-Medium	<ul style="list-style-type: none"> Traffic warning and calming measures will be put in place when construction activities may impact on traffic flow. 	Low
	Loss of cultural heritage	Negative	Low	<ul style="list-style-type: none"> No heritage resources have been identified in the vicinity of the re-alignment. The chance find procedure in the EMPr must be adhered to. 	Low
	Impacts on existing infrastructure and users	Not Applicable	None	<ul style="list-style-type: none"> None required. 	None
	Loss of sense of place	Negative	Low	<ul style="list-style-type: none"> Suitable screening to be put in place during construction to minimise visual impacts. No littering to be allowed. Good housekeeping practices to be followed The construction footprint for the preferred alternative (The Proposal) is smaller and thus this alternative is preferred to minimise changes to the sense of place to the site and neighbouring properties. 	low
Economic	Decline/increase in economy	Positive	+Low-Medium	<ul style="list-style-type: none"> Local contractors and suppliers to be used during the construction phase as far as possible. 	+Medium-High
	Costs associated with demolition of equestrian centre	Not Applicable	None	<ul style="list-style-type: none"> None required. 	None

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
	Employment	Positive	+Low-Medium	• Wherever possible labour, materials and services will be sourced locally.	+Medium-High
Operational Phase					
Atmospheric Emissions	Dust emissions	Not Applicable	None	The East-West link road will be tarred and dust emissions are not expected.	None
	Emissions from vehicles and equipment (CO ₂ , NO _x , SO _x , VOC's etc.)	Negative	Low-Medium	• Employ speed limits on road • Employ mechanisms to ensure that road users stick to the speed limit, such as speed traps etc. (sticking to the speed limit, reduces fuel consumption and decreases emissions).	Low
Noise	Noise increase due to vehicles using the road	Negative	Medium	• Employ speed limits on road • Employ mechanisms to ensure that road users stick to the speed limit, such as speed traps etc. • Road surface will be layered with asphalt and materials to minimize noise impacts	Low
Discharge to Water (Surface and Groundwater)	Sewage	Not Applicable	None	N/A during the operational phase.	None
	Silt	Not Applicable	None	N/A during the operational phase.	None
	Surface water run-off	Negative	Medium	• Storm water management system to be implemented and maintained.	Low
	Contamination of water from hazardous substances	Negative	Low	• Employ speed limits on road • Employ mechanisms to ensure that road users stick to the speed limit, such as speed traps etc. to limit potential incidents on the road resulting in spills	Low
	Disturbance of natural system	Not Applicable	None	N/A during the operational phase.	Low

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
	Disturbance of aquatic ecological systems	Negative	Low	The only potential disturbance of aquatic ecological systems is through poor management of stormwater. This can be mitigated through: • Stormwater management	Low
Waste Generation	Domestic waste	Negative	Low	• As part of management of the road, litter should be collected and disposed of at an approved landfill site.	Low
	Construction waste	Not Applicable	None	N/A during the operational phase.	None
	Hazardous waste	Negative	Low	The only hazardous waste expected is through incidents/accidents resulting in oil/fuel spillages. Should this occur, the following process must be followed: • Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste.	Low
Soil Alteration	Loss of topsoil	Not Applicable	None	N/A during the operational phase.	None
	Loss of land capability	Not Applicable	None	N/A during the operational phase.	None
	Alteration of topography	Not Applicable	None	N/A during the operational phase.	None
	Soil erosion	Negative	Low	The only potential cause of soil erosion during operation is through poor management of stormwater. This can be mitigated through: • Stormwater management	Low
	Soil pollution	Negative	Low	The only potential soil pollution expected is through incidents/accidents resulting in oil/fuel spillages. Should this occur, the following process must be followed: • Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste.	Low
Resource Consumption	Electricity consumption	Not Applicable	None	N/A during the operational phase.	None

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
	Water consumption	Not Applicable	None	N/A during the operational phase.	None
	Fuel consumption	Not Applicable	None	N/A during the operational phase.	None
	Raw materials consumption	Not Applicable	None	N/A during the operational phase.	None
Effects on Biodiversity	Loss of habitat	Not Applicable	None	N/A during the operational phase.	None
	Loss of fauna	Negative	Low	Due to the shorter length of the preferred alternative (The Proposal) within Porcupine Park, this alternative is preferred and the potential for animals needing to cross the road is lessened (and thus the intensity and probability of the impact are reduced). However, in order to prevent road kill incidents, it is suggested that a fence/wall be placed alongside the road reserve. This will also ensure that Porcupine Park cannot be accessed outside of the official access points which will minimise poaching incidents.	Low
	Loss of flora	Not Applicable	None	N/A during the operational phase.	None
	Degradation of ecological systems	Not Applicable	None	N/A during the operational phase.	None
	Disruption of natural corridors	Negative	Low-Medium	Currently fauna occurring within Porcupine Park are limited to the boundary of Porcupine Park. With the preferred alternative (The Proposal), a very small section of the area will no longer be accessible during operation. This impact is much greater for the alternative re-alignment which traverses the whole of the Porcupine Park. The preferred alternative (The Proposal) should therefore be implemented.	Low-Medium
Incidents, accidents and potential emergency situations	Pollution incidents	Negative	Low	The only potential pollution incidents expected is through incidents/accidents resulting in oil/fuel spillages. Should this occur, the following process must be followed: <ul style="list-style-type: none"> Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste. 	Low
	Health and safety	Negative	Low	<ul style="list-style-type: none"> Speed limits to be implemented. Traffic calming and safety measures to be implemented during any maintenance activities taking place on the side of the road (e.g. collecting litter, cutting grass etc.). 	Low

Potential Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
	Storage of hydrocarbons	Not Applicable	None	N/A during the operational phase.	None
	Fire	Negative	Low	• Maintenance of road reserve (e.g. grass cutting) to prevent high fire load and to act as a firebreak.	Low
Social	Visual impact	Negative	Medium	<ul style="list-style-type: none"> • A suitable boundary wall/fence should be put in place to limit visual impacts. • Maintenance of the road should include litter collection. • Rehabilitation of construction footprint must be undertaken. 	Low-Medium
	Safety and security	Negative	Low	• Fence/wall to be put in place to limit access to Porcupine Park from the road and to ensure only access is through official access points.	Low
	Traffic disruptions	Positive	+Medium	The proposed East West Link Road the road will provide great benefits to the greater road network in Johannesburg including improved capacity and traffic flow for the area, improved east-west linkage and improved mobility). No mitigation measures are required.	+Medium
	Loss of equestrian centre	Not Applicable	None	None required.	None
	Loss of cultural heritage	Not Applicable	None	N/A during the operational phase.	None
	Loss of sense of place	Negative	Low-Medium	<ul style="list-style-type: none"> • A suitable boundary wall/fence should be put in place to limit visual impacts. • Maintenance of the road should include litter collection. • Rehabilitation of construction footprint must be undertaken. • The preferred alternative (The Proposal) should be implemented as it limits changes to Porcupine Park. 	Low
Economic	Decline/increase in economy	Not Applicable	None	N/A during the operational phase.	None
	Employment	Not Applicable	None	N/A during the operational phase.	None

Table 9: Summary Impact Assessment for the Alternative (Alternative 1)

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
Construction Phase					
Atmospheric Emissions	Dust emissions	Negative	Low	<ul style="list-style-type: none"> A speed limit of 20km/h must be maintained on all dirt roads. Dust suppression by means of either water or biodegradable chemical agent is required. 	Low
	Emissions from vehicles and equipment (CO ₂ , NO _x , SO _x , VOC's etc.)	Negative	Low	<ul style="list-style-type: none"> In terms of transportation of workers and materials, collective transportation arrangements should be made to reduce individual car journeys where possible. All vehicles used during the project should be properly maintained and in good working order. All vehicles and other machinery should comply with road worthy requirements and comply with legislation in terms of allowable emissions 	Low
Noise	Noise increase due to construction activities	Negative	Low	<ul style="list-style-type: none"> Equipment and/or machinery which will be used must comply with the manufacturer's specifications on acceptable noise levels. Construction activities should be limited to daytime only. 	Low
Discharge to Water	Sewage	Negative	Low-Medium	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Chemical toilets must be supplied within the site camp. Ablution facilities (chemical toilets) are to be provided by the Contractor, at a ratio of 1:10. Ablution facilities (chemical toilets) must be erected within 100m from all workplaces but not within wetlands or wetland buffers. Toilets are to be secured to the ground, and must have a closing mechanism. Toilet paper must be provided at these facilities and must be serviced once per week. Certified contractors to maintain and remove chemical toilets regularly. The contractor must ensure that spillage does not occur when toilets are cleaned/serviced and contents must be properly stored and disposed of. Discharge of waste into the environment and/or burial of waste are strictly prohibited. Washing of persons and effects, and ablution is only allowed at facilities provided. Wash areas (if applicable) are to be situated at least 100m away from watercourses, riparian zones and areas with shallow groundwater. Sanitary arrangements must be to the satisfaction of the PM, ECO, the local authorities and the applicable legal requirements. Areas demarcated for eating must be cleaned on a daily basis, to ensure adequate hygiene standards. 	Low-Medium

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)
Description	Nature			
Silt	Negative	Low-Medium	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Instability and erosion of steep slopes must be stabilised immediately. Re-vegetation in consultation with landscape architect and ECO should be done if required. To reduce the loss of material by erosion, disturbance must be kept to a minimum. If clearing of slopes occur within the rainy season, earth berms must be created along the up-slope side of the construction area. Where possible, natural vegetation should be retained to reduce the risk of erosion. Should erosion occur due to negligence on the part of the Contractor to apply the above measures, the Contractor will be responsible for reinstatement of the eroded area to its former state at his own expense. Any surface water pollution occurring as a result of this negligence will be cleaned up by the Contractor or a nominated clean up organisation at the expenses of the Contractor. Run-off containing high sedimentation loads must not be released into natural or municipal drainage systems. Silt fences must be used to stabilise the site, reduce erosion and silt entering the natural environment. No unchecked silt may enter the natural environment. Silt fences must be fit for purpose, effective and regularly maintained. 	Low-Medium
Surface water run-off	Negative	Low-Medium	<ul style="list-style-type: none"> Storm water management during construction will be implemented however, as the preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands, construction stormwater from the preferred re-alignment is minimal. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Increased run-off during construction should be managed using berms, temporary cut-off drains, attenuation ponds or other suitable structures, in consultation with the ECO and resident Engineer. Cut off drains may not cause additional harm to environment. Care must be taken to consider their position and the receiving environment. Stormwater management system is to be installed as soon as possible following site establishment, to attenuate stormwater during the construction phase, as well as during the operational phase. Surface-water run-off and stormwater must be directed away from trenches and areas of excavation. 	Low-Medium

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
	Contamination of water from hazardous substances	Negative	Low-Medium	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Drip trays must be placed under all vehicles when immobile for longer than 24 hours. Vehicles suspected of leaking must be monitored and conduct a pre start-up inspection checklist. Drip trays must be checked and replaced for vehicles standing (parked) for prolonged periods. Drip trays must be of a sufficient size and volume to collect any hydrocarbon leakages from a stationary vehicle. Spill kits (absorbent material) must be available on site and in all vehicles that transport hydrocarbons for dispensing to other vehicles on the construction site. Spilled substances must be contained in impermeable containers for removal to a licensed hazardous waste site. Hazardous materials of any nature must be stored at least 50m away from any water bodies. Contaminated wastewater to be contained, and removed to a registered site, to ensure water bodies on site are not contaminated. Significant spills should be reported to the Project Manager or Contractors Manager who should report this to the relevant authority 	Low-Medium
	Disturbance of natural system	Negative	Low-Medium	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Ensure that no workers or equipment enter sensitive areas and associated buffers. 	Low-Medium
	Disturbance of aquatic ecological systems	Negative	Low-Medium	<ul style="list-style-type: none"> The preferred re-alignment does not cross any watercourses and is not in close proximity to any wetlands as such minimal impacts apply. Thus to manage impacts to surface water, the preferred re-alignment should be implemented. Ensure that no workers or equipment enter sensitive areas and associated buffers. 	Low-Medium
Waste Generation	Domestic waste	Negative	Low-Medium	<ul style="list-style-type: none"> Waste recycling to be put in place. Solid waste shall only be stored in the designated general waste storage area which must be enclosed and impermeable. All solid waste shall be disposed of by a certified contractor, off-site, at an approved landfill site. The Contractor shall supply the ECO with a certificate of disposal for auditing purposes. 	low
	Construction waste	Negative	Low-Medium	<ul style="list-style-type: none"> Litter (from outside the camp included) and concrete bags etc. must be collected and put into suitable closed bins on a daily basis. Construction rubble must be disposed of at a registered landfill site 	Low

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
	Hazardous waste	Negative	Low-Medium	<ul style="list-style-type: none"> The classification of waste determines the handling methods and the ultimate disposal of the material. The contractor shall manage hazardous waste that are anticipated to be generated by his operations as follows: Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste. Only temporary storage of waste is allowed (once of storage of waste for a period less than 90 days). The volume of material should be limited to less than 80m3 of hazardous waste. Should this be exceeded the Norms and Standards for the Storage of Waste will need to be complied with. 	low
Soil Alteration	Loss of topsoil	Negative	Medium	<ul style="list-style-type: none"> Top soil should be separated and re-used where possible. The proposed re-alignment (the Proposal) is a shorter route and thus will have less of an impact on top soil within Porcupine Park. It therefore should be implemented. 	Low-Medium
	Loss of land capability	Negative	Medium	<ul style="list-style-type: none"> The proposed site does not have a high agricultural potential nor is currently used for agriculture. No mitigation measures are therefore recommended or required. However, overall, the proposed re-alignment (the Proposal) is a shorter route and thus will have less of an impact. It therefore should be implemented. 	Medium
	Alteration of topography	Negative	Medium	<ul style="list-style-type: none"> In general, the average slope of the preferred alternative (the Proposal) is 3.6% and thus slope alteration is expected to be at a minimum. However, any changes to topography must be properly designed. Stormwater management measures must be implemented to ensure these changes to not impact on stormwater. 	low
	Soil erosion	Negative	Low-Medium	<ul style="list-style-type: none"> In general, the average slope of the preferred alternative (the Proposal) is 3.6% and thus erosion related to steep slopes is expected to be at a minimum. However, any instability and erosion of steep slopes must be stabilised immediately. To reduce the loss of material by erosion, disturbance must be kept to a minimum. If clearing of slopes occur within the rainy season, earth berms must be created along the up-slope side of the construction area. Where possible, natural vegetation should be retained to reduce the risk of erosion. Should erosion occur due to negligence on the part of the Contractor to apply the above measures, the Contractor will be responsible for reinstatement of the eroded area to its former state at his own expense. Any surface water pollution occurring as a result of this negligence will be cleaned up by the Contractor or a nominated clean up organisation at the expenses of the Contractor. 	Low
	Soil pollution	Negative	Low	<ul style="list-style-type: none"> All vehicle/equipment maintenance and washing must be done in the workshop area, equipped with a bund wall and grease trap oil separator. Workshop area must be monitored for fuel and oil spills. Spills must be cleaned up immediately and remediated to the satisfaction of the ECO and PM. Spill kits must be comprehensive and available on site at all times. An adequate supply of absorbent material must be available to accommodate emergency spills. 	low

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
Resource Consumption	Electricity consumption	Not Applicable	None	•No electricity usage is required. Generators will be used where necessary.	None
	Water consumption	Negative	Low	<ul style="list-style-type: none"> Enforce water saving strategies. Environmental awareness training. 	low
	Fuel consumption	Negative	Low	<ul style="list-style-type: none"> Record and monitor fuel consumption regularly Reduce theft of fuel (increase security) 	low
	Raw materials consumption	Negative	Low-Medium	<ul style="list-style-type: none"> Promote effective use of raw material. 	Low-Medium
Effects on Biodiversity	Loss of habitat	Negative	Medium	<ul style="list-style-type: none"> The preferred re-alignment minimises the impact to Porcupine Park. The area that will be impacted upon is also less sensitive than the rest of Porcupine Park. It also does not impact on any wetlands or watercourses and therefore will not result in any loss of these habitats. It is therefore preferred and should be implemented. Exotic and invasive plants should be controlled and removed. 	Low-Medium
	Loss of fauna	Negative	Low	<ul style="list-style-type: none"> If the re-alignment is approved, construction contractors, sub-contractors and operators must ensure that no fauna taxa are unduly disturbed, trapped, hunted or killed All workers will undergo environmental awareness training to address potential human and wildlife interaction and the permissible reactions to this interaction. 	low
	Loss of flora	Negative	Medium	<ul style="list-style-type: none"> Individuals of the Declining plant species <i>Boophone disticha</i> and <i>Hypoxis hemerocallidea</i> need to be relocated where applicable, to a suitable site nearby before the construction work of the development, if approved, is initiated. This should be done by suitably qualified persons to ensure the success of the rescue effort. Permits for relocation are to be obtained from GDARD for the rescue effort if necessary. 	Low-Medium
	Degradation of ecological systems	Negative	Medium	<ul style="list-style-type: none"> The preferred re-alignment minimises the impact to Porcupine Park. The area that will be impacted upon is also less sensitive than the rest of Porcupine Park. It also does not impact on any wetlands or watercourses and therefore will not result in the ecological degradation of the area. It is therefore preferred and should be implemented. Dedicated implementation of the EMPr 	Low-Medium
	Disruption of natural corridors	Negative	Medium	<ul style="list-style-type: none"> The preferred re-alignment minimises the impact to Porcupine Park. The area that will be impacted upon is also less sensitive than the rest of Porcupine Park. It also does not impact on any wetlands or watercourses and therefore limits the disruption of ecological corridors. It is therefore preferred and should be implemented. Dedicated implementation of the EMPr 	Low-Medium
Incidents, accidents	Pollution incidents	Negative	Low	<ul style="list-style-type: none"> Spill kits to be located in strategic areas for when needed Environmental awareness training 	low

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
and potential emergency situations	Health and safety	Negative	Low	<ul style="list-style-type: none"> • 24 hour security and access control. • Health and Safety awareness training. • Contractor to submit a Health and Safety Plan, prepared in accordance with the Health and Safety Specification, for approval prior to the commencement of work. • A Safety Agent should be appointed • A Dedicated Occupational Health and Safety system to be implemented by Contractor's Safety Officer. To be monitored and audited by the Client's Safety Agent, in terms of the Construction Regulations (2003). 	low
	Storage of hydrocarbons	Negative	Low	<ul style="list-style-type: none"> • Best practice regarding storage of substances • Spill kits to be located in strategic areas for when needed • Environmental awareness training • Firefighting equipment must be accessible on site at all times. • Display of emergency numbers 	low
	Fire	Negative	Low	<ul style="list-style-type: none"> • Adhere to the appropriate emergency procedures • Firefighting equipment must be accessible on site at all times. • Display of emergency numbers • In addition, designated smoking areas should be provided and there should be zero tolerance to smoking outside these areas. Cooking over open flames is not allowed. 	low
Social	Visual impact	Negative	Low-Medium	<ul style="list-style-type: none"> • Suitable screening to be put in place during construction to minimise visual impacts. • No littering to be allowed. • Good housekeeping practices to be followed * The construction footprint for the preferred alternative (The Proposal) is smaller and thus this alternative is preferred to minimise visual impacts to the site and neighbouring properties. 	Low
	Safety and security	Negative	Low	<ul style="list-style-type: none"> • 24 hour access control to the site and 24 hour security. • Workers found to be engaging in activities such as excessive consumption of alcohol, drug use or selling of any such items on site must be disciplined. 	Low
	Traffic disruptions	Negative	Low-Medium	<ul style="list-style-type: none"> • Traffic warning and calming measures will be put in place when construction activities may impact on traffic flow. 	Low
	Loss of cultural heritage	Negative	Low	<ul style="list-style-type: none"> • No heritage resources have been identified in the vicinity of the re-alignment. • The chance find procedure in the EMPr must be adhered to. 	Low
	Impacts on existing infrastructure and users	Not Applicable	None	None required.	None

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
	Loss of sense of place	Negative	Low	<ul style="list-style-type: none"> Suitable screening to be put in place during construction to minimise visual impacts. No littering to be allowed. Good housekeeping practices to be followed * The construction footprint for the preferred alternative (The Proposal) is smaller and thus this alternative is preferred to minimise changes to the sense of place to the site and neighbouring properties. 	Low
Economic	Decline/increase in economy	Positive	+Low-Medium	<ul style="list-style-type: none"> Local contractors and suppliers to be used during the construction phase as far as possible. 	+Medium-High
	Costs associated with demolition of equestrian	Not Applicable	None	None required.	None
	Employment	Positive	+ Low-Medium	<ul style="list-style-type: none"> Wherever possible labour, materials and services will be sourced locally. 	+Medium-High
Operational phase					
Atmospheric Emissions	Dust emissions	Not Applicable	None	The east-west link road will be tarred and dust emissions are not expected.	None
	Emissions from vehicles and equipment (CO ₂ , NO _x , SO _x , VOC's etc.)	Negative	Low-Medium	<ul style="list-style-type: none"> Employ speed limits on road Employ mechanisms to ensure that road users stick to the speed limit, such as speed traps etc. (sticking to the speed limit, reduces fuel consumption and decreases emissions). 	Low
Noise	Noise increase due to vehicles using the road	Negative	Medium	<ul style="list-style-type: none"> Employ speed limits on road Employ mechanisms to ensure that road users stick to the speed limit, such as speed traps etc. Road surface will be layered with asphalt and materials to minimize noise impacts 	Low
Discharge to Water (Surface and Groundwater)	Sewage	Not Applicable	None	N/A during the operational phase.	None
	Silt	Not Applicable	None	N/A during the operational phase.	None
	Surface water run-off	Negative	Medium	<ul style="list-style-type: none"> Storm water management system to be implemented and maintained. 	Low

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
	Contamination of water from hazardous substances	Negative	Low	<ul style="list-style-type: none"> Employ speed limits on road Employ mechanisms to ensure that road users stick to the speed limit, such as speed traps etc. to limit potential incidents on the road resulting in spills 	Low
	Disturbance of natural system	Not Applicable	None	N/A during the operational phase.	Low
	Disturbance of aquatic ecological systems	Negative	Low	<p>The only potential disturbance of aquatic ecological systems is through poor management of stormwater. This can be mitigated through:</p> <ul style="list-style-type: none"> Stormwater management 	Low
Waste Generation	Domestic waste	Negative	Low	<ul style="list-style-type: none"> As part of management of the road, litter should be collected and disposed of at an approved landfill site. 	low
	Construction waste	Not Applicable	None	N/A during the operational phase.	None
	Hazardous waste	Negative	Low	<p>The only hazardous waste expected is through incidents/accidents resulting in oil/fuel spillages. Should this occur, the following process must be followed:</p> <ul style="list-style-type: none"> Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste. 	low
Soil Alteration	Loss of topsoil	Not Applicable	None	N/A during the operational phase.	None
	Loss of land capability	Not Applicable	None	N/A during the operational phase.	None
	Alteration of topography	Not Applicable	None	N/A during the operational phase.	None
	Soil erosion	Negative	Low	<p>The only potential cause of soil erosion during operation is through poor management of stormwater. This can be mitigated through:</p> <ul style="list-style-type: none"> Stormwater management 	Low

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
	Soil pollution	Negative	Low	The only potential soil pollution expected is through incidents/accidents resulting in oil/fuel spillages. Should this occur, the following process must be followed: • Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste.	low
Resource Consumption	Electricity consumption	Not Applicable	None	N/A during the operational phase.	None
	Water consumption	Not Applicable	None	N/A during the operational phase.	None
	Fuel consumption	Not Applicable	None	N/A during the operational phase.	None
	Raw materials consumption	Not Applicable	None	N/A during the operational phase.	None
Effects on Biodiversity	Loss of habitat	Not Applicable	None	N/A during the operational phase.	None
	Loss of fauna	Negative	Low	Due to the shorter length of the preferred alternative (The Proposal) within Porcupine Park, this alternative is preferred and the potential for animals needing to cross the road is lessened (and thus the intensity and probability of the impact are reduced). However, in order to prevent road kill incidents, it is suggested that a fence/wall be placed alongside the road reserve. This will also ensure that Porcupine Park cannot be accessed outside of the official access points which will minimise poaching incidents.	low
	Loss of flora	Not Applicable	None	N/A during the operational phase.	None
	Degradation of ecological systems	Not Applicable	None	N/A during the operational phase.	None
	Disruption of natural corridors	Negative	Medium	Currently fauna occurring within Porcupine Park are limited to the boundary of Porcupine Park. With the preferred alternative (The Proposal), a very small section of the area will no longer be accessible during operation. This impact is much greater for the the alternative re-alignment which traverses the whole of the Porcupine Park. The preferred alternative (The Proposal) should therefore be implemented.	Medium

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
Incidents, accidents and potential emergency situations	Pollution incidents	Negative	Low	The only potential pollution incidents expected is through incidents/accidents resulting in oil/fuel spillages. Should this occur, the following process must be followed: • Characterise the waste to determine if it is general or hazardous (Use the Appendix 1 of the Norms and Standards for the Classification of Waste for landfill to determine whether additional classification is required). Obtain and provide an acceptable container with a label. Place hazardous waste material in the container. Inspect the container on a regular basis Haul the full container to the licenced and correct disposal site. Provide documentary evidence of proper disposal of the waste.	low
	Health and safety	Negative	Low	• Speed limits to be implemented. • Traffic calming and safety measures to be implemented during any maintenance activities taking place on the side of the road (e.g. collecting litter, cutting grass etc.).	low
	Storage of hydrocarbons	Not Applicable	None	N/A during the operational phase.	None
	Fire	Negative	Low	•Maintenance of road reserve (e.g. grass cutting) to prevent high fire load and to act as a firebreak.	low
Social	Visual impact	Negative	Medium	• A suitable boundary wall/fence should be put in place to limit visual impacts. • Maintenance of the road should include litter collection. • Rehabilitation of construction footprint must be undertaken.	Low-Medium
	Safety and security	Negative	Low	• Fence/wall to be put in place to limit access to Porcupine Park from the road and to ensure only access is through official access points.	Low
	Traffic disruptions	Positive	+Medium	The proposed East West Link Road the road will provide great benefits to the greater road network in Johannesburg including improved capacity and traffic flow for the area, improved east-west linkage and improved mobility). No mitigation measures are required.	+Medium
	Loss of equestrian centre	Not Applicable	None	None required.	None
	Loss of cultural heritage	Not Applicable	None	N/A during the operational phase.	None
	Loss of sense of place	Negative	Low-Medium	• A suitable boundary wall/fence should be put in place to limit visual impacts. • Maintenance of the road should include litter collection. • Rehabilitation of construction footprint must be undertaken. • The preferred alternative (The Proposal) should be implemented as it limits changes to Porcupine Park.	Low-Medium

Impacts		Significance (Without Mitigation)	Management & mitigation measures	Significance (Without Mitigation)	
Description	Nature				
Economic	Decline/increase in economy	Not Applicable	None	N/A during the operational phase.	None
	Employment	Not Applicable	None	N/A during the operational phase.	None

Table 10: Summary Impact Assessment for the No-Go Alternative

Impacts		Significance (Without Mitigation)	Comment/Management & mitigation measures	Significance (With Mitigation)	
Description	Nature				
Construction Phase					
Atmospheric Emissions	Dust emissions	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar dust emissions. It is expected that these would be at the same level as both the preferred and alternative re-alignments. The same mitigation measures as above apply.	Low
	Emissions from vehicles and equipment (CO ₂ , NO _x , SO _x , VOC's etc.)	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar emissions. It is expected that these would be at the same level as both the preferred and alternative re-alignments. The same mitigation measures as above apply.	Low
Noise	Noise increase due to construction activities	Negative	Low-Medium	Greater noise impacts are expected as if the no-go option is authorised, as it will result in the demolition of the equestrian Centre (for the already approved alignment) which will extend construction and construction related noise. The same mitigation measures as above would apply.	Low
Discharge to Water	Sewage	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Silt	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Surface water run-off	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Contamination of water from hazardous substances	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Disturbance of natural system	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low

	Disturbance of aquatic ecological systems	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
Waste Generation	Domestic waste	Negative	Low-Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
	Construction waste	Negative	Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed. This will result in the demolition of the existing equestrian centre which will create larger volumes of construction waste being produced. The same mitigation measures as above will apply.	Low-Medium
	Hazardous waste	Negative	Low-Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed. This will result in the demolition of the existing equestrian centre which will create larger volumes of potentially hazardous waste being produced. The same mitigation measures as above will apply.	low
Soil Alteration	Loss of topsoil	Negative	Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Loss of land capability	Negative	Low-Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Alteration of topography	Negative	Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
	Soil erosion	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Soil pollution	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
Resource Consumption	Electricity consumption	Not Applicable	None	*No electricity usage is required. Generators will be used where necessary.	None

	Water consumption	Negative	Low	Water requirements will be similar should the re-alignment not be authorised and the existing authorisation be constructed. The same mitigation measures as above apply.	low
	Fuel consumption	Negative	Low	Fuel requirements will be similar should the re-alignment not be authorised and the existing authorisation be constructed. The same mitigation measures as above apply.	low
	Raw materials consumption	Negative	Low-Medium	Raw Material requirements will be similar should the re-alignment not be authorised and the existing authorisation be constructed. The same mitigation measures as above apply.	Low-Medium
Effects on Biodiversity	Loss of habitat	Negative	None	• None required as the road will go through built up area (equestrian centre)	None
	Loss of fauna	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
	Loss of flora	Negative	None	• None required as the road will go through built up area (equestrian centre)	None
	Degradation of ecological systems	Negative	None	• None required as the road will go through built up area (equestrian centre)	None
	Disruption of natural corridors	Negative	None	• None required as the road will go through built up area (equestrian centre)	None
Incidents, accidents and potential emergency situations	Pollution incidents	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
	Health and safety	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
	Storage of hydrocarbons	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low

Social	Fire	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Visual impact	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Safety and security	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Traffic disruptions	Negative	Low-Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Loss of cultural heritage	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Impacts on existing infrastructure and users	Negative	Medium-High	The no-go option will result in the destruction of the existing equestrian Centre and is thus not supported. No mitigation measures are possible to reduce the significance of this impact.	Medium-High
	Loss of sense of place	Negative	Medium-High	The loss of the equestrian centre would result in a loss of some of the sense of place in the area as in general there is a strong equestrian community in the area. No mitigation measures are possible.	Medium-High
Economic	Decline/increase in economy	Positive	+Low-Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	+Medium-High
	Costs associated with demolition of equestrian	Negative	Low-Medium	The demolition of the equestrian centre would result in economic losses. No mitigation measures are possible.	Low-Medium
	Employment	Positive	+Low-Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	+Medium-High

Operational Phase					
Atmospheric Emissions	Dust emissions	Not Applicable	None	N/A during the operational phase.	None
	Emissions from vehicles and equipment (CO2, NOx, SOx, VOC's etc.)	Negative	Low-Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
Noise	Noise increase due to vehicles using the road	Negative	Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
Discharge to Water (Surface and Groundwater)	Sewage	Not Applicable	None	N/A during the operational phase.	None
	Silt	Not Applicable	None	N/A during the operational phase.	None
	Surface water run-off	Negative	Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Contamination of water from hazardous substances	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Disturbance of natural system	Not Applicable	None	N/A during the operational phase.	None
	Disturbance of aquatic ecological systems	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low

Waste Generation	Domestic waste	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Construction waste	Not Applicable	None	N/A during the operational phase.	None
	Hazardous waste	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
Soil Alteration	Loss of topsoil	Not Applicable	None	N/A during the operational phase.	None
	Loss of land capability	Not Applicable	None	N/A during the operational phase.	None
	Alteration of topography	Not Applicable	None	N/A during the operational phase.	None
	Soil erosion	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Soil pollution	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
Resource Consumption	Electricity consumption	Not Applicable	None	N/A during the operational phase.	None
	Water consumption	Not Applicable	None	N/A during the operational phase.	None
	Fuel consumption	Not Applicable	None	N/A during the operational phase.	None
	Raw materials consumption	Not Applicable	None	N/A during the operational phase.	None
Effects on Biodiversity	Loss of habitat	Not Applicable	None	N/A during the operational phase.	None

	Loss of fauna	Negative	Low	Should the proposed re-alignment not be approved, the existing alignment will be constructed. This is outside Porcupine Park and thus road kill is unlikely.	Low
	Loss of flora	Not Applicable	None	N/A during the operational phase.	None
	Degradation of ecological systems	Not Applicable	None	N/A during the operational phase.	None
	Disruption of natural corridors	Negative	Low	Should the proposed re-alignment not be approved, the existing alignment will be constructed. This is outside Porcupine Park and thus limits disturbance to ecological corridors.	Low
Incidents, accidents and potential emergency situations	Pollution incidents	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
	Health and safety	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
	Storage of hydrocarbons	Not Applicable	None	N/A during the operational phase.	None
	Fire	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	low
Social	Visual impact	Negative	Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low-Medium
	Safety and security	Negative	Low	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	Low
	Traffic disruptions	Positive	+Medium	Should the proposed re-alignment not be approved, the originally approved alignment will be constructed which will result in similar impacts. It is expected that these would be at the same level as both the preferred re-alignment. The same mitigation measures as above apply.	+Medium
	Loss of equestrian centre	Negative	Medium	No mitigation measures available.	Medium

	Loss of cultural heritage	Not Applicable	None	N/A during the operational phase.	None
	Loss of sense of place	Negative	Medium	The loss of the equestrian centre would result in a loss of some of the sense of place in the area as in general there is a strong equestrian community in the area. No mitigation measures are possible.	Medium
Economic	Decline/increase in economy	Negative	Medium	Demolition of the equestrian Centre will result in a loss of income.	Medium
	Employment	Negative	Medium	Demolition of the equestrian estate will result in a loss of employment opportunities.	Medium

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

Please see **Appendix G** for a copy of the Ecological Habitat Assessment.

Please also note the following:

- The proposed re-alignment is in close proximity to the previously authorised road. A Heritage Impact Assessment was previously undertaken and approved by PHRA-G. As such, no additional Heritage Impact Assessment has been conducted.

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

The following assumptions, gaps and/or limitations accompany the Ecological Habitat Assessment:

- The study was limited to a snapshot view. Site visits were undertaken during July 2015 and revisited in April 2017. Notes from earlier habitat surveys in the larger study area during January 2014, February 2014 and March 2014 were also considered. For each site visited, it should be emphasized that surveys can by no means result in an exhaustive list of the plants and animals present on the site, because of the time constraint.
- The site surveys were conducted in July 2015 and revisited in April 2017, which comprises a sub-optimal time of the year to do the surveys. Notes from earlier visits to the larger study area during January 2014, February 2014 and March 2014 have also been considered. Weather conditions during the survey were favourable for recording fauna and flora. The focus of the survey remains a habitat survey that concentrates on the possibility that species of conservation priority occur on the site or not. It is unlikely that more surveys would alter the outcome of this study.

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.

The proposed re-aligned road will provide an important east-west link in the area and will improve mobility in the area. At this point in time, it is not expected that the road will be decommissioned and as such impacts related to decommissioning and closure are not applicable.

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

Not applicable.

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

Not applicable.

4. Cumulative Impacts

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

Cumulative impacts are included in the detailed impact assessment included in **Appendix I** but in summary, the following impacts have been considered as cumulative for each phase of development:

Construction Phase:

- Dust emissions
- Emissions from vehicles and equipment (CO₂, NO_x, SO_x, VOC's etc.)
- Noise increase due to construction activities
- Sewage
- Domestic waste
- Construction waste

- Hazardous waste
- Loss of land capability
- Water consumption
- Fuel consumption
- Raw materials consumption
- Loss of habitat
- Loss of fauna
- Loss of flora
- Degradation of ecological systems
- Disruption of natural corridors
- Safety and security
- Traffic disruptions
- Decline/increase in economy (positive)
- Employment (positive)

Operational Phase:

- Emissions from vehicles and equipment (CO₂, NO_x, SO_x, VOC's etc.)
- Noise increase due to vehicles using the road
- Surface water run-off
- Disturbance of aquatic ecological systems
- Disruption of natural corridors
- Safety and security
- Loss of sense of place

It should be noted that even taking into account their cumulative nature, these impacts could be satisfactorily mitigated.

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 – Preferred Alternative (Proposal)

The proposal involves the re-alignment of a small section of the authorised road northwards so to miss the existing Steyn City Equestrian Estate. It will then curve southwards and join up with the existing Runnymede Road and 10th Road intersection. From the intersection, it will follow the existing alignment again. The area that will be impacted has been historically impacted by dumping activities as well as the Eskom powerlines that occur in the area.

Based on the findings of the specialist study and impact assessment and taking into account the successful implementation of the EMP, it is felt that this proposed re-alignment (The Proposal) should be authorised. The reasons for this opinion are discussed in more detail in the following subsections:

1. Need for the Project

Sustainable development is directly linked to the provision of a safe and efficient road network. Currently there is a lack of linkage between the eastern and western section of the northern part of Johannesburg. Further, due to increased development in the area (for example, Steyn City as well as Riverside View Extension X28 – both approved previously), there is a need to create an east-west link road which links William Nicol Drive to the east with the corner of 10th Avenue and Runnymede Avenue to the west. A number of authorisation processes was previously conducted for this and was approved by various authorisations (Gaut: 002/15-16/E0053; Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022). It is envisaged that the East West Link Road will carry high volumes of traffic and it will function as an important link in the greater road network. Therefore, the East West Link Road will assist with the distribution and alleviation of traffic in this area of Johannesburg.

However, as mentioned in the project description, a small section of the authorised alignment impacts on the existing Equestrian Estate within Steyn City. It is therefore necessary to redesign this section. The proposed re-alignment involves the bending of the road so that it no longer impacts on Steyn City.

The need for this re-alignment is therefore as follows:

- Improved capacity and traffic flow for the area.
- Improved east-west linkage for the area.
- Decreased impacts on existing infrastructure; and
- Economic and social benefits related the road not impacting on Steyn City.

2. Environmental Sensitivity

An Ecological Habitat Assessment was undertaken and found that whilst patches of grassland in fair

condition remain, the proposed re-alignment will not result in loss of any unique ecosystems. Two plant species *Hypoxis hemerocallidea* and *Boophone disticha* that are not threatened but listed as Declining are visibly frequent at the site and larger study area and could be conserved in the larger study area (Porcupine Park) and relocated from the footprint, if the development is approved. There appears to be no loss of any threatened species, if the site is developed.

3. Impact Assessment

A detailed impact assessment has been undertaken and assessed the types of impact, duration of impacts, likelihood of potential impacts as well as the overall significance of the impact occurring (**Appendix I**). Most impacts have a low significance once mitigation measures were applied (please see **Table 11** below for the impact summary for the proposal). The following can be noted:

- During construction, dust emissions and emissions from vehicles will occur but will be of a low significance. A number of mitigation measures will be implemented and will further reduce the intensity of these impacts. During operation, no dust emissions are expected. Vehicle emissions will however occur but can be reduced to a low significance
- Noise impacts will occur throughout construction but will be of a low significance. Mitigation measures will further reduce the significance of this impact. Noise impacts during operation will occur due to vehicles using the road. However, ensuring speed limits are adhered to and the use of proper materials to construct the road will minimize these impacts.
- The proposed re-alignment does not cross any watercourses or wetlands and as such, the probability of impacts occurring as well as their intensity is expected to be lower than the alternative alignment. All impacts can be mitigated and overall impacts assessed were found to have a low significance. During operation, the only potential impacts will be related to surface water run-off. As stormwater will be managed through a proper stormwater management system, related impacts such as contamination from hazardous substances and disturbance of aquatic ecological systems will be mitigated. These impacts are expected to have a low significance.
- Waste in the form of domestic waste, hazardous waste and construction waste will be generated. However, the impacts related to this can be mitigated to 'low' with the implementation of a number of mitigation measures. Further, the fact that the proposed re-alignment is shorter than the alternative, waste generation is expected to be less. During operation, some domestic waste will be generated as road users are likely to litter. Hazardous waste may also be generated when accidents resulting in spills occur. These can be mitigated to a low significance.
- Soil alteration impacts such as loss of topsoil, loss of land capability, alteration of topography, soil erosion and soil pollution will occur however, due to the fact that the re-alignment is shorter than the alternative, soil alteration impacts are expected to be less. All impacts can be mitigated to a low significance with the implementation of the mitigation measures in the EMPr. During operation, the only applicable impacts will be soil erosion and soil pollution. Soil erosion will be minimized through the implementation of the proper stormwater management system. Soil pollution will only occur should incidents or accidents occur and will thus be incidental in nature. Thus, impacts will be of a low significance.
- No electricity usage is expected during construction. Further, in terms of water consumption and fuel consumptions, impacts can be considered to be of a low significance. The consumption of raw materials is regarded as low-medium impact due to the fact that during construction raw material is used with the erecting of structures. However, due to the proposed re-alignment being shorter than the alternative, this is expected to be less than it would be for the alternative, Further, the effective use of raw materials will be promoted to minimise unregulated use. During operation, no impacts related to resource consumption are expected.
- The site is regarded as a Critical Biodiversity Area (CBA) and Ecological Support Area (ESA) by the Department. A specialist study was undertaken and found that patches of grassland in the area remain in fair condition but that overall, the proposed development would not threaten any sensitive species as the area affected by the re-alignment has been previously impacted upon by illegal dumping activities. The alignment itself occurs mostly in an area with low/ to medium sensitivity. Effectively implementing the proposed mitigation measures will minimise the impact on the environment. Impacts include the loss of habitat, loss of fauna, loss of flora and degradation of ecological systems and disruption of natural corridors. With implementation of mitigation measures, all impacts will have a low significance. During operation, many of these impacts (loss of habitat, loss of flora and disruption of ecological systems) will not occur as these impacts take place during construction. Operational impacts related to loss of fauna (low significance) and disruption of natural corridors (low -medium significance) will however occur but can be mitigated to reduce the intensity of the impact.
- Potential impacts related to pollution incidents, health and safety, storage of hydrocarbons and fire may occur during construction but can be mitigated through the implementation of the site specific EMPr and will thus have a low significance. During operation, some pollution incidents may still occur due to incidents/accidents resulting in spillages however these will have a low significance. Health and safety impacts may still occur when maintenance activities such as

cleaning up litter or grass cutting occur. These can be mitigated through the proper safety measures are put in place prior to these activities taking place. Fire is a possible impact during operation but would be incidental in nature. Overall the significance of this expected to be low.

- During construction, the main social impacts will be visual impacts, safety and security, traffic disruptions, loss and loss of sense of place. All these impacts can be successfully mitigated to a low significance. During operation, there will be a positive impact related to traffic disruptions as the east-west link road will relieve traffic issues in the area. However, a visual impact will occur but can be mitigated to a low-medium significance. All other impacts can be mitigated to a low significance.
- During construction, a number of positive economic impacts will occur relating to an increase in economy and increased employment. Both these have a medium-high significance after mitigation. During operation, there will be no economic impacts.

Based on the impact assessment undertaken as well as the findings of the specialist study and the need for the project, it is the opinion of the EAP, that **the Proposal be approved**.

Alternative 1

With Alternative 1, Porcupine Avenue will be re-aligned east of the Jukskei River on Portion 5 of Farm of Diepsloot 388-JR. It will then run adjacent to the Steyn City boundary (within the Remaining Extent of Portion 1 of Farm Diepsloot 388-JR – i.e. Porcupine Park). It then will cross Runnymead Avenue slightly to the north of the existing Runnymead road and 10th road intersection. From the intersection, the road will curve to the south and then join the existing 10th road. This bend in the road will occur within Portion 25 of Farm Nietgedacht 535-JQ.

1. Need for the Project

The need for both alternatives is the same and thus the full discussion provided above is not repeated here. However, in summary, the main needs for the project are as follows:

- Improved capacity and traffic flow for the area.
- Improved east-west linkage for the area.
- Decreased impacts on existing infrastructure; and
- Economic and social benefits related the road not impacting on Steyn City.

2. Environmental Sensitivity

As mentioned in the previous Impact Statement, an Ecological Habitat Assessment was undertaken. The specialist study **did not** prefer Alternative 1 because it had a greater impact on sensitive habitats (Porcupine Park).

3. Impact Assessment

A detailed impact assessment has been undertaken for Alternative 1 and assessed the types of impact, duration of impacts, likelihood of potential impacts as well as the overall significance of the impact occurring (**Appendix I**). Based on the impact assessment, Alternative 1 is **not preferred** for a number of reasons:

- The most important and pertinent reason is the increased impact to Porcupine Park as the alternative re-alignment traverses a greater extent of Porcupine Park and thus impacts such as loss of habitat, loss of flora, loss of fauna, degradation of ecological systems and disruptions to natural corridors are much greater.
- Alternative 1 also has a much greater impact to surface water as it will require two new watercrossings.
- The longer extent of the Alternative will also require additional resource consumption which is an additional impact.
- Furthermore, construction and operation related impacts such as visual impacts, dust emissions, surface water runoff etc. will still occur. Therefore there is no environmental, social or economic benefit for approving the alternative.

Please see **Table 12** below for the impact summary for Alternative 1.

Based on the impact assessment undertaken as well as the findings of the specialist study, it is the opinion of the EAP, that Alternative 1 **NOT BE AUTHORISED** as the impacts to the sensitive Porcupine Park are much greater.

No-go (compulsory)

As mentioned in the project description, the development of Porcupine Avenue from the border of Riverside View Extension 35 up to Runnymead Road was authorised by the Gauteng Department of Agriculture and Rural Development (GDARD) on 25 February 2016 (Gaut: 002/15-16/E0053). In addition to above 2016 Authorisation, sections of the road were also authorised as part of separate processes (Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022). This approved

alignment impacts on the existing equestrian estate.

The No-Go Option therefore involves the construction of the original alignment and the demolition of the existing equestrian centre.

1. Need for the Project

Should the No-go Option be selected, one of the main needs of the project will **NOT** be met, namely the economic and social benefits related to the roads not impacting on Steyn City. From a needs, perspective, the No-go option is therefore **NOT** preferred.

2. Impact Assessment

A detailed impact assessment has been undertaken for No-Go Alternative and assessed the types of impact, duration of impacts, likelihood of potential impacts as well as the overall significance of the impact occurring (**Appendix I**).

Based on the impact assessment, the no-go option is **not preferred** for a number of reasons.

- Firstly and most importantly, the no-go option will result in the demolition of the existing equestrian centre. This will result in increased waste generation as well as negative social and economic impacts. These **cannot be mitigated to a satisfactory level.**
- Secondly, the more general impacts related to construction and operation (visual impacts, dust emissions, soil alteration etc.) will still occur and thus the no-go option does not have numerous environmental benefits. From, an biodiversity perspective, the no-go option will reduce some effects on biodiversity as the originally approved alignment does not directly impact on Porcupine Park. Edge effects would still however occur.

Based on the impact assessment undertaken as well as the need for the project, it is the opinion of the EAP, that the No-Go Option **NOT BE AUTHORISED** as this will result in the demolition of the equestrian estate and therefore numerous economic and social impacts (which cannot be mitigated) will occur. In addition, the general construction and operation impacts would still occur.

6. Impact Summary of the Proposal or Preferred Alternative

For proposal:

Please see **Table 11** for a summary of the impact assessment undertaken. In general, most negative impacts from both construction and operation could be mitigated to a low significance with the implementation of the proposed mitigation measures which are included in the EMP. Further, numerous social and economic benefits are related to proposal which have a medium-high significance. **For this reason, the Proposal is preferred.**

Table 11: Impact Summary for the Proposal

Impacts	Comment
Atmospheric Emissions	During construction, dust emissions and emissions from vehicles will occur but will be of a low significance. A number of mitigation measures will be implemented and will further reduce the intensity of these impacts. During operation, no dust emissions are expected. Vehicle emissions will however occur but can be reduced to a low significance
Noise	Noise impacts will occur throughout construction but will be of a low significance. Mitigation measures will further reduce the significance of this impact. Noise impacts during operation will occur due to vehicles using the road. However, ensuring speed limits are adhered to and the use of proper materials to construct the road will minimize these impacts.
Discharge to Water	The proposed re-alignment does not cross any watercourses or wetlands and as such, the probability of impacts occurring as well as their intensity is expected to be lower than the alternative alignment. All impacts can be mitigated and overall impacts assessed were found to have a low significance. During operation, the only potential impacts will be related to surface water run-off. As stormwater will be managed through a proper stormwater management system, related impacts such as contamination from hazardous substances and disturbance of aquatic ecological systems will be mitigated. These impacts are expected to have a low significance.
Waste Generation	Waste in the form of domestic waste, hazardous waste and construction waste will be generated. However, the impacts related to this can be mitigated to 'low' with the implementation of a number of mitigation measures. Further, the fact that the proposed re-alignment is shorter than the alternative, waste generation is expected to be less. During operation, some domestic waste will be generated as road users are likely to litter. Hazardous waste may also be generated when

	accidents resulting in spills occur. These can be mitigated to a low significance.
Soil Alteration	Soil alteration impacts such as loss of topsoil, loss of land capability, alteration of topography, soil erosion and soil pollution will occur however, due to the fact that the re-alignment is shorter than the alternative, soil alteration impacts are expected to be less. All impacts can be mitigated to a low significance with the implementation of the mitigation measures in the EMPr. During operation, the only applicable impacts will be soil erosion and soil pollution. Soil erosion will be minimized through the implementation of the proper stormwater management system. Soil pollution will only occur should incidents or accidents occur and will thus be incidental in nature. Thus, impacts will be of a low significance.
Resource Consumption	No electricity usage is expected during construction. Further, in terms of water consumption and fuel consumptions, impacts can be considered to be of a low significance. The consumption of raw materials is regarded as low-medium impact due to the fact that during construction raw material is used with the erecting of structures. However, due to the proposed re-alignment being shorter than the alternative, this is expected to be less than it would be for the alternative. Further, the effective use of raw materials will be promoted to minimise unregulated use. During operation, no impacts related to resource consumption are expected.
Effects on Biodiversity	The site is regarded as a Critical Biodiversity Area (CBA) and Ecological Support Area (ESA) by the Department. A specialist study was undertaken and found that patches of grassland in the area remain in fair condition but that overall, the proposed development would not threaten any sensitive species. The alignment itself occurs mostly in an area with low/ to medium sensitivity. Effectively implementing the proposed mitigation measures will minimise the impact on the environment. Impacts include: <ul style="list-style-type: none"> • The loss of habitat • Loss of fauna • Loss of flora • Degradation of ecological systems With implementation of mitigation measures, all impacts will have a low significance. During operation, many of these impacts (loss of habitat, loss of flora and disruption of ecological systems) will not occur as these impacts take place during construction. Operational impacts related to loss of fauna (low significance) and disruption of natural corridors (low -medium significance) will however occur but can be mitigated to reduce the intensity of the impact.
Incidents, accidents and potential emergency situations	Potential impacts related to pollution incidents, health and safety, storage of hydrocarbons and fire may occur during construction but can be mitigated through the implementation of the site specific EMPr and will thus have a low significance. During operation, some pollution incidents may still occur due to incidents/accidents resulting in spillages however these will have a low significance. Health and safety impacts may still occur when maintenance activities such as cleaning up litter or grass cutting occur. These can be mitigated through the proper safety measures are put in place prior to these activities taking place. Fire is a possible impact during operation but would be incidental in nature. Overall the significance of this expected to be low.
Social	During construction, the main social impacts will be visual impacts, safety and security, traffic disruptions, loss and loss of sense of place. All these impacts can be successfully mitigated to a low significance. During operation, there will be a positive impact related to traffic disruptions as the east-west link road will relieve traffic issues in the area. However, a visual impact will occur but can be mitigated to a low-medium significance. All other impacts can be mitigated to a low significance.
Economic	During construction, a number of positive economic impacts will occur relating to an increase in economy and increased employment. Both these have a medium-high significance after mitigation. During operation, there will be no economic impacts.

For alternative:

A detailed impact assessment has been undertaken for Alternative 1 and assessed the types of impact, duration of impacts, likelihood of potential impacts as well as the overall significance of the impact occurring (**Appendix I**). Based on the impact assessment, Alternative 1 is **not preferred** for a number of reasons:

- The most important and pertinent reason is the increased impact to Porcupine Park as the

alternative re-alignment traverses a greater extent of Porcupine Park and thus impacts such as loss of habitat, loss of flora, loss of fauna, degradation of ecological systems and disruptions to natural corridors are much greater.

- Alternative 1 also has a much greater impact to surface water as it will require two new watercrossings.
- The longer extent of the Alternative will also require additional resource consumption which is an additional impact.
- Furthermore, construction and operation related impacts such as visual impacts, dust emissions, surface water runoff etc. will still occur. Therefore there is no environmental, social or economic benefit for approving the alternative.

Table 12 below provides a summary of the impacts assessed.

Table 12: Impact Summary for Alternative 1

Impacts	Comment
Atmospheric Emissions	As with the proposed alternative, Alternative 1 will have similar atmospheric emissions: <ul style="list-style-type: none"> • During construction, dust emissions and emissions from vehicles will occur but will be of a low significance. A number of mitigation measures will be implemented and will further reduce the intensity of these impacts. • During operation, no dust emissions are expected. Vehicle emissions will however occur but can be reduced to a low significance
Noise	As with the proposed alternative, Alternative 1 will have similar noise impacts which will occur throughout construction but will be of a low significance. Mitigation measures will further reduce the significance of this impact. Noise impacts during operation will occur due to vehicles using the road. However, ensuring speed limits are adhered to and the use of proper materials to construct the road will minimize these impacts.
Discharge to Water	As Alternative 1 requires new watercrossings, the intensity of the impacts related to discharge to water is much greater. These impacts can be mitigated but as new crossings will be put in place, this mitigation will only reduce the intensity of the impact and not the overall significance. During operation, the only potential impacts will be related to surface water run-off. As stormwater will be managed through a proper stormwater management system, related impacts such as contamination from hazardous substances and disturbance of aquatic ecological systems will be mitigated. These impacts are expected to have a low significance.
Waste Generation	As with the preferred alternative, waste in the form of domestic waste, hazardous waste and construction waste will be generated. However, as the extent of the re-alignment is greater, the intensity of the impacts are expected to be greater as more waste will be generated. These impacts can however be mitigated to 'low' with the implementation of a number of mitigation measures. During operation, some domestic waste will be generated as road users are likely to litter. Hazardous waste may also be generated when accidents resulting in spills occur. These can be mitigated to a low significance.
Soil Alteration	Soil alteration impacts such as loss of topsoil, loss of land capability, alteration of topography, soil erosion and soil pollution will occur however as the route is longer, these impacts are expected to have a greater and intensity and are more likely to occur. Loss of land capability in particular will have a medium significance even after mitigation. Loss of top soil will have a low medium significance even after mitigation. During operation, the only applicable impacts will be soil erosion and soil pollution. Soil erosion will be minimized through the implementation of the proper stormwater management system. Soil pollution will only occur should incidents or accidents occur and will thus be incidental in nature. Thus, impacts will be of a low significance.
Resource Consumption	No electricity usage is expected during construction. Further, in terms of water consumption and fuel consumptions, impacts can be considered to be of a low significance. The consumption of raw materials is regarded as low-medium impact due to the fact that during construction raw material is used with the erecting of structures. As the alternative is longer than the proposal, the volume of raw material required is greater and thus even after mitigation, this has a low-medium significance. During operation, no impacts related to resource consumption are expected.
Effects on Biodiversity	The site is regarded as a Critical Biodiversity Area (CBA) and Ecological Support Area (ESA) by the Department. A specialist study was undertaken and found that patches of grassland in the area remain in fair condition but that overall, the proposed development would not threaten any sensitive species. The Alternative alignment was not preferred by the specialist as it crosses some of the more sensitive areas. Further, the fact that the whole alignment traverses Porcupine Park results in a larger impact. The main impacts include the loss of habitat, loss

	<p>of fauna, loss of flora, degradation of ecological systems and disturbance of natural corridors. Even with mitigation, these impacts were found to have a low-medium significance.</p> <p>During operation, many of these impacts (loss of habitat, loss of flora and disruption of ecological systems) will not occur as these impacts take place during construction. Operational impacts related to loss of fauna (low significance) and disruption of natural corridors (low -medium significance) will however occur but can be mitigated to reduce the intensity of the impact.</p>
Incidents, accidents and potential emergency situations	<p>Potential impacts related to pollution incidents, health and safety, storage of hydrocarbons and fire may occur during construction but can be mitigated through the implementation of the site specific EMPr and will thus have a low significance. During operation, some pollution incidents may still occur due to incidents/accidents resulting in spillages however these will have a low significance. Health and safety impacts may still occur when maintenance activities such as cleaning up litter or grass cutting occur. These can be mitigated through the proper safety measures are put in place prior to these activities taking place. Fire is a possible impact during operation but would be incidental in nature. Overall the significance of this expected to be low.</p>
Social	<p>During construction, the main social impacts will be visual impacts, safety and security, traffic disruptions, loss and loss of sense of place. All these impacts can be successfully mitigated to a low significance. However, the intensity of the impacts will be greater in some cases (for example, for visual impacts) due to the extended route required for the alternative. During operation, there will be a positive impact related to traffic disruptions as the east-west link road will relieve traffic issues in the area. However, a visual impact will occur but can be mitigated to a low-medium significance. All other impacts can be mitigated to a low significance.</p>
Economic	<p>During construction, a number of positive economic impacts will occur relating to an increase in economy and increased employment. Both these have a medium-high significance after mitigation. During operation, there will be no economic impacts.</p>

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.

When assessing the alternatives, the following was assessed:

- The findings of the specialist study undertaken;
- The results of the impact assessment; and
- The need for the project.

The Ecological habitat assessment which was undertaken found that whilst patches of grassland in fair condition remain, the proposed re-alignment will not result in loss of any unique ecosystems. Two plant species *Hypoxis hemerocallidea* and *Boophone disticha* that are not threatened but listed as Declining are visibly frequent at the site and larger study area and could be conserved in the larger study area (Porcupine Park) and relocated from the footprint, if the development is approved. There appears to be no loss of any threatened species, if the site is developed as part of the proposed re-alignment. The specialist preferred the Proposal as it limited the impact on the sensitive Porcupine Park.

Further, taking into account the findings of the specialist study, a detailed impact assessment was undertaken for both the Proposal and the alternative alignment (Alternative 1) as well as the No-Go Option. A summary of the findings are provided in **Table 11** and **Table 12** above. However, in summary, the impacts had a greater intensity and were more likely to occur for Alternative 1 due to the longer extent of the route through Porcupine Park and the fact that the alternative will require new watercrossings. The longer extent would also generate more waste and require additional resource consumption.

In terms of the need for the project, both alignments would meet the need for the project as they would create an east-west link road (and thus improve the capacity and traffic flow for the area). However, the Proposal is preferred as it meets the need for the project without compromising the environment and is thus in line with the concepts contained in Section 24 of the Constitution as well as the concept of sustainable development as contained in the National Environmental Management Act, 1998 (Act 107 of 1998).

Therefore, based on the findings of the specialist study and impact assessment and taking into account the successful implementation of the EMPr, it is felt that Proposal should be authorised.

7. Spatial Development Tools

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

The following spatial development tools were applied and/or considered:

- The City of Johannesburg Spatial Development Framework 2040 was consulted as Spatial Development Tool and it was found that the area occurs within a Consolidation zone.
- GDARD C-PLAN and environmentally sensitive layers were utilized during the compilation of this report to identify biodiversity specialist reports as well as possible sensitive areas within the area.
- Gauteng Provincial Environmental Management Framework was utilized in the compilation of this report. The proposed alignment occurs within Zone 3 and Zone 4. A Ecological Habitat Assessment however was undertaken and found that the proposed re-alignment would not result in losses of sensitive habitat or species.

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
✓	

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

Not applicable.

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:

A number of critical mitigation measures accompany this recommendation and should be included as conditions of the environmental authorisation (should it be granted). These include:

- **The Proposal** should be implemented.
- An Environmental Control Officer (ECO) should be appointed to ensure compliance to the authorization and EMPr.
- Individuals of the Declining plant species *Boophone disticha* and *Hypoxis hemerocallidea* need to be relocated where applicable, to a suitable site nearby before the construction work of the development, if approved, is initiated. This should be done by suitably qualified persons to ensure the success of the rescue effort. Permits for relocation are to be obtained from GDARD for the rescue effort if necessary.
- Exotic and invasive plants should be controlled and removed.
- Construction contractors, sub-contractors and operators must ensure that no fauna taxa are unduly disturbed, trapped, hunted or killed.

9. The Needs and Desirability of the Proposed Development (As Per Notice 792 Of 2012, or the updated version of this Guideline)

The need and desirability of the proposed re-alignment was assessed in terms of Notice 891 of 2014 which is the updated guideline available regarding need and desirability. In line with this, the consideration of "need and desirability" included consideration of the strategic context of the proposed re-alignment along with the broader societal needs and the public interest.

Sustainable development is directly linked to the provision of a safe and efficient road network. Currently there is a lack of linkage between the eastern and western section of the northern part of Johannesburg. Further, due to increased development in the area (for example, Steyn City as well as Riverside View Extension X28 – both approved previously), there is a need to create an east-west link road which links William Nicol Drive to the east with the corner of 10th Avenue and Runnymede Avenue to the west. A number of authorisation processes was previously conducted for this and was approved by various authorisations (Gaut: 002/15-16/E0053; Gaut: 002/12-13/E0070; Gaut: 006/13-14/E0091 and Gaut: 002/14-15/0022). It is envisaged that the East West Link Road will carry high volumes of traffic and it will function as an important link in the greater road network. Therefore, the East West Link Road

will assist with the distribution and alleviation of traffic in this area of Johannesburg.

However, as mentioned in the project description, a small section of the authorised alignment impacts on the existing Equestrian Estate within Steyn City. It is therefore necessary to redesign this section. The proposed re-alignment involves the bending of the road so that it no longer impacts on Steyn City.

The need for this re-alignment is therefore as follows:

- Improved capacity and traffic flow for the area.
- Improved east-west linkage for the area.
- Decreased impacts on existing infrastructure; and
- Economic and social benefits related the road not impacting on Steyn City.

Further, a detailed impact assessment process including the compilation of an Ecological Habitat Assessment has been undertaken and shows that impacts related to the proposed re-alignment can be satisfactorily mitigated. In addition, the construction of the proposed re-alignment will result in employment opportunities in the area. It will also prevent the loss of the equestrian centre. As the area has a strong equestrian interest, this is an important consideration in terms of need and desirability.

The following questions have also been addressed in line with the Guideline for Need and Desirability (Notice 891 of 2014).

Table 13: Need and Desirability Assessment

Question from the Need and Desirability Guideline	Response
Securing ecological sustainable development and use of natural resources	
How will this development (and its separate elements / aspects) on the ecological integrity of the area?	<p>The Ecological habitat assessment which was undertaken found that whilst patches of grassland in fair condition remain, the proposed re-alignment will not result in loss of any unique ecosystems. Two plant species <i>Hypoxis hemerocallidea</i> and <i>Boophone disticha</i> that are not threatened but listed as Declining are visibly frequent at the site and larger study area and could be conserved in the larger study area (Porcupine Park) and relocated from the footprint, if the development is approved. There appears to be no loss of any threatened species, if the site is developed as part of the proposed re-alignment. The specialist preferred the Proposal as it limited the impact on the sensitive Porcupine Park.</p> <p>Based on this, the proposed re-alignment will not significantly impact on the ecological integrity of the area.</p>
<p>How were the following ecological integrity considerations taken into account?</p> <ul style="list-style-type: none"> • Threatened Ecosystems • Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure, • Critical Biodiversity Areas (“CBAs”) and Ecological Support Areas (“ESAs”) • Conservation targets, • Environmental Management Framework, • Spatial Development Framework, and • Global and international responsibilities relating to the environment (e.g. RAMSAR sites, Climate Change, etc.) 	<p>This Basic Assessment Report has taken into account the ecological integrity of the area in the following way:</p> <ul style="list-style-type: none"> • An initial sensitivity map was compiled to identify potential ecological sensitivities. This map took into account CBAs, ESAs, watercourses, Important Bird Areas (IBAs) etc. • Based on this, it was determined that an Ecological Assessment was required. • An Ecological Assessment was therefore undertaken and took into account aspects such as threatened and sensitive ecosystems etc. A detailed final sensitivity map was compiled based on the findings of the study. • The findings of the Ecological Assessment were used to determine and assess impacts related to the

	development. A detailed impact assessment which assessed the proposal, alternative and no-go option was compiled.
How will this development disturb or enhance ecosystems and / or result in the loss or protection of biological impacts that could not be avoided altogether, what measures were explored to minimize and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	Please refer to Appendix I1 for the detailed impact assessment which identified the main impacts as well as the pertinent mitigation measures that reduce negative impacts and enhance positive benefits. Further, please see the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures. Including those suggested to enhance positive benefits (i.e. such as the use of local labour where possible).
How will this development pollute and/or degrade the biophysical environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimize and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	Please refer to Appendix I1 for the detailed impact assessment which identified the main impacts related to the pollution and/or degradation of biophysical environment. Further, please see the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures.
What waste will be generated by this development? What measures were explored to firstly avoid waste, and where waste could not be avoided altogether, what measures were explored to minimize, reuse and/or recycle the waste? What measures have been explored to safely treat and/or dispose of unavoidable waste?	<p>Please refer to Appendix I1 for the detailed impact assessment which includes impacts related to waste as well as the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures.</p> <p>The proposal reduces the volume of waste that will be generated as it prevents the demolition of the existing Equestrian Centre which would result in large volumes of waste being generated.</p>
How will this development use and/or impact on non-renewable natural resources? What measures were explored to ensure responsible and equitable use of the resources? How have the consequences of the depletion of the non-renewable natural resources been considered? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimize and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	Please refer to Appendix I1 for the detailed impact assessment which includes impacts related to resources as well as the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures.
<p>How will this development use and/or impact on renewable natural resources and the ecosystem of which they are part? Will the use of the resources and/or impact on the ecosystem jeopardize the integrity of the resource and/or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds? What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimize the use of resources? What measures were taken to ensure responsible and equitable use of the resources? What measures were explored to enhance positive impacts?</p> <ul style="list-style-type: none"> Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. dematerialized growth)? (note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of 	<p>Please refer to Appendix I1 for the detailed impact assessment which includes impacts related to resources as well as the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures.</p> <p>It should be noted that the proposed development involves the re-alignment of a section of the approved East-West Link Road and therefore will not exacerbate the increased use of resources to maintain economic growth.</p> <p>Further, the location, type and scale of the development (specifically the proposal) reduces the need for resources as the re-aligned section is much shorter and therefore requires less resources to construct.</p>

<p>waste they generate, without compromising their quest to improve their quality of life)</p> <ul style="list-style-type: none"> • Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources this the proposed development alternative?). • Do the proposed location, type and scale of development promote a reduced dependency on resources? 	
<p>How were a risk-averse and cautious approach applied in terms of ecological impacts?</p> <ul style="list-style-type: none"> • What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)? • What is the level of risk associated with the limits of current knowledge? • Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development? 	<p>A risk-averse and cautious approach was undertaken throughout the process including the compilation of specialist studies, the impact assessment and the EMPr. In particular, it was incorporated in the following ways:</p> <ul style="list-style-type: none"> • The specialist identified gaps which were noted in both the specialist report and BAR. • The impact assessment specifically deals with gaps identified by specialists and/or lack of information through the assessment of 'Level of Confidence'. • The EMPr provided numerous mitigation measures to ensure that even impacts that were identified to be a 'low' risk would be further mitigated. <p>In all cases, the level of risk associated with the current knowledge was deemed sufficient for undertaking the impact assessment for providing a recommendation. It is therefore the EAP's opinion that a risk averse and cautious approach has been applied to the development.</p>
<p>How will the ecological impacts resulting from this development impact on people's environmental right in terms following:</p> <ul style="list-style-type: none"> • Negative impacts e.g. access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimize, manage and remedy negative impacts? • Positive impacts: e.g. improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts? 	<p>Please refer to Appendix I1 for the detailed impact assessment as well as the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures.</p> <p>However, in summary, it is felt that the negative impacts related to the development will not have a significantly negative impact on people's environmental right through the dedicated implementation of the EMPr. Whilst, a portion of the area of Porcupine Park will be developed, access to the rest of the Porcupine Park area will still be available. Further, the Proposal has a small footprint and will occur in an area which has a lower sensitivity due to historical activities.</p> <p>The positive impacts associated with the East-West link road and in particular, the proposed re-alignment include:</p> <ul style="list-style-type: none"> • Improved capacity and traffic flow for the area. • Improved east-west linkage for the area. • Decreased impacts on existing infrastructure; • Economic and social benefits related

	the road not impacting on the Equestrian Centre.
Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in question and how the development's ecological impacts will result in socio-economic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)?	The Porcupine Park area is mostly sensitive however the proposed re-alignment occurs in a lower sensitivity area. It is not felt that it will not have a significantly negative on ecosystem services as the majority of Porcupine Park will be retained. No loss of livelihoods, heritage or significant opportunity costs are anticipated.
Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/targets/considerations of the area?	<p>The Ecological Specialist noted the following:</p> <p><i>"In the case of this study site, patches of grassland in fair condition remain. There appears to be no loss of any unique ecosystems, if the site is developed. A riparian zone of the Jukskei River is present at the eastern end of the site. Two plant species Hypoxis hemerocallidea and Boophone disticha that are not threatened but listed as Declining are visibly frequent at the site and larger study area and could be conserved in the larger study area and relocated from the footprint, if the development is approved. There appears to be no loss of any threatened species, if the site is developed."</i></p> <p>Based on this and the detailed impact assessment (refer to Appendix I1), it is not expected that the proposed re-alignment will negatively impact on the ecological targets of the area.</p>
Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the "best practicable environmental option" in terms of ecological considerations?	<p>Two alternative re-alignments were assessed, namely:</p> <ul style="list-style-type: none"> • The Proposal; and • Alternative 1. <p>When assessing these alternatives, the following was assessed:</p> <ul style="list-style-type: none"> • The findings of the specialist study undertaken; • The results of the impact assessment; and • The need for the project. <p>The Ecological habitat assessment preferred the Proposal as it limited the impact on the sensitive Porcupine Park.</p> <p>Further, taking into account the findings of the specialist study, a detailed impact assessment was undertaken for both the Proposal and the alternative alignment (Alternative 1). A summary of the findings are provided in Table 11 and Table 12 above. However, in summary, the impacts had a greater intensity and were more likely to occur for Alternative 1 due to the longer extent of the route through Porcupine Park and the fact that the alternative will require new watercrossings. The longer extent would also generate more waste and require additional resource consumption.</p> <p>In terms of the need for the project, both alignments would meet the need for the project as they would create an east-west link road (and thus improve the capacity and traffic flow for the</p>

	<p>area). However, the Proposal is preferred as it meets the need for the project without compromising the environment and is thus in line with the concepts contained in Section 24 of the Constitution as well as the concept of sustainable development as contained in the National Environmental Management Act, 1998 (Act 107 of 1998).</p> <p>Therefore, based on the findings of the specialist study and impact assessment and taking into account the successful implementation of the EMPr, it is felt that Proposal should be authorised and is the BPEO.</p>
Promoting justifiable economic and social development	
<p>What is the socio-economic context of the area, based on, amongst other considerations, the following considerations?</p> <ul style="list-style-type: none"> • The IDP (and its sector plans' vision, objectives, strategies, indicators and targets) and any strategic plans, frameworks of policies applicable to the area, • Spatial priorities and desired spatial patterns (e.g. need for integrated of segregated communities, need to upgrade informal settlements, need for densification, etc.). • Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.), and • Municipal Economic Development Strategy ("LED Strategy"). 	<p>Please see Section 9 of the BAR which provides an overview of the socio-economic context of the area.</p> <p>In summary, the east-west link road is in line with regional planning for the area and will fulfil an important function. It takes into account the new developments in the area (such as Century City, Steyn City and Valuemax). The proposed re-alignment takes into account existing infrastructure which is already in place (I.e the Equestrian Centre) and ensures that it will not need to be demolished. The proposal also minimises impacts to Porcupine Park.</p>
<p>Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-economic objectives of the area?</p> <ul style="list-style-type: none"> • Will the development complement the local socio-economic initiatives (such as local economic development (LED) initiatives), or skills development programs? 	<p>Please refer to Appendix I1 for the detailed impact assessment as well as the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures. In summary, the social and economic main impacts that were assessed included:</p> <ul style="list-style-type: none"> • Social <ul style="list-style-type: none"> ○ Visual impact ○ Safety and security ○ Traffic disruptions ○ Loss of equestrian centre ○ Loss of cultural heritage ○ Loss of sense of place • Economic <ul style="list-style-type: none"> ○ Decline/increase in economy ○ Employment <p>In terms of social impacts, during construction, the main social impacts will be visual impacts, safety and security, traffic disruptions, loss and loss of sense of place. All these impacts can be successfully mitigated to a low significance. During operation, there will be a positive impact related to traffic disruptions as the east-west link road will relieve traffic issues in the area. However, a visual impact will occur but can be mitigated to a low-medium significance. All other impacts can be mitigated to a low significance.</p> <p>In terms of economic impacts, during construction, a number of positive economic impacts will occur relating to an increase in economy and increased employment. Both these</p>

	<p>have a medium-high significance after mitigation. During operation, there will be no economic impacts.</p>
<p>How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?</p>	<p>The proposed re-alignment allows for the development of an east-west link road which is necessary for the area and is required in terms of regional planning.</p>
<p>Will the development result in equitable (intra- and inter-generational) impact distribution, in the short- and long-term? Will the impact be socially and economically sustainable in the short- and long-term?</p>	<p>Yes, the proposed development will allow for the development of a necessary east-west link road without resulting in the destructing of existing infrastructure. The proposal also limits the impact on Porcupine Park.</p>
<p>In terms of location, describe how the placement of the proposed development will:</p> <ul style="list-style-type: none"> • Result in the creation of residential and employment opportunities in close proximity to or integrated with each other • Reduce the need for transport of people and goods • Result in access to public transport or enable non-motorized and pedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms public transport), • Compliment other uses in the area • Be in line with the planning for the area, • for urban related development, make use of underutilized land available with the urban edge • optimize the use of existing resources and infrastructure, • opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g. not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement), • discourage “urban sprawl” and contribute to compaction/densification, • contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs, • encourage environmentally sustainable land development practices and processes, • take into account special locational factors that might favour the specific location (e.g. the location of a strategic mineral resource, access to the port, access to rail, etc.), • the investment in the settlement or area in question will generate the highest socio-economic returns (i.e an area with high economic potential), • impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area, and • in terms of the nature, scale and location of the development promote or act as a catalyst to create a more 	<p>The proposed location of the proposed re-alignment considered a number of aspects including:</p> <ul style="list-style-type: none"> • The need for an east-west link road; • The Eskom Servitudes that is north of the boundary wall of Steyn City. • Eskom pylons also to the north of the boundary wall of Steyn City. • The already constructed Steyn City Equestrian Centre which are affected by the original approved route and need to be taken into account in the re-alignment. • The sensitivity of Porcupine Park and the need to reduce impacts to this area. <p>The following can also be noted:</p> <ul style="list-style-type: none"> • The proposed re-alignment will create employment during construction and operation. • It will provide a much-needed east-west link road which will reduce traffic in the overall area. The road will be used by numerous road users including public transport. • It compliments other land uses in the area as the road is required to improve traffic due to numerous residential developments in the area. • The road is in line with regional planning by JRA. • The proposed re-alignment does not occur within the urban edge, however, it is required in its proposed location to allow for improved east-west traffic. It is on the edge of the urban edge and the residential developments that occur in the vicinity of the road occur for the most part within the urban edge. • As it is not a residential development it cannot contribute to compaction/densification. • The road is required to enable continued development in the area. A number of large developments are currently being developed and a east-west link road will relieve traffic related to these developments and provide the needed east-west link required by regional planning. • The proposed re-alignment will not impact on any cultural aspects. A heritage impact assessment was

<p>integrated settlement?</p>	<p>previously done on the main alignment (in close proximity to the re-alignment) and was approved by PHRA-G. Further, the use of Porcupine Park by the equestrian community will be able to continue.</p> <ul style="list-style-type: none"> The proposal promotes a more integrated City of Johannesburg as it provides a necessary east-west link road without impacting on the existing equestrian estate.
<p>How were a risk-averse and cautious approach applied in terms of socio-economic impacts?</p> <ul style="list-style-type: none"> What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)? What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic vulnerability and sustainability) associated with the limits of current knowledge? Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development? 	<p>A risk-averse and cautious approach was undertaken throughout the process including the compilation of the impact assessment and the EMPr. In particular, it was incorporated in the following ways:</p> <ul style="list-style-type: none"> The impact assessment specifically deals with gaps and/or lack of information through the assessment of 'Level of Confidence'. The EMPr provided numerous mitigation measures to ensure that even impacts that were identified to be a 'low' risk would be further mitigated. <p>In all cases, the level of risk associated with the current knowledge was deemed sufficient for undertaking the impact assessment for providing a recommendation. It is therefore the EAP's opinion that a risk averse and cautious approach has been applied to the development.</p>
<p>How will the socio-economic impacts resulting from this development impact on people's environmental right in terms following:</p> <ul style="list-style-type: none"> Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimize, manage and remedy negative impacts? Positive impacts. What measures were taken to enhance positive impacts? 	<p>Please refer to Appendix I1 for the detailed impact assessment as well as the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures. In summary, the social and economic main impacts that were assessed included:</p> <ul style="list-style-type: none"> Social <ul style="list-style-type: none"> Visual impact Safety and security Traffic disruptions Loss of equestrian centre Loss of cultural heritage Loss of sense of place Economic <ul style="list-style-type: none"> Decline/increase in economy Employment <p>In summary, most social and economic impacts are positive in nature. Those that are negative can be satisfactorily mitigated and thus the development does not impact on people's environmental rights.</p>
<p>Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts (e.g. over utilization of natural resources, etc.)?</p>	<p>The proposed re-alignment has been located to minimise impacts on the natural environment so that the socio-economic benefits of the re-alignment do not result in significant negative environmental impacts. Please refer to Appendix I1 for the detailed impact assessment as well as the detailed and site specific EMPr which is contained in Appendix H for all proposed mitigation measures.</p>
<p>What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations?</p>	<p>Two alternative re-alignments were assessed, namely:</p> <ul style="list-style-type: none"> The Proposal; and Alternative 1.

	<p>When assessing these alternatives, the following was assessed:</p> <ul style="list-style-type: none"> • The findings of the specialist study undertaken; • The results of the impact assessment; and • The need for the project. <p>In terms of the need for the project, both alignments would meet the need for the project as they would create an east-west link road (and thus improve the capacity and traffic flow for the area). However, the Proposal is preferred as it meets the need for the project without compromising the environment and is thus in line with the concepts contained in Section 24 of the Constitution as well as the concept of sustainable development as contained in the National Environmental Management Act, 1998 (Act 107 of 1998).</p> <p>Therefore, based on the findings of the specialist study and impact assessment and taking into account the successful implementation of the EMPr, it is felt that Proposal should be authorised and is the BPEO.</p>
<p>What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)? Considering the need for social equity and justice, do the alternatives identified, allow the “best practicable environmental option” to be selected, or is there a need for other alternatives to be considered?</p>	<p>A detailed impact assessment process has been undertaken including the development of alternatives which were assessed. In addition, in line with the requirements of the EIA Regulations, 2014, the BAR is being made available for review and I&APS will be able to comment on the impact assessment. It is the opinion of the EAP, that no impacts assessed will distributed in such a way to discriminate against any disadvantaged person. Instead, the proposed re-alignment will allow for the development of an east-west link road that does not impact on existing infrastructure.</p> <p>The alternatives assessed do allow for the best practicable environmental option to be determined and the EAP is of the opinion that no further alternatives need to be assessed.</p>
<p>What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?</p>	<p>The proposed re-alignment will be used by numerous road users including categories of people disadvantaged by unfair discrimination.</p>
<p>What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development’s life cycle?</p>	<p>In identifying the impacts associated with the development as well as the development of the EMPr, the full lifecycle was assessed.</p> <p>Further, the full EMPr includes the roles and responsibilities for the development and ensures that the responsibility of the implementation of the EMPr falls to the developer.</p>
<p>What measures were taken to:</p> <ul style="list-style-type: none"> • ensure the participation of all interested and affected parties, • provide all people with an opportunity to develop the understanding, skills and 	<p>A detailed public participation process is being undertaken as part of the Basic Assessment process.</p> <p>As part of this, a detailed Interested and Affected</p>

<p>capacity necessary for achieving equitable and effective participation</p> <ul style="list-style-type: none"> • ensure participation by vulnerable and disadvantaged persons, • promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means, • ensure openness and transparency, and access to information in terms of the process, • ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to all forms of knowledge, including traditional and ordinary knowledge, and • ensure that the vital role of women and youth in environmental management and development were recognized and their full participation therein were promoted? 	<p>Party (I&AP) Database was compiled and included registered I&APs from previous Steyn City projects as well as the original East-West Link Road Approval process. The database also includes organs of state that have jurisdiction over the site such as City of Johannesburg, Johannesburg Roads Agency, Department of Water and Sanitation, Johannesburg Water and Gauteng Department of Agriculture and Rural Development (GDARD). In addition, the I&AP database included the affected ward councillor of the area as well as the Chartwell North Estates Home Owners Association and the Chartwell Country Estates Residents Association.</p> <p>As part of the combined notification and review, written notification in the form of a Background Information Document (BID) were emailed to all I&APs on the I&AP Database. In addition, a public participation map was compiled to show all adjacent landowners. Hand Delivery of BIDs took place. Three site notices were also placed around the site and an advert was also placed in The Star. The BID, advert and site notices provided a short background on the project and encouraged I&APs to register as I&APs. Information on the review of the Basic Assessment Report was also provided and a 30-day registration and review period was provided.</p> <p>As numerous communication methods (including site notices, adverts, hand delivery of BIDs and emails) are being employed, it is felt that public participation has been such to ensure participation by all potentially interested or affected people.</p>
<p>Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g. a mixture of low- middle-, and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)</p>	<p>The proposed re-alignment will provide an important east-west link road which is important at a regional level and will improve traffic. Further, the re-alignment will ensure that the east-west link road does not impact on existing infrastructure and is therefore important from a local perspective.</p>
<p>What measures have been taken to ensure that current and / or future workers will be informed of work that potentially might be harmful to human health or the or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?</p>	<p>Please refer to Appendix H: EMPr which includes an Environmental Awareness Plan. As part of this, workers will be informed of their rights to refuse work that might be harmful to human health or the environment.</p>
<p>Describe how the development will impact on job creation in terms of, amongst other aspects:</p> <ul style="list-style-type: none"> • the number of temporary versus permanent jobs that will be created, • whether the labour available in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area), • the distance from where labourers will have to travel, • the location of jobs opportunities versus the location of impacts (i.e. equitable distribution of costs and benefits); and • the opportunity costs in terms of job 	<p>The following can be noted in regards to this:</p> <ul style="list-style-type: none"> • Prism EMS have indicated in the EMPr, contained under Appendix H, that local employment should be encouraged to promote skills transfer and development. This will enhance the general area and provide job opportunities to potential job seekers and manage it in the best suitable way. • An assessment of the social environment of the area suggests that there is labour available in the area. • The proposed road re-alignment occurs in close proximity to numerous

<p>creation (e.g. a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.)</p>	<p>residential developments and informal settlements and thus, the distance labourers will have to commute is not expected to be significant.</p> <ul style="list-style-type: none"> The proposed development will not result in any losses of any jobs and job related opportunity costs are not expected.
<p>What measures were taken to ensure:</p> <ul style="list-style-type: none"> That there were intergovernmental coordination and harmonization of policies, legislation and actions relating to the environment, and That actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures? 	<p>National Legislation i.e. NEMA, NWA, NHRA, NEM:BA were consulted in the preparation of this Basic Assessment Report. Provincial guidelines also formed part of the literature review. Spatial development tools also aided the EAP to assess and provide information pertaining to the proposed development.</p> <p>Any comments received from I&APs or organs of state are included in the comments and response register.</p>
<p>Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?</p>	<p>The EMPr which has been compiled is site specific and includes realistic and achievable mitigation measures which aim to reduce any negative impacts as well as to enhance any positive benefits associated with the project.</p>
<p>What measures were taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?</p>	<p>A detailed EMPr has been compiled and includes detailed roles and responsibilities. In addition, a penalty system for contractors is included.</p>
<p>Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?</p>	<p>Two alternative re-alignments were assessed, namely:</p> <ul style="list-style-type: none"> The Proposal; and Alternative 1. <p>When assessing these alternatives, the following was assessed:</p> <ul style="list-style-type: none"> The findings of the specialist study undertaken; The results of the impact assessment; and The need for the project. <p>In terms of the need for the project, both alignments would meet the need for the project as they would create an east-west link road (and thus improve the capacity and traffic flow for the area). However, the Proposal is preferred as it meets the need for the project without compromising the environment and is thus in line with the concepts contained in Section 24 of the Constitution as well as the concept of sustainable development as contained in the National Environmental Management Act, 1998 (Act 107 of 1998).</p> <p>Therefore, based on the findings of the specialist study and impact assessment and taking into account the successful implementation of the EMPr, it is felt that Proposal should be authorised and is the BPEO.</p>

**10. The Period for which the Environmental Authorisation is Required
(Consider when the Activity is Expected to be Concluded)**

The proposed period for which the environmental authorization should be valid prior to operation is 8 years with an option to extend if necessary. Should construction not commence within this period, the authorization will lapse and new authorization process would be required.

However, once the project has commenced, it cannot be seen to have an expiry date (i.e. during the operational phase), because of the nature of the project and because the project is intending to construct permanent infrastructure on the proposed site.

11. Environmental Management Programme (EMPr) (must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 8 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

Appendix E: Public participation information

Appendix E1 – Proof of site notice

Appendix E2 – Written notices issued as required in terms of the regulations

Appendix E3 – Proof of newspaper advertisements

Appendix E4 – Communications to and from interested and affected parties

Appendix E5 – Minutes of any public and/or stakeholder meetings

Appendix E6 - Comments and Responses Report

Appendix E7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix E8 –Comments from I&APs on amendments to the BA Report

Appendix E9 – Copy of the register of I&APs

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

Appendix F1 – Copy of Main Alignment Authorisation

Appendix F2 – Copy of Main Alignment WUL

Appendix F3 – JRA Approval Letter

Appendix F4- PHRA-G Letter

Appendix G: Specialist reports

Appendix G1: Ecological Habitat Assessment

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.