



**BASIC ASSESSMENT PROCESS FOR THE  
PROPOSED WIDENING OF CONRAD BRIDGE OVER  
BRAAMFONTEIN SPRUIT, CITY OF JOHANNESBURG,  
GAUTENG PROVINCE**

**DRAFT BASIC ASSESSMENT REPORT**

**May 2016**

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## Gauteng Department of Agriculture and Rural Development (GDARD)

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

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

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#### **Kindly note that:**

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

#### **DEPARTMENTAL DETAILS**

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

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

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

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(For official use only)

<b>File Reference Number:</b>						
<b>Application Number:</b>						
<b>Date Received:</b>						

\* Submission to State Departments (Number 3 above)

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

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

if no, state reasons for not attaching the list.

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## PROJECT DETAILS

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**Title** : Environmental Basic Assessment Process  
and Water Use Licence for the Basic Assessment Process for  
The Proposed Widening of Conrad Bridge over Braamfontein  
Spruit, City of Johannesburg, Gauteng province

**Report compiled by** : Contact person: Ms Jubilee Bubala  
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**Client** : Triakon Engineering

**Report Status** : Draft Basic Assessment Report for public review

**Review period** **The 30-day period for review is from  
13 May 2016 to 13 June 2016**

**DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)**

<b>Environmental Assessment Practitioner (EAP):</b>	Envirolution Consulting (Pty) Ltd		
<b>Contact person:</b>	Gesam Govender		
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<b>EAP Qualifications</b>	BSc (Hons)		
<b>EAP Registrations/Associations</b>	Registered with the South African Council for Natural Scientific Professions (No: 400049/12)		

**Details of the EAP’s expertise to carry out Basic Assessment procedures**

Envirolution Consulting Pty Ltd was contracted by Triakon Engineering on behalf of Johannesburg Road Agency as the independent environmental consultant to undertake the Environmental Basic Assessment process and Water Use Licence for the proposed project. Envirolution Consulting Pty Ltd is not a subsidiary of, or affiliated to Triakon Engineering. Furthermore, Envirolution Consulting does not have any interests in secondary developments that may arise out of the authorisation of the proposed project.

Envirolution Consulting is a specialist environmental consulting company providing holistic environmental management services, including environmental impact assessments and planning to ensure compliance with environmental legislation and evaluate the risk of development; and the development and implementation of environmental management tools Envirolution Consulting benefits from the pooled resources, diverse skills and experience in the environmental field held by its team.

The Envirolution Consulting team have considerable experience in environmental impact assessments and environmental management, and have been actively involved in undertaking environmental studies, for a wide variety of projects throughout South Africa, including those associated with linear developments.

The EAPs from Envirolution Consulting who are responsible for this project are (refer to **Appendix I** for CVs):

- Gesam Govender – The principle environmental assessment practitioner (EAP) for this project is a registered Professional Natural Scientist and holds an Honors Degree in Botany. He has over 15 years of experience within the field of environmental management. His key focus is on strategic environmental assessment and advice; management and co-ordination of environmental projects, which includes integration of environmental studies and environmental processes into larger engineering-based projects and ensuring compliance to legislation and guidelines; compliance reporting; the identification of environmental management solutions and mitigation/risk minimising

measures; and strategy and guideline development. He is currently responsible for the project management of EIAs for several diverse projects across the country.

- Ms. Jubilee Bubala the principle author of this Basic Assessment Report holds a Master's of Science degree from the Witwatersrand University. She has 8 years of experience consulting in the environmental field. Her key focus is on strategic environmental assessment and advice; management and co-ordination of environmental projects, which includes integration of environmental studies and environmental processes into larger engineering-based projects and ensuring compliance to legislation and guidelines; environmental auditing and compliance reporting; the identification of environmental management solution and mitigation/risk minimising measures; environmental auditing, monitoring and reporting compliance; and developing and implementing ISO 14001:2004. Jubilee has been a project scientist for various EIA's in South Africa and Southern Africa. Jubilee is currently a Project Manager and Environmental Consultant at Envirolution Consulting Pty Ltd.

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### Appendixes

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#### Appendix A: Site plan(s)

- A1: Locality Map
- A2: Sensitivity Map

#### 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: Proof of Stakeholder Consultation
- Appendix E3: Proof of newspaper advertisements
- Appendix E4: Authority Consultation
- Appendix E5 – Minutes of any public and/or stakeholder meetings **N/A – No public meeting has been held yet, this will be held during Public Review of the BAR**
- Appendix E6 - Comments and Responses Report Attached
- Appendix E7 –Comments from I&APs on Draft Basic Assessment (BA) Report **Comments are anticipated during the Draft BAR review period**
- Appendix E8 –Comments from I&APs on amendments to the BA Report (**N/A**)
- Appendix E9: I&APs and Registered I&APs Database
- Appendix E10 – Comments from I&APs on the application
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#### Appendix F: Water use license(s) authorisation, SAHRA information, service letters from municipalities, water supply information

#### Appendix G: Specialist reports

- G1: Wetland Specialist Report
- G2: Wetland Rehabilitation and Monitoring Plan
- G3: Heritage Specialist Report
- G4: Traffic Impact Report
- G5: Geotechnical Report

#### Appendix H: EMPr

#### Appendix I: Other information

- I1: EAP Declaration and CVs
- I2: Specialist Declarations and CVs.

## SECTION A: ACTIVITY INFORMATION

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### 1. ACTIVITY DESCRIPTION

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

**Project Title: The Proposed Widening of Conrad Bridge over Braamfontein Spruit, City of Johannesburg, Gauteng Province.**

#### 1.2 Introduction and Background

According to the City of Johannesburg IDP 2014/2015, the upgrade of roads and bridge infrastructure was identified by Johannesburg Road Agency SOC Limited (hereafter referred to as "JRA") as one of the infrastructure that requires attention. Conrad Drive is a major feeder road that connects residential estates, business parks hence carrying traffic to the major Jan Smuts Avenue into William Nicol that then connects to the N1 Eastern Bypass highway. Johannesburg Road Agency (JRA) identified that Conrad Drive is one of the congested roads in Blairgowrie, Randburg area. The congestion is caused by the bottleneck that occurs at the Conrad Bridge across Braamfontein Spruit. Two lanes of traffic from Blairgowrie converge into one lane at the bridge towards Jan Smuts avenue, therefore forming queues of traffic during peak times. The high traffic congestion during peak hours is mainly experienced in the direction of Jan Smuts Drive. The Conrad Drive approach to the intersection has four lanes at Jan Smuts, but these rapidly reduce to two and then to one over the Braamfontein Spruit Bridge. Residents, workers and commuters residing or working along the route undergo long hours of traffic congestion coupled with slow vehicular movement. A traffic impact assessment study was conducted to assess the existing traffic volumes on Conrad Drive. Intersection analysis was carried out and upgrades were proposed.

#### 1.2 Widening of Conrad Bridge over Braamfontein Spruit

Following the above, JRA proposes that the Conrad bridge over the Braamfontein Spruit be widened northwards to accommodate two lanes from Blairgowrie to Jan Smuts avenue. It is proposed to signalise the Blairgowrie drive and Conrad drive intersection. The proposed upgrades will enable flow of traffic from Blairgowrie area onto Jan Smuts avenue. The widening of the bridge and the associated Conrad Drive that require reconstruction will improve traffic flow in the area as well as resolve bank erosion along Braamfontein spruit. The construction activities on site are envisaged to last for a period of 6months

#### 1.3 Location of Study Area

The Conrad Bridge is located near the intersection of Hillcrest Avenue and Conrad Drive and intersection of Jan Smuts Avenue, Bordeaux Drive and Conrad drive in Blairgowrie, Randburg. Refer to locality Map attached within **Figure 1**. The Widening of Conrad Bridge and the associated Conrad Drive that require reconstruction are both confined to the boundaries of Blairgowrie, on the farm Klipfontein 203IQ. The site falls within the jurisdiction of the City of Johannesburg, Gauteng Province.

#### 1.4 The activities being Applied for.

The nature and characteristic of the proposed project results in Listed Activities that requires an Environmental authorisation from the Competent Authority as per the NEMA EIA Regulations 2014. In terms of Sections 24(2) and 24D of the National Environmental Management Act (Act No. 107 of 1998), as amended, and as read on Listing Notice 1 and Listing Notice 3 (Government Notices R. 983 and Government Notices R. 985, in Government Gazette 38282 of 04 December 2014) a Basic Assessment is required for the project as per the following listed activity:



**GNR.983, Activity 19 of Listing Notice 1 of 2014:**

The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from –

- (i) a watercourse;
- but excluding where such infilling, depositing, dredging, excavation, removal or moving –
- (a) will occur behind a development setback
  - (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or
  - (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies

The proposed project entails the widening of Conrad Bridge where Conrad Drive traverses a watercourse during the road reconstruction. The activity will result in infilling or removal of 5m<sup>3</sup> or more of material into/from a watercourse during the widening of the Bridge.

**GNR. 985, Activity 14 of Listing Notice 3 of 2014:**

The expansion of –

- (iii) bridges where the bridge is expanded by 10m<sup>2</sup> or more in size ;
- (xii) infrastructure or structures where the physical footprint is expanded by 10m<sup>2</sup> metres or more; where such development occurs –
  - (a) within a watercourse
  - (b) In Gauteng:
    - (iv) Sites identified as Critical Biodiversity area (CBA's) and Ecological Support Areas) in the Gauteng Conservation Plan or in bioregional regions
    - (vi) Sensitivities areas identified in an Environmental Management Framework adopted by relevant environmental authority excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.

The existing Conrad bridge will be expanded by 260m<sup>2</sup> and this will occur within the watercourse (Braamfontein Spruit) identified on site. Wetlands according to the Gauteng Conservation Plan are regarded as Ecological Support Areas (ESA's). Wetlands are also regarded as sensitive ecosystems.

The nature and characteristic of the proposed project may not commence without an environmental authorization from the competent Authority, Gauteng Department of Agriculture & Rural Development (GDARD). It is for this reason that a Basic Assessment Process is being conducted. The aim of the Environmental Impact Assessment is to ensure that:

- The potential environmental impacts associated with the proposed project are taken into consideration
- Public Participation Process is conducted i.e. to afford any Interested and or Affected parties (I&AP) sufficient opportunity: to provide comments
- Sufficient information is provided to decision markers in order to ensure an informed decision making.

The proposed development also requires a Water Use License from the Department of Water and Sanitation in terms of National Water Act No. 36 of 1998 for the following specific water uses:

- **Section 21(i):** altering the bed, banks, course or characteristics of a watercourse; and
- **Section 21(c):** impeding or diverting the flow of water in a watercourse

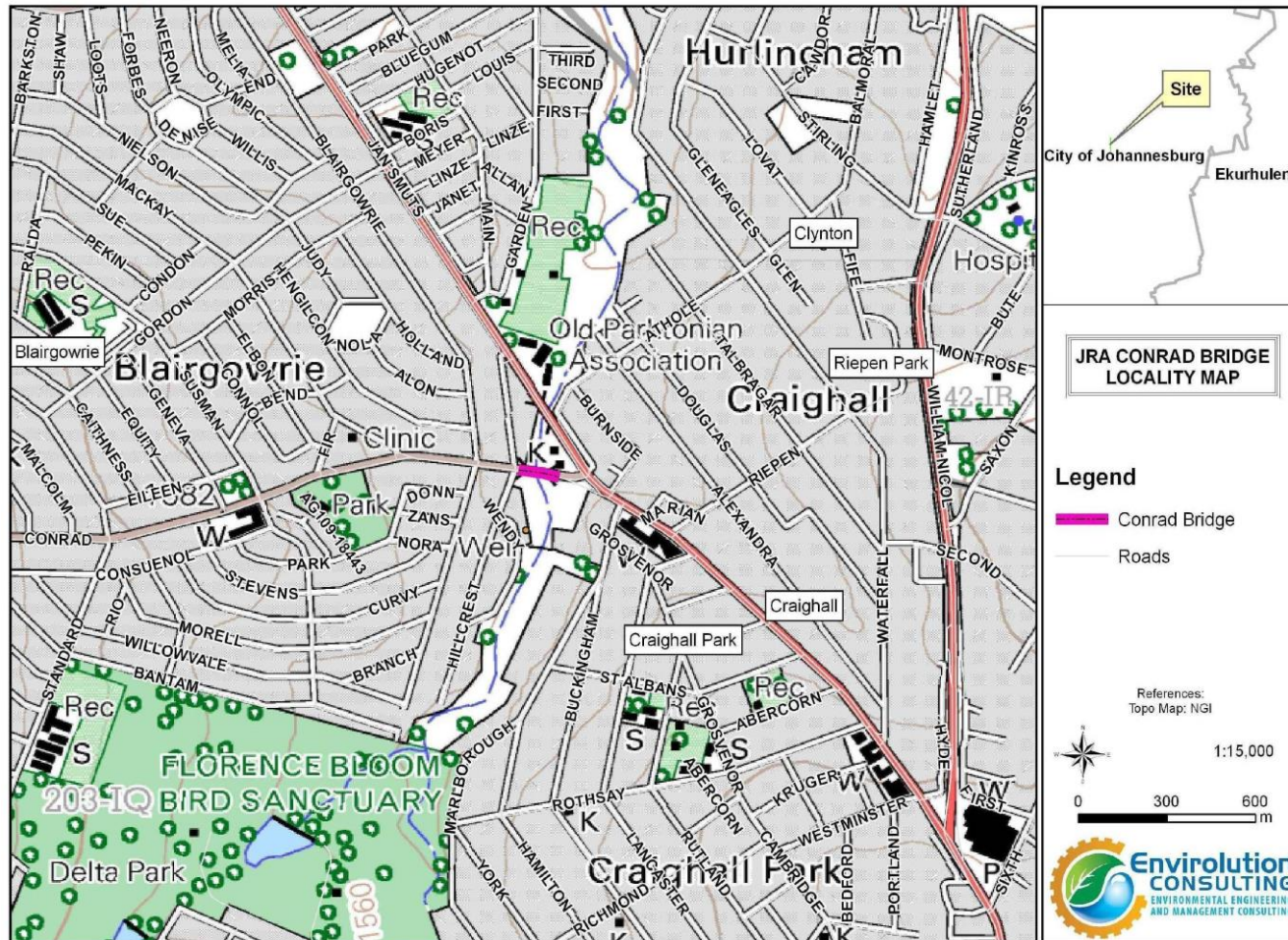


Figure 1: Locality Map showing the location of the proposed widening of the Conrad Bridge.

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**

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

During the widening of the bridge, activities such as dredging of the Braamfontein spruit and bank stabilization will. According to the National Water Act (NWA), 1998 (Act No.36 of 1998), such an activity requires a Water Use License. Relevant sections of the NWA Act that are triggered are as follows:

- Section 21(c): impeding or diverting the flow of water in a watercourse and;
- Section 21 (i): altering the bed, banks, course or characteristics of a watercourse.

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

	<b>NO</b>
YES	NO

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

Water Use License Application is being handled parallel to the process of obtaining an Environmental Authorisation. Impacts on the watercourse were assessed in detail during the wetland study by the wetland specialist. Further, the EAP (Environmental Assessment Practitioner) included impacts and mitigation measures within the Technical Report which is the main document in the WUL Application. Documents that will be submitted to the Department of Water and Sanitation are:

- Final Basic Assessment Report;
- Technical Report inclusive of the following:
  - Wetland Delineation;
  - Environmental Management Plan Report;
  - Heritage Specialist Reports and
  - Traffic Impact Report.

## 2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:

Administering authority:

Promulgation Date:

The Constitution of South Africa (Act No 108 of 1996)	Protection of human rights and environment of the study area.	1996
<b>National Environmental Management Act, 1998 (Act No. 107 of 1998):</b> EIA Regulations have been promulgated in terms of Chapter 5. Activities which may not commence without an environmental authorisation are identified within these Regulations.	National & Provincial	27 November 1998

<p>In terms of Section 24(1) of NEMA, the potential impact on the environment associated with these listed activities must be considered, investigated, assessed and reported on to the competent authority (the decision-maker) charged by NEMA with granting of the relevant environmental authorisation.</p> <p><u>In terms of GNR 983 and GNR 985 of December 2014, a Basic Assessment process is required to be undertaken for the proposed project</u></p>		
<p><b>National Environmental Management Act (Act No 107 of 1998):</b> In terms of the Duty of Care provision in S28(1) the project proponent must ensure that reasonable measures are taken throughout the life cycle of this project to ensure that any pollution or degradation of the environment associated with this project is avoided, stopped or minimised.</p> <p>In terms of NEMA, it has become the legal duty of a project proponent to consider a project holistically, and to consider the cumulative effect of a variety of impacts.</p> <p><u>While no permitting requirements arise from this section of the Act, this will be applicable during construction. An EMPr has been compiled in order to ensure minimisation of impacts on the environment.</u></p>	<p>Department of Environmental Affairs (as regulator of NEMA).</p>	<p>1998</p>
<p><b>National Water Act, 1998 (Act No. 36 of 1998):</b> The National Water Act aims to provide management of the national water resources to achieve sustainable use of water for the benefit of all water users. This requires that the quality of water resources is protected as well as integrated management of water resources with the delegation of powers to institutions at the regional or catchment level. The purpose of the Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled.</p> <p><u>In terms of Section 19, the project proponent must ensure that reasonable measures are taken throughout the life cycle of this project to prevent and remedy the effects of pollution to water resources from occurring, continuing or recurring.</u></p> <p><u>In terms of Section 21, the project proponent will also need to apply for a water use licence.</u></p>	<p>Department of Water and Sanitation (DWS)</p>	<p>1998</p>
<p><b>National Environmental Management: Biodiversity Act 2004 (Act 10 of 2004) ;</b> This Act provides management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act 107 of 1998; the</p>	<p>Department of Environmental Affairs (DEA)</p>	<p>2004</p>

<p>protection of species and ecosystems that warrant national protection and the sustainable use of indigenous biological resources.</p> <p>While no permitting or licensing requirements arise from this legislation. <u>However, this Act will find application during the construction phase of the project in proper management of the sensitive area (wetland) identified on site.</u></p>		
<p><b>National Environmental Management: Waste Act (Act No. 59 of 2008):</b> The NEMA: WA came into effect on the on 1st July 2009. Section 20 of the Environment Conservation Act 73 of 1989, under which waste management was previously governed, was repealed. In general, the act seeks to ensure that people are aware of the impact of waste on their health wellbeing and the environment, and in the process giving effect to Section 24 of the constitution, in ensuring an environment that is not harmful to health and wellbeing.</p> <p><u>No waste license activities are applicable to this project. The developer will however be required to store and manage waste in accordance with the requirements of this Act and associated Standards.</u></p>	<p>Department of Environmental Affairs (DEA)</p> <p>Department of Environmental Affairs – lead authority for regulating hazardous waste.</p> <p>Provincial Environmental Department – for regulating general waste</p>	<p>2009</p>
<p><b>Promotion of Access to Information Act, 2000 (Act No 2 of 2000):</b></p> <p>Legislation that allows the public access to information about activities that influence their well-being and to make contributions to decision making.</p> <p><u>No permitting is required the act finds applicability during the public participation process phase of the basic assessment process.</u></p>	<p>Department of Environmental Affairs (DEA)</p>	<p>2000</p>
<p><b>National Environmental Management: Air Quality Act (Act No 39 of 2004).</b></p> <ul style="list-style-type: none"> <li>* S18, S19 and S20 of the Act allow certain areas to be declared and managed as “priority areas”</li> <li>* The Act provides that an air quality officer may require any person to submit an atmospheric impact report if there is reasonable suspicion that the person has failed to comply with the Act.</li> <li>* Dust Control Regulation Control Regulations, R. No. 827 of 1 November 2013.</li> </ul> <p><u>While no permitting or licensing requirements arise from this legislation, this Act will find application during the construction phase of the project. Dust control regulations promulgated in November 2013 may require</u></p>	<p>Department of Environmental Affairs</p> <p>Local authority, i.e. City of Johannesburg Metropolitan Municipality</p>	<p>2004</p>

<p><u>the implementation of a dust management plan</u></p>		
<p><b>National Heritage Resources Act (Act No 25 of 1999)</b> <b>Section 38 states that Heritage Impact Assessments (HIAs) are required for certain kinds of development including</b> b) the construction of a bridge or similar structure exceeding 50 m in length;</p> <p>The Conrad Bride will be upgraded by 30 m in length and 19 m wide (proposed footprint of bridge), these are below the thresholds. However, the Bridge is older than 60 years and therefore enjoys general protection under the National Heritage Act.</p> <p><u>A permit to undertake any alterations on the built environment older than 60 years would be required to be obtained from Gauteng PHRA</u></p>	<p>South African Heritage Resources Agency (SAHRA)</p> <p>The Provincial Heritage Resources Authority Gauteng (PHRAG)</p>	<p>1999</p>
<p><b>Occupational Health and Safety Act No. 85 of 1993.</b> The Occupational Health and Safety Act provides for the health and safety of persons at work and for the health and safety of persons.</p> <p><u>While no permitting or licensing requirements arise from this legislation, this Act will find application during the construction phase of the project. Health and safety precautions measures must be put in place for the construction crew and the general public. E.g. Protection of workers on site through provision of Personal Protective Equipment's; Training and other health and safety amenities.</u></p>	<p>Department of Labour</p>	<p>1993</p>

### 3. ALTERNATIVES

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

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

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

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, operational or other(provide details of "other")	Description
1	<b>Proposal (Preferred)</b>	<p>The Proposed widening of Conrad Bridge over Braamfontein Spruit, City of Johannesburg, Gauteng Province (Proposed and Preferred).</p> <p>The proposed project entails the widening of the existing Conrad Bridge that crosses the Braamfontein Spruit in Blairgowrie, Randburg. The development will improve traffic flow in the area as well as resolve bank erosion along Braamfontein spruit. The Conrad Bridge to be widened is located in Blairgowrie near the intersection of Hillcrest Avenue and Conrad Drive and intersection of Jan Smuts Avenue, Bordeaux Drive and Conrad drive. The widening of the Bridge is proposed during road reconstruction of Conrad Drive</p>
2	<b>Site alternatives</b>	<p>A site/route alternative refers to the identification of more than one potential site/route which may be suitable for the establishment of a proposed development. Due to the fact that the proposed bridge and its associated road (Conrad Drive) to be expanded are existing, no other sites were considered for the development.</p> <p>Thus only one site is deemed practicable for the proposed development. The Conrad Bridge is located in Blairgowrie near the intersection of Hillcrest Avenue and Conrad Drive and intersection of Jan Smuts Avenue, Bordeaux Drive and Conrad drive, City of Johannesburg.</p>
2	<b>Design Alternatives</b>	<p>Two design alternatives exist with respect to the reconstruction of the existing Conrad Drive to ease traffic. Therefore the layout and design of the facility is dictated by the existing road and bridge infrastructure and the drainage (catchment) characteristic of the area</p> <p><b>Proposed Design: (Preferred).</b> <b><u>Widening of the Conrad Bridge and associated Conrad Drive</u></b></p> <p>To improve eastbound traffic mobility during the widening of Conrad Drive, it is proposed that the Conrad Bridge be widened, thereby constructing new westbound exit lane from the intersection until the western edge of the existing bridge decks.</p> <p><b>Design Alternative 1.</b> <b><u>Upgrade of the Blairgowrie/Conrad drive intersection only</u></b></p> <p>This design involves the widening of the Blairgowrie/Conrad drive intersection and retaining the bridge as is.</p> <p>The abovementioned two design options will be assessed further in this basic assessment report.</p>
3	<b>Other alternatives</b>	<b><u>N/a</u></b>

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

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



#### 4. PHYSICAL SIZE OF THE ACTIVITY

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

	Size of the activity:
Proposed activity ( <b>Widen Conrad Bridge &amp; associated Conrad Drive</b> )	260 m <sup>2</sup>
Alternative 1 ( <b>Upgrade of the Blairgowrie/Conrad drive intersection</b> )	210m <sup>2</sup>
Alternative 2 ( )	N/A
	Ha/ m <sup>2</sup>

or, for linear activities:

	Length of the activity:
Proposed activity( )	N/A
<b>Alternatives:</b>	
Alternative 1 (if any)	N/A
Alternative 2 (if any)	N/A
	k/km

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

	Size of the site/servitude:
Proposed activity ( <b>Widening of Conrad Bridge &amp; associated Conrad Drive</b> )	30 m in length and 19 metres wide (proposed footprint of bridge)
<b>Alternatives:</b>	
Alternative 1 ( <b>Upgrade of the Blairgowrie/Conrad drive intersection</b> )	Additional 3.5m lanes for length 60m
Alternative 2 (if any)	N/A
	Ha/m <sup>2</sup>
	k/km

#### 5. SITE ACCESS

##### (Underpass and overpass options)

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

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

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

	m
--	---

Describe the type of access road planned:

The site is accessible from the N1 Eastern Bypass via William Nicol off-ramp to the South, turn into Jan Smuts Avenue, turn left into Conrad Drive. No access road is planned. The existing access roads will be used to access the area.

Include the position of the access road on the site plan. (Refer to Figure 1 for an overview of the proposed site and the position of the access roads to the site.)



Figure 2: Overview of study showing access routes to site (Source Google Earth)

**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. SITE OR ROUTE PLAN

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

- the scale of the plan, which must be at least a scale of 1:2000 ( scale cannot be larger than 1:2000 i.e. scale cannot be 1:2500 but could where applicable be 1:1500)
- the property boundaries and numbers of all the properties within 50m of the site;
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- the exact position of each element of the application as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, septic tanks, storm water infrastructure and telecommunication infrastructure;
- walls and fencing including details of the height and construction material;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- for gentle slopes the 1m contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- the positions from where photographs of the site were taken.
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the 32m position from the bank to be clearly indicated)

The Locality Map for the proposed development and sensitivity map are enclosed within **Appendix A**

## 7. SITE PHOTOGRAPHS

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

Color photographs taken on site together with a description of each photograph are attached within **Appendix B**.

## 8. FACILITY ILLUSTRATION

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

Please see facility illustrations attached within **Appendix C**

## SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

**Further:**

### Instructions for completion of Section B for linear activities

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

### Not Applicable: the triggered activity is not a linear development

Section B has been duplicated for sections of the route

times

### Instructions for completion of Section B for location/route alternatives

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

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

times

### 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:**

The Widening of Conrad Bridge is confined to the boundaries of Blairgowrie located on farm Klipfontein 2031Q.

(Farm name, portion etc.)

## 2. ACTIVITY POSITION

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

**Design alternatives were considered for this development therefore the position of the activity remains the same.**

**Alternative: (Bridge)**

Latitude (S):	Longitude (E):
26°06'51.75"S	28°01'10.48"E

**In the case of linear activities:**

**Alternative:**

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

Latitude (S):	Longitude (E):

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

Addendum of route alternatives attached

### 3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

**Proposed Design: (Preferred) and Design Alternative 1**

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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### 4. LOCATION IN LANDSCAPE

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

**Proposed Design: (Preferred) and Design Alternative 1**

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

Yes	No
No	Yes
Yes	No
No	Yes
Yes	No
No	Yes

An area sensitive to erosion

Yes

(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).

### Geology and Soil

Based on the information taken from the Wetland delineation and assessment, the site is underlain by the Halfway House Granite (GDACE, 2002). Soils are classified as unconsolidated referring to an Anthropic subgroup (disturbed deposits). In this soil form, the soil structure has been sufficiently disturbed by anthropogenic activities to have lost any recognisable subsoil layers that might have been present (Fey, 2005).

### Gauteng Conservation Plan

The Gauteng Conservation Plan (Version 3.3) (GDARD, 2011) classified areas within the province on the basis of its contribution to reach the conservation targets within the province. Critical Biodiversity Areas (CBAs) contain irreplaceable, important and protected areas (terms used in C-Plan 2) and are areas needed to reach the conservation targets of the Province. In addition 'Ecological Support Areas' (ESAs), mainly around riparian areas and other movement corridors were also classified to ensure sustainability in the long term. Landscape features associated with ESAs is essential for the maintenance and generation of biodiversity in sensitive areas and requires sensitive management where incorporated into C-Plan 3.

The majority of the proposed road is located on both important areas and ecological support areas (refer to Figure 2 below).

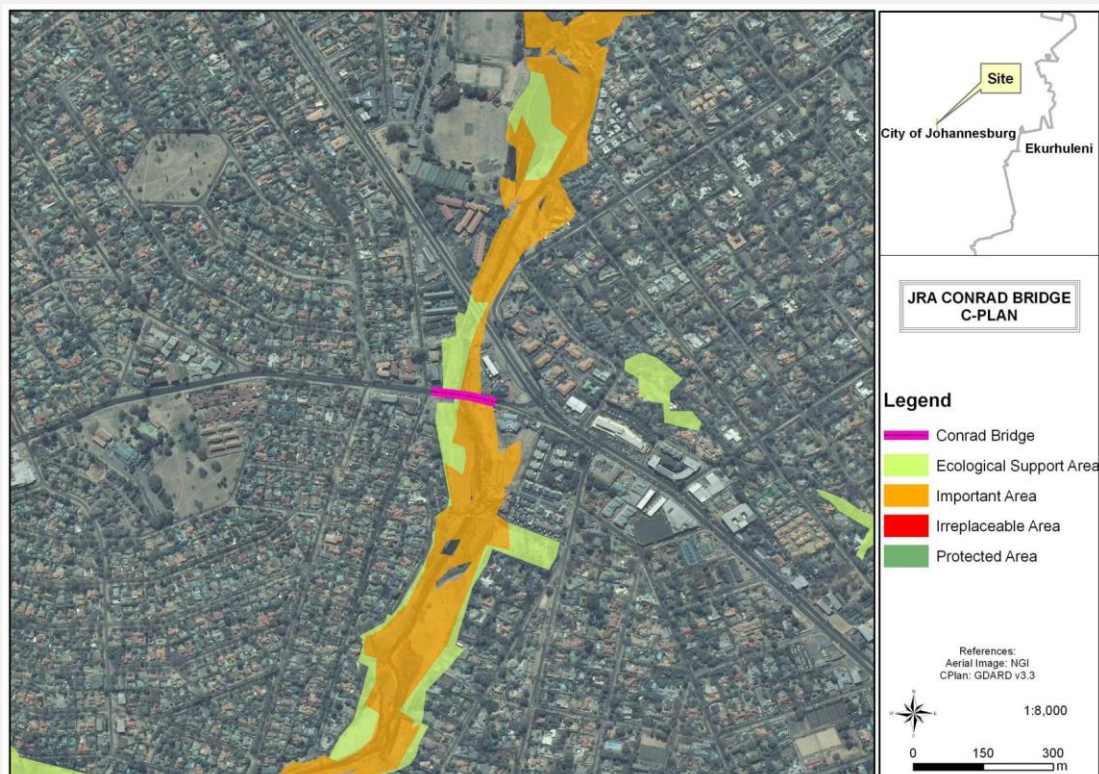
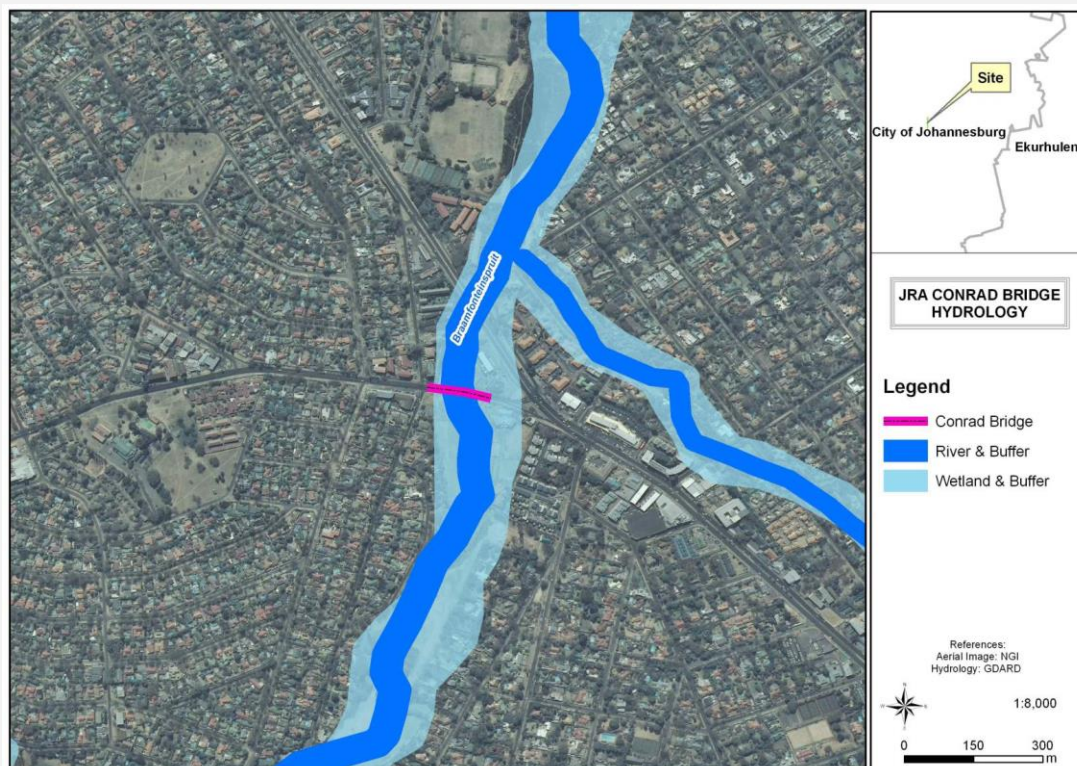


Figure 2: Gauteng Conservation Plan Sensitive Areas

### Wetland and Hydrology

The site is situated in the Quaternary Catchment A21C, Water Management Area 3 (Crocodile Marico) and drains into the Jukskei River. In this catchment, the precipitation rate is lower than the evaporation rate with a Mean Annual Precipitation (MAP) to Potential Evapotranspiration (PET) of 0.31. Consequently, watercourses in this area are sensitive to changes in regional hydrology, particularly where their catchment becomes transformed and the water available to sustain them becomes redirected. The GDARD (Gauteng Department of Agriculture and Rural Development) spatial layer indicates a watercourse classified as the Braamfontein Spruit flowing under the bridge as well as extending farther north towards the south east. Refer to Figure 3 below



**Figure 3:** Regional Hydrology.

According to the Wetland delineation study conducted by Limosella Consulting (2015), one riparian area was recorded on site. The stream currently flows from south to north. It is likely that this riparian area previously had characterised similar to a valley bottom wetland and that the increased urbanisation has led to an increase in water flow into the stream which ultimately reshaped the stream and now shares more characteristics with a river than a wetland. The riparian area is greatly disturbed by current and historical anthropogenic activities as well as increased urbanisation and the associated increased in hardened surfaces within the catchment. As a response, the vegetation cover of the riparian is largely changed from historical conditions and the majority of the woody and the non-woody vegetation is exotic. The combined EC scores for the riparian area on the study site is an E - Seriously modified. The loss of natural habitat, biota and basic ecosystem functions is extensive. The combined QHI score for the riparian area on the study site is an E - Seriously modified. The loss of natural habitat, biota and basic ecosystem functions is extensive. The Ecological Importance and Sensitivity (EIS) score of 1.0 determine by the Ecological specialist falls into a category characterised by Moderate ecological importance and sensitivity. These watercourses are considered to be ecologically important and sensitive on a provincial or local scale. The biodiversity of these wetlands is not usually sensitive to flow. For further details refer to the Wetland Specialist report attached within **Appendix G1**

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

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):

o	o
---	---

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

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):

o	o
---	---

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

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):

o	o
---	---

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

## 6. AGRICULTURE

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

No

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

## 7. GROUND COVER

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

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

Natural veld - good condition % =	Natural veld with scattered aliens % =	Natural veld with heavy alien infestation % =	Veld dominated by alien species % = 50	Landscaped (vegetation) % =25 (Lawn grass)
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % = ?	Building or other structure (Bridge) % =10	Bare soil % =15

**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.



**Vegetation**

According to the Vegetation Map of South Africa, Lesotho and Swaziland, the site is situated in the Egoli Granite Grassland, a protected grassland type currently under severe pressure from urbanisation (Mucina & Rutherford, 2006). Where transformation has altered the plant species community structure of Egoli Granite Grassland, by for example agriculture or urbanisation, this grassland type is no longer conservation worthy as an entity, although specific rare or medicinally valuable bulb species may still be recorded. In its disturbed state, the vegetation is usually dominated by the grass *Hyparrhenia hirta*.

According to Limosella Consulting (2015) - The vegetation of the area was dominated by *Pennisetum clandestinum* (Kikuyu Grass) as can be expected in a park. The majority of the indigenous vegetation was thus replaced with lawn and only some large trees remain adjacent to the stream channel. These trees include *Salix babylonica*, *Morus alba* and *Celtis africana*. Some wetland like vegetation such as *Plantago lanceolata* was recorded in-between the Kikuyu lawn while the vegetation of the stream and adjacent areas was mostly dominated by exotic species such as *Arundo donax*, *Canna indica* and *Amaranthus hybridis*. Instream vegetation was sparse especially where bedrock and boulders were prominent. Some of the sand deposits where the sand formed small islands in the stream were also dominated by Kikuyu Grass. The riparian area is greatly disturbed by current and historical anthropogenic activities as well as increase urbanisation and associated increased in hardened surfaces within the catchment. As a response the vegetation cover of the riparian is largely changed from historical conditions and the majority of the woody and the non-woody vegetation is exotic. The loss of natural habitat, biota and basic ecosystem functions is extensive.

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

	<b>No</b>
--	-----------

If YES, specify and explain:

**N/A**

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.

	<b>No</b>
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If YES, specify and explain:

**N/A**

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

<b>Yes</b>	
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If YES, specify and explain:

The proposed activity transverses the Braamfontein Spruit. In terms of legislation, wetlands, riparian zones and watercourses are defined in the Water Act as sensitive habitats. In addition they are also regarded as sensitive habitats in the National Environmental Management Act, implying that they are afforded a higher level of protection.

Was a specialist consulted to assist with completing this section

<b>Yes</b>	
------------	--

If yes complete specialist details

Name of the specialist:

Antoinette Bootsma
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Qualification(s) of the specialist:	B. Sc (Botany & Zoology) University of South Africa (1997 - 2001), B. Sc (Hons) Botany University of Pretoria (2003-2005), MSc Ecology, University of South Africa (2010 - on-going), short course in wetland delineation, legislation and rehabilitation, University of Pretoria (2007) and Short course in wetland soils, Terrasoil Science (2009).			
Postal address:	P.O. Box 32733, Waverley, Pretoria			
Postal code:	0135			
Telephone:	012 543 9982	Cell:	083 4545 454	
E-mail:	<a href="mailto:antoinette@limosella.co.za">antoinette@limosella.co.za</a>	Fax:		
Are any further specialist studies recommended by the specialist?				<b>No</b>
If YES, specify:	N/A			
If YES, is such a report(s) attached?				<b>No</b>
If YES list the specialist reports attached below	N/A			

Signature of specialist:		Date:	<b>2015.06.05</b>
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**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


The Conrad Bridge crosses over the Braamfontein Spruit. This watercourse is surrounded by residential and business infrastructure. The area south of Conrad Bridge has seen an increase in development adjacent to the stream on the eastern side of the stream from 2001 – 2010 (Google Earth Timeline Function) while an open area remains undeveloped west of the stream. This open section together with some vacant areas south is used as a hiking route and links up with Delta Park in the south. The surrounding area is largely urbanised with only small undeveloped areas such as parks.

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 <sup>AN</sup>	17. Hospitality facility	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport <sup>N</sup>	23. Train station or shunting yard <sup>N</sup>	24. Railway line <sup>N</sup>	25. Major road (4 lanes or more) <sup>N</sup>
26. Sewage treatment plant <sup>A</sup>	27. Landfill or waste treatment site <sup>A</sup>	28. Historical building	29. Graveyard	30. Archeological site
31. Open cast mine	32. Underground mine	33. Spoil heap or slimes dam <sup>A</sup>	34. Small Holdings	
Other land uses (describe):				

**NOTE: Each block represents an area of 250m X250m**

NORTH					
	8	8	2	8	19
	8	8	2	2	8
WEST	8	2		8	8
	8	2	2	8	2
	8	8	2	4	4
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  
 If yes indicate the type of reports below

Yes	
-----	--

<ul style="list-style-type: none"> <li>Wetland Assessment Report</li> <li>Wetland Rehabilitation and Monitoring Plan</li> <li>Heritage Impact Assessment Report</li> <li>Traffic Impact Assessment Report</li> <li>Geotechnical Report.</li> </ul>
The above specialists reports are attached within <b>Appendix G</b> of this report

## 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.

**Demography:** The study area is located in the suburb of Blairgowrie Randburg. The study area has a total area of 4.19km<sup>2</sup> with a total population of 12049. The majority of the population is white 61.6%, Blacks 24.5%, Indian/Asian 9.1%, Coloured 3.1% and other 1.7%. The dominant age group is youth 15 to 34 year olds. The study area falls within Region B of the City of Johannesburg Metropolitan Municipality. The population in Region B is estimated at just over 198 000 - about 6 percent of the population of greater Johannesburg. This figure is expected to decline as a result of ageing, Aids-related deaths, and a slowdown in migration into the area and an increase in migration out of the area. The region is, however, attracting young adults.

**Economic Profile of Region B:** According to the City of Johannesburg, Region B is in the centre of the City of Johannesburg, sharing its boundaries with four other regions. To the west and northwest it borders Region C (Roodepoort and surrounds), to the east it borders Region E (Bryanston and Sandton) and to the southeast it borders Region F (the inner city). It also shares a border with Region D (Soweto) along the suburb of Noordgesig. Region B is well noted for its diversity, ranging from upmarket houses in both historic and newer suburbs, to central Randburg and trendy Rosebank. Development is mainly economic, with rapid growth and strong pressures in and around Cresta and along the Sunnyside-University of Johannesburg belt. There are also high levels of economic development along the arterial routes associated with these areas, in particular along Beyers Naude Drive and Ontdekkers Road. There is a strong trend towards residential densification as more townhouse complexes are built and large, single residential properties (mainly in the north) are subdivided. Gentrification in some of the older, inner urban residential areas is also increasing. These include Melville and the eastern part of Westdene, and the conversion of old industrial buildings adjacent to Egoli Gas into offices. In contrast, many of the southern suburbs are prone to urban decay and decline. Industrial development along the Main Reef Road belt is adversely affected by the lack of access from the N1 freeway. The region's commercial nodes include Rosebank, Randburg, Richmond, Parktown (west of Jan Smuts Avenue), Cresta and Florida, but small local retail and office areas are widespread. Industria is an important hub for industry. There are significant open spaces and parks, and wetlands and watercourses link the region with the rest of the city in terms of a green belt and stormwater drainage. Spaces with open water provide pleasant recreational areas. Region B is also home to the University of Johannesburg (Auckland Park campus), the Helen Joseph Hospital and the headquarters of the South African Broadcasting Corporation.

**Transportation:** Inadequate linkages mean that lower-order roads take on the role of arterial routes along the busy north-east/south-west commuter route. The resulting artificial arterial road system puts pressure on the existing infrastructure. In addition, inappropriate development has begun on these lesser roads, many of which run through predominantly residential areas

**Employment and Household Income:** Level Of Unemployment: The IDP states that unemployment in Johannesburg calculated on official figures was approximately 25% in 2011 down from approximately 29.6% in 2001. Approximately 65.8% of the household heads in Johannesburg are unemployed. The significant number of the population not economically active pushes up the dependency ratio. According to the Regional Spatial Development Framework 2010/2011, unemployment in Region B is about 67% is one of the highest in Soweto and much higher than the Soweto average (45%).

**Level of Education:** With regard to Education, the City of Johannesburg has low education levels and slow formal sector growths are two of the major causes of youth unemployment. The vast majority of the youthful population in Johannesburg has only a matriculation certificate, preventing access to the labour market. The proportion of people over 20 years of age without any schooling had dropped from 7.2% in 2001 to 2.1% in 2011.

The expansions of the Conrad bridges and its associated Conrad Drive infrastructure will contribute to the social benefit for the surrounding community, as the development will ease traffic congestion in the area. Other social economic benefits would include short term job opportunities and skills development. during construction.

## 9. 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 m<sup>2</sup> 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 m<sup>2</sup> 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?

	<b>No</b>
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If YES, explain:

None

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:

According to the Heritage Impact Assessment that was undertaken during the Basic Assessment process, the Conrad bridge to be widened is regarded as an infrastructure (built environment) that is of heritage significance as the bridge is older than 60 years therefore enjoys general protection under the National Heritage Act. Currently, the bridge is used as a public road and the area below it forms part of a walking and cycling trail. It is a recommendation of the heritage specialist that the bridge be retained as is and that any development at the bridge should be done in sympathy with the bridge in order to retain it for posterity. A detailed Heritage Impact Assessment Report is attached as Appendix G3 of this report. For further details, please refer to the Heritage specialist report attached with **Appendix G3** of this report.

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

YES	
YES	

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

## SECTION C: PUBLIC PARTICIPATION

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### 1. ADVERTISEMENT

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

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

Throughout the process, public participation received high priority. –Public participation is one of the most important elements of the development process; therefore stakeholders (I&APs), were identified as part of the Public Participation Process, including occupiers of the property, owners and occupiers of land adjacent to the site, municipal officials and relevant State Departments. All respondents were then placed on the project database. This database was supplemented by I&APs that contacted our Public Participation consultant to be included on the database. The database was used throughout the process to inform the stakeholders of the project and is attached within **Appendix E9**.

In order to canvass the issues and concerns of the broader public and to ensure that all IAPs are afforded the opportunity to comment on the proposed development, the proposed project was announced as follows:

- Erection of site notices, size A2) advertising the proposed development and displaying the contact details of the EAP were prepared and displayed on-site. The site notices served the purpose of informing potential IAPs of the project and therefore afforded them the opportunity to comment. Refer to **Appendix E1** for Proof of Site Notices.
- Distribution of the notification letter with a registration and comment sheet, and the locality map to state departments and other potential stakeholders through emails (Refer to **Appendix E2a** for the notification letter.
- Hand-delivered the announcement letter with Registration and Comment Sheet to the adjacent landowners in close proximity of the boundary of the property (See **Appendix E2b** for the – knock and drop register).
- Published an advertisement in the Randburg Sun Newspaper on 18 June 2015. **Appendix E3** provides the proof of advert.

- Communication with local authorities and stakeholders (See **Appendix E4** for proof of correspondence with I&APs.

Please note that any comments received during the review period of the draft Basic Assessment and public meeting as well as responses provided will be captured and recorded within the Comments and Response Report attached as **Appendix E6** in the final Basic Assessment Report.

A copy of the Draft Basic Assessment Report for public review has been made available for public review at the Blairgowrie Library 46A Leslie Street, Blairgowrie for a 30 day commenting period.

## 2. LOCAL AUTHORITY PARTICIPATION

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

Has any comment been received from the local authority?

No

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

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

The City of Johannesburg Metropolitan Municipality and Department of Water and Sanitation have been informed of the proposed development by notification letters distributed via email. A registration sheet was attached to the notification letters for the State Departments to register as an interested and Affected Party and to submit their comments. No comments have been received. Comments are anticipated during the draft BAR review period which will be submitted to the Organ of State for comment.

## 3. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?

Yes

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

The public were notified of the application, during the process notification period. A number of comments received from IAPs were proposed mitigation measures in the form of recommendation and or suggestions with respect to what would be the best way out of resolving traffic problems in the broader study area and the project site under study.

For details, please note that all comments received and responses provided are all captured and recorded within the Comments and Response Report attached as Appendix E6 of this Basic Assessment Report

Please note that any further comments received during the review period of the draft Basic Assessment and public meeting as well as responses provided will also be captured and recorded within the Comments and Response Report attached as Appendix E6 in the Final Basic Assessment Report (FBAR).

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

N/A

#### **4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS**

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

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

#### **5. APPENDICES FOR PUBLIC PARTICIPATION**

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

Appendix 1 – Proof of site notice **Attached as Appendix E1**

Appendix 2 – Written notices issued to those persons detailed in 1(b) to 1(f) above **Attached as Appendix E2**

Appendix 3 – Proof of newspaper advertisements **Attached as Appendix E3**

Appendix 4 – Communications to and from persons detailed in Point 2 and 3 above **Attached as Appendix E4**

Appendix 5 – Minutes of any public and/or stakeholder meetings **N/A – No public meeting has been held yet**

Appendix 6 - Comments and Responses Report **Attached as Appendix E6**

Appendix 7 –Comments from I&APs on Draft Basic Assessment (BA) Report **N/A Comments are anticipated during the Draft BAR review period**



Appendix 8 –Comments from I&APs on amendments to the BA Report (**N/A**)

Appendix 9 – Copy of the register of I&APs **Attached as Appendix E9**

Appendix 10 – Comments from I&APs on the application (**None received**)

Appendix 11 - Other

## SECTION D: RESOURCE USE AND PROCESS DETAILS

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

### Instructions for completion of Section D for alternatives

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

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

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

### 1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

#### Solid waste management

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

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

<b>Yes</b>	
Could not be determined at this stage m3	

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

Construction rubble/ solid waste will be temporarily stored on site in designated waste skips and then removed by an appropriate waste contractor appointed by the main construction contractor to an approved landfill site. This will be managed through the EMPr.

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

General waste removed from site will be disposed off at a suitably licensed disposal facility. The nearest licensed landfill site is the Dobsonville Landfill site and the Marie Louise landfill on Dobsonville road in Roodepoort. Safe disposal certificates must be obtained and kept on site for the duration of the construction phase.

Will the activity produce solid waste during its operational phase?

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

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

	<b>No</b>
<b>N/A m<sup>3</sup></b>	

No solid waste will be produced during the operational phase of the proposed project.

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?

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

During construction a registered landfill sites e.g. Dobsonville Landfill site and the Marie Louise landfill can be used as they still have capacity and no waste will be generated during the operation phase.

**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?  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?  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:

During Construction, wastes must be separated at source and disposed at relevant suitably licensed facilities. Waste should be separated into recyclable and non-recyclable materials and distributed for recycling where applicable. During the construction phase, construction waste rubble should be used as fill material and as foundation for the proposed upgrade processes where possible. The re-use of construction waste materials will minimize the amount of waste that will need to be disposed of at registered municipal waste facilities.

**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?  No

If yes, what estimated quantity will be produced per month?  N/A m<sup>3</sup>

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

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

If yes, what estimated quantity will be produced per month?  N/A m<sup>3</sup>

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

N/A

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?  No

If yes, provide the particulars of the facility:

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

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

N/A

**Liquid effluent (domestic sewage)**

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

If yes, what estimated quantity will be produced per month?  Unknown m<sup>3</sup>

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

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

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

Chemical toilets are going to be used and the sewage waste will be collected by the registered Contractor for treatment at a treatment facility.

**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?

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

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

The activity itself will not contribute directly to emissions released into the atmosphere except possible short-term dust emissions during the construction phase. Emissions generated will be in the form of dust, and minimal gases e.g. carbon dioxide, carbon monoxide from construction vehicle emissions and other diesel powered machinery during the construction phase.

**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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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

N/A liters
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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	
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If yes, list the permits required

Water Use License

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

	No
	No

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

A Water Use License Application will only be submitted only when the Environmental Authorization is granted by GDARD. The DBAR will also be made available to the Department of Water and Sanitation for comment during the DBAR review period.

**3. POWER SUPPLY**

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

The development will not require power supply during its operation phase. However generators will be used as a source of power if needed during the construction phase.

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

Please see above.

**4. ENERGY EFFICIENCY**

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

No particular considerations of energy saving/ conservation were deemed applicable in this project. The scope of work will be structured in a way that, where possible, the use of labour intensive methods will be employed. Not only will it serve the local community but it also saves the use of Pneumatic Equipment that requires a lot of energy input.

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

Not Applicable: The proposed development is not an energy-intensive development that will require energy/electricity input for its continued operations

## SECTION E: IMPACT ASSESSMENT

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

### 1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarize the issues raised by interested and affected parties.

Summary of main issues raised by I&APs	Summary of response from EAP
<ul style="list-style-type: none"> <li>▪ The public were notified of the application, during the process notification period. In summary, the majority (100%) of comments received from IAPs were proposed mitigation measures/suggestions to the project in the form of recommendation with respect to what would be the best way out of solving traffic issues in the broader study area and the project site under study.</li> </ul>	<ul style="list-style-type: none"> <li>▪ “Please note that all Traffic Impact Assessment (TIA) comments as far as this project is concerned have been addressed by the Johannesburg Road Agency Mobility department Head as the Senior Traffic Engineer Expert. Therefore, we recommend that the complainant approach mobility Department whom shall advise Roads and Stormwater Planning Unit accordingly should the need arise.”</li> </ul>
<ul style="list-style-type: none"> <li>▪ For details please refer to Appendix E6: Comments and Response Report</li> </ul>	

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

A summary of the response is provided in the above table. Additional comments are anticipated during the DBAR review period.

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

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

The purpose of impact assessment is to assign relative significance to predicted impacts associated with the project, and to determine the manner in which impacts are to be avoided, mitigated or managed. The potentially significant environmental impacts were identified based on the nature of the receiving environment, a review of the proposed activities, and the issues raised in the public participation process.

The potential impacts of the proposed development were identified through a site visit, the Environmental Assessment Practitioners experience and expertise in the field and specialist study reports.

In the Basic Assessment Report, the potential impacts are broadly identified and outlined. An assessment of the potential impacts is provided, identifying the impacts that are potentially significant and recommending management and mitigation measures to reduce the impacts.

In general, it is recognized that every development has the potential to pose various risks to the environment as well as to the residents or businesses in the surrounding area. Therefore, it is important that these possible risks are taken into account during the planning phase of the development. Risks

and key issues were identified and addressed through an internal process based on similar developments, and an environmental evaluation.

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

In the impact assessment stage of a Basic Assessment, identified issues are analysed and expected impacts are defined. This analysis identifies:

- (i) The types of impact - provides a brief description of the impact
- (ii) Intensity of the impact - This provides an order of magnitude of whether or not the intensity (magnitude/size/frequency) of the impact would be high, medium, low or negligible (no impact).
  - High.
  - Medium.
  - Low.
  - Negligible (no impact).
- (iii) Determines the overall significance of the impact.

The significance of the identified impacts on components of the affected environment (and where relevant, with respect to potential legal infringement) will be described as:

- Low - where the impact will not have a significant influence on the environment, and, thus, will not be required to be significantly accommodated in the project design.
- Medium - where it could have an adverse influence on the environment, which would require modification of the project design or alternative mitigation actions.

High - where it could block the project regardless of any possible mitigation

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.

This section contains the assessment of potentially significant positive and negative environmental impacts associated with the proposed project. Specific emphasis was placed on any relevant significant environmental, social and economic impacts identified from the specialist study and professional judgement of the EAP (Envirovolution Consulting Pty Ltd). The objectives of the specialist study and further investigation by Envirovolution of each of the potential environmental impacts identified was to determine their significance and to promote mitigation measures to reduce the impacts to an acceptable level where required.

All of the identified impacts are assessed in a separate section. Considering the general nature of the proposed project, impacts anticipated occurring during construction phase and operational phase were assessed for proposed preferred alternative.

All potential environmental impacts have been addressed in this section, according to the adopted methodology for assessing impacts as described in Section 2.

**Proposed Design: (Preferred): Widen Conrad Bridge and associated Conrad Drive (Construction impacts)**

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
<p><b>Impacts on ground water:</b> Groundwater contamination due to construction earthworks.</p>	<p>Low (Negative)</p>	<ol style="list-style-type: none"> <li>1. Construction vehicles are to be maintained in good working order, to reduce the probability of leakage of fuels and lubricants.</li> <li>2. All cement mixing must occur on impervious surfaces and within controlled bermed areas.</li> <li>3. Oil residue must be treated with oil absorbent such as Drizit or similar and this material removed to a licensed waste disposal site.</li> <li>4. Contractor/s must provide regularly serviced portable chemical toilets for construction workers at a distance no more than 200 m from the place of construction.</li> <li>5. No materials may be discharged from the construction camps.</li> <li>6. Drip trays will be placed underneath vehicles and machinery waiting for maintenance, repair or standing for long periods of time;</li> <li>7. Remediation of spillages must be conducted on a continual basis and within 24h of spillage;</li> <li>8. Hazardous substances shall be stored in bunded areas</li> <li>9. Hazardous waste shall be stored in designated areas.</li> </ol>	<p>Very Low (Negative)</p>
<p><b>Impacts on the wetland</b> Changing the physical structure within a water resource (habitat) due to construction activities</p>	<p>High (negative)</p>	<ol style="list-style-type: none"> <li>1. The bridge (and any other related structure) should be constructed on a straight section of the stream, and not in a curve where either the natural eroding (outside bank) or sedimentation (inside) bank will put it under pressure, or where its failure might accelerate the natural erosion processes.</li> <li>2. Other than approved and authorized structure, no other</li> </ol>	<p>Low (negative)</p>



		<p>development or maintenance infrastructure is allowed within the delineated wetland or associated buffer zones.</p> <p>3. Demarcate the wetland areas and buffer zones to limit disturbance, clearly mark these areas as no-go areas</p> <p>4. Make use of existing road servitudes as far as possible</p> <p>5. Minimise the width of the construction servitude across the wetland zone and demarcate the construction footprint prior to commencement of construction and ensure that all workers and contractors are aware that access beyond the demarcated areas are not allowed</p> <p>6. Only use access roads as designated during the planning phase</p> <p>7. Limit the removal of indigenous vegetation in the construction footprint and do not remove vegetation outside of the construction footprint</p> <p>8. Ablution or sanitary facilities should not be located within 100 m of the watercourse.</p> <p>9. Contractors should refrain from impacting areas beyond the demarcated construction area</p> <p>10 All stockpiles will be positioned away from the watercourse and its buffer area.</p> <p>11. The ECO must ensure that all construction equipment and material are removed on completion of construction</p> <p>12. The riparian area together with its associated buffer zones should be fenced during the construction phase to prevent any human activity from encroaching onto these areas, other than that which</p>	
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		<p>is essential to road construction. .</p> <p>13. No activities should take place in the watercourses and associated buffer zone. Where the above is unavoidable, only the footprint of the bridges can be considered. This is subjected to authorization by means of a water use license.</p> <p>14. Construction in and around the watercourse must be restricted to the dryer winter months.</p> <p>15. A temporary fence or demarcation must be erected around the works area to prevent access to sensitive environments.</p> <p>16. The bridge design should be able to accommodate large debris during flooding to prevent that the bridges gets blocked and washed away.</p>	
<p><b>Mobilisation of pollutants</b></p> <ul style="list-style-type: none"> <li>• Pollution of water entering the wetland</li> </ul>	<p>High (Negative)</p>	<ol style="list-style-type: none"> <li>1. The contractors must provide and maintain a method statement for mixing of cement.</li> <li>2. The method statement must provide information on proposed location, storage, washing &amp; disposal of cement, packaging, tools and plant storage</li> <li>3. Washing and cleaning of equipment and vehicles should also be done within a wash bay area (outside of the wetland buffer), in order to trap any cement or plaster and avoid excessive soil erosion. These sites must be rehabilitated prior to commencing the operational phase</li> <li>4. The mixing of concrete should only be done at specifically selected sites on mortar boards or similar structures to contain run-off into the</li> </ol>	<p>Low (Negative)</p>

		<p>watercourse</p> <ol style="list-style-type: none"> <li>5. Materials such as fuel, oil, paint, herbicide and insecticides must be sealed and stored in bunded areas or under lock and key, as appropriate, in well-ventilated areas</li> <li>6. These substances must be confined to specific and secured areas within the contractor's camp, and in a way that does not pose a danger of pollution even during times of high rainfall</li> <li>7. Storage of materials as described above may not be within the 1:100 flood line, watercourses or associated buffer areas</li> <li>8. In the case of pollution of any surface or groundwater, the Regional Representative of the Department of Water and Sanitation (DWS) must be informed immediately</li> <li>9. All equipment should be parked overnight and/or fuelled at least 500 meters from a watercourse</li> <li>10. Drip trays (minimum of 10cm deep) must be placed under all vehicles that stand for more than 24 hours. Vehicles suspected of leaking must not be left unattended, drip trays must be utilised.</li> <li>11. Drip trays must be utilised during repairs and maintenance of all machinery. The depth of the drip tray must be determined considering the total amount / volume of oil in the vehicle. The drip tray must be able to contain the volume of oil in the vehicle</li> <li>12. Provision of adequate</li> </ol>	
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		<p>sanitation facilities located outside of the wetland/riparian area or its associated buffer zone</p> <p>13. Remove all construction equipment and material on completion of construction</p> <p>14. No water should be abstracted from any river / wetland without DWS authorisation</p> <p>15. Remove all project-related material used to support equipment on completion of construction</p>	
<p><b>Impacts on flora</b></p> <ul style="list-style-type: none"> <li>• Destruction of Riparian Habitat</li> <li>• Wide establishment of alien plant species as the site is infested more with the alien plant species and these proliferate in disturbed environments</li> </ul>	<p>Low (Negative)</p>	<p>1. Sensitive vegetation (wetlands and primary grasslands) that should not be impacted by construction activities should be cordoned off throughout the construction periods to restrict the movement of vehicles and any other development into such areas; and</p> <p>2. Only vegetation that must be removed for the construction of the Bridge should be removed and the footprint must be kept as small as possible.</p> <p>3. Ensure natural indigenous vegetation is used for rehabilitation purposes.</p> <p>4. Control of alien plants must be undertaken.</p>	<p>Very Low (Negative)</p>
<p><b>Air quality</b></p> <ul style="list-style-type: none"> <li>• The increased dust, smoke and emissions resulting from construction activities (site preparation, earthworks, uncovered topsoil stockpiles and sand piles, loads on vehicles and the</li> </ul>	<p>Medium (Negative)</p>	<p>1. Dust suppression mitigation measures must be implemented</p> <p>2. A continuous dust monitoring process needs to be undertaken during construction.</p> <p>3. All vehicles transporting friable materials such as sand, rubble etc must be covered by a tarpaulin or wet down.</p>	<p>Very Low (Negative)</p>

<p>burning of waste); vehicles, plant and machinery poses a health hazard to construction staff and people living and working in the vicinity of the site.</p> <ul style="list-style-type: none"> <li>Excavated and stockpiled material that is vulnerable to wind has the potential to contribute to the influx of pollutants in the air.</li> </ul>		<p>4. Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area.</p> <p>5. No burning of refuse or vegetation is permitted.</p> <p>5. A complaints register will be maintained, in which any complaints from the community will be logged. Complaints will be investigated and, if appropriate, acted upon</p>	
<p><b>Visual Impacts:</b></p> <ul style="list-style-type: none"> <li>Littering and illegal dumping on the site may result in an alteration of the visual character of the site.</li> </ul>	<p>Medium (Negative)</p>	<p>1. Ensure that no litter, refuse, waste, rubbish, rubble, debris and builders wastes generated on the premises be placed, dumped or deposited on adjacent or surrounding properties including road verges, roads or public places and open spaces during or after the construction period. All waste/litter/rubbish etc must be disposed of at an approved dumping site as approved by the Council.</p> <p>2. No wastes may remain on the construction site for more than two weeks.</p> <p>3. Supply sufficient garbage bins throughout the site and empty regularly.</p> <p>4. Ensure good housekeeping is implemented at all times.</p> <p>5. Keep the property neat and litter free at all times and maintain the landscaped areas.</p> <p>6. Vegetation to be removed from the footprint areas only</p> <p>7. Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area;</p> <p>9. The landscape must be rehabilitated in such a way that it corresponds to the surrounding topography;</p>	<p>Very Low (Negative)</p>

		11. Should overtime/night work be authorised, the Contractor shall be responsible to ensure that lighting does not cause undue disturbance to neighbouring residents. In this situation low flux and frequency lighting shall be utilised.	
<p><b>Noise:</b> Noise pollution caused during construction could potentially be a nuisance to sensitive receptors in close proximity to the project area.</p>	Low (Negative)	<p>1. Construction activities must be limited to normal working hours and according to municipal bylaws, i.e. working hours must be limited to weekdays only.</p> <p>2. If construction is required on the weekend; permission from adjacent landowners will be required prior to construction.</p> <p>3. No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site.</p> <p>4. Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc) must be used as per operating instructions and maintained properly during site operations</p>	Very Low (Negative)
<p><b>Traffic Impact:</b></p> <ul style="list-style-type: none"> <li>Increased traffic congestion could possibly occur as a result of construction vehicles moving onto and off the site during construction.</li> <li>Traffic delays/congestion due to road lanes crossed for reconstruction</li> </ul>	Medium (Negative)	<p>1. Construction activities must be limited to normal working hours and according to municipal bylaws, i.e. working hours must be limited to weekdays only.</p> <p>2. A detour route and signs must be provided to guide road users which route to take during the operation phase.</p> <p>4. Traffic marshals/officers must be appointed to assist with smooth movement of motorist that will be affected during the construction phase.</p> <p>6. Suitable warning and information signage should be erected before</p>	Low (Negative)

		construction commences.	
<p><b>Heritage Impacts</b>                  Impact on the turning over of buried artefacts</p> <p>Impact on the Conrad Bridge which is older than 60 years</p>	Medium (Negative)	<ol style="list-style-type: none"> <li>1. There are no important cultural heritage resources or graves near the site or within the stream.</li> <li>2. Should graves, fossils or any archaeological artifacts be identified during construction, work on the area where the artifacts were found, must cease immediately and it should immediately be reported to a heritage practitioner or local museum so that an investigation and evaluation of the finds can be made.</li> <li>3. The Bridge is older than 60 years and therefore enjoys general protection under the National Heritage Act.</li> <li>4. It is a recommendation of the heritage specialist that the bridge be retained as is and that any development at the bridge should be done in sympathy with the bridge in order to retain it for posterity</li> <li>5. A permit is required to be obtained from Gauteng PHRA for impacting on the built environment</li> </ol>	Low (Negative)
<p><b>Health and Safety</b></p> <ul style="list-style-type: none"> <li>• The health of workers may be adversely affected by unsafe working conditions on the construction site.</li> <li>• Inadequate attention to fire safety awareness and fire safety equipment</li> </ul>	Medium (Negative)	<ol style="list-style-type: none"> <li>1. The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas.</li> <li>2. Adequate signage warning road users of the speed limit and possible dangers on site</li> <li>3. At least 1 toilet must be</li> </ol>	Low (Negative)

<p>could result in unsafe working environment and loss of property.</p> <ul style="list-style-type: none"> <li>• Possible injuries to motorist due to known hazards from construction not communicated to road users. E.g. no signage's to warn motorist of construction activities.</li> </ul>		<p>available per 20 workers.</p> <ol style="list-style-type: none"> <li>4. Toilet paper must be provided.</li> <li>5. Healthy and Safety protective personal equipment such as safety boots, safety helmets, gloves, dust masks etc must be made available for workers on site</li> <li>6. No open fires will be allowed on site unless in a demarcated area identified by the ECO</li> <li>7. The Contractor shall provide sanitation facilities in the form of chemical toilets, at all camps, offices, workshops and construction sites for staff and visitors. No other form of sanitation will be permitted unless a connection with a local sewer main is possible. The provision of this facility will comply with current legislation.</li> <li>8. A minimum of one toilet per 11 people or within 100 meters of the work site in order to prevent any breach of sanitary bylaws or offence to public decency.</li> <li>9. All staff is to use the toilets at all times rather than informal defecation in the environment.</li> <li>10. Toilets are to meet the minimum requirements of the OHS ACT.</li> <li>11. All sanitary fees that may be payable to any local authority shall be paid by the Contractor.</li> <li>12. Ablutions are to be cleaned/emptied before they are full and contaminate the environment.</li> <li>13. Toilets are not to be located within sensitive</li> </ol>	
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		<p>areas such as drainage lines and 1:100 year flood lines</p> <p>14. Any sewerage spillages must be regarded as hazardous and cleaned up immediately using appropriate PPE.</p>	
<p><b>Safety and Security:</b></p> <ul style="list-style-type: none"> <li>Construction sites by their nature act as a magnet to the unemployed, so large numbers of people may gather on or around the site. These people must be kept off the site for safety reasons.</li> <li>Furthermore criminals may also utilise the opportunity to steal items from the site and the surrounding communities.</li> </ul>	<p>Medium (Negative)</p>	<p>1. All flammable substances must be stored in dry area which do not pose an ignition risk to the said substances</p> <p>2. Ensure all construction vehicles and machinery is under the control of competent personnel.</p> <p>3. Limit access to the construction site to the workforce only. Comply with the requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).</p> <p>4. Construction footprints, including site offices, excavations, storage areas, materials lay-down areas, stockpile area, and workers rest areas should be clearly demarcated or fenced off before construction commences.</p> <p>5. All construction activities should be limited to the demarcated areas. Access to these demarcated areas strictly controlled.</p> <p>6. Entry points and access routes to the sites must be clearly marked and traffic limited to those areas as far as possible.</p> <p>7. Suitable warning and information signage should be erected before construction commences.</p> <p>8. Adequate sanitary and ablutions facilities must be provided for construction workers</p> <p>9. Mechanisms will be implemented to deal with people seeking employment in order to minimise any</p>	<p>Low (Negative)</p>

		issues related to the influx of people.	
<p><b>Waste Management</b>                  Construction rubble left onsite may attract vermin, encourage the growth of opportunistic alien vegetation and become unsightly</p> <p>Littering on site may attract vermin, pollute the surrounding areas and become unsightly</p>	<p>Medium                  (Negative)</p>	<ol style="list-style-type: none"> <li>1. Littering will not be permitted on the site and general housekeeping will be enforced.</li> <li>2. General waste bins must be readily available for litter disposal and general housekeeping. The EMPr must be followed during construction.</li> <li>3. All solid waste generated during the construction process must be placed in a designated waste collection area within the construction camp and must not be allowed to blow around the site, be accessible to animals, or be placed in piles adjacent the waste skips / bins.</li> <li>4. All solid waste must then be disposed of at the nearest licensed landfill and safe disposal certificates obtained. Separate waste skips/ bins for the different waste streams must be available on site.</li> <li>5. The waste containers must be appropriate to the waste type contained therein and where necessary should be lined and covered. This will be managed through the site specific EMPr and monitored by the ECO.</li> <li>6. No waste (hazardous or general) will be disposed of in the trenches around the storm water channel footprint.</li> <li>7. All excess material and rubble must be removed from the site so not to restrict the rehabilitation process.</li> <li>8. Adequate toilet facilities must be provided for all staff members as standard construction practice.</li> <li>9. Monitor the sewerage facilities for spillages, and handle any spillages as</li> </ol>	<p>Low                  (Negative)</p>

		<p>hazardous waste;</p> <p>10. Chemical toilets must be placed within the construction camp and not in close proximity to the wetlands.</p> <p>11. The chemical toilets to be provided must be from a registered company and all sewage must be disposed of at an appropriate facility. Safe disposal certificates must be kept on record.</p> <p>12. All hazardous material must be carefully stored and then disposed of offsite at the licensed hazardous landfill site</p>	
<p><b>Soil contamination</b> Hydrocarbon spillages from construction equipment e.g. (oils, fuels,) and also cement have a potential of contaminating soil</p>	<p>Low (Negative)</p>	<p>1. Any hazardous or dangerous goods utilized during the construction phase must be stored on an impermeable surface that is bunded, fenced, locked and covered.</p> <p>2. A spill kits must be clearly marked and visible when utilizing hazardous or dangerous materials to ensure all spills can be immediately cleaned.</p> <p>3. Spill kits must be regularly checked and maintained.</p> <p>4. Remediation of spillages must be conducted on a continual basis and within 24h of spillage;</p> <p>5. Contaminated soil will be considered to be hazardous waste and disposed of accordingly.</p> <p>6. Machinery must be properly maintained to keep oil leaks in check.</p> <p>Mixing of cement must be undertaken on mixing boards.</p> <p>7. If a cement mixing silo is constructed on site this must be within a bunded area.</p>	<p>Very Low (Negative)</p>
<p><b>Erosion and Sedimentation</b> Construction earthworks may cause soil erosion and sedimentation in the watercourse</p>	<p>Medium (Negative)</p>	<p>1. Similarly, the erection of silt barriers along all of the drainage lines must be undertaken to curb any sediment and silt run-off. Ideally, the amount of land that will be disturbed should</p>	<p>Low (Negative)</p>

		<p>be kept to an absolute minimal.</p> <p>2. Non-erodible materials should be used for the construction of any berms, coffer dams or any other isolation structures to be used within a flowing watercourse.</p> <p>3. Spoil stockpiles should be placed above the high water mark in distinct piles and adequate erosion measures need to be implemented in order to minimise and reduce erosion and siltation into the watercourse from spoil stockpiles.</p> <p>4. As far as possible, construction activities should make use of the dry seasonal construction window. This will further reduce the risk associated with erosion/siltation; and</p> <p>5. Erosion control measures should be inspected regularly during the course of construction and necessary repairs need to be carried out if any damage has occurred</p> <p>6. The duration of exposed soil must be kept to a minimum and rehabilitation must be initiated as soon as construction is completed.</p> <p>7. Ensure that cleared areas are stabilised to prevent and control erosion and/or sedimentation.</p> <p>8. Only vegetation that needs to be removed for the construction of the bridge should be removed in a phased and controlled manner.</p>	
<p><b>Socio-economic Impacts</b> <u>Positive social impacts:</u>  Creation of employment and business opportunities.</p>	<p>Low Positive</p>	<p><b><u>Enhancement Measures</u></b></p> <p>Job opportunities can be created during the construction phase.</p> <p>Surrounding neighbours must be consulted prior to construction to discuss the</p>	<p>Medium Positive</p>

		<p>construction process and opportunities regarding employment.</p> <p>Local community members must be employed as far as possible for low- and semi-skilled jobs.</p> <p>Mechanisms must be implemented to deal with people seeking employment in order to minimise any issues related to the influx of people.</p>	
<p><b>Proposed Design (Preferred): Widen both the Conrad Bridge and associated Conrad Drive (Preferred).</b></p>			
<p><b>OPERATIONAL IMPACTS</b></p>			
<p><b>Safety and Security</b></p> <p>Risk of pedestrian from being run over by motorist.</p>	<p>Low negative</p>	<p>1. Pedestrian and cyclist walkways should be provided during construction to ascertain safety of pedestrians.</p>	<p>Negligible</p>
<p><b>Traffic Impact</b></p>	<p>Negligible with or without Mitigation</p>		

**Design Alternative 1:**  
**Upgrade of the Blairgowrie/Conrad drive intersection only– (Construction impacts)**

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
<p><b>Impacts on ground water:</b> Groundwater contamination due to construction earthworks.</p>	<p>Low (Negative)</p>	<p>1. Construction vehicles are to be maintained in good working order, to reduce the probability of leakage of fuels and lubricants. 2. All cement mixing must occur on impervious surfaces and within controlled bermed areas. 3. Oil residue must be treated with oil absorbent such as Drizit or similar and this material removed to a licensed waste disposal site. 4. Contractor/s must provide regularly serviced portable chemical toilets for construction workers at a distance no more than 200 m from the place of construction. 5. No materials may be discharged from the construction camps. 6. Drip trays will be placed underneath</p>	<p>Very Low (Negative)</p>

		<p>vehicles and machinery waiting for maintenance, repair or standing for long periods of time;</p> <p>7. Remediation of spillages must be conducted on a continual basis and within 24h of spillage;</p> <p>8. Hazardous substances shall be stored in bunded areas</p> <p>9. Hazardous waste shall be stored in designated areas.</p>	
<p><b>Impacts on the wetland</b></p> <p>Changing the physical structure within a water resource (habitat) due to construction activities</p>	<p>Medium (negative)</p>	<p>1. Other than approved and authorized structure, no other development or maintenance infrastructure is allowed within the delineated wetland or associated buffer zones.</p> <p>2. Demarcate the wetland areas and buffer zones to limit disturbance, clearly mark these areas as no-go areas</p> <p>3. Make use of existing road servitudes as far as possible</p> <p>4. Minimise the width of the construction servitude across the wetland zone and demarcate the construction footprint prior to commencement of construction and ensure that all workers and contractors are aware that access beyond the demarcated areas are not allowed</p> <p>5. Only use access roads as designated during the planning phase</p> <p>6. Limit the removal of indigenous vegetation in the construction footprint and do not remove vegetation outside of the construction footprint.</p> <p>7. Ablution or sanitary facilities should not be located within 100 m of the watercourse.</p> <p>8. Contractors should refrain from impacting areas beyond the demarcated construction area</p> <p>9. All stockpiles will be positioned away from the watercourse and its buffer area.</p> <p>10. The ECO must ensure that all construction equipment and material are removed on completion of construction.</p> <p>12.. The riparian area together with its associated buffer zones should be fenced during the construction phase to prevent any human activity from encroaching onto these areas, other than that which is essential to bridge construction.</p> <p>13. Where any hard structures (concrete, gabion or otherwise) are used, it should be well keyed into the surrounding bank walls and secured to the ground.</p>	<p>Low (negative)</p>

		<p>No activities should take place in the watercourses and associated buffer zone. Where the above is unavoidable, only the footprint of the bridges can be considered. This is subjected to authorization by means of a water use license.</p> <p>14. Construction in and around the watercourse must be restricted to the dryer winter months.</p> <p>15. A temporary fence or demarcation must be erected around the works area to prevent access to sensitive environments.</p> <p>16. The bridge design should be able to accommodate large debris during flooding to prevent that the bridges gets blocked and washed away.</p>	
<p><b>Mobilisation of pollutants</b> Pollution of water entering the wetland</p>	<p>Medium (Negative)</p>	<p>1. The contractors must provide and maintain a method statement for mixing of cement.</p> <p>2. The method statement must provide information on proposed location, storage, washing &amp; disposal of cement, packaging, tools and plant storage</p> <p>3. Washing and cleaning of equipment and vehicles should also be done within a bermed area (outside of the wetland buffer), in order to trap any cement or plaster and avoid excessive soil erosion. These sites must be rehabilitated prior to commencing the operational phase.</p> <p>3. The mixing of concrete should only be done at specifically selected sites on mortar boards or similar structures to contain run-off into the watercourse</p> <p>4. Materials such as fuel, oil, paint, herbicide and insecticides must be sealed and stored in bermed areas or under lock and key, as appropriate, in well-ventilated areas.</p> <p>5. These substances must be confined to specific and secured areas within the contractor's camp, and in a way that does not pose a danger of pollution even during times of high rainfall</p> <p>6. Storage of materials as described above may not be within the 1:100 flood line, watercourses or associated buffer areas</p> <p>7. In the case of pollution of any surface or groundwater, the Regional Representative of the Department of Water and Sanitation (DWS) must be informed immediately</p> <p>8. All equipment should be parked overnight and/or fuelled at least 500 meters from a watercourse</p> <p>9. Drip trays (minimum of 10cm deep)</p>	<p>Low (Negative)</p>

		<p>must be placed under all vehicles that stand for more than 24 hours. Vehicles suspected of leaking must not be left unattended, drip trays must be utilised.</p> <p>10. Drip trays must be utilised during repairs and maintenance of all machinery. The depth of the drip tray must be determined considering the total amount / volume of oil in the vehicle. The drip tray must be able to contain the volume of oil in the vehicle</p> <p>11.Provision of adequate sanitation facilities located outside of the wetland/riparian area or its associated buffer zone</p> <p>12.Remove all construction equipment and material on completion of construction</p> <p>13.No water should be abstracted from any river / wetland without DWS authorisation</p> <p>14.Remove all project-related material used to support equipment on completion of construction</p>	
<p><b>Impacts on flora</b></p> <ul style="list-style-type: none"> <li>• Destruction of Riparian Habitat</li> <li>• Wide establishment of alien plant species as these proliferate in disturbed environments</li> </ul>	<p>Medium (Negative)</p>	<p>1. Sensitive vegetation (wetlands and primary grasslands) that should not be impacted by construction activities should be cordoned off throughout the construction periods to restrict the movement of vehicles and any other development into such areas; and</p> <p>2. Only vegetation that must be removed for the construction of the Bridge should be removed and the footprint must be kept as small as possible.</p> <p>3. Ensure natural indigenous vegetation is used for rehabilitation purposes.</p> <p>4. Control of alien plants must be undertaken.</p>	<p>Low (Negative)</p>
<p><b>Air quality</b></p> <ul style="list-style-type: none"> <li>• The increased dust, smoke and emissions resulting from construction activities (site preparation, earthworks, uncovered topsoil stockpiles and sand piles, loads on vehicles and the burning of waste); vehicles, plant and machinery poses a</li> </ul>	<p>Medium (Negative)</p>	<p>1. Dust suppression mitigation measures must be implemented</p> <p>2. A continuous dust monitoring process needs to be undertaken during construction.</p> <p>3. All vehicles transporting friable materials such as sand, rubble etc must be covered by a tarpaulin or wet down.</p> <p>4. Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area.</p> <p>5. No burning of refuse or vegetation is permitted.</p>	<p>Very low (Negative)</p>



<p>health hazard to construction staff and people living and working in the vicinity of the site.</p> <ul style="list-style-type: none"> <li>Excavated and stockpiled material that is vulnerable to wind has the potential to contribute to the influx of pollutants in the air.</li> </ul>		<p>5. A complaints register will be maintained, in which any complaints from the community will be logged. Complaints will be investigated and, if appropriate, acted upon</p>	
<p><b>Visual Impacts:</b></p> <ul style="list-style-type: none"> <li>Littering and illegal dumping on the site may result in an alteration of the visual character of the site.</li> </ul>	<p>Medium (Negative)</p>	<ol style="list-style-type: none"> <li>Ensure that no litter, refuse, waste, rubbish, rubble, debris and builders wastes generated on the premises be placed, dumped or deposited on adjacent or surrounding properties including road verges, roads or public places and open spaces during or after the construction period. All waste/litter/rubbish etc must be disposed of at an approved dumping site as approved by the Council.</li> <li>No wastes may remain on the construction site for more than two weeks.</li> <li>Supply sufficient garbage bins throughout the site and empty regularly.</li> <li>Ensure good housekeeping is implemented at all times.</li> <li>Keep the construction site neat and litter free at all times and maintain the landscaped areas.</li> <li>Vegetation to be removed from the footprint areas only</li> <li>Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area;</li> <li>The landscape must be rehabilitated in such a way that it corresponds to the surrounding topography;</li> <li>Should overtime/night work be authorised, the Contractor shall be responsible to ensure that lighting does not cause undue disturbance to neighbouring residents. In this situation low flux and frequency lighting shall be utilised.</li> </ol>	<p>Low (Negative)</p>
<p><b>Noise:</b> Noise pollution caused during construction could potentially be a nuisance to sensitive receptors in close proximity to the project</p>	<p>Low (Negative)</p>	<ol style="list-style-type: none"> <li>Construction activities must be limited to normal working hours and according to municipal bylaws, i.e. working hours must be limited to weekdays only.</li> <li>If construction is required on the weekend; permission from adjacent landowners will be required prior to</li> </ol>	<p>Very Low (Negative)</p>

<p>area.</p>		<p>construction. 3. No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site. 4. Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc) must be used as per operating instructions and maintained properly during site operations</p>	
<p><b>Traffic:</b></p> <ul style="list-style-type: none"> <li>• Increased traffic congestion could possibly occur as a result of construction vehicles moving onto and off the site during construction.</li> <li>• Traffic delays due to road lanes crossed for construction</li> </ul>	<p>Medium (Negative)</p>	<p>1. Construction activities must be limited to normal working hours and according to municipal bylaws, i.e. working hours must be limited to weekdays only. 2. A detour route and signs must be provided to guide road users which route to take during the construction phase. 4. Traffic marshals/officers must be appointed to assist with smooth movement of motorists for the residents that will be affected during the construction phase. 6. Suitable warning and information signage should be erected before construction commences.</p>	<p>Low (Negative)</p>
<p><b>Heritage Impacts</b> Impact on the turning over of buried artefacts</p>	<p>Low (Negative)</p>	<p>There are no important cultural heritage resources or graves near the site or within the stream.  Should graves, fossils or any archaeological artifacts be identified during construction, work on the area where the artifacts were found, must cease immediately and it should immediately be reported to a heritage practitioner or local museum so that an investigation and evaluation of the finds can be made.</p>	<p>Very Low (Negative)</p>
<p><b>Health and Safety</b></p> <ul style="list-style-type: none"> <li>• The health of workers may be adversely affected by unsafe working conditions on the construction site.</li> <li>• Inadequate attention to fire safety awareness and fire safety equipment could result in unsafe working environment and loss of property</li> <li>• Construction workers using nearby</li> </ul>	<p>Low (Negative)</p>	<p>1. The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. 2. Healthy and Safety protective personal equipment such as safety boots, safety helmets, gloves, dust masks etc must be made available for workers on site 3. No open fires will be allowed on site unless in a demarcated area identified by the ECO. 4. The Contractor shall provide sanitation facilities in the form of chemical toilets, chemical toilets, at all camps, offices, workshops and construction sites for staff and visitors. No other form of sanitation</p>	<p>Low (Negative)</p>

<p>surroundings for ablution.</p> <ul style="list-style-type: none"> <li>• Possible injuries to motorist due to known hazards from construction not communicated to road users</li> </ul>		<p>will be permitted unless a connection with a local sewer main is possible. The provision of this facility will comply with current legislation.</p> <ol style="list-style-type: none"> <li>5. A minimum of one toilet per 11 people or within 100 meters of the work site in order to prevent any breach of sanitary bylaws or offence to public decency.</li> <li>6. All staff is to use the toilets at all times rather than informal defecation in the environment.</li> <li>7. Toilets are to meet the minimum requirements of the OHS ACT.</li> <li>8. All sanitary fees that may be payable to any local authority shall be paid by the Contractor.</li> <li>9. Ablutions are to be cleaned/emptied before they are full and contaminate the environment.</li> <li>10. Toilets are not to be located within sensitive areas such as drainage lines and 1:100 year flood lines</li> <li>11. Any sewerage spillages must be regarded as hazardous and cleaned up immediately using appropriate PPE.</li> <li>12. A sewage leak due to accidental damage to a sewerage service must contain the spillage. The spillage may not leave the site. The relevant authority must be notified,</li> <li>13. All necessary precautions against veldt fires and also to protect material on site shall be taken.</li> <li>14. Adequate signage warning road users of the speed limit and possible dangers on site</li> </ol>	
<p><b>Safety and Security:</b></p> <ul style="list-style-type: none"> <li>• Construction sites by their nature act as a magnet to the unemployed, so large numbers of people may gather on or around the site. These people must be kept off the site for safety reasons.</li> <li>• Furthermore criminals may also utilise the opportunity to steal items from the site and the surrounding communities.</li> </ul>	<p>Medium (Negative)</p>	<ol style="list-style-type: none"> <li>1. All flammable substances must be stored in dry area which do not pose an ignition risk to the said substances</li> <li>2. Ensure all construction vehicles and machinery is under the control of competent personnel.</li> <li>3. Limit access to the construction site to the workforce only. Comply with the requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).</li> <li>4. Construction footprints, including site offices, excavations, storage areas, materials lay-down areas, stockpile area, and workers rest areas should be clearly demarcated or fenced off before construction commences.</li> <li>5. All construction activities should be limited to the demarcated areas.</li> </ol>	<p>Low (Negative)</p>

		<p>Access to these demarcated areas strictly controlled.</p> <p>6. Entry points and access routes to the sites must be clearly marked and traffic limited to those areas as far as possible.</p> <p>7. Suitable warning and information signage should be erected before construction commences.</p> <p>8. Adequate sanitary and ablutions facilities must be provided for construction workers</p> <p>9. Mechanisms will be implemented to deal with people seeking employment in order to minimise any issues related to the influx of people.</p> <p>10. Pedestrian and cyclist walkways should be provided at design phase to ensure safety of pedestrians and cyclist during operation.</p>	
<p><b>Waste Management</b>                  Construction rubble left onsite may attract vermin, encourage the growth of opportunistic alien vegetation and become unsightly</p> <p>Littering on site may attract vermin, pollute the surrounding areas and become unsightly</p>	<p>Medium                  (Negative)</p>	<p>1. Littering will not be permitted on the site and general housekeeping will be enforced.</p> <p>2. General waste bins must be readily available for litter disposal and general housekeeping. The EMPr must be followed during construction.</p> <p>3. All solid waste generated during the construction process must be placed in a designated waste collection area within the construction camp and must not be allowed to blow around the site, be accessible to animals, or be placed in piles adjacent the waste skips / bins.</p> <p>4. All solid waste must then be disposed of at the nearest licensed landfill and safe disposal certificates obtained. Separate waste skips/ bins for the different waste streams must be available on site.</p> <p>5. The waste containers must be appropriate to the waste type contained therein and where necessary should be lined and covered. This will be managed through the site specific EMPr and monitored by the ECO.</p> <p>6. No waste (hazardous or general) will be disposed of in the trenches around the storm water channel footprint.</p> <p>7. All excess material and rubble must be removed from the site so not to restrict the rehabilitation process.</p> <p>8. Adequate toilet facilities must be provided for all staff members as standard construction practice.</p> <p>9. Monitor the sewerage facilities for spillages, and handle any spillages as</p>	<p>Low                  (Negative)</p>

		<p>hazardous waste;</p> <p>10. Chemical toilets must be placed within the construction camp and not in close proximity to the wetlands.</p> <p>11. The chemical toilets to be provided must be from a registered company and all sewage must be disposed of at an appropriate facility. Safe disposal certificates must be kept on record.</p> <p>12. All hazardous material must be carefully stored and then disposed of offsite at the licensed hazardous landfill site</p>	
<p><b>Soil contamination</b> Hydrocarbon spillages from construction equipment e.g. (oils, fuels, cement etc) have a potential of contaminating soil and the watercourse.</p>	<p>Medium (Negative)</p>	<p>1. Any hazardous or dangerous goods utilized during the construction phase must be stored on an impermeable surface that is bunded, fenced, locked and covered.</p> <p>2. A spill kits must be clearly marked and visible when utilizing hazardous or dangerous materials to ensure all spills can be immediately cleaned.</p> <p>3. Spill kits must be regularly checked and maintained.</p> <p>4. Remediation of spillages must be conducted on a continual basis and within 24h of spillage;</p> <p>5. Contaminated soil will be considered to be hazardous waste and disposed of accordingly.</p> <p>6. Machinery must be properly maintained to keep oil leaks in check.</p> <p>7. If a cement mixing silo is constructed on site this must be within a bunded area.</p>	<p>Very Low (Negative)</p>
<p><b>Erosion and Sedimentation</b> Construction earthworks may cause soil erosion and sedimentation.</p>	<p>Medium (Negative)</p>	<p>1. Similarly, the erection of silt barriers along all of the drainage lines must be undertaken to curb any sediment and silt run-off. Ideally, the amount of land that will be disturbed should be kept to an absolute minimal.</p> <p>2. Non-erodible materials should be used for the construction of any berms, coffer dams or any other isolation structures to be used within a flowing watercourse.</p> <p>3. Spoil stockpiles should be placed above the high water mark in distinct piles and adequate erosion measures need to be implemented in order to minimise and reduce erosion and siltation into the watercourse from spoil stockpiles.</p> <p>4. As far as possible, construction activities should make use of the dry seasonal construction window. This will further reduce the risk associated with erosion/siltation; and</p>	<p>Low (Negative)</p>

		<p>5. Erosion control measures should be inspected regularly during the course of construction and necessary repairs need to be carried out if any damage has occurred</p> <p>6. The duration of exposed soil must be kept to a minimum and rehabilitation must be initiated as soon as construction is completed.</p> <p>7. Ensure that cleared areas are stabilised to prevent and control erosion and/or sedimentation.</p> <p>8. Only vegetation that needs to be removed for the construction of the storm water channel should be removed in a phased and controlled manner.</p>	
<p><b>Socio-economic Impacts</b> Temporary job creation during the construction phase</p>	Low Positive	<p><b>Enhancement Measures</b></p> <p>1. Job opportunities can be created during the construction phase.</p> <p>2. Surrounding neighbours must be consulted prior to construction to discuss the construction process and opportunities regarding employment.</p> <p>3. Local community members must be employed as far as possible for low- and semi-skilled jobs.</p> <p>4. Mechanisms must be implemented to deal with people seeking employment in order to minimize any issues related to the influx of people.</p>	Medium Positive
<p><b>Design Alternative 1: Upgrade of the Blairgowrie/Conrad drive intersection</b></p> <p><b>OPERATIONAL IMPACTS</b></p>			
<p><b>Safety and Security</b> Risk of pedestrian from being run over by motorist.</p>	Low negative	<p>1. Pedestrian and cyclist walkways should be provided during construction to ascertain safety of pedestrians during the operation phase.</p>	Negligible
<p><b>Traffic Impact</b></p>	<p><b>High with or without mitigation</b>, this design is not supported by the City of Johannesburg Planning Department.</p>		

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

- Wetland Delineation and Rehabilitation Report,
- Heritage Impact Assessment Report
- Traffic Impact Report and
- Geotechnical Report

These specialists reports are attached as **Appendix G** of this BAR

## 10. 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.

### Proposed Design: (Preferred) and Design Alternative 1

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Decommissioning and closure phase has not been considered as part of this application as the end use of the site and required decommissioning activities are not known at this time. It is therefore not possible to predict the potential environmental impacts. In addition, it is unlikely that decommissioning will be contemplated due to the nature of the development. If decommissioning phase is considered in future, the developer will undertake the required actions as prescribed by the legislation at the time and comply with all relevant requirements administered by any relevant authority and competent authority at that time.			

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

Specialist studies for decommissioning and closure phase will be undertaken at the time when decommissioning is contemplated by the developer.

## 11. 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:

### Proposed Design: (Preferred) and Design Alternative 1

Cumulative impacts can result from actions which may not be significant on their own but which are significant when added to the impact of other similar actions. The anticipated cumulative impacts of this development (for both the Proposed Design- Widen both Bridge and Road (Preferred) and Design Alternative 1- Upgrade of the Blairgowrie/Conrad drive intersection and retain Bridge as is) includes the

following:

**Spread of alien vegetation**

- The study site is infested with alien (exotic) plant species, disturbance during construction will result in more of these plants occurring on site as such plant species proliferate in disturbed areas. The impact will be MEDIUM and can be reduced to LOW with mitigation.

**Impacts on the Wetland**

- Impacts associated with construction could increase the significance of this impact already present as a result of other activities in the area such as current and historical anthropogenic activities as well as increase in urbanisation and associated increased hardened surfaces within the catchment. The stream currently flows from south to north. It is likely that this riparian area previously had characteristics similar to a valley bottom wetland and that the increased urbanisation has led to an increase in water flow into the stream which ultimately reshaped the stream and now shares more characteristics with a river than a wetland. The cumulative impact will be MEDIUM and with mitigation it can be reduced to LOW.

**Increased socio-economic upliftment as a result of the proposed development**

- Constructing the proposed development will result in additional jobs being created in the area and skills development during the construction phase. Due to the high unemployment rate within the City of Johannesburg. The positive cumulative impact will be VERY LOW Positive but with enhancement it can be LOW positive.



## 12. 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.

### **Proposed Design (Preferred) and Design Alternative 1**

In summary, the Basic Assessment has assessed potential impacts and identified appropriate management and mitigation measures. No environmental fatal flows and no significant negative impacts have been identified to be associated with the proposed project for **both Design options (Widen Bridge and associated Conrad Drive Versus Upgrade of the Blairgowrie/Conrad drive intersection only)**. The Impact Assessment section of this report indicates that the identified environmental impacts associated can be effectively mitigated to have a **low – medium** significance impact rating provided the recommended mitigation and management measures are implemented.

Environmental cost that can be expected to arise as a result of the project proceeding for both the preferred and alternative design options) include **cumulative impacts** as listed below:

- Spread of alien vegetation
- Impacts on the wetland
- Safety and Security

These cumulative impacts are expected to occur at a site and local level and are considered acceptable provided the mitigation measures as outlined in this Basic Assessment and EMPr attached in **Appendix H** are implemented.

Benefits of the project include the following:

- Creation of job opportunities during construction phase.
- The project will improve the traffic flow in the area

The benefits of the project are expected to outweigh the costs.

Design alternatives exist with respect to the implementation of the project to calm down traffic congestion with either proposed design or design alternative 1. The option of reconstructing the bridge using the proposed design 1 is preferred from an operation perspective and it is also supported by the City of Johannesburg Planning Department as the Preferred Design. The upgrade of the Blairgowrie/Conrad Intersection (Design Alternative 1) is not supported. Therefore the implementation of the project using **Proposed Design: (Widen Bridge and its associated Conrad Drive)** is nominated as the **preferred design to be implemented**.

### **No-go (compulsory)**

The **`do nothing alternative`** is the option of not constructing the three pedestrian bridges on the identified site. This alternative would result in no additional environmental impacts on the site or its surrounding area. Due to the transformed nature of the area as a result of historic and current anthropogenic activities, the potential for impact is considered low with development, and therefore the do nothing alternative has little benefit to the current development as per below.

- Should the development not proceed, this “will limit the JRA’s potential to provide the required road and storm water maintenance service in the area and cumulatively in the broader region of Johannesburg.
- Conrad Drive is a major feeder road that experiences high traffic congestion during peak hours, due to the high density built area comprising residential and business properties. The road connects residential estates, business parks carrying traffic to the major Jan Smuts Avenue into William Nicol that then connects to the N1 Eastern Bypass highway. Residents, workers and commuters residing or working along the route undergo long hours of traffic congestion coupled with slow vehicular movement. The No-go Option will not improve traffic flow in the area as well as resolve bank erosion along Braamfontein spruit.
- The JRA will be failing to carry out their legislative mandate towards the realisation of provision of aforementioned services where required.
- No anticipated job opportunities from the No go option will be created
- The community will remain an unhappy community

In summary the situation on the ground will remain the same and The `**do nothing alternative**` will not assist JRA in addressing issues that require quick emergency response as detailed above. The cost of the `**do nothing alternative**` are expected to outweigh the benefits and therefore this alternative is not a preferred alternative

### 13. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

The following impacts and mitigation measures for the construction phase are envisaged for the Preferred Technical Alternative 1 (Overpass) and Technical Alternative 2 (Underpass).

#### **Proposed Design (Preferred) and Alternative Design 1**

The major findings of the negative impacts on the proposed development were the following:

##### **Construction Phase:**

-It is most likely that all identified construction related impacts would be limited to the duration of this phase can be adequately mitigated to have a medium-low or insignificant impact for both design options. The only highest negative impact identified was the cumulative impacts on the wetland and proliferation of alien plant species on site which was determined to be HIGH to MEDIUM significance after mitigation for the **for Proposed Design** and MEDIUM TO LOW for Design Option 1.

No HIGH or VERY HIGH negative impacts after mitigation were determined for the both the Preferred Design Alternative 1 and Design Alternative 2 from an environmental perspective.

Nonetheless from a an operation perspective, Design Alternative 2 (Don't widen Bridge widen only Road) is not PREFERRED as it will not resolve the problem of traffic congestion in the area which JRA aims to rectify by proposing both the expansion of the Bridge and its associated Road

##### **Operational Phase:**

From an operation perspective, as stated above, no known significant operation impacts are envisaged from the implementation of the Proposed Design, whereas Design Option 1 will still result in traffic congestion where the Bridge is located if not expanded alongside its associated Conrad Drive.

##### **Decommissioning Phase:**

(Not applicable as detailed in this report)

The identified environmental impacts on site for both the Preferred-Design and Design Alternative 1 are similar with only a difference on impact on wetland during construction and also impact on heritage as Design 1 proposes the expansion of a bridge older than 60 years old. In addition Traffic impact during the operation phase will not be fully resolved with the implementation of Design Alternative 1. A summary of all the potential impacts from the proposed project assessed above is included in the Impact Summary Table 1.

**Table 1: Impact Summary table (Proposed Design and Design Alternative 1)  
Construction impacts**

ITEM	Significance of Impact	
	Impacts on groundwater	Low (Negative)

Contamination of soil	Medium (Negative)	Very Low (Negative)
Mobilisation of pollutants	Medium (Negative)	Low (Negative)
Erosion & Sedimentation of wetland <b>(Proposed Design)</b>	High (Negative)	Low (Negative)
Erosion & Sedimentation of wetland <b>(Design Alternative 1)</b>	Medium (Negative)	Low (Negative)
Impacts on flora	Low (Negative)	Very Low (Negative)
Waste Management	Medium (Negative)	Low (Negative)
Air Quality	Medium (Negative)	Low (Negative)
Visual Impact	Medium (Negative)	Low (Negative)
Noise	Medium (Negative)	Low (Negative)
Traffic	Medium (Negative)	Low (Negative)
Heritage Impacts <b>(Proposed Design)</b>	Medium (Negative)	Low (Negative)
Heritage Impacts <b>(Design Alternative 1)</b>	Low (Negative)	Very Low (Negative)
Impacts on the wetland <b>Proposed Design</b>	High (Negative)	Medium (Negative)
Impacts on the wetland <b>Design Alternative 1</b>	High (Negative)	Low (Negative)
Health and Safety,	Medium (Negative)	Low (Negative)
Safety and Security	Medium (Negative)	Low (Negative)
Socio-economic Impacts	Low (Positive)	Medium (Positive)
<b>Proposed Design (Preferred) and Design Alternative 1</b>		
<b>Operational Impacts</b>		
<b>Type of Impact</b>	<b>Significance of Impact</b>	
	<b>No Mitigation</b>	<b>With mitigation</b>
<b>Traffic Impact Proposed Design</b>	Negligible with or without mitigation	
<b>Traffic Impact Design Alternative 1</b>	Medium (Negative)	Medium (Negative)
	With or without mitigation the impact will remain High	

<p><b>Healthy and Safety</b> Risk of pedestrian from being run over by motorist. <b>Proposed Design</b></p>	<p>Low negative</p>	<p>1. Pedestrian and cyclist walkways should be provided during operation perspective, to ensure safety of pedestrians.</p>
<p><b>Safety and Security</b> Risk of pedestrian from being run over by motorist. <b>Design Alternative 1</b></p>	<p>Low negative</p>	<p>1. Pedestrian and cyclist walkways should be provided during design to ensure safety of pedestrians.</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.

### Comparison of Alternatives (Proposed Design and Design Alternative 1 )

Two design alternatives exist with respect to the upgrade of the Conrad Drive and its associated Conrad Bridge which could be implemented on site either via the preferred design (widen both road and associated bridge) or Design Alternative 1: Widen only road

#### 1. Construction Phase

##### **Proposed Design\_Widen both bridge and associated road (Preferred) and Design Alternative 1 (Widen only Road)**

Having assessed the impacts of both Preferred Design-(Proposed) and Design Alternative 1. The proposed development in both ways of implementing the project has been carefully planned to reduce significant negative environmental impacts. No issue of environmental fatal flaws was recorded. The identified impacts were, in the majority the same for both design options during construction except for the impact on the wetland and heritage. There exist a wetland (Braamfontein Spruit) on the proposed site and both the Proposed Design (Preferred) and Alternative Design 1 will interfere with the watercourse. The recorded impacts is HIGH and with mitigation it can be reduced to MEDIUM For Preferred Design, Whereas, with the (Design Alternative 1), the recorded impact is MEDIUM and with mitigation the impact can effectively be mitigated to have a LOW SIGNIFICANCE. The Conrad Bridge is a built environment which is over 60 any development and the bridge should be done in sympathy with the bridge in order to retain it for posterity, with Proposed Design (Preferred), the impact on Heritage will be Medium and with Mitigation it can be reduced to Low. Whereas Design Alternative 1 has LOW impacts and with Mitigation the impact is VERY LOW or near Negligible.

Overall, the environmental costs are expected to occur at local and site level and are considered acceptable provided the mitigation measures as outlined in this Basic Assessment Report and EMPr are implemented.

#### 2. Operation phase

- **Widen Bridge & Associated Road: Proposed Design (Preferred)**

The preferred design will enable JRA to achieve its objective of reducing traffic congestions in the study area as the proposed widening of the Conrad Bridge will improve eastbound movements, thereby including westbound exit lane from the intersection until the western edge of the existing bridge decks

during road reconstruction of the Conrad Drive.


- **Don't Widen Bridge, Widen only Associated Road: Design Alternative 1**

The study area is a built up area surrounded by business and affluent residential areas resulting in heavy traffic flow, the best solution is to widen both so that an eastbound lane can be created from the bridge expansion. Therefore if only Road is expanded, the solution of resolving traffic congestion will not be fully resolved. It is also only practical that the bridge width be the same as the width of the associated Road (Conrad drive) to be expanded.

In conclusion, from an environmental, operation perspective, Proposed Design (Preferred) (Widen Both Bridge and associated Road) can be implemented as it is deemed to be environmentally and technically appropriate to resolve the traffic congestion in the area within the context of the receiving environment as detailed in this basic assessment report. It can, therefore, be recommended that **Preferred Design (Proposed)** be implemented as all its impacts during construction and operation phases can be mitigated to an acceptable level. No environmental fatal flaws have been identified.

#### 14. RECOMMENDATION OF PRACTITIONER

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

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

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

Envirolution Consulting (Pty) Ltd recommends that the proposed project be considered for approval subject to the following conditions:

- EMPr for this application be made a binding document for the contractors and managers on site.
- An independent ECO should be present during construction to monitor the implementation of the EMPr and the environmental authorization once issued.
- Compliance with the mitigation measures outlined in this BA report and EMPr;
- Continued consultation and engagement with all relevant stakeholders – especially neighboring property owners and local communities, and respective municipalities during labour recruitment and procurement for services and supplies during construction phase;
- Clearance of the area should be as minimal as possible and construction activities be confined to areas where construction will take place (development footprint) to prevent negative impact of the surrounding environment
- Adequate measures must be put in place to prevent polluted runoff water from entering the, wetland and soil, thus preventing surface and groundwater pollution.

- Servicing/maintenance/washing of vehicles must not be carried on the construction site and only emergency repairs can be done on site.
- All relevant legislation and requirement of other government departments (National, Provincial), in particular of Section 28 (duty of care) of NEMA, must be complied with
- The developer must appoint an independent external auditor to monitor the development during construction for environmental compliance. Monitoring must be carried out on a monthly basis (or as specified in the environmental authorisation once issued), and compile an audit report for submission to the authorities. The audit report must cover compliance with any specific environmental authorisation conditions and requirements of the project EMPr.
- In the event of a major incident (e.g. fire causing damage to property and environment, major spill or leak of contaminants), the relevant authorities should be notified as per the notification of emergencies/ incidents, as per the requirements of NEMA.
- Water Use License: It is probable that a Water Use License or exemption thereof will be required in terms of Section 21 (i) and (j) of the National Water Act in areas where water resources are impacted (streams and wetland crossing). The relevant authorisations and water use licenses must be obtained from Department of Water Affairs prior to the commencement of construction activities.
- Compliance with all legal requirements in relation to environmental management and conditions of the authorisation issued by GDARD.

#### 15. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

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

EMPr attached

Yes

## SECTION F: APPENDIXES

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The following appendixes must be attached as appropriate:

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

### **Appendix A: Site plan(s)**

- A1: Locality Map
- A2: Sensitivity Map

### **Appendix B: Photographs**

### **Appendix C: Facility illustration(s)**

### **Appendix D: Route position information (N/A)**

### **Appendix E: Public participation information**

- Appendix E1: Proof of site notice
- Appendix E2: Proof of Stakeholder Consultation
- Appendix E3: Proof of newspaper advertisements
- Appendix E4: Authority Consultation
- Appendix E5 – Minutes of any public and/or stakeholder meetings– **No public meeting has been held yet, this will be held during Public Review of the BAR**
- Appendix E6 - Comments and Responses Report Attached
- Appendix E7 –Comments from I&APs on Draft Basic Assessment (BA) Report **N/A Comments are anticipated during the Draft BAR review period**
- Appendix E8 –Comments from I&APs on amendments to the BA Report (**N/A**)
- Appendix E9: I&APs and Registered I&APs Database
- Appendix E10 – Comments from I&APs on the application
- Appendix E11 - Other

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

### **Appendix G: Specialist reports**

- G1: Wetland Specialist Report
- G2: Wetland Rehabilitation and Monitoring Plan
- G3: Heritage Specialist Report
- G4: Traffic Impact Report
- G5: Geotechnical Report

### **Appendix H: EMPr**

### **Appendix I: Other information**

- I1: EAP Declaration and CVs
- I2: Specialist Declarations and CVs.



## **CHECKLIST**

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

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