



**BASIC ASSESSMENT PROCESS FOR THE RIVER REHABILITATION
OF 52 MAIN STREET IN BORDEAUX, RANDBURG, CITY OF
JOHANNESBURG, GAUTENG PROVINCE**

DRAFT BASIC ASSEMENT REPORT (DBAR)

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

Kindly note that:

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

DEPARTMENTAL DETAILS

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

Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch
Ground floor, Umnotho House, 56 Eloff Street, Johannesburg
Email Address: bongani.shabangu@gauteng.gov.za

Administrative Unit telephone number: (011) 240 3377/3051
Department central telephone number: (011) 240 2500

DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED RIVER REHABILITATION OF 52 MAIN STREET IN BORDEAUX, RANDBURG. GAUTENG PROVINCE. SOUTH AFRICA.

MARCH 2021

(For official use only)

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

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

Not Applicable

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

No

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

There is no decommission envisaged for this development even in the long-term. In case it happens, it will trigger listed activities in terms of the National Environmental Management: Waste Act, 59 of 2008. Therefore, potential impacts would be identified and assessed at that time. The relevant specialist studies will be conducted at that time.

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

No

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

Yes

If no, state reasons for not attaching the list.

Have State Departments including the competent authority commented?

No

If no, why?

This draft will only be submitted to the Interested and Affected Parties (I&APs) as part of the Public Participation Process (PPP)

PROJECT DETAILS: DETAILS OF ROLE PLAYERS

DETAILS OF APPLICANT

Table 1: Details of the Applicant

Applicant:	JRA
Contact person:	Andre Nel
Postal address:	75 Helen Joseph Street, Cnr Harrison Street, Johannesburg
Postal code:	2000
Telephone:	011 298 5099
E-mail:	anel@jra.org.za

DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

The EAP is Joseph Chauke contracted by ROMH Consultants. Mr Chauke is a Certificated Natural Scientist (SACNASP) with a BSc Honours Degree in Ecology, Environment and Conservation from the University of the Witwatersrand and has over 12 years of experience in the Environmental Management Field. The EAP has experience in conducted the following processes:

- Basic Assessment, Scoping and Environmental Impact Assessment.
- Water Use License Applications.
- Environmental Auditing and Monitoring; and
- Public Consultation and Stakeholder Engagement

The details of the EAP are as stipulated on the table below.

Company	Organic Minds Solutions (PTY) LTD		
EAP	Joseph Chauke		
Postal address:	6 Appian Place, 373 Kent Ave, Ferndale		
Postal code:	2109	Cell:	082 097 0571
Telephone:		Fax:	
E-mail:	Joseph@organicm-solutions.co.za		
Professional affiliation(s) (if any)	SACNASP (Cert.Nat.Sci. 123073)		

EXECUTIVE SUMMARY

ROHM consulting (Pty) Ltd has appointed Organic Minds Solutions (PTY) Ltd Consultants to conduct a Basic Assessment for the proposed River Rehabilitation on of 52 Main Street in Bordeaux, Randburg in the City of Johannesburg in Gauteng Province

Description of the proposed development

The need for this project arose from a complaint laid through the JRA complaints register by the property owner at 52 Main Street Bordeaux, citing a collapsed boundary wall and escalating property damage by stormwater. The property boundary is located adjacent to a major culvert outlet for a catchment that extends further upstream. The complaint was first laid in year 2017, and each rainy season that comes imposes further damage to the property. The objective of the project is. to assess the condition of the existing culvert outlet adjacent to the affected property and to tailor a long-lasting solution to mitigate further floodwater damage.

The design philosophy for the solutions that will be proposed for this project for approval by the JRA and will be centred around the following requirements such as fit for purpose design, Cost efficient design, Environmentally friendly, Innovation, and ease of construction.

Dry detention ponds will be constructed within the existing recreational park (public open space, i.e., Denis Park, Rose garden Park, and Bordeaux South Park), which is regarded as already disturbed areas. Very little activity is expected to take place within the stream as per this design option. The only localised activity within the stream will be stabilization of the badly eroded areas and reinstating the damaged retaining wall. Environmental impacts associated with these activities have already occurred.

LISTED ACTIVITIES

In terms of sections 24 and 24D of the National Environmental Management Act (No 107 of 1998), as read with the EIA Regulations 2014 of GN R324, R325, and R327 a Basic Assessment process is required to be undertaken for the proposed project.

Listed activities triggered by the proposed development requiring Environmental Authorization.

Activity	Relevance to 52 Main Street
Activity (19) The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles, or rock or more than 10 cubic metres from:	Wetland and drainage lines will necessitate movement of more than 10m or material into or from a watercourse.

(i) a watercourse;	
<p>Activity (12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>(C) In Gauteng</p> <p>(ii) Within Critical Biodiversity Areas or Ecological Support Areas identified in the Gauteng Conservation Plan or bioregional plans;</p>	<p>Part of the construction activities include the clearance of vegetation within ESAs and CBAs.</p>

ALTERNATIVES

The Localized Mitigation Strategy proposes rehabilitation works on the problem site such as the lining of the channel as well as reinstatement of the outlet structure has been an alternative. This option will result intensive reshaping of the banks and construction related activities within the drainage line and therefore the risk of pollution and sediment migration is much larger even if the final product will reduce environmental risk and erosion in the long term. The one considered alternative were not feasible to obtain the desired outcome for the site as a whole. The current alternative for enacting dray detention ponds is the only one that allows for maximum development of the site in terms of the proposed activities.

SPECIALIST FINDINGS

Topography and Climate

The terrain surrounding the project location can be described as gentle rolling, with an average slope of 4.9% in the identified catchment. The lowest point is at an elevation of 1469 masl.

According to the Weinert classification, the project is situated in a moderate climatic region with a Weinert N-value between 2 and 5. Thornthwaite's moisture index indicates that the project location falls under moderate moisture conditions. The project area is characterised by warm summers and cool winters. Average daily temperatures range between 16.1°C and 20.1°C between September and March.

The average annual rainfall for the project area for the indicated time frame is 713 mm. Over 80% of the rain is received between October and March. The highest monthly rainfall is received in January, and is an average of 125 mm.

Heritage

This document serves to inform and guide the developer and contractors about the potential impacts that the Proposed riverbank rehabilitation of 52 Main Street, Bordeaux within the City of Johannesburg Metropolitan, Gauteng Province may have on heritage resources (if any) located in the study area. In the same light, the document must also inform South African heritage authorities (SAHRA/PHRA-G) about the presence, absence and significance of heritage resources located in the study area. As required by South African heritage legislation, developments such as this require pre-development assessment by a competent heritage practitioner to identify, record and if necessary, salvage the irreplaceable heritage resources that may be impacted upon by the development.

In compliance with these laws Organic Minds Solutions (Pty) Ltd (OMS) appointed Integrated Specialist Services (Pty) Ltd (ISS) to conduct a Phase 1 Archaeological and Heritage Impact Assessment (A/HIA) of the proposed riverbank rehabilitation of 52 Main Street, Bordeaux in the City of Johannesburg Metropolitan, Gauteng Province. Desktop studies, drive-throughs and field walking were conducted in order to identify heritage landmarks on and around the proposed development site.

The project site is not on pristine ground, having seen significant transformations owing to residential developments and infrastructure and roads. Although the area is known for historical and LIA occurrences, no archaeological resources were identifiable on the surface due to extensive settlement developments. In terms of the built environment of the project area, structures younger than 60 years of age occur within the project area. No mitigation is required prior to rehabilitation in terms of the archaeology of the area under study. Nonetheless, sub-surface archaeological material and unmarked graves may still exist and when encountered during development construction, work must be stopped forth-with and the finds must be reported to the South African Heritage Resource Agency (SAHRA) or the heritage practitioner. Therefore, the impact of the proposed project on heritage resources is considered to be acceptable and it is recommended that the proposed project can commence on the condition that the following recommendations are implemented and based on approval from SAHRA.

Aquatic Assessment

The focus of the rehabilitation adjacent to 52 Main Street should be on reinstating subsurface drainage and reinstating wetland functions as well as the ecosystem services that allow for flood attenuation, and reduction in flood peaks thereby reducing erosive energy within the stream. To this end Option 1 the implementation of the proposed attenuation ponds is seen as the most prudent posing the least environmental risk for the greatest long-term reward. Additionally, if correctly managed it is thought these attenuation ponds could aid in improving the water quality of the storm

water runoff by allowing for greater contact time with wetland plant species and their associated rootzone microbes.

Wetlands also trap sediment reducing downstream scour and potential impacts to existing infrastructure. Removal of alien invasive species will increase the water available within the channel and needs to be offset but replanting indigenous species. Ideally all construction and earthworks should be conducted in the dry season (May to October) to limit the risk of heavy rainfall transporting loosened sediment and exacerbating erosion. Sediment traps must be installed downstream of the any earthworks and must be serviced when necessary.

IMPACT SUMMARY

The proposed dry detention ponds will be constructed within the existing recreational park (public open space), which is regarded as already disturbed areas. Very little activity is expected to take place within the stream as per this design option. The only localised activity within the stream will be stabilization of the badly eroded areas and reinstating the damaged retaining wall. Environmental impacts associated with these activities have already occurred.

The vegetation cover of the riparian zone is largely changed from historical grassy wetland 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. Some of the identified impacts include canalization of sections of the active channel, bank stabilization, active erosion within the channel, conversion of sections of the watercourse into the Bordeaux South Park (recreational area).

The watercourses within the study area are considered to be of ecological importance and sensitive on a provincial or local scale. The EIS score of 1.0 falls into a category characterised by Moderate ecological importance and sensitivity. Most of the identified impacts will only take place as a result of construction activities and therefore will be limited to the duration of the construction activities and can be adequately mitigated to have a medium-low or insignificant impact for both design options. No HIGH (negative) impacts after mitigation were determined for the proposed construction of a series of detention ponds within the existing recreational area.

This Basic Assessment has assessed potential impacts and identified appropriate management and mitigation measures. No environmental fatal flaws and no significant negative impacts have been identified to be associated with the proposed project for both Option1 (Installation of a series of detention ponds). 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 include cumulative impacts as listed below:

- Spread of alien vegetation.
- Impacts on the riparian zone.
- 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:

- Re-instating the wetland functions that were provided by the system before it became a stream. These functions include flood attenuation, stream flow augmentation, sediment trapping, water quality improvement and erosion control.
- Reversing some of the impacts of urbanisation of the integrity and sensitivity of the receiving surface water resources within the catchment.
- Achieving integrated usage of public open spaces to benefit surrounding communities.
- Protection of the integrity of the boundary at Number 52 Main Street, Bordeaux.
- Protection of the private properties along the watercourse along Park Avenue and Valley Road, Bordeaux.
- Improving biodiversity support within an urban environment; and
- Creation of job opportunities during construction phase.

RECOMMENDATIONS

In terms of Section 31 (m) of NEMA the environmental practitioner is required to provide an opinion as to whether the activity should or should not be authorised. The assessment process in this Basic Assessment Report has demonstrated that the proposed river rehabilitation of 52 Main street in Bordeaux and associated infrastructure will not have any detrimental impacts on the environment.

The collapsed boundary wall and is currently escalating property damage. Further, if left unattended, the property boundary located adjacent to a major culvert outlet for a catchment that extends further upstream will worsen. The proposed development will contribute to socio-economic development in the area by offering opportunities for employment to the local communities (temporary and permanent). The Impact Assessment has also identified essential mitigation measures that will mitigate all the anticipated negative impacts associated with the activity to within acceptable levels.

From a planning perspective, the development complies with the relevant plans and policies and is consistent with these plans. The following mitigation measures must be included:

- An Environmental Control Officer Must be appointed prior to the commencement of construction activities.
- Construction area must be clearly demarcated to avoid impact on adjacent properties.
- A monitoring plan must be implemented to ensure pollution prevention around the Suburb.
- The applicant, site manager and contractors must adhere to all mitigation measures in the EMPr. The EMPr is a legally binding document to all parties involved in the construction of the activity.

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SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Proposed river rehabilitation at Number 52 Main Street, Bordeaux, Randburg within the City of Johannesburg Metropolitan, Gauteng Province.

Select the appropriate box.

The application is for an upgrade of an existing development

The application is for a new development

Other, specify

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

 YES NO

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

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

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

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

YES	NO
YES	NO

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy, or guideline:	Administering authority:	Promulgation Date:
<p>National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).</p> <p>In terms of GNR 983 and GNR 985 of December 2014, a Basic Assessment process for the proposed Riverbed Rehabilitation at Number 52 Main Road, Bordeaux, Randburg, Gauteng Province is required.</p>	National & Provincial	27 November 1998
<p>National Environmental Management Act (Act No 107 of 1998): In terms of the Duty of Care provision in S28(1) requires the project proponent to 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 minimized.</p>	Department of Environmental Affairs (as regulator of NEMA).	1998

<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>While no permitting requirements arise from this section of the Act, this will be applicable during construction. An EMPr has been compiled to ensure minimization.</p>		
<p>National Water Act, 1998 (Act No. 36 of 1998): 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 be 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>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.</p> <p>In terms of Section 21 (c) and (i), the project proponent has already applied for a Water Use License.</p>	<p>Department of Water and Sanitation (DWS)</p>	<p>1998</p>
<p>National Environmental Management: Biodiversity Act 2004 (Act 10 of 2004); This Act provides management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act 107 of 1998; the 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. However, this Act will find application during the construction phase of the project in proper management of the sensitive area (Riparian Zone) identified on site.</p>	<p>Department of Environmental Affairs (as regulator of NEMA).</p>	<p>2004</p>
<p>National Environmental Management: Waste Act (Act No. 59 of 2008): The NEMA: WA came into effect on the on 1st July 2009. Section 20 of the Environment Conservation Act 73 of</p>	<p>Department of Environmental Affairs (DEA)</p>	<p>2009</p>

<p>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>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.</p>	<p>Department of Environmental Affairs – lead authority for regulating hazardous waste.</p> <p>Provincial Environmental Department – for regulating general waste</p>	
<p>Promotion of Access to Information Act, 2000 (Act No 2 of 2000): Legislation that allows the public access to information about activities that influence their well-being and to make contributions to decision making. No permitting is required the act finds applicability during the public participation process phase of the basic assessment process.</p>	<p>Department of Environmental Affairs (DEA</p>	<p>2000</p>
<p>National Environmental Management: Air Quality Act (Act No 39 of 2004). S18, S19 and S20 of the Act allow certain areas to be declared and managed as “priority areas” 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. Dust Control Regulation Control Regulations, R. No. 827 of 1 November 2013.</p> <p>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 the implementation of a dust management plan.</p>	<p>Department of Environmental Affairs</p> <p>Local authority, i.e., City of Johannesburg Metropolitan Municipality</p>	<p>2004</p>
<p>National Heritage Resources Act (Act No 25 of 1999) Section 38 states that Heritage Impact Assessments (HIAs) are required for certain kinds of development including b) the construction of a bridge or similar structure exceeding 50 m in length.</p>	<p>South African Heritage Resources Agency (SAHRA)</p>	<p>1999</p>

<p>While no permit or licensing requirements arise from this legislation, no known archaeological sites were reported along the riverbank rehabilitation site. Therefore, the developer and contractors will be diligent and observant during excavation and report chance findings.</p>	<p>The Provincial Heritage Resources Authority Gauteng (PHRAG</p>	
<p>Occupational Health and Safety Act No. 85 of 1993. 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>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 public. E.g., Protection of workers on site through provision of Personal Protective Equipment's; Training and other health and safety amenities.</p>	<p>Department of Labor</p>	<p>1993</p>

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

Legislation, policy of guideline	Administering authority:	Description of compliance
<p>National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).</p>	<p>National & Provincial</p>	<p>The Environmental Authorisation for the proposed development is lawfully applied for in terms of the EIA Regulations, 2014 and 2017 promulgated under NEMA. The conditions on the Environmental Authorisation, if approved, will be adhered to.</p>
<p>National Environmental Management: Biodiversity, 2004 (Act No. 10 of 2004) (NEM:BA)</p>	<p>National and Provincial</p>	<p>The fauna and flora prevailing in the proposed project site will be handled in terms or respect of the National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) as amended (NEMBA) including all the pieces of legislation published in terms of this act.</p>
<p>National Environmental Management Waste Act 2008 (Act No. 59 of</p>	<p>National and Provincial</p>	<p>The management of waste for all types of developments and activities which pose a threat to the environment in terms of the act.</p>

Legislation, policy of guideline	Administering authority:	Description of compliance
2008) (NEM: WA)		
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA)	National (SAHRA) and Provincial Heritage Resources Agency Gauteng (PHRAG)	NHRA, an HIA was conducted for the site because the site is greater than 0, 5 hectares (ha). The Heritage Impact Assessor stated that no obvious features, sites or artefacts of cultural significance that could be impacted on by the proposed project were identified.
<ul style="list-style-type: none"> • DEA Guidelines on Public Participation • DEA Guidelines on Alternatives • DEA Guidelines on Need & Desirability 	National (DEA)	Integrated Environmental Management (IEM) is a philosophy, which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development. IEM is a philosophy, which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development (Department of Environmental Affairs (DEAT, 2004)). The IEM guidelines intend endearing a pro-active approach to sourcing, collating and presenting information at a level that can be interpreted at all levels.
Constitution of the Republic of South Africa Act, 1996 (Act No 108 of 1996)	National	Section 24 of the Constitution of South Africa No. 108 of 1996 states that "...everyone has the right (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations through reasonable legislative and other measures that (c) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development." This protection encompasses preventing pollution and promoting conservation and environmentally sustainable development. The proposed project will ensure of such rights.
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)	National (Labour)	Controls the exposure of employees and the public to dangerous and toxic substances or activities. Department of Labour.
City of Joburg	Local	Five-year plan for the municipal service delivery and infrastructure planning. The IDP identifies areas of opportunity and improvement and lays out the plan to achieve the municipal mandate in terms of the Local Government Municipal Systems 2000 (Act 32 of 2000).

3. ALTERNATIVES

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

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

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

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

The need for this project arose from a complaint laid through the JRA complaints register by the property owner at 52 Main Street Bordeaux, citing a collapsed boundary wall and escalating property damage by stormwater. The property boundary is located adjacent to a major culvert outlet for a catchment that extends further upstream. The complaint was first laid in year 2017, and each rainy season that comes imposes further damage to the property. The objective of the project is to assess the condition of the existing culvert outlet adjacent to the affected property and to tailor a long-lasting solution to mitigate further floodwater damage.

The design philosophy for the solutions that will be proposed for this project for approval by the JRA and will be centred around the following requirements:

- Fit for purpose design – the solution proposed will adequately control storm water to prevent further damage at the affected property and will further provide an added benefit to downstream properties. The solution will be tailored to serve the purpose for the long term with minimal maintenance required.
- Cost efficient design – the proposed solution will be tailored keeping in mind possible budget constraints and re-prioritisation of projects by the JRA. Different techniques of cost saving will be explored, while maintaining high levels of service, which include the use of locally available materials for construction.
- Environmentally friendly – aspects of environmental preservation will be adopted in the design and will include exploring a solution that will have a minimal carbon footprint, cause minimal disturbance to the watercourse ecosystem and compliant with EISD guidelines.
- Innovation – this will be at the centre of the proposed solution, considering the need for producing a lasting solution in a confined location, and that it may involve working with nonstandard solutions. This will be achieved while ensuring that the solution is aesthetically acceptable and safe for the property owners and the surrounding ecosystems.
- Ease of construction – the proposed solution will be easy to construct, to allow for participation of all levels of labour (skilled and non-skilled) and the use of standard construction equipment, while ensuring that a quality solution is delivered.

For this project, the JRA has emphasised the need for exploring a green (environmentally friendly) solution to the problem, as far as reasonably possible, in order to preserve the existing ecosystem

in the watercourse. In light of the expectation from JRA three rehabilitation methods have been assessed in efforts to provide the JRA with a comprehensive solution that not only meets budget but an overall balance between the three pillars of sustainability, which include:

- The Social – Bordeaux Communities.
- The Environmental – Adequate measures in support of the Ecological Support Areas as well as the Critical Biodiversity Areas identified within the 500m buffer zone of the Braamfonteinspruit.
- The Economic – Meeting project budget constraints and timelines while adding greater amenity value and flood risk mitigation measures for the low-lying Bordeaux community;

Provide a description of the alternatives considered.

No.	Alternative type, either alternative: site on property, properties, activity, design, technology, energy, operational or other (provide details of "other")	Description
1	Proposal: Series of dry detention ponds	The proposed Option is to use of a series of dry detention ponds located directly upstream of the problem area. The dry attenuation ponds will be located on existing recreational areas (Bordeaux South Park, Rose Garden Park, and the Denise Park) and shall be designed to as a retro fit solution to retain its current function as a recreational area. Dry attenuation ponds are basins designed to temporarily detain run-off for a minimal duration and slowly release it in a controlled manner, in efforts to reduce the flood peaks downstream, alleviating the burdens observed downstream in the problem site. The dry ponds will be accompanied with minor rehabilitation works of the project site such as outlet reinstatement and riverbank Stabilisation works.
2	Alternative 1: Localised Mitigation Strategy	The Localised Mitigation Strategy proposes rehabilitation works on the problem site such as the lining of the channel as well as reinstatement of the outlet structure. This option will result intensive reshaping of the banks and construction related activities within the drainage line and therefore the risk of pollution and sediment migration is much larger even if the final product will reduce environmental risk and erosion in the long term.
3	Alternative 2: No go Option	This is the option to leave the site as is.

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

N/A

4. PHYSICAL SIZE OF THE ACTIVITY

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

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

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Size of the activity:

20 ha (5ha)

--

Ha/ m²

or, for linear activities:

Proposed activity

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Length of the activity:

--

--

m/km

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

Proposed activity

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Size of the site/servitude:

--

--

Ha/m²

5. SITE ACCESS

Proposal

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

YES	NO

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

m

Describe the type of access road planned:

--

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

Alternative 1

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

YES	NO

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

m

Describe the type of access road planned:

--

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

Alternative 2

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

YES	NO

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

m

Describe the type of access road planned:

--

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

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

Section A 6-8 has been duplicated

Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

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

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

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

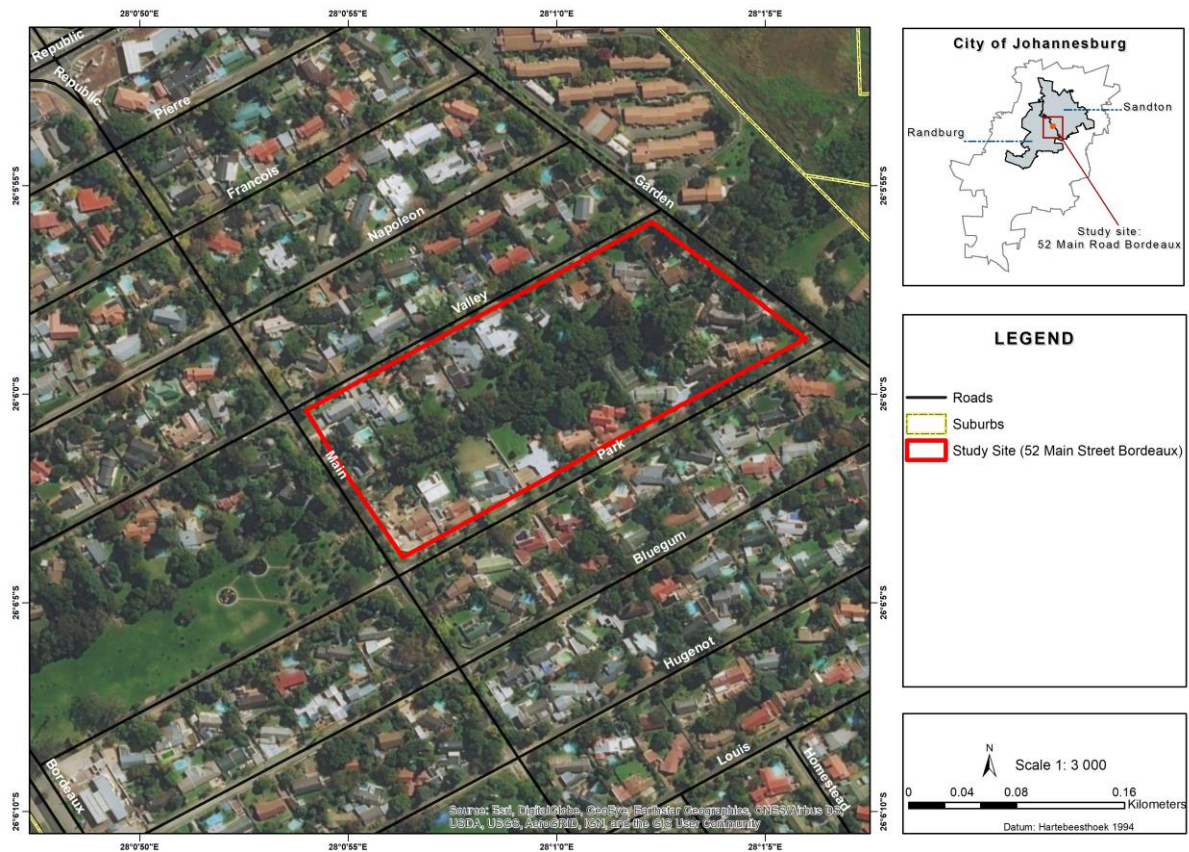


Figure 1: Site layout Plan. (Appendix A)

7. SITE PHOTOGRAPHS

Colour photographs are attached in 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.

A detailed illustration of the activity is attached in Appendix C.

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route times

Instructions for completion of Section B for location/route alternatives

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

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

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

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

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

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

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

1. PROPERTY DESCRIPTION

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

The project is located in the suburb of Randburg, which falls under the jurisdiction of the City of Johannesburg administrative Region B. The site address is Number 52 Main Street, Bordereaux within the City of Johannesburg Metropolitan, Gauteng Province

2. ACTIVITY POSITION

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

Alternative:	Latitude (S):	Longitude (E):
	26° 100545S	28° 016077E

In the case of linear activities:

Alternative:	Latitude (S):	Longitude (E):
• Starting point of the activity	26°103994S	28°008702E
• Middle point of the activity	26°102378S	28°012122E
• End point of the activity	26°101519S	28°014342E

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

Addendum of route alternatives attached

The 21-digit Surveyor General code of each cadastral land parcel

PROPOSAL																				
ALT. 1																				
ALT. 2																				
etc.																				

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

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

Ridgeline	Plateau	Side slope of hill/ridge	Valley	Plain	Undulating plain/low hills	River front
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5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

Shallow water table (less than 1.5m deep)	YES	NO
Dolomite, sinkhole, or doline areas	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO
Any other unstable soil or geological feature	YES	NO
An area sensitive to erosion	YES	NO

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

b) are any caves located on the site(s) YES NO

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

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

c) are any caves located within a 300m radius of the site(s) YES NO

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

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

d) are any sinkholes located within a 300m radius of the site(s) YES NO

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

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

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

6. AGRICULTURE

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

YES	NO
-----	----

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

7. GROUNDCOVER

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

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

Natural veld - good condition % =	Natural veld with scattered aliens % =	Natural veld with heavy alien infestation % =	Veld dominated by alien species. % =40	Landscaped (vegetation) % =
Sport field % =	Cultivated land. % =	Paved surface (hard landscaping) % =	Building or other structure (Concrete channel and Calvert) % = 60%	Bare soil % =

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

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

YES	NO
-----	----

If YES, specify and explain:

--

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

YES	NO
-----	----

If YES, specify and explain:

--

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

YES	NO
-----	----

If YES, specify and explain:

The project area is located on a tributary of the Braamfontein Spruit. A riparian zone was identified within the project area. 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.

DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED RIVER REHABILITATION OF 52 MAIN STREET IN BORDEAUX, RANDBURG. GAUTENG PROVINCE. SOUTH AFRICA.

MARCH 2021

Was a specialist consulted to assist with completing this section	<input type="checkbox"/>	<input type="checkbox"/>
If yes complete specialist details		
Name of the specialist:	Lindokuhle Hlongwane	
Qualification(s) of the specialist:	B. Sc (Environmental Sciences) University of Witwatersrand, B. Sc (Hons) Environmental Sciences, University of Witwatersrand; MSc (Environmental Sciences) University of Witwatersrand (on-going),	
Postal address:	764 Vermooten Street Groblerpark Ext 20 1724	
Postal code:	1724	
Telephone:	-	Cell: 0820868901
E-mail:	mlikznqp@hotmail.com	Fax: -
Are any further specialist studies recommended by the specialist?	<input type="checkbox"/>	<input type="checkbox"/>
If YES, specify:		
If YES, is such a report(s) attached?	<input type="checkbox"/>	<input type="checkbox"/>
If YES list the specialist reports attached below		

Signature of specialist:		Date:	02 March 2021
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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 project area crosses over the tributary of the Braamfontein Spruit. This watercourse is surrounded by low density residential area. The surrounding area is largely urbanised with only small undeveloped areas such as parks and the area in close proximity to the stream. Sections of the stream have been canalised to maximise developable area.

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

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

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

NORTH					
	8	8	8	8	8
	8	8	8	8	8
WEST	4	4	18/2	2	EAST
	12	8	8	8	12
	12	8	8	8	8
SOUTH					

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

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

Have specialist reports been attached
If yes indicate the type of reports below

YES	NO
-----	----

The following specialist studies are attached:

- Wetland/Riparian Zone Assessment Report.
- Aquatic Assessment Report.
- Heritage Impact Assessment Report.
- Geotechnical Report

9. SOCIO-ECONOMIC CONTEXT

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

Demography: The study area is located in the suburb of Bordeaux, Randburg. The study area has a total area of 4.19km² 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. 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.

10. CULTURAL/HISTORICAL FEATURES

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

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

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

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

YES	NO
-----	----

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 by Mr. Trust Mlilo of Integrated Specialist Services Pty (Ltd) during the Basic Assessment process, the study area is located in a heavily disturbed landscape characterised by residential developments, bulk water supply infrastructure, power lines, roads, and associated infrastructure. The study area is regarded as having a low to medium potential of yielding previously unidentified archaeological sites during subsurface excavations and construction work associated with the proposed development. The archaeological field survey did not record any burial sites within the study area. No public memorials and monuments were identified within the study area. No buildings were identified on the direct path of the proposed riverbank rehabilitation. The age of the existing bridge could not be established during the survey, but it is most likely that it is younger than 60 years and has gone through maintenance alterations over the years. A detailed Heritage Impact Assessment Report is attached as Appendix D of this report. For further details, please refer to the Heritage specialist report attached with Appendix D 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)?
 If yes, please attached the comments from SAHRA in the appropriate Appendix

YES	NO
YES	NO

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. THE ENVIRONMENTAL ASSESSMENT PRACTITIONER MUST CONDUCT PUBLIC PARTICIPATION PROCESS IN ACCORDANCE WITH THE REQUIREMENT OF THE EIA REGULATIONS, 2014.

2. LOCAL AUTHORITY PARTICIPATION

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

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

YES	NO
-----	----

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

YES	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 or why the report was not submitted if that is the case.

This draft report will be forwarded to the local authority as part of the Public Participation Process.

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?

YES	NO
-----	----

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

--

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

This draft report will be forwarded to the local authority as part of the Public Participation Process.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

5. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix 1 – Proof of site notice

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

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from interested and affected parties

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs.

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

Section D has been duplicated for alternatives

"insert No. of duplicates"

 times (complete only when appropriate)

Section D Alternative No.

"insert alternative number"

 (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

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

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

YES	NO
Could not be determined at this stage m ³	

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)?

All waste removed from site will be disposed at an appropriately 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?

YES	NO
m ³	

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

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?

YES	NO
-----	----

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?

YES	NO
-----	----

If yes, inform the competent authority and request a change to an application for scoping and EIA.

DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED RIVER REHABILITATION OF 52 MAIN STREET IN BORDEAUX, RANDBURG. GAUTENG PROVINCE. SOUTH AFRICA.

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Is the activity that is being applied for a solid waste handling or treatment facility?

YES	NO
-----	----

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

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

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?

YES	NO
-----	----

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

No effluent will be produced. m ³	
---	--

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

YES	NO
-----	----

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

Yes	NO
-----	----

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

m ³	
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If yes describe the nature of the effluent and how it will be disposed.

No effluent will be produced.

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

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

YES	NO
-----	----

If yes, provide the particulars of the facility:

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

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

Liquid effluent (domestic sewage)

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

YES	NO
-----	----

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

Unknown at this stage m ³	
--------------------------------------	--

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

YES	NO
-----	----

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

YES	NO
-----	----

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

N/A

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO
-----	----

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

YES	NO
-----	----

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

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

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: 0liters

If Yes, please attach proof of assurance of water supply, e.g., yield of borehole, in the appropriate Appendix
Does the activity require a water use permit from the Department of Water Affairs? YES NO

If yes, list the permits required

The water for project use will be delivered to site from the nearest water treatment facility.

If yes, have you applied for the water use permit(s)? YES NO
If yes, have you received approval(s)? (attached in appropriate appendix) YES NO

3. POWER SUPPLY

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

During construction, the project will employ labour intensive methods and/or pneumatic equipment that does not require a lot of energy input.

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

No particular consideration has been given to power supply as the project is not an energy-intensive development that will require energy/electricity input for its continued operations.

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 and/or pneumatic machinery. The project does not require ongoing energy supply during the operational phase.

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

No issues were raised.

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

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

None.

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

Briefly describe the methodology utilized in the rating of significance of impacts.

The potential environmental impacts of the proposed development on the receiving environment within the project area were assessed according to the methodology indicated in the Table 2-1 below. The impacts arising from the proposed riverbank rehabilitation will be assessed in a standard manner to allow comparisons between a wide range of impacts. A clearly defined rating scale is used to assess each impact in terms of severity, spatial extent, and duration (which determines the consequence) and in terms of the frequency of the activity and the frequency of the related impact (which determines the likelihood of occurrence). The overall impact significance is then determined via a significance rating matrix (Table 2-2) utilizing the scores obtained for consequence and likelihood of occurrence, in order to assign a final impact rating.

Table 2-1: Impact Assessment Methodology

Rating	Severity	Spatial Scale	Duration	Probability
7	Very significant impact on the environment. Irreversible damage to highly valued species, habitat, or ecosystem. Persistent severe damage.	The effect will occur across international borders.	Permanent: No Mitigation No mitigation measures of natural process will reduce the impact after implementation.	Certain/Definite. The impact will occur regardless of the implementation of any preventative or corrective actions.
6	Significant impact on highly valued species, habitat, or ecosystem.	National Will affect the entire country	Permanent: Mitigation measures of natural process will reduce the impact.	Almost certain/Highly probable It is most likely that the impact will occur
5	Very serious, long-term environmental impairment of ecosystem function that may	Province/ Region Will affect the entire province	Project Life The impact will cease after the	Likely, the impact may occur.

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	take several years to rehabilitate	or region	operational life span of the project.	
4	Serious medium term environmental effects. Environmental damage can be reversed in less than a year.	Municipal Area Will affect the whole municipal area	Long term 6-15 years	Probable Has occurred here or elsewhere and could therefore occur
3	Moderate, short-term effects but not affecting ecosystem functions. Rehabilitation requires intervention of external specialists and can be done in less than a month.	Local. Local extending only as far as the development site area.	Medium term 1-5 years.	Unlikely Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur.
2	Minor effects on biological or physical environment. Environmental damage can be rehabilitated internally with/ without help of external consultants.	Limited. Limited to the site and its immediate surrounds	Short term Less than 1 year	Rare/ improbable Conceivable, but only in extreme circumstances and/ or has not happened during lifetime of the project but has happened elsewhere. The possibility of the impact materializing is very low as a result of design, historic experience, or implementation of adequate mitigation measures.

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1	Limited damage to minimal area of low significance, (e.g., ad hoc spills within plant area). Will have no impact on the environment.	Very limited to specific isolated parts of the site.	Immediate Less than 1 month	Highly unlikely/None Expected never to happen.
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Table 2-1: Impact significance rating

Impact Significance = Consequence (Severity + Scale + Duration)				
Ranking	108-147	73-107	36-72	0-35
Significance	High (Major)	Medium-High	Medium-Low	Negligible

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 (Organic Minds Pty Ltd).

All 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 Option (Preferred Option): Series of Dry Detention Pond

This Alternative proposes the use of a series of dry detention ponds located directly upstream of the problem area. The dry attenuation ponds will be located on existing recreational areas and shall be designed to as a retro fit solution to retain its current function as a recreational area. Dry attenuation ponds are basins designed to temporarily detain run-off for a minimal duration and slowly release it in a controlled manner, in efforts to reduce the flood peaks downstream, alleviating the burdens observed downstream in the problem site. The dry ponds will be accompanied with minor rehabilitation works of the project site such as:

- Outlet Reinstatement and
- Riverbank Stabilization works

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
<p>Impacts on ground water: Groundwater contamination due to construction earthworks</p>	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> • Construction vehicles are to be maintained in good working order, to reduce the probability of leakage of fuels and lubricants. • All cement mixing must occur on impervious surfaces and within controlled bermed areas. • Oil residue must be treated with oil absorbent such as Drizit or similar and this material removed to a licensed waste disposal site. • 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. • No materials may be discharged from the construction camps. • Drip trays will be placed underneath vehicles and machinery waiting for maintenance, repair or standing for long periods of time. • Remediation of spillages must be conducted on a continual basis and within 24h of spillage. • Hazardous substances shall be stored in bunded areas. • Hazardous waste shall be stored in designated areas 	<p>Negligible (Negative)</p>	<p>Low</p>
<p>Impacts on the riparian zone Changing the physical structure within a water resource (habitat) due to construction activities</p>	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> • Other than approved and authorized structure, no other development or maintenance infrastructure is allowed within the delineated riparian zone or associated buffer zones. • Demarcate the riparian areas and buffer zones to limit disturbance, clearly mark these areas as no-go areas. • Make use of existing road servitudes as far as possible. • 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. • Only use access roads as designated during the planning phase. 	<p>Negligible (Negative)</p>	<p>Low</p>

		<ul style="list-style-type: none"> • Limit the removal of indigenous vegetation in the construction footprint and do not remove vegetation outside of the construction footprint. • Ablution or sanitary facilities should not be located within outside of the watercourse. • Contractors should refrain from impacting areas beyond the demarcated construction area. • All stockpiles will be positioned away from the watercourse and its buffer area. • The ECO must ensure that all construction equipment and material are removed on completion of construction. • No activities should take place in the watercourses and associated buffer zone. Where the above is unavoidable, only the footprint of the stabilization area can be considered. This is subjected to authorization by means of a water use license. • Construction in and around the watercourse must be restricted to the dryer winter months. • A temporary fence or demarcation must be erected around the works area to prevent access to sensitive environments. 		
<p>Mobilization of pollutants</p> <ul style="list-style-type: none"> • Pollution of water entering the riparian zone 	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> • The contractors must provide and maintain a method statement for mixing of cement. • The method statement must provide information on proposed location, storage, washing & disposal of cement, packaging, tools, and plant storage. • 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. • 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. • 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. • 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 7. Storage of materials as described above may not be within the 1:100 flood line, watercourses, or associated buffer areas. 	<p>Negligible (Negative)</p>	<p>Very Low</p>

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		<ul style="list-style-type: none"> • 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. • All equipment should be parked overnight and/or fuelled at least 500 meters from a watercourse. • 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 utilized. • Drip trays must be utilized 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. • Provision of adequate sanitation facilities located outside of the riparian area or its associated buffer zone. • Remove all construction equipment and material on completion of construction. • No water should be abstracted from any river / wetland without DWS authorization. • Remove all project-related material used to support equipment on completion of construction 		
<p>Impacts on flora.</p> <ul style="list-style-type: none"> • Destruction of Riparian Habitat • Wide establishment of alien plant species as the site is infested more with the alien plant species and these proliferate in disturbed environments 	Medium-Low (Negative)	<ul style="list-style-type: none"> • 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. • Only vegetation that must be removed for the construction of the stabilizing structures should be removed and the footprint must be kept as small as possible. • Ensure natural indigenous vegetation is used for rehabilitation purposes. • Control of alien plants must be undertaken. 	Negligible (negative)	Low
Air quality	Medium-Low	<ul style="list-style-type: none"> • Dust suppression mitigation measures must be implemented. 	Negligible	Low

<ul style="list-style-type: none"> 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 health hazard to construction staff and people living and working in the vicinity of the site. Excavated and stockpiled material that is vulnerable to wind has the potential to contribute to the influx of pollutants in the air. 	<p>(Negative)</p>	<ul style="list-style-type: none"> A continuous dust monitoring process needs to be undertaken during construction. All vehicles transporting friable materials such as sand, rubble etc must be covered by a tarpaulin or wet down. Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area. No burning of refuse or vegetation is permitted. 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>(Negative)</p>	
<p>Visual Impacts:</p> <ul style="list-style-type: none"> Littering and illegal dumping on the site may result in an 	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> Ensure that no litter, refuse, waste, rubbish, rubble, debris, and builders waste 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 	<p>Negligible (Negative)</p>	<p>Low</p>

<p>alteration of the visual character of the site.</p>		<p>Council.</p> <ul style="list-style-type: none"> No wastes may remain on the construction site for more than two weeks. Supply sufficient garbage bins throughout the site and empty regularly. Ensure good housekeeping is implemented at all times. Keep the property neat and litter free at all times and maintain the landscaped areas. Vegetation to be removed from the footprint areas only. Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area. The landscape must be rehabilitated in such a way that it corresponds to the surrounding topography. Should overtime/night work be authorized, 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 utilized. 		
<p>Noise Impact:</p> <ul style="list-style-type: none"> Noise pollution caused during construction could potentially be a nuisance to sensitive receptors in close proximity to the study area. 	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> Construction activities must be limited to normal working hours and according to municipal bylaws, i.e., working hours must be limited to weekdays only. If construction is required on the weekend; permission from adjacent landowners will be required prior to construction. 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. 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>Negligible (Negative)</p>	<p>Low</p>
<p>Traffic Impact:</p> <ul style="list-style-type: none"> Increased traffic congestion could possibly occur as a result of construction 	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> Construction activities must be limited to normal working hours and according to municipal bylaws, i.e., working hours must be limited to weekdays only. A detour route and signs must be provided to guide road users which route to take during the operation phase. Traffic marshals/officers must be appointed to assist with smooth movement of motorist that will be 	<p>Medium-Low (Negative)</p>	<p>Low</p>

<p>vehicles moving onto and off the site during construction.</p> <ul style="list-style-type: none"> Traffic delays/congestion due to road lanes crossed for reconstruction 		<p>affected during the construction phase.</p> <ul style="list-style-type: none"> Suitable warning and information signage should be erected before construction commences. 		
<p>Heritage Impacts Impact on the turning over of buried artefacts.</p>	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> 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>Negligible (Negative)</p>	<p>Low</p>
<p>Health and Safety</p> <ul style="list-style-type: none"> The health of workers may be adversely affected by unsafe working conditions on the construction site. Inadequate attention to fire safety awareness and fire safety equipment could result in unsafe working environment and loss of property. Possible injuries to motorist due to known 	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. Adequate signage warning road users of the speed limit and possible dangers on site At least 1 toilet must be available per 20 workers. Toilet paper must be provided. Healthy and Safety protective personal equipment such as safety boots, safety helmets, gloves, dust masks etc must be made available for workers on site. No open fires will be allowed on site unless in a demarcated area identified by the ECO. 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. 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. All staff is to use the toilets at all times rather than informal defecation in the environment. 	<p>Medium-Low (Negative)</p>	<p>Low</p>

<p>hazards from construction not communicated to road users. E.g., no signage's to warn motorists of construction activities</p>		<p>10. Toilets are to meet the minimum requirements of the OHS ACT.</p> <ul style="list-style-type: none"> All sanitary fees that may be payable to any local authority shall be paid by the Contractor. Ablutions are to be cleaned/emptied before they are full and contaminate the environment. Toilets are not to be located within sensitive areas such as drainage lines and 1:100-year flood lines. Any sewerage spillages must be regarded as hazardous and cleaned up immediately using appropriate PPE. 		
<p>Safety and Security:</p> <ul style="list-style-type: none"> 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. Furthermore, criminals may also utilize the opportunity to steal items from the site and the surrounding communities 	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> All flammable substances must be stored in dry area which do not pose an ignition risk to the said substances. Ensure all construction vehicles and machinery is under the control of competent personnel. 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). 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. All construction activities should be limited to the demarcated areas. Access to these demarcated areas strictly controlled. Entry points and access routes to the sites must be clearly marked and traffic limited to those areas as far as possible. Suitable warning and information signage should be erected before construction commences. Adequate sanitary and ablutions facilities must be provided for construction workers. Mechanisms will be implemented to deal with people seeking employment in order to minimize any issues related to the influx of people. 	<p>Medium-Low (Negative)</p>	<p>Low</p>
<p>Waste Management Construction rubble left onsite may attract vermin, encourage the growth of</p>	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> Littering will not be permitted on the site and general housekeeping will be enforced. General waste bins must be readily available for litter disposal and general housekeeping. The EMPr must be followed during construction. All solid waste generated during the construction process must be placed in a designated waste 	<p>Negligible (Negative)</p>	<p>Low</p>

<p>opportunistic alien vegetation, and become unsightly.</p> <p>Littering on site may attract vermin, pollute the surrounding areas, and become unsightly.</p>		<p>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> <ul style="list-style-type: none"> • 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. • 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. • No waste (hazardous or general) will be disposed of in the trenches around the storm water channel footprint. • All excess material and rubble must be removed from the site so not to restrict the rehabilitation process. • Adequate toilet facilities must be provided for all staff members as standard construction practice. • Monitor the sewerage facilities for spillages and handle any spillages as hazardous waste. • Chemical toilets must be placed within the construction camp and not in close proximity to the watercourse. • 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. • All hazardous material must be carefully stored and then disposed of offsite at the licensed hazardous landfill site. 		
<p>Soil contamination</p> <p>Hydrocarbon spillages from construction equipment e.g. (oils, fuels,) and also cement have a potential of contaminating soil.</p>	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> • Any hazardous or dangerous goods utilized during the construction phase must be stored on an impermeable surface that is bunded, fenced, locked, and covered. • A spill kits must be clearly marked and visible when utilizing hazardous or dangerous materials to ensure all spills can be immediately cleaned. • Spill kits must be regularly checked and maintained. • Remediation of spillages must be conducted on a continual basis and within 24h of spillage. • Contaminated soil will be considered to be hazardous waste and disposed of accordingly. 	<p>Negligible (Negative)</p>	<p>Low</p>

		<ul style="list-style-type: none"> • Machinery must be properly maintained to keep oil leaks in check. Mixing of cement must be undertaken on mixing boards. • If a cement mixing silo is constructed on site this must be within a bunded area. 		
<p>Erosion and Sedimentation: Construction earthworks may cause soil erosion and sedimentation in the watercourse</p>	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> • 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. • 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. • 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. • 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 • 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. • The duration of exposed soil must be kept to a minimum and rehabilitation must be initiated as soon as construction is completed. • Ensure that cleared areas are stabilized to prevent and control erosion and/or sedimentation. • Only vegetation that needs to be removed for the construction of the bridge should be removed in a phased and controlled manner. 	<p>Medium-Low (Negative)</p>	<p>Low</p>
<p>Socio-economic Impacts Positive social impacts: Creation of employment and business opportunities.</p>	<p>Medium-High (Positive)</p>	<ul style="list-style-type: none"> • Job opportunities can be created during the construction phase. • Surrounding neighbours must be consulted prior to construction to discuss the construction process and opportunities regarding employment. • Local community members must be employed as far as possible for low- and semiskilled jobs. • Mechanisms must be implemented to deal with people seeking employment in order to minimize any issues related to the influx of people 	<p>Medium-High (Positive)</p>	<p>Low</p>

Proposed Option (Preferred): Series of Dry Detention Pond.				
OPERATIONAL IMPACT				
Safety and Security: Use of overgrown areas for criminal activities.	Medium-Low (negative)	<ul style="list-style-type: none"> Ongoing vegetation growth management must be incorporated into the Johannesburg City Parks program as the detention ponds will be constructed in existing recreational parks. Establishment and encroachment of alien invasive species should be monitored regularly, and control of alien species should be done where necessary. Details regarding the identification and legislation associated with alien invasive species can be obtained from 	Negligible (Negative)	Low
Sedimentation within the of the detention ponds and loss of dam capacity:	Medium-Low (negative)	<ul style="list-style-type: none"> Non-erodible materials should be used for the construction of any dam walls or any other isolation structures to be used. The final design should indicate a clear water balance. The detention ponds should be grass lined to prevent erosion. Adequate erosion control measures should be implemented on the spillways. 	Negligible (Negative)	Low
Impacts on Flora: <ul style="list-style-type: none"> Wide establishment of alien plant on the disturbed area. Vegetation overgrowth 	Medium-Low (Negative)	<ul style="list-style-type: none"> Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area. Establishment and encroachment of alien invasive species should be monitored regularly, and control of alien species should be done where necessary. Details regarding the identification and legislation associated with alien invasive species can be obtained from http://www.agis.agric.za; Ongoing vegetation growth management must be incorporated into the Johannesburg City Parks program as the detention ponds will be constructed in existing recreational parks. 	Negligible (Negative)	Low
Visual Impact: Vegetation	Medium-Low	Ongoing vegetation growth management must be incorporated into the Johannesburg City Parks	Negligible	Low

overgrowth	(Negative)	program as the detention ponds will be constructed in existing recreational parks.	(Negative)	
<p>Please note: The majority of the impacts identified for Alternative 1 will be the same for Alternative 2. The impacts may however differ in significance, as the impacts due to the extent of disturbance.</p> <p style="text-align: center;">Alternative 2: Localized Mitigation Strategy</p> <p>The Localized Mitigation Strategy proposes rehabilitation works on the problem site such as the lining of the channel as well as reinstatement of the outlet structure. This option will result intensive reshaping of the banks and construction related activities within the drainage line and therefore the risk of pollution and sediment migration is much larger even if the final product will reduce environmental risk and erosion in the long term.</p>				
Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Site clearing affecting soils and riparian vegetation.	High (Negative)	<ul style="list-style-type: none"> All development footprint areas to remain as small as possible and vegetation clearing to be limited to what is absolutely essential. Retain as much indigenous vegetation as possible. All construction activities should be undertaken during the dry season. Contractor laydown areas and stockpiles to be established outside of the delineated riparian zones and the buffer area. Limit the removal of naturally occurring vegetation and the associated biodiversity to only that which is absolutely necessary. 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. 	Medium-Low (Negative)	Low

<p>Impacts on the riparian zone Changing the physical structure within a water resource (habitat) and replacing with a lined channel.</p> <ul style="list-style-type: none"> Physical destruction of the riparian vegetation. Loss of connectivity of the active channel with the riparian zone 	<p>High (Negative)</p>	<ul style="list-style-type: none"> Other than approved and authorized structure, no other development or maintenance infrastructure is allowed within the delineated riparian zone or associated buffer zones. Demarcate the riparian areas and buffer zones to limit disturbance, clearly mark these areas as no-go areas. Make use of existing road servitudes as far as possible. 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. Only use access roads as designated during the planning phase. Limit the removal of indigenous vegetation in the construction footprint and do not remove vegetation outside of the construction footprint. Ablution or sanitary facilities should not be located within outside of the watercourse. Contractors should refrain from impacting areas beyond the demarcated construction area. All stockpiles will be positioned away from the watercourse and its buffer area. The ECO must ensure that all construction equipment and material are removed on completion of construction. No activities should take place in the watercourses and associated buffer zone. Where the above is unavoidable, only the footprint of the stabilization area can be considered. This is subjected to authorization by means of a water use license. Construction in and around the watercourse must be restricted to the dryer winter months. A temporary fence or demarcation must be erected around the works area to prevent access to sensitive environments. 	<p>Medium-High (Negative)</p>	<p>Low</p>
<p>Impacts on ground water: Groundwater contamination due to construction earthworks</p>	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> Construction vehicles are to be maintained in good working order, to reduce the probability of leakage of fuels and lubricants. All cement mixing must occur on impervious surfaces and within controlled bermed areas. Oil residue must be treated with oil absorbent such as Drizit or similar and this material removed to a licensed waste disposal site. Contractor/s must provide regularly serviced portable chemical toilets for construction workers at a 	<p>Medium-Low (Negative)</p>	<p>Very Low</p>

		<p>distance no more than 200 m from the place of construction.</p> <ul style="list-style-type: none"> No materials may be discharged from the construction camps. Drip trays will be placed underneath vehicles and machinery waiting for maintenance, repair or standing for long periods of time. Remediation of spillages must be conducted on a continual basis and within 24h of spillage. Hazardous substances shall be stored in bunded areas. Hazardous waste shall be stored in designated areas 		
<p>Mobilization of pollutants</p> <ul style="list-style-type: none"> Pollution of water entering the wetland 	<p>High (Negative)</p>	<ul style="list-style-type: none"> The contractors must provide and maintain a method statement for mixing of cement. The method statement must provide information on proposed location, storage, washing & disposal of cement, packaging, tools, and plant storage. 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. 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. 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. 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 7. Storage of materials as described above may not be within the 1:100 flood line, watercourses, or associated buffer areas. 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. All equipment should be parked overnight and/or fuelled at least 500 meters from a watercourse. 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 utilized. Drip trays must be utilized during repairs and maintenance of all machinery. The depth of the drip 	<p>Medium-Low (Negative)</p>	

		<p>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 12. Provision of adequate sanitation facilities located outside of the riparian area or its associated buffer zone.</p> <ul style="list-style-type: none"> Remove all construction equipment and material on completion of construction 14. No water should be abstracted from any river / wetland without DWS authorization. Remove all project-related material used to support equipment on completion of construction 		
<p>Impacts on flora.</p> <ul style="list-style-type: none"> Destruction of Riparian Habitat Wide establishment of alien plant species as the site is infested more with the alien plant species and these proliferate in disturbed environments 	<p>High (Negative)</p>	<ul style="list-style-type: none"> Sensitive vegetation (riparian zone 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. Only vegetation that must be removed for the construction of the stabilizing structures should be removed and the footprint must be kept as small as possible. Ensure natural indigenous vegetation is used for rehabilitation purposes. Control of alien plants must be undertaken. 	<p>Medium-Low (Negative)</p>	<p>Low</p>
<p>Air quality Impacts</p> <ul style="list-style-type: none"> The increased dust, smoke and emissions resulting from construction activities (site preparation, earthworks, uncovered topsoil stockpiles and sand piles, loads on vehicles and the 	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> Dust suppression mitigation measures must be implemented. A continuous dust monitoring process needs to be undertaken during construction. All vehicles transporting friable materials such as sand, rubble etc must be covered by a tarpaulin or wet down. Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area. No burning of refuse or vegetation is permitted. 6. 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>Negligible (Negative)</p>	<p>Low</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"> Excavated and stockpiled material that is vulnerable to wind has the potential to contribute to the influx of pollutants in the air. 				
<p>Visual Impacts:</p> <ul style="list-style-type: none"> Littering and illegal dumping on the site may result in an alteration of the visual character of the site. 	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> Ensure that no litter, refuse, waste, rubbish, rubble, debris, and builders waste 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. No wastes may remain on the construction site for more than two weeks. Supply sufficient garbage bins throughout the site and empty regularly. Ensure good housekeeping is implemented at all times. Keep the property neat and litter free at all times and maintain the landscaped areas. Vegetation to be removed from the footprint areas only. Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area. The landscape must be rehabilitated in such a way that it corresponds to the surrounding 	<p>Negligible (Negative)</p>	<p>Low</p>

		<p>topography.</p> <ul style="list-style-type: none"> Should overtime/night work be authorized, 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 utilized. 		
<p>Noise:</p> <ul style="list-style-type: none"> Noise pollution caused during construction could potentially be a nuisance to sensitive receptors in close proximity to the study area. 	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> Construction activities must be limited to normal working hours and according to municipal bylaws, i.e., working hours must be limited to weekdays only. If construction is required on the weekend; permission from adjacent landowners will be required prior to construction. 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. 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>Medium-Low (Negative)</p>	<p>Low</p>
<p>Traffic Impact:</p> <ul style="list-style-type: none"> Increased traffic congestion could possibly occur as a result of construction vehicles moving onto and off the site during construction. Traffic delays/congestion due to road lanes crossed for reconstruction 	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> Construction activities must be limited to normal working hours and according to municipal bylaws, i.e., working hours must be limited to weekdays only. A detour route and signs must be provided to guide road users which route to take during the operation phase. Traffic marshals/officers must be appointed to assist with smooth movement of motorist that will be affected during the construction phase. Suitable warning and information signage should be erected before construction commences. 	<p>Medium-Low (Negative)</p>	<p>Low</p>
<p>Heritage Impacts Impact on the turning over of</p>	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> 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 	<p>Negligible (Negative)</p>	<p>Low</p>

buried artefacts.		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>Health and Safety</p> <ul style="list-style-type: none"> The health of workers may be adversely affected by unsafe working conditions on the construction site. Inadequate attention to fire safety awareness and fire safety equipment could result in unsafe working environment and loss of property. 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 	Medium-High (Negative)	<ul style="list-style-type: none"> The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. Adequate signage warning road users of the speed limit and possible dangers on site At least 1 toilet must be available per 20 workers. Toilet paper must be provided. Healthy and Safety protective personal equipment such as safety boots, safety helmets, gloves, dust masks etc must be made available for workers on site. No open fires will be allowed on site unless in a demarcated area identified by the ECO. 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. 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. All staff is to use the toilets at all times rather than informal defecation in the environment. Toilets are to meet the minimum requirements of the OHS ACT. All sanitary fees that may be payable to any local authority shall be paid by the Contractor. Ablutions are to be cleaned/emptied before they are full and contaminate the environment. Toilets are not to be located within sensitive areas such as drainage lines and 1:100-year flood lines. Any sewerage spillages must be regarded as hazardous and cleaned up immediately using appropriate PPE. 	Medium-Low (Negative)	Low
<p>Safety and Security:</p> <ul style="list-style-type: none"> Construction sites by 	Medium-High	<ul style="list-style-type: none"> All flammable substances must be stored in dry area which do not pose an ignition risk to the said substances. 	Medium-Low (Negative)	Low

DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED RIVER REHABILITATION OF 52 MAIN STREET IN BORDEAUX, RANDBURG. GAUTENG PROVINCE. SOUTH AFRICA.

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<p>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.</p> <ul style="list-style-type: none"> Furthermore, criminals may also utilize the opportunity to steal items from the site and the surrounding communities 	<p>(Negative)</p>	<ul style="list-style-type: none"> Ensure all construction vehicles and machinery is under the control of competent personnel. 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). 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. All construction activities should be limited to the demarcated areas. Access to these demarcated areas strictly controlled. Entry points and access routes to the sites must be clearly marked and traffic limited to those areas as far as possible. Suitable warning and information signage should be erected before construction commences. Adequate sanitary and ablutions facilities must be provided for construction workers. Mechanisms will be implemented to deal with people seeking employment in order to minimize any issues related to the influx of people. 		
<p>Waste Management 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-High (Negative)</p>	<ul style="list-style-type: none"> Littering will not be permitted on the site and general housekeeping will be enforced. General waste bins must be readily available for litter disposal and general housekeeping. The EMPr must be followed during construction. 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. 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. 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. No waste (hazardous or general) will be disposed of in the trenches around the storm water 	<p>Negligible (Negative)</p>	<p>Low</p>

		<p>channel footprint.</p> <ul style="list-style-type: none"> • All excess material and rubble must be removed from the site so not to restrict the rehabilitation process. • Adequate toilet facilities must be provided for all staff members as standard construction practice. • Monitor the sewerage facilities for spillages and handle any spillages as hazardous waste. • Chemical toilets must be placed within the construction camp and not in close proximity to the watercourse. • 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. • All hazardous material must be carefully stored and then disposed of offsite at the licensed hazardous landfill site. 		
<p>Soil contamination Hydrocarbon spillages from construction equipment e.g. (oils, fuels,) and also cement have a potential of contaminating soil.</p>	<p>Medium-Low (Negative)</p>	<ul style="list-style-type: none"> • Any hazardous or dangerous goods utilized during the construction phase must be stored on an impermeable surface that is bunded, fenced, locked, and covered. • A spill kits must be clearly marked and visible when utilizing hazardous or dangerous materials to ensure all spills can be immediately cleaned. • Spill kits must be regularly checked and maintained. • Remediation of spillages must be conducted on a continual basis and within 24h of spillage. • Contaminated soil will be considered to be hazardous waste and disposed of accordingly. • Machinery must be properly maintained to keep oil leaks in check. Mixing of cement must be undertaken on mixing boards. • If a cement mixing silo is constructed on site this must be within a bunded area. 	<p>Negligible (Negative)</p>	<p>Low</p>
<p>Erosion and Sedimentation: Construction earthworks may cause soil erosion and sedimentation in the watercourse</p>	<p>High (Negative)</p>	<ul style="list-style-type: none"> • 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. • 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. • Spoil stockpiles should be placed above the high-water mark in distinct piles and adequate erosion 	<p>Medium-Low (Low)</p>	<p>Low</p>

		<p>measures need to be implemented in order to minimise and reduce erosion and siltation into the watercourse from spoil stockpiles.</p> <ul style="list-style-type: none"> 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 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. The duration of exposed soil must be kept to a minimum and rehabilitation must be initiated as soon as construction is completed. Ensure that cleared areas are stabilized to prevent and control erosion and/or sedimentation. Only vegetation that needs to be removed for the construction of the bridge should be removed in a phased and controlled manner. 		
<p>Socio-economic Impacts</p> <p>Positive social impacts:</p> <p>Creation of employment and business opportunities.</p>	<p>Medium-High (Positive)</p>	<p>Job opportunities can be created during the construction phase.</p> <ul style="list-style-type: none"> Surrounding neighbours must be consulted prior to construction to discuss the construction process and opportunities regarding employment. Local community members must be employed as far as possible for low- and semiskilled jobs. Mechanisms must be implemented to deal with people seeking employment in order to minimize any issues related to the influx of people 	<p>Medium-High (Positive)</p>	<p>Low</p>
<p>Proposed Alternative 1: Localized Mitigation Strategy</p> <p>OPERATIONAL IMPACT</p>				
<p>Impacts on Flora:</p> <ul style="list-style-type: none"> Establishment of alien plant on the disturbed area. 	<p>Medium-High (Negative)</p>	<ul style="list-style-type: none"> Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area. Establishment and encroachment of alien invasive species should be monitored regularly, and control of alien species should be done where necessary. Details regarding the identification and 	<p>Negligible (Negative)</p>	<p>Low</p>

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		<p>legislation associated with alien invasive species can be obtained from http://www.agis.agric.za;</p> <ul style="list-style-type: none"> Ongoing vegetation growth management must be incorporated into the Johannesburg City Parks program as the detention ponds will be constructed in existing recreational parks. 		
<p>No Go: Not Preferred</p> <p>The no-go option refers to the option of not implementing the proposed activity. In this case it would mean that no further maintenance activities would be carried out on any of the storm water management. In this case it would mean the current negative impacts such as scouring, erosion, alien vegetation establishment will continue unabated. Furthermore, the complaint received from the property owner at number 52 Main Street, Bordeaux would not be addressed. The collapsing boundary wall and the escalating property damage by storm water would continue unabated. The increasing flood risk to private property would become a reality soon.</p> <p>It is also important to note that the identified impacts associated with the three proposed options would be completely avoided.</p>				
Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Collapse of the boundary wall	High (Negative)	<ul style="list-style-type: none"> In the absence of any erosion control measures the boundary wall will collapse unabated. This will have negative impacts on the on a number of properties located with 1:50 year flood line. 	High (Negative)	High
<p>Impacts on Flora:</p> <ul style="list-style-type: none"> Establishment of alien plant on the disturbed area. 	Medium-High (Negative)	<ul style="list-style-type: none"> Establishment and encroachment of alien invasive species should be monitored regularly, and control of alien species should be done where necessary. Details regarding the identification and legislation associated with alien invasive species can be obtained from http://www.agis.agric.za; Ongoing vegetation growth management must be incorporated into the Johannesburg City Parks program as the detention ponds will be constructed in existing recreational parks. 	Medium-High (Negative)	High

<p>Visual Impact: Scouring, erosion, debris accumulation in the channel</p>	<p>High (Negative)</p>	<ul style="list-style-type: none"> • In the absence of erosion control methods banks and beds would further degrade resulting in further loss of habitat and ecological functionality. • Failure to conduct maintenance on the existing infrastructure such as road culverts, gabions, and stormwater outlets may result in structural failure and associated negative environmental impacts. There are also safety implications associated with a lack of maintenance. 	<p>High (Negative)</p>	<p>High</p>
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List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

The following specialist studies were undertaken:

- Wetland/Riparian Zone Delineation and Rehabilitation Report,
- Aquatic Ecology Impact Assessment
- Heritage Impact Assessment Report and
- Geotechnical Report

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

None

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

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

Proposal

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Decommissioning 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.

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

N/A

4. CUMULATIVE IMPACTS

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

Cumulative impacts are regarded as those impacts that can result from actions which may not be significant on their own, but which can become significant when added to the impact of other similar activities. The anticipated cumulative impacts of this development (for both the Proposed Installation of a Series of dry detention ponds (Preferred) and Design Alternative 1- Localised Mitigation Strategy) includes the following:

Establishment 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-HIGH and can be reduced to MEDIUM-LOW with mitigation.

Destruction of Riparian Zones:

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 west to east. 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-HIGH. The implementation of the proposed dry detention dams may reverse some of the impacts of urbanisation and hardening of the catchment area. This may reduce the cumulative impacts to MEDIUM-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 Medium-high (Positive) but with enhancement it can be MEDIUM-HIGH positive.

5. ENVIRONMENTAL IMPACT STATEMENT

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

Proposal

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 Option1 (Installation of a series of detention ponds). 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 include cumulative impacts as listed below:

- Spread of alien vegetation.
- Impacts on the riparian zone.
- 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:

- Re-instating the wetland functions that were provided by the system before it became a stream. These functions include flood attenuation, stream flow augmentation, sediment trapping, water quality improvement and erosion control.
- Reversing some of the impacts of urbanisation of the integrity and sensitivity of the receiving surface water resources within the catchment.
- Achieving integrated usage of public open spaces to benefit surrounding communities.
- Protection of the integrity of the boundary at Number 52 Main Street, Bordeaux.
- Protection of the private properties along the watercourse along Park Avenue and Valley Road, Bordeaux.
- Improving biodiversity support within an urban environment; and
- Creation of job opportunities during construction phase.

Alternative 1

In summary, the Basic Assessment has assessed potential impacts and identified appropriate management and mitigation measures. No environmental fatal flows, however, some significant negative impacts have been identified to be associated with the localised mitigation strategy. The Impact Assessment section of this report indicates that the following impacts are regarded as significant:

- Site clearing affecting soils and riparian vegetation.
- Impacts on the riparian zone (Changing the physical structure within a water resource (habitat) and replacing with a lined channel, Physical destruction of the riparian vegetation, Loss of connectivity of the active channel with the riparian zone)
- Impacts on flora (Destruction of Riparian Habitat, Wide establishment of alien plant species as the site is infested more with the alien plant species and these proliferate in disturbed environments)
- Mobilization of pollutants: canalization of the stream will promote mobilization of pollutants downstream without improving the water quality.
- Erosion and Sedimentation: (Construction earthworks may cause soil erosion and

sedimentation in the watercourse)

The identified impacts are not regarded as fatal flaws they may result in a complete change in the environment and change the natural stream into a concreted channel. As such the Localised mitigation Strategy is not the nominated as the preferred option to be implemented.

No-go (compulsory)

The `do nothing alternative` is the option of not constructing a storm water management system and addressing the complaint raised by the property owner at Number 52 Main Street, Bordeaux. This alternative would not address the collapsing boundary wall and associated infrastructure. Furthermore, this alternative will not address the pertinent flood risk to a number of private properties that are located in the boundary of the watercourse in the area. As such the do nothing alternative has little benefit to the current development and the surrounding environment. Should this development not proceed:

- The complaint by the landowner at Number 52 Main Street Bordeaux will remain unaddressed.
- The collapsing boundary wall will remain unaddressed.
- The existing infrastructure will be at risk of collapsing.
- The flood risk will remain unabated for a number of private properties along the watercourse.
- No anticipated job opportunities from the No go option will be created.

In summary the situation on the ground will remain the same and the `do nothing alternative` will not assist JRA, the landowner at Number 52 Main Street and the Bordeaux Community at large. The cost of the `do nothing alternative` are expected to outweigh the benefits and therefore this alternative is not a preferred alternative

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal: Rehabilitation Option 1: Series of Dry Detention Ponds

The proposed dry detention ponds will be constructed within the existing recreational park (public open space), which is regarded as already disturbed areas. Very little activity is expected to take place within the stream as per this design option. The only localised activity within the stream will be stabilization of the badly eroded areas and reinstating the damaged retaining wall. Environmental impacts associated with these activities have already occurred.

The vegetation cover of the riparian zone is largely changed from historical grassy wetland 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. Some of the identified impacts include canalization of sections of the active channel, bank stabilization, active erosion within the channel, conversion of sections of the watercourse into the Bordeaux South Park (recreational area).

The watercourses within the study area are considered to be of ecological importance and sensitive on a provincial or local scale. The EIS score of 1.0 falls into a category characterised by Moderate ecological importance and sensitivity. Most of the identified impacts will only take place as a result of construction activities and therefore will be limited to the duration of the construction activities and can be adequately mitigated to have a medium-low or insignificant impact for both design options. No HIGH (negative) impacts after mitigation were determined for the proposed construction of a series of detention ponds within the existing recreational area.

Table 1: Impact Summary table for the proposed series of detention dams (Preferred Alternative)

Item	Significance of impact	
	Before Mitigation	After Mitigation
Impacts on Groundwater	Medium-Low (-ve)	Negligible (-ve)
Impacts on Riparian Zone	Medium-High (-ve)	Negligible (-ve)
Mobilization of Pollutants	Medium-Low (-ve)	Negligible (-ve)
Impacts on Flora	Medium-Low (-ve)	Negligible (-ve)
Air Quality Impacts	Medium-Low (-ve)	Negligible (-ve)
Visual Impacts	Medium-Low (-ve)	Negligible (-ve)
Noise Impact	Medium-Low (-ve)	Negligible (-ve)
Traffic Impacts	Medium-High (-ve)	Medium-Low (-ve)
Heritage Impacts	Medium-Low (-ve)	Negligible (-ve)
Health and Safety	Medium-High (-ve)	Negligible (-ve)
Safety and Security	Medium-High (-ve)	Medium-Low (-ve)
Waste management	Medium-High (-ve)	Negligible (-ve)
Soil Contamination	Medium-Low (-ve)	Negligible (-ve)
Erosion and Sedimentation	Medium-Low (-ve)	Negligible (-ve)
Socio-Economic Impacts	Medium-High (+ve)	Medium-High (+ve)
Operational Phase		
Safety and Security	Medium-Low (-ve)	Negligible (-ve)
Sedimentation within the channel	Medium-Low (-ve)	Negligible (-ve)
Impacts on Flora	Medium-Low (-ve)	Negligible (-ve)
Visual Impacts	Medium-Low (-ve)	Negligible (-ve)

For alternative: Localized Mitigation Strategy

The proposed localised mitigation strategy entails the lining of the active channel and reinstatement of the outlet structures. The rehabilitation works will attempt to mitigate the current localised problem at the current site but however not tackle the overall global problem at its source. Furthermore, this strategy will only perpetuate transfer the issue onsite downstream. This alternative will have a detrimental impact on the natural environment. As per the strategy the stream will be converted into a concrete channel. This will have detrimental impacts on the natural vegetation, physical structure of the riparian zone, the biodiversity support

function. This alternative will result in the loss of both important areas and ecological support areas according to the Gauteng Conservation Plan (Version 3.3) (GDARD, 2011).

Impacts identified as High are those that will result in a permanent change in the ecological classification, importance, and sensitivity of the watercourse. These include the impacts such as Site Clearing (High), Impacts on Riparian Zone (High), Mobilization of Pollutants (High), and Impacts on Flora (High) and Erosion and Sedimentation (High). Impacts that was identified as high are mostly associated with construction activities.

Table 2: Impact Summary table for the Localised Mitigation Strategy (Preferred Alternative)

Item	Significance of impact	
	Before Mitigation	After Mitigation
Site Clearing	High (-ve)	Medium-High (ve)
Impacts on Riparian Zone	High (-ve)	Medium-High (-ve)
Impacts on Groundwater	Medium-High (-ve)	Medium-Low (-ve)
Mobilization of Pollutants	High (-ve)	Medium-Low (-ve)
Impacts on Flora	High (-ve)	Medium-Low (-ve)
Air Quality Impacts	Medium-Low (-ve)	Negligible (-ve)
Visual Impacts	Medium-Low (-ve)	Negligible (-ve)
Noise Impact	Medium-High (-ve)	Medium-Low (-ve)
Traffic Impacts	Medium-High (-ve)	Medium-Low (-ve)
Heritage Impacts	Medium-Low (-ve)	Negligible (-ve)
Health and Safety	Medium-High (-ve)	Medium-Low (-ve)
Safety and Security	Medium-High (-ve)	Medium-Low (-ve)
Waste management	Medium-High (-ve)	Negligible (-ve)
Soil Contamination	Medium-Low (-ve)	Negligible (-ve)
Erosion and Sedimentation	High (-ve)	Medium-Low (-ve)
Socio-Economic Impacts	Medium-High (+ve)	Medium-High (+ve)
Operational Phase		
Impacts on Flora	Medium-High (-ve)	Negligible (-ve)

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

The construction of the dry detention ponds will take place within the existing recreational parks located outside of the watercourse (which is regarded as a sensitive area). These dry detention ponds will however have a positive impact in the integrity of the watercourse.

The construction of dry detentions ponds will re-instate the wetland functions that were provided by the wetland system before it became a stream due to urbanization and large scale scouring. These functions include flood attenuation, stream flow augmentation, sediment trapping, water quality improvement and erosion control. This will reverse some of the impacts of urbanisation of the integrity and sensitivity of the receiving surface water resources within the catchment;

The proposed series of dry detention dams will not only address the issue raised by the property owner at

Number 52 Main Street but will also address potential future complaints from homeowners situated along the watercourse.

The proposed construction of a series of Dry detention ponds will have an overall positive impact on the integrity of the watercourse within the project area and provide protection to the watercourse down gradient of the study area.

The proposed construction of dry detention ponds will increase the biodiversity support function that is currently played by the recreation's parks. The presence of water will attract water birds and improve the biodiversity in the area.

7. SPATIAL DEVELOPMENT TOOLS

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

Gauteng Provincial Environmental Management Framework:

- The Development site is located within the Urban Development Zone wherein intensive urban development is encouraged.

Johannesburg Open Space Management Framework

- The framework seeks to ensure inter-connected and managed network of open spaces supporting interactions between social, economic, and ecological activities, sustaining, and enhancing both ecological processes and human settlements within the city.
- In this area, the framework identifies the need to protect wetlands and sensitive habitats.

8. RECOMMENDATION OF THE PRACTITIONER

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

YES	NO
-----	----

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

--

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:

Organic Minds (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 with the property owner at Number 52 Main Street, Bordeaux as he is the main Interested and Affected Party.

- Continued consultation and engagement with all relevant stakeholders – especially neighbouring property owners and local communities, and respective municipalities during labour recruitment and procurement for services and supplies during construction phase.
- Non-erodible materials should be used for the construction of any berms or any other isolation structures to be used within a flowing watercourse.
- 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.
- 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
- 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 riparian zone and soil, thus preventing surface and groundwater pollution.
- 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.
- 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. The relevant authorizations 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 authorization issued by GDARD.

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

Overall Positive Environmental Impact: The River rehabilitation (proposed series of water detention dams) will have an overall positive impact to the environment. The proposed activity will address some of the impacts that are currently undermining the integrity and sensitivity of the watercourse within the study area. These impacts include localized erosion, erosion down gradient of the study area, establishment of alien vegetation, accumulation of woody debris within the watercourse etc.

Re-instatement of wetland functionality: According to the wetland specialist report It is likely that the Bordeaux South Park, Rose Garden Park, and the Denise Park located up gradient of the study area were all constructed on a historically connected wetland system (Hillslope seepage and valley bottom wetland areas). Urbanization and hardening of the catchment area resulted in extensive erosion and canalization of the wetland area. The

proposed activity seeks to re-instate some of the wetland functionality that was lost due to urbanization of the catchment area.

Addressing of the long-standing complaint: The rehabilitation of the river on 52 Main street will further address a long-standing complaint from the property owner. The complaint was first laid with the Johannesburg Roads Agency (JRA) in 2017, and each rainy season that comes imposes further damage to the property, the watercourse onsite and the watercourse down gradient of the site.

Protecting private properties: A number of private properties are at risk of being eroded as a result of ongoing erosion within the watercourse. Each passing rainy season imposes further damage to the watercourse and increases the risk to a number of properties down gradient of the study area. The proposed river rehabilitation will have a positive impact on the immediate surrounding community, especially since their properties and investments will be protected from ruin which is currently caused by the watercourse. If nothing is done now, then JRA and City of Johannesburg should expect a flood of complaints from a number of private property owners in the near future.

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

10 years.

11.

ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

(must include post construction monitoring requirements and when these will be concluded.)

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

EMPr attached

Yes

SECTION F: APPENDIXES

APPENDIX A: SITE PLAN(S)

- **Locality Map**

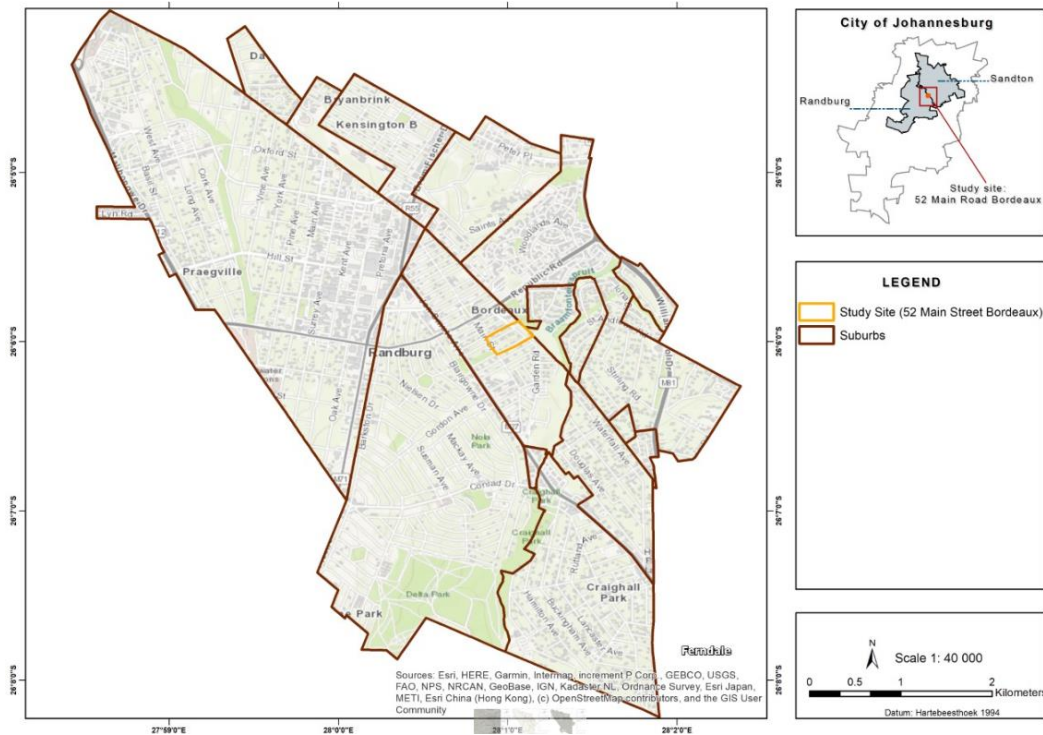


Fig: Locality Map showing showing 52 Main Street, in the City of Joburg

- **Sensitivity map**



Fig: Environmentally sensitive areas outside the project location

APPENDIX B: PHOTOGRAPHS



Fig: Indicating some of the impacts identified during the site assessment: **Frame A:** bank stabilization; **Frame B:** Calvert under Main Road; **Frame C:** Woody vegetation, debris and litter; **Frame D:** Canalization of sections of the channel; **Frame E:** Active erosion within the channel; **Frame F:** Bordeaux South Park in a historical valley bottom wetland system (Rose Garden Park and the Denise Park are located up gradient of the study site within the same wetland system).

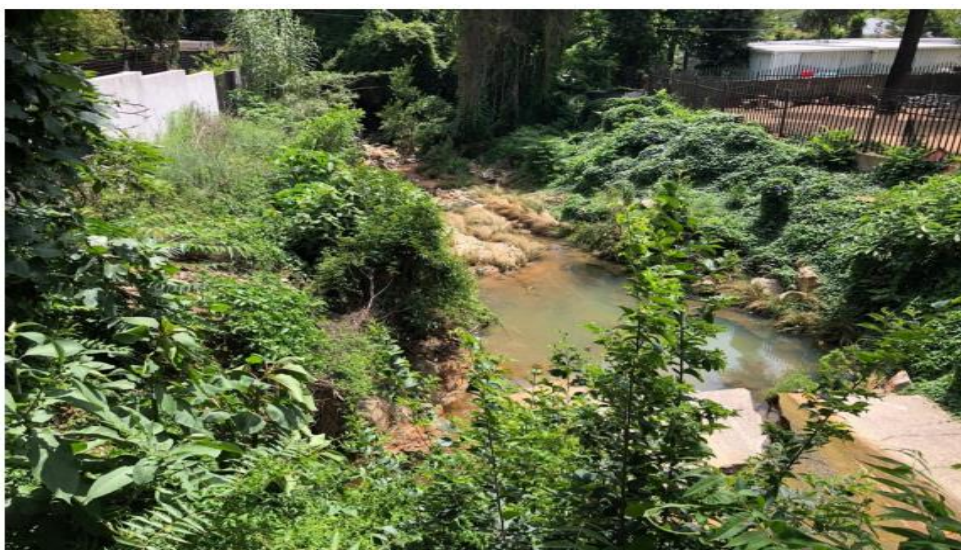


Fig: Erosion and scouring on 52 Main street



Fig: Left – concrete canal flowing from Main street towards the river. Right – Dry riverbed towards the Braamfonteinspruit.



Fig: Example of fencing over river crossing within access controled area.

APPENDIX C: FACILITY ILLUSTRATION(S)



Fig: Heat map of the 1:50 yr flooding in Bordeaux



Fig: Proposed attenuation ponds on locations around Bordeaux catchment

APPENDIX D: ROUTE POSITION INFORMATION

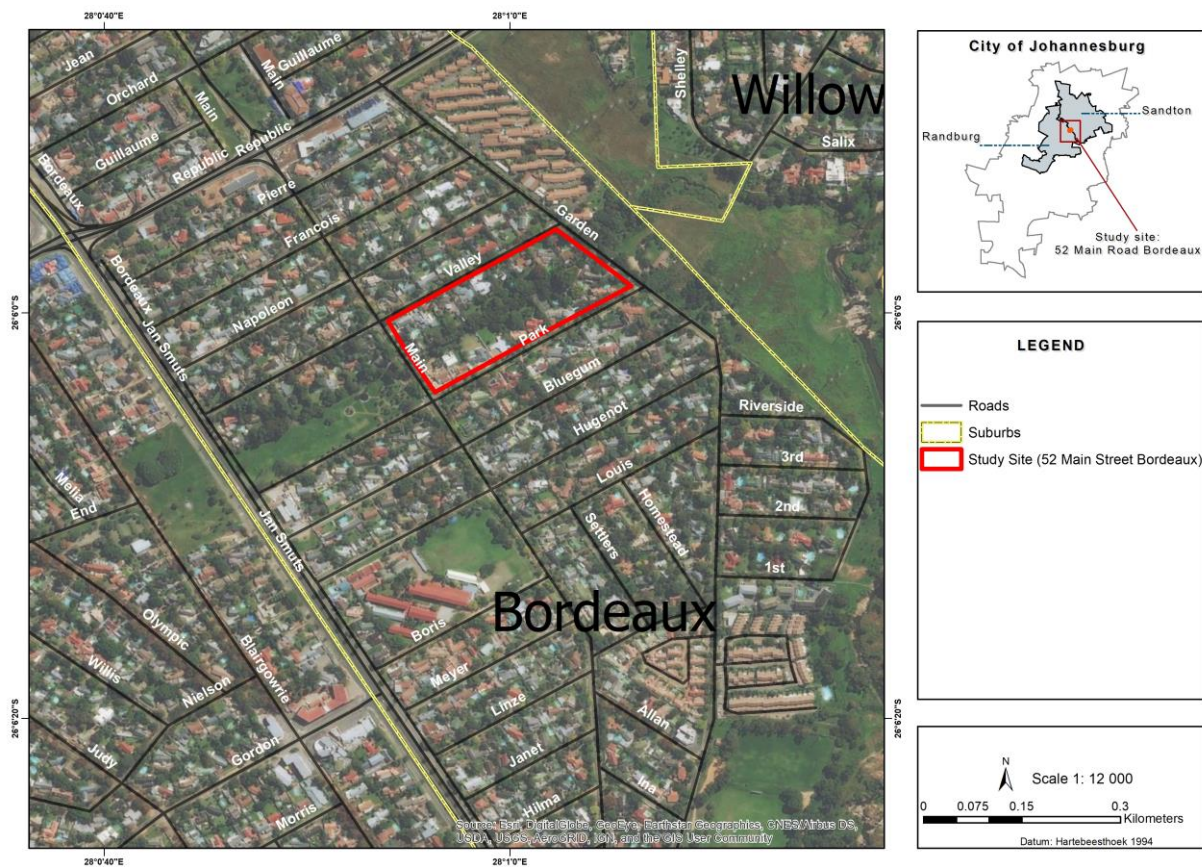


Fig: Suburbs surrounding Bordeaux, showing project location

APPENDIX E: PUBLIC PARTICIPATION INFORMATION

1. Proof of site notice

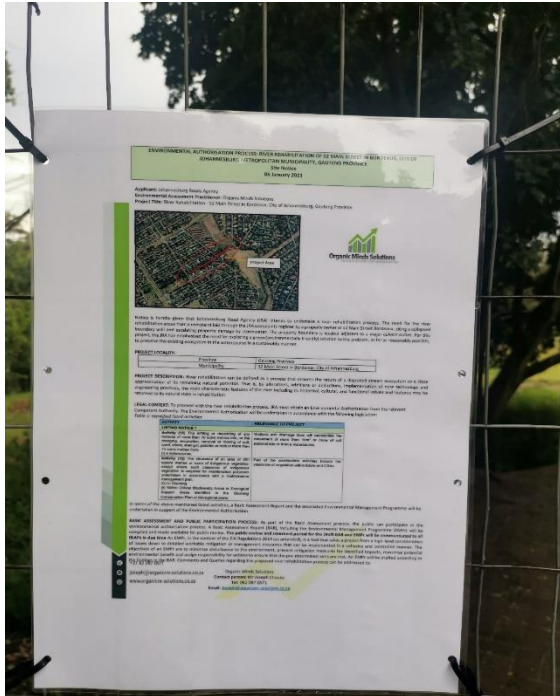


Image 1: Notice was placed at Gordons Road by a small entrance gate



Image 2: Photograph at the entrance of Bordeaux South



Image 3 & 4 : Photographs on the Gate as shown in Image 2 and notice on 52 Main street above the culvert

2. Written notices issued as required in terms of the regulations.

ENVIRONMENTAL AUTHORISATION PROCESS: RIVER REHABILITATION OF 52 MAIN STREET IN BORDEAUX, CITY OF JOHANNESBURG METROPOLITAN MUNICIPALITY, GAUTENG PROVINCE
Site Notice
January 2021



Applicant: Johannesburg Roads Agency

Environmental Assessment Practitioner: Organic Minds Solutions

Project Title: River Rehabilitation - 52 Main Street in Bordeaux, City of Johannesburg, Gauteng Province.

Notice is hereby given that Johannesburg Road Agency (JRA) intends to undertake a river rehabilitation process. The need for the river rehabilitation arose from a complaint laid through the JRA complaints register by a property owner at 52 Main Street Bordeaux, citing a collapsed boundary wall and escalating property damage by stormwater. The property boundary is located adjacent to a major culvert outlet. For this project, the JRA has emphasised the need for exploring a green (environmentally friendly) solution to the problem, as far as reasonably possible, to preserve the existing ecosystem in the watercourse in a sustainable manner.

PROJECT LOCALITY:

Province	Gauteng Province
Municipality	City of Johannesburg
Ward	102

For a more detailed project locality please refer to the attached Locality map (Figure 1)



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joseph@organicm-solutions.co.za
www.organicm-solutions.co.za

PROJECT DESCRIPTION: River rehabilitation can be defined as a process that ensures the return of a degraded stream ecosystem to a close approximation of its remaining natural potential. That is, by alterations, additions or deductions, implementation of new technology and engineering practices, the main characteristic features of the river including its historical, cultural, and functional values and features may be returned to its natural state in rehabilitation.

LEGAL CONTEXT: To proceed with the river rehabilitation process, JRA must obtain an Environmental Authorisation from the relevant Competent Authority. The Environmental Authorisation will be undertaken in accordance with the following legislation:

- Application for an Environmental Authorisation for listed activities triggered in Listing Notices GN 324, 325, and 327 in terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), as promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). The Competent Authority responsible for this application is the Gauteng Department of Agriculture and Rural Development (GDARD).

Please refer to Table 1 for a list of triggered activities in terms of the EIA Regulations.

Table 1: Identified listed activities

ACTIVITY	RELEVANCE TO PROJECT
LISTING NOTICE 1	
Activity (19) The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 10 cubic metres from: (i) a watercourse;	Wetland and drainage lines will necessitate the movement of more than 10m ³ or more of soil material into or from a watercourse
Activity (12) The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (C) in Gauteng (i) Within Critical Biodiversity Areas or Ecological Support Areas identified in the Gauteng Conservation Plan or bioregional plans;	Part of the construction activities include the clearance of vegetation within ESAs and CBAs.

In terms of the above-mentioned listed activities, a Basic Assessment Report and the associated Environmental Management Programme will be undertaken in support of the Environmental Authorisation.

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BASIC ASSESSMENT AND PUBLIC PARTICIPATION PROCESS: As part of the Basic Assessment process, the public can participate in the environmental authorisation process. A Basic Assessment Report (BAR), including the Environmental Management Programme (EMP) will be compiled and made available for public review. **The public review and comment period for the Draft BAR and EMP will be communicated to all ILAPs in due time.** An EMP, in the context of the EIA Regulations 2014 (as amended), is a tool that takes a project from a high-level consideration of issues down to detailed workable mitigation or management measures that can be implemented in a cohesive and controlled manner. The objectives of an EMP are to minimise disturbance to the environment, present mitigation measures for identified impacts, maximise potential environmental benefit and assign responsibility for actions to ensure that the pre-determined aims are met. An EMP will be drafted according to the findings in the BAR. Comments and Queries regarding the proposed river rehabilitation process can be addressed to:

Organic Minds Solutions
Contact person: Mr Joseph Chauke
Tel: 082 097 0571
Email: joseph@organicm-solutions.co.za

+27 82 097 0571
joseph@organicm-solutions.co.za
www.organicm-solutions.co.za

3. Proof of newspaper advertisements



Image: Newspaper Advert was placed at the Randburg Sun on the week ending 15 January 2020, as shown in yellow

4. Communications to and from interested and affected parties

- Member of the public are currently making registration on the I&AP database. Upon release of this draft, an email will be sent to all I&APs for comments and all correspondence will be placed here.

5. Minutes of any public and/or stakeholder meetings

No meeting held at this stage

6. Comments and Responses Report

Not at this stage.

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

Not at this stage

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

Not at this stage

9. Copy of the register of I&APs

Salutation	Name & Surname	Organization	Cell & Email	Address
Mrs	Michele Marais	Studio Twenty TWO	0843330486; michele@studio22sa.co.za	22 Valley Rd, Bordeaux, Randburg
Dr	Deonita Damons	Boston	0844550099; deonitad@boston.co.za	PO Box 799, Randburg, 2125
Mr	Stan Hudson	Home Owner	Stan Hudson stanmozam@gmail.com	51 Garden Road Bordeaux Randburg 2194.
Mr	Bernie Marais	Home Owner	bmarais@aospartner.com	
Mr	Peter Maromo	Home Owner	Petermaromo1@gmail.com	17 Park Ave, Bordeaux
Mrs	Tanya Hugo	Home Owner	Taneke.designsa@gmail.com	8 Valley Rd, Bordeaux, Randburg

**APPENDIX F: WATER USE LICENSE(S) AUTHORISATION, SAHRA
INFORMATION, SERVICE LETTERS FROM MUNICIPALITIES, WATER
SUPPLY INFORMATION**

- Pre-application meeting has been conducted, Organic Minds Solutions is awaiting acknowledgement letter which maps out steps to follow and subsequent requirements from the Department of Water & Sanitation.

APPENDIX G: SPECIALIST REPORTS

G1. Heritage Impact Assessment

G2. Aquatic Impact Assessment

G3. Wetland/Riparian Zone Impact Assessment

APPENDIX H: EMPR

APPENDIX I: OTHER INFORMATION

EAP DECLARATION

INDEMNITY AND DECLARATION OF INDEPENDENCE

I, Joseph Chauke (**SACNASP: 123073**), in my capacity as a Environmental Assessment Practitioner (EAP), hereby declare that;

- I have no vested interest in the in the property studied nor is it affiliated with any other person/body involved with the property and/or proposed development;
- I do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998);
- The findings, results, observations, conclusions and recommendations given in this report are based on my best scientific and professional knowledge as well as available information;
- The report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken by myself and I reserve the right to modify aspects of the report including the recommendations if and when new information becomes available from on-going research or further work in this field, or pertaining to this investigation;
- Although I have exercised due care and diligence in rendering services and preparing documents, I however accepts no liability, and the client, by receiving this document, indemnifies myself against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by the use of the information contained in this document;
- This report must not be altered or added to without the prior written consent of the author. This also refers to electronic copies of this report which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If these form part of a bigger report relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.

Signed:



Company: Organic Minds Solutions (PTY) Ltd

Date: 05 March 2021

SPECIALIST DECLARATION

Heritage Specialist Declaration

DECLARATION OF INDEPENDENCE

In terms of Chapter 5 of the National Environmental Management Act of 1998 specialists involved in Impact Assessment processes must declare their independence.

I, Trust Mlilo, do hereby declare that I am financially and otherwise independent of the client and their consultants, and that all opinions expressed in this document are substantially my own, notwithstanding the fact that I have received fair remuneration from the client for preparation of this report.

Expertise:

Trust Mlilo, MA. (Archaeology), BA Hons, PDGE and BA & (Univ. of Pretoria) ASAPA (affiliation member) and more than 15 years of experience in archaeological and heritage impact assessment and management. Mlilo is an accredited member of the Association for Southern African Professional Archaeologists (ASAPA), Amafa akwaZulu Natali and Eastern Cape Heritage Resources Agency (ECPHRA). He has conducted more than hundred AIA/HIA Studies, heritage mitigation work and heritage development projects over the past 15 years of service. The completed projects vary from Phase 1 and Phase 2 as well as heritage nomination work for government, parastatals (Eskom) and several private companies such as BHP Billiton and Rhino Minerals.

Independence

The views expressed in this document are the objective, independent views of Mr Trust Mlilo and the survey was carried out under Organic Minds Solutions. ISS has no business, personal, financial or other interest in the proposed development apart from fair remuneration for the work performed.

Conditions relating to this report

The content of this report is based on the author's best scientific and professional knowledge as well as available information. ISS reserves the right to modify the report in any way deemed fit should new, relevant or previously unavailable or undisclosed information become known to the author from on-going research or further work in this field or pertaining to this investigation.

This report must not be altered or added to without the prior written consent of the author and ROMH Consulting. This also refers to electronic copies of the report which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If these form part of a main report

relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.

Authorship: This AIA/HIA Report has been prepared by Mr Trust Mlilo (Professional Archaeologist). The report is for the review of the Heritage Resources Agency (PHRA-G).


Geographic Co-ordinate Information: Geographic co-ordinates in this report were obtained using a hand-held Garmin Global Positioning System device. The manufacturer states that these devices are accurate to within +/- 5 m.

Maps: Maps included in this report use data extracted from the NTS Map and Google Earth Pro.

Disclaimer: The Authors are not responsible for omissions and inconsistencies that may result from information not available at the time this report was prepared.

The Archaeological and Heritage Impact Assessment Study was carried out within the context of tangible and intangible cultural heritage resources as defined by the SAHRA Regulations and Guidelines as to the authorisation of the proposed riverbank rehabilitation on 52 Main street, Bordeaux within the City of Johannesburg Metropolitan, Gauteng Province being proposed by Johannesburg Road Agency.

Signed by



25/ 11/ 2020


Aquatic Specialist Declaration

DECLARATION BY THE SPECIALIST

I, Brett Reimers, declare that –

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;

- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the Specialist

Offset Industries

Name of Company:

04/02/2021

Date

Wetland Specialist Declaration

INDEMNITY AND DECLARATION OF INDEPENDENCE

I Lindokuhle Hlongwane, in my capacity as a Wetland Specialist consultant hereby declare that;

- I have no vested interest in the in the property studied nor is it affiliated with any other person/body involved with the property and/or proposed development;
- I do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998);
- The findings, results, observations, conclusions and recommendations given in this report are based on my best scientific and professional knowledge as well as available information;
- The report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken by myself and I reserve the right to modify aspects of the report including the recommendations if and when new information becomes available from on-going research or further work in this field, or pertaining to this investigation;
- Although I have exercised due care and diligence in rendering services and preparing documents, I however accepts no liability, and the client, by receiving this document, indemnifies myself against all actions, claims, demands, losses, liabilities, costs, damages and expenses arising from or in connection with services rendered, directly or indirectly by the use of the information contained in this document;
- This report must not be altered or added to without the prior written consent of the author. This also refers to electronic copies of this report which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If these form part of a bigger report relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.