



**Johannesburg City Parks and Zoo**  
**Golden Harvest Park Upgrades**  
**Draft Basic Assessment Report for Public Comment**  
**GDARD Reference Number: GAUT 002/22-23/E3343**

August 2022

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# Johannesburg City Parks and Zoo

## Golden Harvest Park Upgrades

### Draft Basic Assessment Report

August 2022

AVDE Project Ref: 129-001

Prepared by: Suzanne van Rooy



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#### VERSION CONTROL

Alta van Dyk Environmental cc

Version: Draft

Approved by: Alta van Dyk

Signed:

A handwritten signature in black ink, appearing to read "Alta van Dyk", is written over a light blue horizontal line.

Position: Environmental Specialist

Date: August 2022

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## ***Abbreviations***

|         |   |
|---------|---|
| AVDE    | Alta van Dyk Environmental Consultants                  |
| BAR     | Basic Assessment Report                                 |
| BID     | Background Information Document                         |
| CAR     | Conservation of Agricultural Resources Act              |
| CBA     | Critical Biodiversity Area                              |
| CBD     | Central Business District                               |
| CivEc   | Civil Engineering Consultants                           |
| CRR     | Comment and Response Report                             |
| DWS     | Department of Water and Sanitation                      |
| EAP     | Environmental Assessment Practitioner                   |
| EI&S    | Ecological Importance and Sensitivity                   |
| EIA     | Environmental Impact Assessment                         |
| EMPr    | Environmental Management Programme Report               |
| ESA     | Ecological Support Area                                 |
| GAPA    | Gauteng Agricultural Potential Atlas                    |
| GAPA 4  | the Gauteng Agricultural Potential Atlas                |
| GDARD   | Gauteng Department of Agriculture and Rural Development |
| GPEMF   | Gauteng Provincial Environmental Management Framework   |
| HGM     | Hydrogeomorphic   |
| IDP     | Integrated Development Plan                             |
| IS      | Importance and Sensitivity                              |
| NEM:AQA | National Environmental Management: Air Quality Act,     |
| NEM:BA  | National Environmental Management: Biodiversity Ac      |
| NEM:PAA | National Environmental Management: Protected Areas Act  |
| NEM:WA  | National Environmental Management: Waste Act            |
| NEMA    | National Environmental Management Act                   |
| NHRA    | National Heritage Resources Act                         |
| NWA     | National Water Act                                      |
| PES     | Present Ecological State                                |
| WCS     | WCS Scientific  |
| WULA    | Water Use Licence Application                           |



## **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 1/2022)**

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### **Kindly note that:**

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This template is current as of April 2022. It is the responsibility of the EAP to ascertain whether subsequent versions of the template 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 must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority (uploaded to the EIA online system) empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application. The EIA online system can be accessed at <https://eia.gauteng.gov.za>.**
- 5.
6. **A copy (PDF) of the final report and attachments must be uploaded to the EIA online system. The EIA online system can be accessed at <https://eia.gauteng.gov.za>.**
7. **Draft and final reports submitted in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) must be emailed to [environmentsue@gauteng.gov.za](mailto:environmentsue@gauteng.gov.za).**
8. 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.
9. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
10. An incomplete report may lead to an application for environmental authorisation or Waste Management License being refused.
11. 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 authorization or Waste Management License being refused.
12. 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 or Waste Management License being refused.
13. The applicant must fill in all relevant sections of this form. Incomplete applications will not be processed. The applicant will be notified of the missing information in the acknowledgement letter that will be sent within 10 days of receipt of the application.
14. 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.
15. 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 Sustainable Utilisation of the Environment (SUE) Branch  
P.O. Box 8769  
Johannesburg  
2000

Ground floor, Umnotho House, 56 Eloff Street, Johannesburg

Administrative Unit telephone number: (011) 240 3051/3052  
Department central telephone number: (011) 240 2500

(For official use only)

|                               |  |  |  |  |  |  |
|-------------------------------|--|--|--|--|--|--|
| <b>NEAS Reference Number:</b> |  |  |  |  |  |  |
| <b>File Reference Number:</b> |  |  |  |  |  |  |
| <b>Application Number:</b>    |  |  |  |  |  |  |
| <b>Date Received:</b>         |  |  |  |  |  |  |

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.

The Golden Harvest Park is an existing public park and closure is not relevant for this project.

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

Yes

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

Yes

Refer to Appendix E9. Please note that contact details have not been included as this is a public document and contact information is private. If contact details are required, please contact the Environmental Assessment Practitioner (EAP) – Suzanne van Rooy at [suzanne@avde.co.za](mailto:suzanne@avde.co.za).

If no, state reasons for not attaching the list.

Not applicable.

Have State Departments including the competent authority commented?

No

If no, why?

This is the Draft Basic Assessment Report (BAR) and the first opportunity for State Departments and the competent authority to comment. Comments received will be included in the Comment and Response Report (CRR) of the Final Basic Assessment Report.

# SECTION A: ACTIVITY INFORMATION

## 1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Golden Harvest Park Upgrades

### **Project Background**

Johannesburg City Parks owns and manages the Golden Harvest Park in Johannesburg, Gauteng, which covers an area of approximately 55 ha. The Golden Harvest Park is an open space established for use by the public for recreational purposes. The Park was established in 1972 amidst residential growth in the area and provides a green space within the urban development. Green spaces within urban development provides ecological, social and environmental benefits.

The Golden Harvest Park is located in Randburg, Gauteng Province and falls within the City of Johannesburg Metropolitan Municipality. The Park is situated on several portions of the farms Northwold Ext 8, Hunters Hill AH, Golden Harvest AH and Brushwood Haugh AH. Refer to Figure 1 for the locality map.

Johannesburg City Parks are planning several upgrades to the Park which required environmental related authorisations. The following upgrades are planned at the Golden Harvest Park:

- Construction of a sewer line;
- Building of ablutions (four);
- Upgrade of vehicle bridge;
- Upgrade of pedestrian bridge;
- Construction of two attenuation structures (weirs); and
- Play equipment and recreational park furniture.

The proposed project layout is shown in Figure 2.

The proposed upgrades at Golden Harvest Park are required in order to ensure that the park's river crossings are safe for local community members utilising the park and to provide adequate ablution facilities for community members when visiting the park.

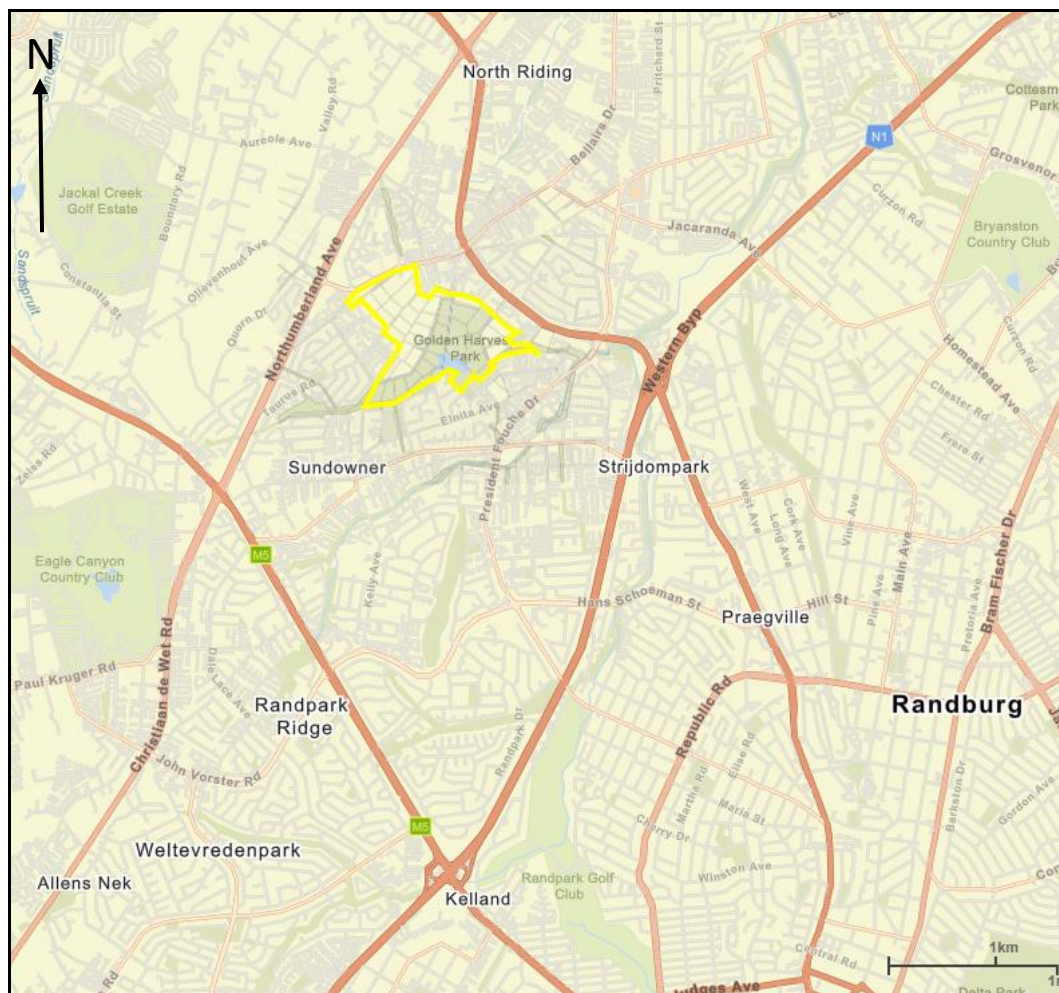


Figure 1: Golden Harvest Park Regional Locality Map





LAYOUT PLAN  
1:2000

SCALE ON REDUCED DRAWING

10mm SCALE ON ORIGINAL DRAWING

- LEGEND**
- NEW ABLUTION FACILITIES
  - EXISTING ABLUTION FACILITIES
  - PROPOSED SEWER 110mm DIA.

REVISION DETAILS

| NO | DATE       | DESCRIPTION              |
|----|------------|--------------------------|
| 1  | 2021-08-25 | FOR INFORMATION PURPOSES |
|    |            |                          |
|    |            |                          |

CLIENT:





a world class African city      City Parks      Joburg ZOO  
General Council      General Council      General Council

APPROVED:

PROJECT MANAGER      CITY ENGINEER

CONSULTANT:



**CivEc**  
Civil Engineering Consultants

10 REGENCY DR, ROUTE 21 BUSINESS PARK, CENTURION, 0178  
PHONE: (012) 346 1255

DATE

PROJECT: GOLDEN HARVEST CONCEPTUAL DESIGN

TITLE: KEY PLAN AND SCOPE OF WORKS

|                       |                    |            |                    |
|-----------------------|--------------------|------------|--------------------|
| DESIGNED:             | F THOMPSON         | SURVEYED:  |                    |
| DRAWN:                | F THOMPSON         | CHECKED:   | H LINCE            |
| CLIENT REFERENCE No.: |                    | DATE:      | 2021-08-25         |
| SCALE:                | AS SHOWN           | FILE NAME: | 1701L-C-GE-KEY-001 |
| ORIGINAL PAPER SIZE:  | A1                 | SHEET:     | 01 of 01           |
| DRAWING No.:          | 1701L-C-GE-KEY-001 | REVISION   | 00                 |

## **Project description**

### **Construction of sewer line**

**The sewer line will be constructed from the depot to an existing manhole to replace the current septic tank at the depot.**

The sewer pipes will be constructed as follows:

- The construction of a 380 m long 110 mm  $\varnothing$  outfall sewer pipeline and will have a total of 5 manholes. The sewer will connect two existing manholes.
- The sewer pipeline will be a Class 75D uPVC pipe.
- The sewer connections will be solid uPVC wall Class 400, and have watertight seals at joints.
- The pipe will be back filled with in situ material and every 50 m will be provided with a 1.0 m section of 19.0 mm stone to allow subsurface water flow towards the wetland.
- A 4 m strip clearing will be done where construction activity will take place.
- At the construction stage, topsoil to a depth of 150 mm will be removed and stockpiled at the designated areas and reinstated after the pipeline is installed.
- Excavation of trenches will be done with a backhoe excavator and material will be stockpiled at designated areas where it does not impact the flow of the watercourse.
- Bedding and blanket material will be imported from commercial sources.
- Backfill material will be from trench excavations which has been temporarily stockpiled. Excess material (spoil) will be carted off site to suitable dumping sites.
- Special filling and blanket will be required in clayey area to absorb any movement due to clay conditions. In addition concrete anchor blocks will be provided at 10 m intervals to avoid any flotation of pipes.
- The work will be in accordance with City of Johannesburg Standards.
- Watertight manholes will be used in the floodline for the outfall sewer as well as all connections.

### **Upgrades of vehicle and pedestrian bridges**

The components of the activities include for:

- Temporary deviation of water course;
- Preparation of embankment footprints and bedding for culvert construction and other hydraulic structures;
- Vehicle bridge: Construction of Precast Rectangular Portal Frame Culverts
- Pedestrian bridge: Construction of Precast Rectangular Portal Frame Culverts
- Imported filling;
- Embankment protection;
- Erosion control and protection;
- Rehabilitation and reinstatement to original state, and
- An existing temporary crossing will be utilised for transportation and traffic to cross the natural water course.

### ***Temporary deviation of watercourse***

The natural water course is a non-perennial water course with a fairly large flow volume, thus temporary deviation thereof will be required during construction to allow a workable construction area and prevent unnecessary environmental damage to the surrounding area. All work will be done during the dry season to facilitate water management.

The temporary deviation will entail:

- Construction of a structure diverting the flow to the eastern side of the water course using sandbags;
- The water will be diverted, to allow a workable area on the western side;
- No excavation will be done on the diverting channel but this will be formed using sandbags or other geo-fabric or material, and
- All temporary construction materials will be removed from site once construction is completed, the site backfilled, topsoiled and grassed including non-degradable fabric such as MatMacR or similar.

### ***Preparation of footprints and bedding***

According to geotechnical information available in-situ conditions are poor and it is not advisable to use in-situ conditions as is for construction purposes. Preparation therefor entails:

- Clearing and grubbing of topsoil and vegetation to a depth of 150 mm;
- Topsoil will be conserved for use during rehabilitation and on embankment slopes;
- Excavation of the footing by means of a backhoe excavator, and spoiling material to designated spoil site. Footing width plus 500mm for working space;
- Trench bottom will be compacted to 90% MDD before construction of rockfill layer;
- Rockfill layer of imported dump rock to be construction to a minimum thickness of 600mm in accordance with SABS 1200 D;
- Construction of bedding material compacted to 90% MDD, bedding and blanket material will be imported, and
- Final layer stability to be approved by engineer to ensure no displacement of material if loaded.

### ***Construction of Rectangular Culverts***

Both bridges will be constructed of rectangular culverts and will be done after deviation of the water course. It will entail the following:

- Construction and casting of a 300mm thick concrete invert slab, Class 30/19 MPa concrete, on a 50mm concrete blinding layer. Including all construction, saw cut and other jointing;
- Installation of Precast Rectangular Portal Frame Culverts
- Sealing of joints with bituminous product or similar approved;
- Culverts to be backfilled with soil cement mixture on sides and as indicated in detailed drawings;
- Layer works will continue for road building purposes;
- Culverts will be Class 75S, complying with the requirements of SABS 986:1994;
- Construction of inlet and outlet structures from reinforced concrete, with rip-rap boulder placement downstream. Including all construction, saw cut and other jointing;
- Construction done according to City of Johannesburg specifications and SABS 1200.

### ***Embankment Protection***

Side slopes to be constructed:

- At 1:2 to 1:3 side slopes;
- Topsoiled with material from site stockpile and/or commercial sources;
- Hydroseeded to environmental consultant specifications, and
- Additional erosion control will also be implemented as required in the form of non- degradable erosion protection on side slopes.

### ***Erosion control and protection***

Erosion protection will take place by ensuring adequate erosion control is added with the features, including but not limited to Gabions and Mac-Mat. The structures will be adjusted according to the flow velocity from the stormwater analysis report.

Downstream of the gabion structure the stream will daylight to natural water course. Additional erosion protection will be implemented by means of rip-rap which has proven very successful on similar projects.

### ***Rehabilitation and Reinstatement***

After completion of construction as specified above the site will be reinstated in accordance with the EMP. All disturbed areas will be rehabilitated and construction material removed from site.

### ***Construction of weirs***

The components of the activities include for:

- Temporary deviation of water course;
- Preparation of embankment footprints and bedding for weirs and other hydraulic structures;
- Two weirs will be constructed upstream of the dam to attenuate water and help with erosion control.
- Imported filling;
- Embankment protection;
- Erosion control and protection;
- Rehabilitation and reinstatement to original state,

### ***Temporary deviation of water course***

The natural water course is a non - perennial water course with a fairly large flow volume, thus temporary deviation thereof will be required during construction to allow a workable construction area and prevent unnecessary environmental damage to the surrounding area. All work will be done during the dry season to facilitate water management.

Temporary deviation will entail:

- Construction of a structure diverting the flow to the northern side of the water course using sandbags;
- The water will be diverted, to allow a workable area on the southern side;
- No excavation will be done on the diverting channel but this will be formed using sandbags or other geo-fabric or material, and
- All temporary construction materials will be removed from site once construction is completed, the site backfilled, topsoiled and grassed including non-degradable fabric such as MatMacR or similar.

### ***Preparation of footprints and bedding***

Preparation therefor entails:

- Clearing and grubbing of topsoil and vegetation to a depth of 150mm, for a width of 20m wide, over a length of approximately 45m. The total affected area will be approximately 900m<sup>2</sup>;
- Topsoil will be conserved for use during rehabilitation and on embankment slopes;

- Excavation of the footing by means of a backhoe excavator, and spoiling material to designated spoil site.
- Construction of bedding material compacted to 90% MDD, bedding and blanket material will be imported, and
- Final layer stability to be approved by engineer to ensure no displacement of material if loaded.

#### **Construction of Weirs**

The construction of weirs will entail the following:

- Construction and casting of a 1m high natural weir constructed of natural material compacted to 90% MDD.
- Construction done according to City of Johannesburg specifications and SABS 1200, and

#### **Embankment Protection**

Side slopes to be constructed:

- At 1:2 to 1:3 side slopes;
- Topsoiled with material from site stockpile and/or commercial sources;
- Hydroseeded to environmental consultant specifications, and
- Additional erosion control will also be implemented as required in the form of non- degradable erosion protection on side slopes.

#### **Erosion control and protection**

Erosion protection will take place by ensuring adequate erosion control is added with the features, including but not limited to Gabions and Mac-Mat. The structures will be adjusted according to the flow velocity from the stormwater analysis report.

Downstream of the gabion structure the stream will daylight to natural water course. Additional erosion protection will be implemented by means of rip-rap which has proven very successful on similar projects.

#### **Rehabilitation and Reinstatement**

After completion of construction as specified above the site will be reinstated in accordance with the EMP. All disturbed areas will be rehabilitated and construction material removed from site.

#### **Legislative requirements**

The environmental related authorisations required for the proposed upgrades at Golden Harvest Park are as follow:

- A Basic Assessment process in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) Regulations. The competent authority for this process is the Gauteng Department of Agriculture and Rural Development (GDARD).
- A Water Use Licence Application (WULA) in terms of the National Water Act (Act 36 of 1998) (NWA). The competent authority for this process is the Department of Water and Sanitation (DWS).

In terms of the EIA Regulations of the NEMA, a Basic Assessment environmental authorisation process is required for the proposed project. Table 1 contains the listed activities triggered by the proposed project and includes a description of the project activity to prompt the listed activity. Table 2 list the water uses that require authorisation in terms of Section 21 of the NWA.

**Table 1: Listed activities triggered by the proposed Golden Harvest Park upgrades**

| Listed activity  | Description of project activity that triggers listed activity   |
|--|---|
| <p><b>Activity 19 of Listing Notice 1</b></p> <p>The infilling or depositing of any material of more than 10m<sup>3</sup> into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m<sup>3</sup> from a watercourse;</p>   | <p>The upgrade of the vehicle bridge, the construction of the pedestrian bridge and the construction of the weirs trigger this activity.</p>  |
| <p><b>Activity 14 of Listing Notice 3</b></p> <p>The development of-</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>where such development occurs-</p> <p>(a) within a watercourse;</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p><u>Gauteng:</u></p> <p>iv. Sites identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;</p> <p>x. Sites zoned for conservation use or public open space</p> | <p>The construction of the following infrastructure triggers this activity:</p> <p>Pedestrian bridge: 248 m<sup>2</sup></p> <p>Weir 1: 141 m<sup>2</sup></p> <p>Weir 2: 123 m<sup>2</sup></p> <p>Sections of the sewer line falls within the regulated 32m from a watercourse (delineated wetland).</p> <p>These proposed activities falls within a Critical Biodiversity Area (CBA) or Ecological Support Area (ESA) according to the Gauteng Conservation Plan. Please refer to Appendix A4.</p> <p>The construction of the ablution facilities does not trigger this activity, as all ablution facilities are located outside the 32m regulated zone around the delineated</p> |

| Listed activity  | Description of project activity that triggers listed activity  |
|--|--|
| or equivalent zoning.  | wetlands. Refer to Appendix A6.  |
| <p><b>Activity 23 of Listing Notice 3</b></p> <p>The expansion of-</p> <p>(ii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>where such development occurs-</p> <p>(a) within a watercourse;</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p><u>Gauteng:</u></p> <p>iv. Sites identified as Critical Biodiversity Areas (CBAs) or Ecological Support Areas (ESAs) in the Gauteng Conservation Plan or in bioregional plans;</p> <p>x. Sites zoned for conservation use or public open space or equivalent zoning.</p> | <p>The upgrade of the vehicle bridge (36m<sup>2</sup>) will expand the current bridge by more than 10m<sup>2</sup>.</p> <p>This activity is located within an Ecological Support Area (ESA) according to the Gauteng Conservation Plan. Please refer to Appendix A4.</p> |

**Table 2: List of Section 21 Water Uses to be applied for.**

| Section 21 Water Use   | Activities which require the Water Use Licence  |
|--|---|
| <p>(c) – impeding or diverting the flow of water in a watercourse</p> <p>(i) – altering the bed, banks, course or characteristics of a watercourse</p> | <ul style="list-style-type: none"> <li>• Upgrade and construction of and vehicle and pedestrian bridges within a watercourse</li> <li>• Construction of weirs within a watercourse</li> <li>• Construction of sewer line and ablution facilities within 500m of a delineated wetland</li> </ul> |

**Details of the Environmental Assessment Practitioner**

Alta van Dyk Environmental Consultants cc (AVDE) was appointed by Civil Engineering Consultants (Pty) Ltd (CivEc) on behalf of Johannesburg City Parks and Zoo to undertake the Basic Assessment environmental authorisation process and Water Use Licence Application for the proposed project. The contact details of Environmental Assessment Practitioner (EAP) are shown in Table 3.

**Table 3: Details of the Environmental Assessment Practitioner**

|                                  |   |
|----------------------------------|---|
| <b>Company</b>                   | Alta van Dyk Environmental Consultants cc   |
| <b>Contact person</b>            | Suzanne van Rooy  |
| <b>Professional registration</b> | Pr.Sci.Nat (Reg nr.400378/11)<br>EAPASA Registered EAP (Ref 2019/1079)  |
| <b>Qualifications</b>            | MPhil Environmental Management (University of Stellenbosch)   |
| <b>Summary of experience</b>     | Suzanne van Rooy holds a Master's Degree in Environmental Management from the University of Stellenbosch. In terms of professional affiliation, Suzanne is registered with the South African Council for Natural Science Professions (SACNASP - 400378/11) in Environmental Science field of practice, as well as a registered EAP with the Environmental Assessment Practitioners Association of South Africa (EAPASA). Suzanne's expertise is in the mining industry sector, focussing on Environmental Impact Assessments, Water Use Licence Applications, environmental performance assessments, water use licence audits, public participation and closure cost assessments. Her involvement in such projects varies from project management and co-ordination to the compilation and review of technical and environmental documents and reports. She has been involved in environmental authorisations for both underground and open cast mining operations, as well as the associated activities such as waste disposal facilities, conveyor routes, access roads, pollution control and other dams, undermining of wetlands and river crossings. She has also conducted various environmental feasibility reporting for potential mining projects. |
| <b>Postal address</b>            | Postnet Suite #745, Private Bag X 1007, Lyttelton, 0140   |
| <b>Telephone</b>                 | 012 940 9457  |
| <b>Fax</b>                       | 086 634 3967  |
| <b>Email</b>                     | <a href="mailto:suzanne@avde.co.za">suzanne@avde.co.za</a>  |

Select the appropriate box

The application is for an upgrade  The application is for a new  Other,

of an existing development  development  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

A Water Use Licence Application (WULA) in terms of the National Water Act (Act No. 36 of 1998) (NWA) will be submitted to the Department of Water and Sanitation (DWS).

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

|     |    |
|-----|----|
| YES | NO |
| YES | NO |

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

## 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:

Applicable legislation, policies and guidelines are listed in Table 4.

**Table 4: Applicable legislation**

| <b>Title of legislation, policy or guideline:</b>   | <b>Administering authority:</b>                                 | <b>Promulgation Date:</b> | <b>Description of compliance</b>   |
|---|---|---------------------------|--|
| National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended) (NEMA)         | Gauteng Department of Agriculture and Rural Development (GDARD) | 29 January 1999           | In terms of the Environmental Impact Assessment (EIA) Regulations, a Basic Assessment environmental authorisation process is required for the proposed project.  |
| National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA)            | Gauteng Department of Agriculture and Rural Development         | 1 July 2009               | No waste license is required for the project.  |
| National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) (NEM:AQA)         | National Department of Environmental Affairs                    | 11 September 2005         | No permitting or licensing requirements arise from this legislation.   |
| National Water Act, 1998 (Act No. 36 of 1998) (NWA)   | Department of Water and Sanitation                              | 1 October 1998            | The proposed development requires a Water Use License as the following water uses are required as per Section 21 of the NWA: <ul style="list-style-type: none"> <li>• Section 21(c): impeding or diverting the flow of water in a watercourse</li> <li>• Section 21 (i): altering the bed, banks, course or characteristics of a watercourse</li> </ul>  |
| National Heritage Resources Act, 1999 (Act No. 45 of 1965 (NHRA)                            | South African Heritage Resources Agency (SAHRA)                 | 1 April 2000              | A heritage impact assessment has been requested by SAHRA and was undertaken by 1World Consultants.   |
| National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEM:PAA) | Department of Fisheries, Forestry and Environment               | 1 November 2004           | No permitting requirements are triggered by the proposed project.  |
| National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEM:BA)         | Department of Fisheries, Forestry and Environment               | 7 January 2005            | No permitting requirements are triggered by the proposed project.  |
| Gauteng Conservation Plan (Version 3.3)   | Gauteng Department of Agriculture and Rural Development         | March 2014                | The Golden Harvest Park falls within and Ecological Support Area and a Critical Biodiversity Areas: Important area in terms of the Gauteng C-Plan.   |
| Gauteng Provincial Environmental Management Framework                                       | Gauteng Department of Agriculture and Rural Development         | February 2016             | The Gauteng Provincial Environmental Management Framework (GPEMF) Phase 2 is a tool developed to streamline the requirements for an environmental impact assessment to reduce timeframes for approvals and to contribute towards reducing the cost of doing business in Gauteng. In this tool, a number of NEMA listed activities are excluded from the requirement to obtain an environmental authorisation. These excluded activities are applicable only in Environmental Management Zones 1 and 5 of the GPEMF, 2015.<br><br>The proposed project does not fall within Zone 1 (Urban Development Zone) or Zone 5, (Industrial and Large commercial focus zone) and is therefore not excluded from obtaining environmental authorisation. |
| GDARD Draft Ridges Policy   | Gauteng Department of Agriculture and Rural Development         | April 2001                | A section of the proposed sewer falls within a Class 2 Ridge area. As the proposed sewer line aims to replace the septic tank at the Park's depot area, and the environmental impact of construction and   |

| Title of legislation, policy or guideline:   | Administering authority:                                | Promulgation Date: | Description of compliance  |
|--|---|--------------------|--|
|  |   |                    | <p>operation of proposed sewer line is not high, this activity can be permitted.</p> <p>One of the proposed ablution facilities (not a listed activity) are located at the foot of a Class 4 Ridge within the Park. This ablution facility however, will be constructed on an already disturbed footprint and is therefore considered a low impact activity.</p> |
| The Gauteng Pollution Buffer Zones Guideline | Gauteng Department of Agriculture and Rural Development | March 2017         | The proposed development is not located close to any industries or pollution sources as listed in the guideline, and therefore requires no further consideration.  |



### 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

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  |             |
| 2   | Alternative 1   |             |
| 3   | Alternative 2   |             |
|     | Etc.  |             |

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

As the Golden Harvest Park has been in existence since 1972 and mainly upgrades to existing facilities will be made, no alternatives have been considered.

### 4. PHYSICAL SIZE OF THE ACTIVITY

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

|  | Size of the activity: |
|--|-----------------------|
| Proposed activity ( <b>Total environmental (landscaping, parking, etc.) and the building footprint</b> ) |                       |
| Upgrade of vehicle bridge  | 36m <sup>2</sup>      |
| Upgrade of pedestrian bridge   | 248m <sup>2</sup>     |
| Weir 1   | 141m <sup>2</sup>     |
| Weir 2   | 123m <sup>2</sup>     |

| Alternatives:          |  |
|------------------------|--|
| Alternative 1 (if any) |  |
| Alternative 2 (if any) |  |

Ha/ m<sup>2</sup>

or, for linear activities:

|                        | Length of the activity: |
|------------------------|-------------------------|
| Proposed activity      | ~380 m                  |
| Alternative 1 (if any) |                         |
| Alternative 2 (if any) |                         |

m/km

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

|                        | Size of the site/servitude: |
|------------------------|-----------------------------|
| Proposed activity      |                             |
| Alternative 1 (if any) |                             |
| Alternative 2 (if any) |                             |

Ha/m<sup>2</sup>

### 5. SITE ACCESS

#### Proposal

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

|     |    |
|-----|----|
| YES | NO |
|     | m  |

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

Describe the type of access road planned:

N/A

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:

N/A

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

1

Number of times

(only complete when applicable)

### 6. LAYOUT OR ROUTE PLAN

The following maps are available in Appendix A:

- Appendix A1: Locality map
- Appendix A2: Properties in relation to Golden Harvest Park
- Appendix A3: Zoning of Golden Harvest Park
- Appendix A4: Golden Harvest Park in relation to the Gauteng Conservation Plan V3.3
- Appendix A5: Site layout
- Appendix A6: Sensitive features: Delineated Wetlands and Heritage sites

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

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

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

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

## 7. SITE PHOTOGRAPHS

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

Refer to Appendix B for photographs of the proposed developments.

## 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.

Refer to Appendix C. The following illustrations are included:

- Vehicle bridge;
- Pedestrian bridge;
- Sewer line layout; and
- Weirs.

# 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.)

**Table 5: Property description**

| Activity                  | Property Description   |
|---------------------------|--|
| Vehicle bridge upgrade    | 15 Golden Harvest A.H.   |
| Pedestrian bridge upgrade | 3 Sundowner Ext 18   |
| Weir 1                    | 16 Hunter Hill A.H.  |
| Weir 2                    | 17 Hunter Hill A.H.  |
| Sewer line                | 3 Golden Harvest A.H.<br>5 Golden Harvest A.H.<br>7 Golden Harvest A.H.<br>8 Golden Harvest A.H. |

## 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): |
|---------------------------|---------------|----------------|
| Vehicle bridge upgrade    | 26° 4'13.96"S | 27°57'27.18"E  |
| Pedestrian bridge upgrade | 26° 4'1.67"S  | 27°57'0.58"E   |
| Weir 1                    | 26° 4'24.44"S | 27°56'57.26"E  |
| Weir 2                    | 26° 4'26.51"S | 27°56'53.81"E  |

In the case of linear activities:

| Alternative:                      | Latitude (S): | Longitude (E): |
|-----------------------------------|---------------|----------------|
| • Starting point of sewer line    | 26° 4'1.48"S  | 27°57'7.07"    |
| • Turning point of the sewer line | 26° 4'2.66"S  | 27°57'9.12"E   |
| • Middle point of the sewer line  | 26° 4'6.06"S  | 27°57'7.71"E   |
| • End point of the sewer line     | 26° 4'10.72"S | 27°57'10.03"E  |

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

Addendum of route alternatives attached

The Will of each cadastral land parcel

| VEHICLE BRIDGE    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T                 | 0 | I | Q | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 |
| PEDESTRIAN BRIDGE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| T                 | 0 | I | Q | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| WEIR 1            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| T                 | 0 | I | Q | 0 | 1 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 |
| WEIR 2            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| T                 | 0 | I | Q | 0 | 1 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 |
| SEWER LINE        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| T                 | 0 | I | Q | 0 | 1 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| T                 | 0 | I | Q | 0 | 1 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| T                 | 0 | I | Q | 0 | 1 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| T                 | 0 | I | Q | 0 | 1 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |

## 3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

## 4. LOCATION IN LANDSCAPE

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

|           |         |                          |        |       |                            |             |
|-----------|---------|--------------------------|--------|-------|----------------------------|-------------|
| Ridgeline | Plateau | Side slope of hill/ridge | Valley | Plain | Undulating plain/low hills | River front |
|-----------|---------|--------------------------|--------|-------|----------------------------|-------------|

## 5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

- Shallow water table (less than 1.5m deep)
- Dolomite, sinkhole or doline areas
- Seasonally wet soils (often close to water bodies)
- Unstable rocky slopes or steep slopes with loose soil
- Dispersive soils (soils that dissolve in water)
- Soils with high clay content (clay fraction more than 40%)
- Any other unstable soil or geological feature
- An area sensitive to erosion

|     |    |         |
|-----|----|---------|
| YES | NO | Unknown |
| YES | NO | Unknown |
| YES | NO | Unknown |
| YES | NO | Unknown |
| YES | NO | Unknown |
| YES | NO | Unknown |
| YES | NO | Unknown |

(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) 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) 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) 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

### Catchments and rivers

The Golden Harvest Park is located in the Limpopo River Catchment (Primary Catchment A), and more specifically quaternary catchment A21C. Refer to Figure 3.

Catchment A21C is drained by the Jukskei River and its tributaries. Information regarding catchment size, mean annual rainfall and runoff for the quaternary catchment is provided in the table below (Middleton, B.J., Midgley, D.C and Pitman, W.V., 1990).

**Table 6: Details for quaternary catchment A21C (WCS, 2021)**

| Catchment surface area (ha) | Mean annual rainfall (mm) | Mean annual run-off (mm) | MAR as % of MAP | Potential evaporation (PE) | MA:PE ration |
|-----------------------------|---------------------------|--------------------------|-----------------|----------------------------|--------------|
| 76 115                      | 694.4                     | 41.8                     | 6.0%            | 2 170.8                    | 0.32         |

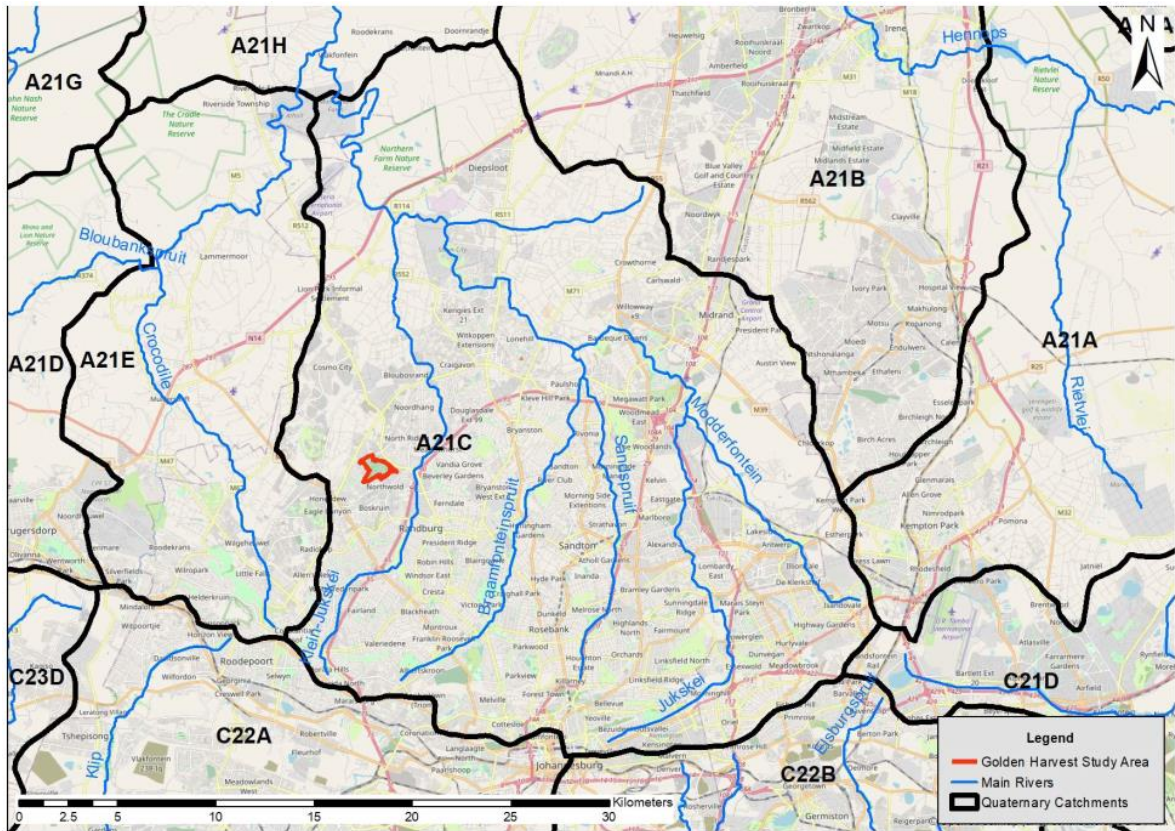


Figure 3: Locality of Golden Harvest Park in relation to quaternary catchment A21C (WCS, 2021)

## 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<br>% = | Natural veld with scattered aliens<br>% = 15 | Natural veld with heavy alien infestation<br>% = 60 | Veld dominated by alien species<br>% = | Landscaped (vegetation)<br>% = 20 |
| Sport field<br>% =                   | Cultivated land<br>% =                       | Paved surface (hard landscaping)<br>% =             | Building or other structure<br>% = 5   | Bare soil<br>% =                  |

**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

|    |
|----|
| No |
|----|

If YES, specify and explain:

The Golden Harvest Park is situated in within the Grassland Biome, Mesic Highveld Grassland Bioregion. At a finer level, it is situated in an area classed as Eglo Granite Grassland (Gm10), according the Vegetation of South Africa, Lesotho and Swaziland (Mucina and Rutherford, 2006).

Egoli Granite Grassland is listed as Endangered in the National List of Ecosystems that are Threatened and in Need of Protection (GN1002 of 2011). However, the study area has been significantly transformed and only limited natural habitat remains within the study area boundaries (WCS, 2021).

The weirs will be constructed in an area that is considered dense infestation of invasive alien plants (WCS, 2021). It is highly unlikely that rare or endangered flora or fauna species will occur in this area.

The upgrade of pedestrian bridge will take place in an area that is partly natural, partly dense infestation of invasive alien plants and partly eroded area and heavily degraded lands. The area of the upgrade will be 31m<sup>2</sup>. It is highly unlikely that endangered fauna and flora will be impacted upon by the upgrade of the pedestrian bridge.

The upgrade of the vehicle bridge will occur in an area that is considered semi natural (undrained). As the facility is existing and requires only upgrades, it is highly unlikely that endangered fauna and flora will be impacted by the upgrade of the vehicle bridge.

The proposed sewer line all of the proposed ablution facilities area is situated in areas that has no natural vegetation remaining, therefore it is highly unlikely that endangered fauna and flora will be impacted by the construction of these facilities.

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.

**No**

If YES, specify and explain:

The Golden Harvest Park is situated in within the Grassland Biome, Mesic Highveld Grassland Bioregion. At a finer level, it is situated in an area classed as Eglo Granite Grassland (Gm10), according the Vegetation of South Africa, Lesotho and Swaziland (Mucina and Rutherford, 2006).  
Egoli Granite Grassland is listed as Endangered in the National List of Ecosystems that are Threatened and in Need of Protection (GN1002 of 2011). However, the study area has been significantly transformed and only limited natural habitat remains within the study area boundaries (WCS, 2021).

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

**YES**

If YES, specify and explain:

Wetlands have been delineated for the site. Refer to Figure 4.

Was a specialist consulted to assist with completing this section

**YES**

If yes complete specialist details

|                                     |   |       |              |
|-------------------------------------|---|-------|--------------|
| Name of the specialist:             | Dieter Kassier  |       |              |
| Qualification(s) of the specialist: | B.Sc. Hons Environmental Science (Aquatic Ecosystem Health) |       |              |
| Postal address:                     | PO Box 72295, Lynnwood Ridge                                |       |              |
| Postal code:                        | 0040  |       |              |
| Telephone:                          | 012 349 2699  | Cell: | 076 403 2398 |
| E-mail:                             | dieterk@wetcs.co.za   | Fax:  | 012 349 2993 |

Are any further specialist studies recommended by the specialist?

**NO**

If YES, specify:

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

**NO**

If YES list the specialist reports attached below

Signature of specialist:



Date:

30/08/2022

**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

**Wetlands**

A wetland assessment was undertaken by WCS Scientific (Pty) Ltd (WCS) during September 2021.

Three different hydrogeomorphic (HGM) wetland units were identified on site:

- Channelled Valley Bottom wetland
- Unchannelled Valley Bottom wetland
- Seep wetland

In addition, 4 dams were identified within the delineated wetland habitat.

The delineated wetland habitat covers a total of 34.2 hectares, which makes up more than 30 % of the project study area. Seep wetlands are the most significant wetland habitat on site, making up more than 50 % of the overall wetland area. The



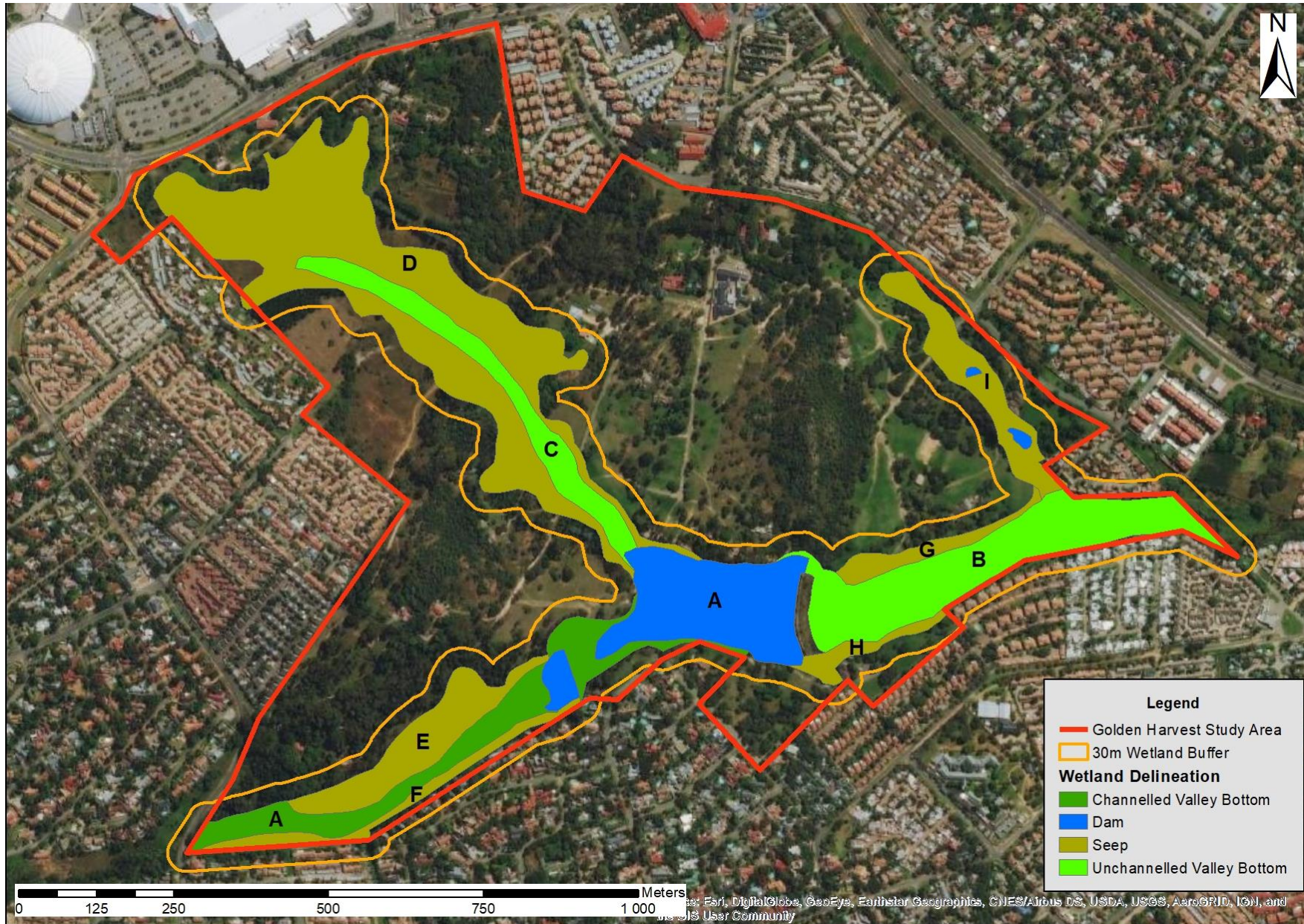
Valley Bottom wetlands, which cover an area of 15.76 hectares, include 4.5 hectares of open water habitat across the two larger dams on site.

**Table 7 Summary of the wetland types and extent within Golden Harvest Park**

| Wetland type               | Area (ha)    | % of wetland area | % of study area |
|----------------------------|--------------|-------------------|-----------------|
| Channelled Valley Bottom   | 7.90         | 23.1%             | 7.1%            |
| Unchannelled Valley Bottom | 7.86         | 23.0%             | 7.0%            |
| Seep                       | 18.43        | 53.9%             | 16.5%           |
| <b>Total</b>               | <b>31.19</b> | <b>100.0%</b>     | <b>30.61%</b>   |

Seep wetlands are the most extensive wetland habitat within the area, making up almost 54% of the wetland habitat identified within the project study area. This is not unexpected within the Halfway House Granite formation which characterises the geology of the area, where the typically coarse, sandy soils derived from the underlying granite provide ideal conditions for the development of Seep wetlands. As is typical of the Seep wetlands in the area, these systems are characterised by sandy soils with impeded vertical drainage due to the presence of typically a soft-plinthic layer or granite bedrock/weathered granite within the soil profile which limits vertical movement of water and encourages lateral seepage and formation of interflow. The Seep wetlands on site consists of a mosaic of temporary and seasonally saturated habitat, with saturation mostly experienced during the summer rainfall season and into the early dry season. Surface water is often absent from Seep wetlands except immediately after rainfall events and at localised Seep fronts. Within the study area however, despite the field survey being undertaken at the end of the dry season, numerous areas of surface seepage and saturated soils were encountered, indicating extended saturation of these wetlands and significant interflow inputs from the wetland catchment.

Each of the wetland is described individually in the sections below. Refer to Figure 4 for the delineated wetlands within Golden Harvest Park and the location of the respective wetland units.



**Wetland Unit A – Channelled Valley Bottom:**

This represents the upper reach of the main watercourse draining across the study area from west to east and includes the two larger dams on site. This wetland is significantly incised, with bedrock exposed in many locations along the channel floor. This wetland unit is dominated by open water habitat (58 % of wetland area) associated with dams and which represents wetland habitat completely covered by impounded water, as well as dense stands of alien vegetation (35 % of wetland area). Alien trees were dominated by *Eucalyptus* species, *Populus canescens* and *Acacia mearnsii*. In terms of the WET-Health land use categories, no remaining Natural / Minimally Impacted habitat was identified within this wetland unit.

**Wetland Unit B – Unchannelled Valley Bottom:**

This represents the lower reach of the main watercourse draining from west to east across the site. A channel does occur along the full length of the wetland on site, though this channel is considered to be as a consequence of hydrological changes in the wetland and its catchment and, under natural conditions, the wetland would have been expected to be unchannelled. Parts of this wetland (approximately 20 % of the wetland area) have been converted to mowed lawns as part of the park landscape, and a small bridge and road crossing also occur. Alien vegetation covers almost 11 % of the wetland area, though the bulk of the wetland habitat still supports indigenous wetland vegetation and has been classified as Semi-natural habitat.

**Wetland Unit C – Unchannelled Valley Bottom:**

This wetland unit forms a tributary to the main watercourse on site and drains into the large dam. Sections of the wetland remain unchannelled, though some sections are affected by severe channel incision. A significant erosion head-cut was observed in the centre of the wetland unit at -26.066990; 27.949932 (refer to photos in Figure 11).

If not urgently addressed, this erosion head-cut is considered to represent a significant risk of further degradation of the remaining unchannelled wetland habitat upstream of this point. Although more than 40 % of this wetland is characterised by dense alien vegetation, this wetland unit also contained fairly intact sections, with 32 % of the wetland considered Natural / Minimally Impacted and a further 22 % Semi-natural.

**Wetland Unit D – Seep:**

This wetland surrounds and drains into the Unchannelled Valley Bottom wetland of wetland unit C. Somewhat surprisingly, given the timing of the survey at the end of the dry season, extensive areas of saturated wetland habitat and surface seepage of water was observed within the central reaches of this wetland, mostly along the eastern slope of the wetland. The emergence of interflow in this Seep wetland right through the dry season indicates substantial interflow inputs from the catchment. What appears to be an old borehole / windmill was observed at -26.067222; 27.950908 (refer to photos in Figure 12 below) and was naturally overflowing at the time of the site visit (artesian). Water quality was recorded as pH 7.25, EC 247µS/cm, TDS 124mg/l and temperature 18.4°C. This wetland had the highest proportion of habitat classified as Natural / Minimally Impacted at just over 40 % of the wetland area, though once again more than 33 % of the wetland area was occupied by dense infestation of alien trees, mostly *Eucalyptus* and *Acacia mearnsii*. The upper reaches of the wetland are more temporary in nature and were dry at the time of the site visit. Several stormwater outlets from surrounding residential developments and roads discharge into the wetland. Downslope of these discharges a few erosion head-cut features were observed.

**Wetland Unit E – Seep:**

This Seep wetland occurs along the northern bank of the Channelled Valley Bottom wetland forming wetland unit A. The wetland is dominated by alien trees, mostly *Eucalyptus* and *Populus* species, which cover almost 95 % of the wetland habitat associated with this wetland unit. The wetland consists as a mosaic of wetness, varying from what appears to be near-permanent saturation (surface seepage at the time of the site visit) to only temporarily saturated areas. Stands of the bulrush *Typha capensis* amongst the *Eucalyptus* trees attests to the extended saturation of sections of this wetland. Stands of *Imperata cylindrica* were also observed, forming a remnant of more natural Seep wetland vegetation.

**Wetland Unit F – Seep:**

This Seep wetland occurs along the southern bank of the Channelled Valley Bottom wetland forming wetland unit A. This wetland unit represents a narrow strip of remanent wetland vegetation between the Valley Bottom wetland and the edge of residential developments to the south. In some instances, adjacent landowners have extended landscape gardens into the wetland habitat. A powerline servitude also runs along this wetland. Wetland habitat is dominated by dense alien vegetation (45 %) and Urban Open Space (suburban gardens – 20 %).

**Wetland Unit G – Seep:**

This wetland occurs along the northern bank of the Unchannelled Valley Bottom wetland forming wetland unit B. Virtually the entire wetland habitat has been converted to a typical park landscape with mowed lawns, while the soil profile also displayed indications of past earthworks and disturbances, presumably related to landscaping activities. Accurate delineation of the wetland boundary was complicated by the transformed vegetation and the compacted disturbed soils.

**Wetland Unit H – Seep:**

Similar to wetland unit G described above, this is a narrow strip of Seep wetland along the southern edge of the Unchannelled Valley Bottom wetland forming wetland unit B. The wetland habitat has once again been completely transformed, with 60 % of the wetland converted to a typical park landscape with mowed lawns. A road and associated road infill also traverse the wetland.

**Wetland Unit I – Seep:**

This Seep wetland in essence forms a small tributary to the Unchannelled Valley Bottom wetland forming wetland unit B. Flows enter the top of the Seep wetland via a gully/channel, though the wetland itself is largely unchannelled. Two small dams were identified within the wetland, as well as a road crossing that seems to cause some localised impounding of flow on occasion. The wetland is once again dominated by alien vegetation, though especially within the upper reaches some of the woody vegetation is made up of indigenous tree species. A facility for the chopping, packing and selling of firewood has been established along the edge of this wetland and presumably partially extends into the wetland.

**Wetlands: Present Ecological State (PES)**

The PES assessment compares the current condition of a wetland/watercourse with its expected reference or natural conditions and rates the change on a scale of A to F.

The project study area consists of an urban recreational park, and as such has been extensively transformed to serve this

purpose. Little natural vegetation remains on site and, as is clear from the wetland descriptions above, all of the wetlands within the project study area have been significantly degraded. As little information is available on the reference state of the wetland on site, historical aerial imagery of the area was used to provide an indication of the nature of the watercourse under less impacted conditions.

The following has been assumed:

- Wetlands would have been largely unchannelled, with channels restricted to localised areas where natural confinement of flow occurs, such as at rocky outcrops;
- Woody vegetation would have been largely absent from all wetland areas;
- Wetlands are likely to have been characterised by a mix of grass and sedge species reflecting the prevailing wetness profile of the wetland, i.e. sedges dominating in areas of extended saturation and grasses in areas of temporary wetness; and
- The main watercourse is likely to have been perennial in nature.

As part of the WET-Health PES assessment, disturbance units (land uses) within the wetlands were identified and mapped. This is illustrated in Figure 5. The level of habitat transformation that has occurred within the wetlands is clearly evident from these results. Only 16% of the total wetland habitat mapped on site was classed as still being in a Natural / Minimally Impacted state, and in many cases these areas were borderline to being categorised as Semi-natural. Some of the most significant impacts include infestation by alien invasive trees, which covered 35 % of the identified wetland habitat, deep flooding from impoundments which covered more than 13 %, and Urban Open Space (in essence being represented by mowed lawns) covering around 10 %.

Alien vegetation impacts on wetlands in numerous ways, including:

- Loss of indigenous vegetation and replacement with alien species, often monospecific stands, resulting in loss of biodiversity;
- Increased water consumption, resulting in reduced flows within wetlands and knock-on flow related impacts;
- Loss of basal cover due to shading out of grasses, resulting in soils being exposed to erosion;
- Increased large debris inputs, resulting in clogging of channels and infrastructures, with possible secondary impacts such as erosion; and
- Shading of water within wetland channels and changes in allochthonous inputs, resulting in water temperature and quality changes, impacting on instream organisms.

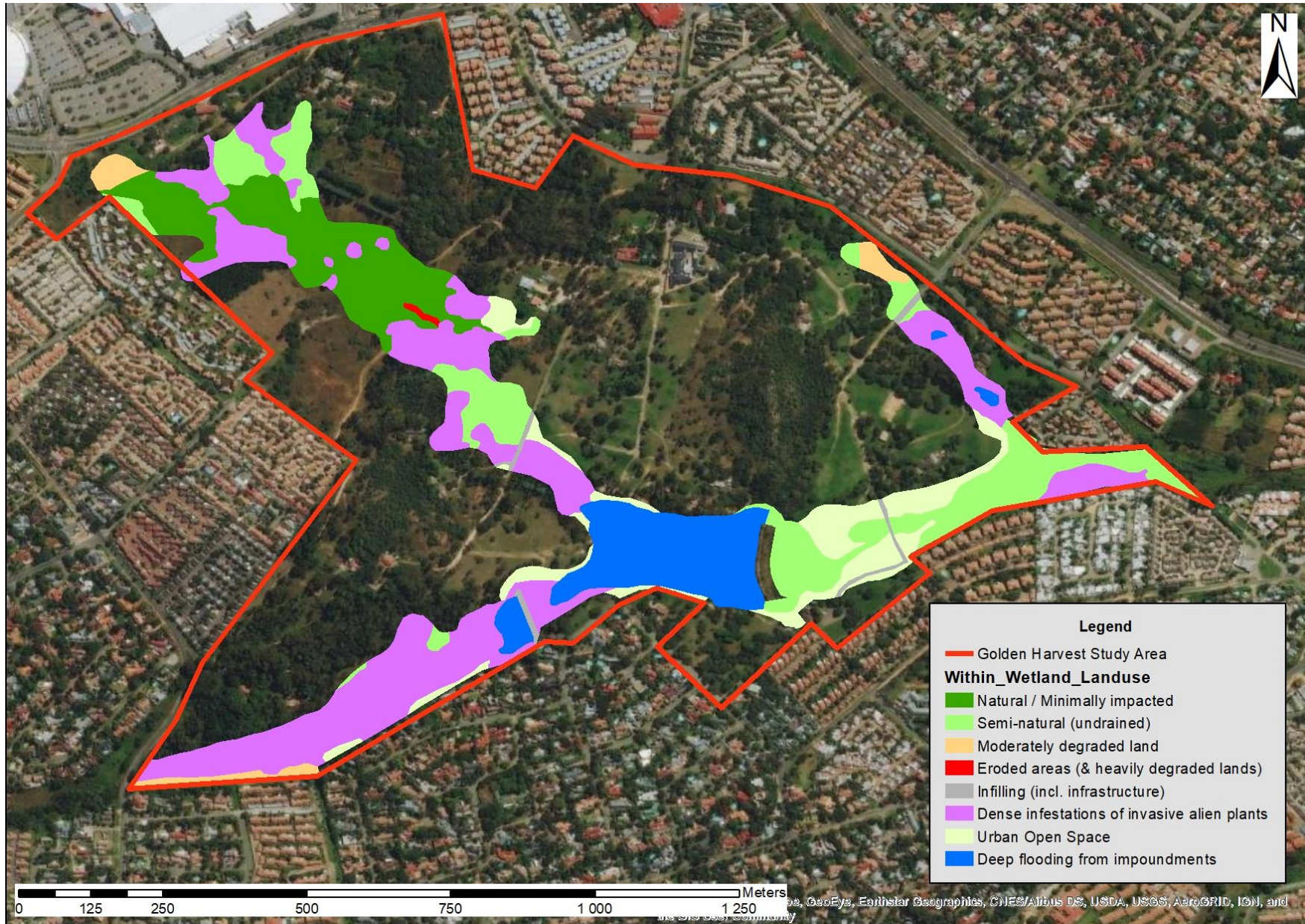


Figure 5: Land uses identified and mapped within delineated wetlands in Golden Harvest Park

**Wetlands: Present Ecological State (PES) continued**

In addition to the extensive within-wetland habitat transformation that has taken place, the catchments of the wetlands and surroundings of the project study area are fully urbanised, resulting in significant changes to landscape hydrology. Urban areas typical reflect a significant increase in hardened surfaces, resulting in increased surface runoff and decreased recharge of soil- and groundwater, resulting in decreased interflow. Surface runoff is then also typically captured within confined stormwater management systems, resulting in point source discharges into wetlands. Typical consequences are increased flow velocities, increased flood peaks and decreased time to concentration. Wetlands respond to these changes often through increased erosion and channel incision – impacts that are clearly in evidence on site.

In light of the above discussion, the results of the PES assessment reflect extensive degradation of wetland habitat on site, with all of the wetlands rated as either Largely Modified (PES category D) or Seriously Modified (PES category E), as illustrated in Figure 6 and summarised in Table 7.

**Table 8: PES assessment for Golden Harvest Park wetlands**

| Wetland unit | Wetland type               | PES category |                    |
|--------------|----------------------------|--------------|--------------------|
| A            | Channelled Valley Bottom   | E            | Seriously modified |
| B            | Unchannelled Valley Bottom | D            | Largely Modified   |
| C            | Unchannelled Valley Bottom | D            | Largely Modified   |
| D            | Seep                       | D            | Largely Modified   |
| E            | Seep                       | E            | Seriously modified |
| F            | Seep                       | E            | Seriously modified |
| G            | Seep                       | E            | Seriously modified |
| H            | Seep                       | E            | Seriously modified |
| I            | Seep                       | E            | Seriously modified |

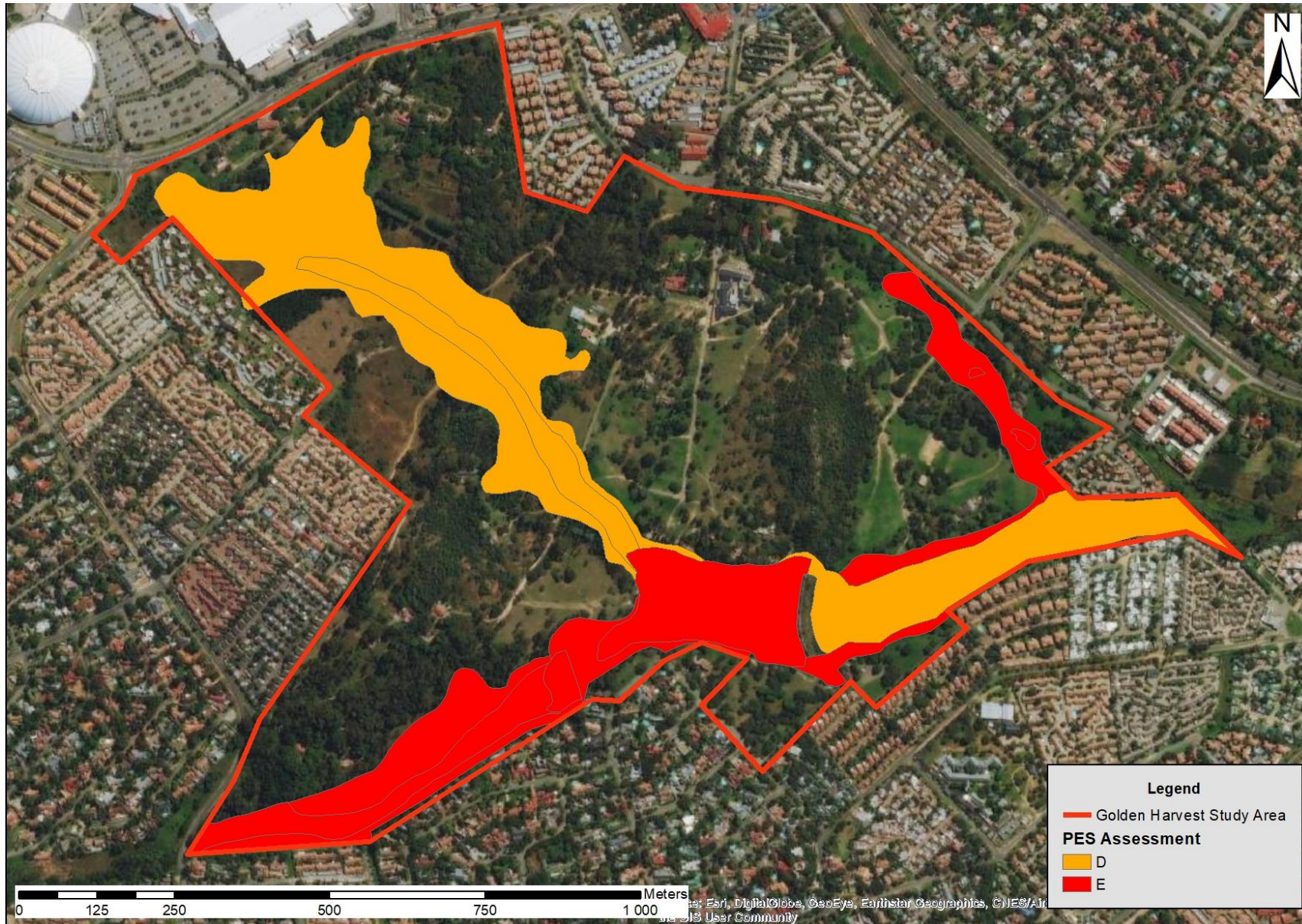


Figure 6: Results of PES assessment for Golden Harvest Park wetlands (WCS, 2021)

**Wetlands: Ecological Importance and Sensitivity (EI&S)**

The Importance and Sensitivity assessment was undertaken for all the wetland habitat on site. Importance and Sensitivity (IS) is a concept introduced in the reserve methodology to evaluate a wetland in terms of:

- Ecological Importance;
- Hydrological Functions; and
- Direct Human Benefits.

The scoring assessments for these three aspects of wetland importance and sensitivity have been based on the requirements of the NWA, the original Ecological Importance and Sensitivity assessments developed for riverine assessments (DWAF, 1999), and the work conducted by Kotze et al (2008) on the assessment of wetland ecological goods and services (the WET-EcoServices tool). Based on this background, an IS assessment was undertaken for all the delineated wetlands on site using the Rountree et al. (2013) methodology.

Wetland units B, C and D, which represent the three wetland units considered Largely Modified and supporting the most extensive areas of largely natural vegetation, were rated as being of Moderate Importance and Sensitivity. The remaining wetland habitat which is all largely transformed and supports little remaining natural habitat was considered to be of Low/Marginal importance and sensitivity. Refer to Figure 7.

It is however highlighted that the wetlands within the Golden Harvest Park form part of a large Urban Open Space that is utilized recreationally by a large number of people. During the course of the field surveys many fishermen, joggers, dog walkers and parents with children were observed utilizing the park. The wetlands form part of the greater landscape mosaic that supports these recreational activities. The direct human use benefit from a recreational perspective must therefore not be underestimated.



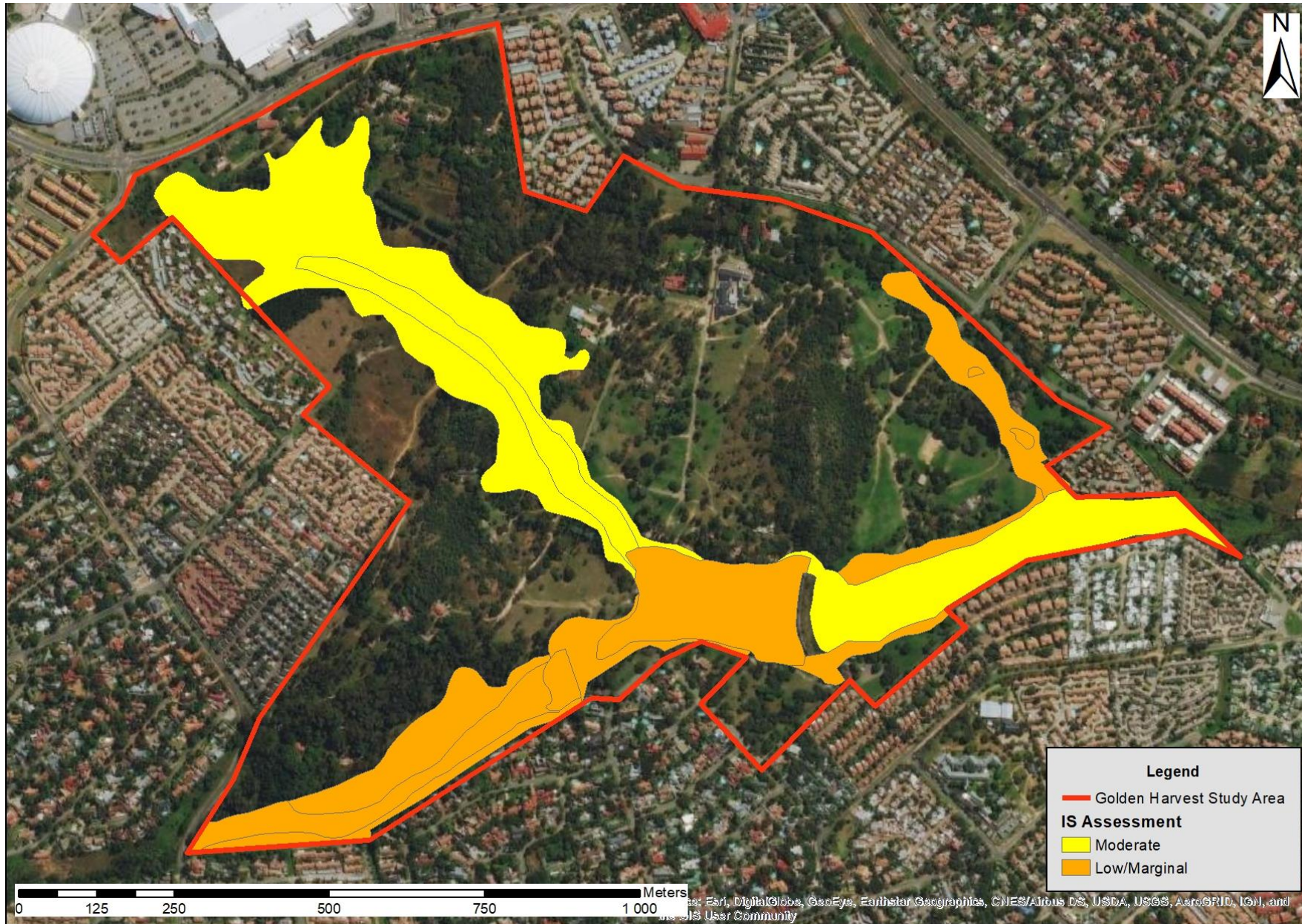


Figure 7: Results of the Ecological Importance and Sensitivity assessment for Golden Harvest Park wetlands

### Buffer zones

In accordance with the GDARD Minimum Requirements for Biodiversity Assessments (GDARD, 2012), a 30 m buffer zone must be identified and delineated around all wetland habitats falling inside the urban edge. According to the guidelines, the wetland habitat and buffer zone are considered sensitive and should be excluded from development. It is therefore recommended that any proposed developments within the Golden Harvest Park recognise the delineated wetland habitats and associated buffer zone and, where practically possible, avoid these areas.

## 8. LAND USE CHARACTER OF SURROUNDING AREA

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

The table below indicates the land uses within the Golden Harvest Park. The block diagram was not included as several upgrades and developments will take place within the existing Golden Harvest Park.

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

**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 “<sup>A</sup>” and with an “<sup>N</sup>” respectively.

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

YES

Wetland report – Refer to Appendix D1.

## 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.

Information for this section was obtained from the Final Integrated Development Plan (IDP) 2020/21 of the City of Johannesburg as well as the City of Johannesburg Website.

The Randburg Area can be found within The City of Johannesburg Municipality which was established in the year 2000 by merging five previously independent municipal areas. Randburg is within Region B which is well noted for its diversity, ranging from upmarket houses in both historic and newer suburbs to central Randburg and trendy Rosebank.

Randburg has been developed as a garden city and as a result has many parks.

### **Demographic Analysis**

The City of Johannesburg covers a total area of 1 644 km<sup>2</sup> with an average density of 1 962 persons per a km<sup>2</sup>. Johannesburg has a population of 3.2 million spread across 1 006 930 households. The area is classified by its youthful residents, with 42% of the population under the age of 24 and 49% under the age of 34.

Within the Randburg Area, population is estimated at just over 198 000 about 6 per cent of the population of greater Johannesburg. Over much of the area, the population is stable and economically active, with high levels of education and disposable income. The southern areas, however, are characterized by high unemployment and low-income levels. A large segment of the population is school-going age, creating a demand for social services and educational facilities.

### **Economic Analysis**

As the country's biggest metropolitan economy, the City of Johannesburg is the largest single metro contributor to national economic product, generating 15% of South Africa's wealth and around 44% of Gauteng's economic output. Over the past 10 years, the City's high economic growth rate has undoubtedly been the major driver behind the performance of the national economy.

More than 70% of South African companies have their headquarters within the City of Johannesburg Municipality. Classified as one of the largest inland ports in the world, handling 30% of South Africa's exports.

The Randburg Central Business District (CBD) functions as a mid-level retail and office node. The Randburg CBD hosts the central northern business district where some telecommunications and financial services companies have their headquarters, companies such as MultiChoice, M-Net and SuperSport have their Head Offices within Randburg. The CBD area has less than optimal residential land uses and limited public amenities. The CBD has experienced two decades of decline including lack of maintenance of buildings and the overall public environments.

Although Johannesburg is creating wealth, economic growth does not automatically translate into a general improvement in the standard of living. It is crucial for an economy to grow at a pace faster than the rate at which the population is growing so that there will be more resources available for each person. In addition, it creates new jobs at a rate that will significantly reduce unemployment over time. Permanent employment in the formal sector is probably the most important factor for sustainable improvement in the standard of living, given the benefits associated with a permanent formal job. The City of Johannesburg also seeks the type of economic growth that is associated with an improvement in the distribution of income in absolute and racial terms.

**Social-Economic Development**

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 Main/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.

**Human Settlements and Basic Services**

Growth in this sector reflects the expansion of public sector services to address infrastructure, education and health issues at national, provincial and metropolitan government levels, with the government sector tending to be fairly immune to economic factors.

There is a stark contrast between the northern and southern sub-areas of Region B, with the latter subject to extreme poverty, unemployment and social problems. This requires intervention in the form of social development programmes and projects specifically focused on poverty alleviation and community capacity building.

However, there is no need for additional social facilities as the Region is well supplied. The major hospitals - Helen Joseph, Garden City, Rahima Moosa Child & Women Hospital and Milpark - are supplemented by numerous community health clinics. There is a large number of government and private schools and municipal recreation centres.

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.

Informal settlements also pose other service delivery challenges in particularly those linked to infrastructure such as water supply, sanitation, electricity, roads and storm water reticulation.

**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 m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

|     |    |
|-----|----|
| YES | NO |
|-----|----|

If YES, explain:

A Heritage Impact Assessment was undertaken by 1World Consultants (Pty) Ltd during May 2022.

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:

### **Heritage**

The areas assessed consist of small projects including bridges, ablution blocks, weirs, and a new sewer pipeline located in a public park with various open spaces with playparks, walkways as well as a large dam situated on the southern edge of the park. The dam is a popular fishing location for local residents. Various houses are also situated within the park itself. These have existed before the park was proclaimed in the 1970s. It is assumed that these features will not be impacted on by the development and is not further discussed here. Various thickly wooded areas are scattered around the park where heritage visibility is low.

A large rocky hill covered in small trees and shrubs is situated towards the centre of the proposed project area. This hill may be of high heritage sensitivity; however, the hill will not be affected by the proposed upgrades. The surrounding environment is completely built-up with various housing complexes, suburbs and shopping centres situated around the Golden Harvest Park. Two observations were made in proximity to the proposed upgrades. The first is a single informal grave marker (26° 4' 5.20"S, 27° 57' 7.26"E) (labelled as GH001) being a small wooden cross (Figure 8). The site is located next to an existing road.



**Figure 8: Grave marker (GH001)**

The second is a low stone-built wall (labelled as GH002 and illustrated in Figure 9) that marks the entrance to the dam (26° 4' 7.70"S, 27° 57' 13.24"E), in all likelihood constructed after the park was established in 1972 and is therefore of no heritage significance. These features will not be impacted on by the proposed upgrades.



**Figure 9: Stone built wall (GH002)**

The location of these heritage sites is shown on Figure 10.



Figure 10: Recorded Heritage Features in Golden Harvest Park

**Palaeontology**

According to the SAHRA Paleontological map the study area is of insignificant paleontological significance (Figure 10 and Table 9) and no further studies are required for this aspect.



Figure 11 Palaeontological sensitivity of the approximate study area (yellow polygon)

Table 9: Paleontological sensitivity table

| Colour        | Sensitivity        | Required action  |
|---------------|--------------------|--|
| Red           | Very High          | Field assessment and protocol for finds is required  |
| Orange/yellow | High               | Desktop study is required and based on the outcome of the desktop study; a field assessment is likely                              |
| Green         | Moderate           | Desktop study is required  |
| Blue          | Low                | No palaeontological studies are required however a protocol for finds is required  |
| Grey          | Insignificant/zero | No palaeontological studies are required   |
| White/clear   | Unknown            | These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map |

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

|  |           |
|--|-----------|
|  | <b>NO</b> |
|  | <b>NO</b> |

Was a specialist consulted to assist with completing this section

|            |  |
|------------|--|
| <b>YES</b> |  |
|------------|--|

If yes complete specialist details

Name of the specialist:

Jaco van der Walt

Qualification(s) of the specialist:

MA Archaeology

Postal address:

Private Bag X1049 Suite 34 Modimolle

Postal code:

Telephone:  Cell:

E-mail:  Fax:

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

If YES, specify:

If YES, is such a report(s) attached?  YES  NO

If YES list the specialist reports attached below

Signature of specialist:  Date:

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

If yes complete specialist details

# SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

## 1. LOCAL AUTHORITY PARTICIPATION

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

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

YES

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

NO

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

N/A

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

The Draft Basic Assessment Report (BAR) and Environmental Management Programme (EMPr) is currently out for public comment and has also been submitted to local authorities for review. Once the comment period has lapsed, comments received from local authorities and the public/stakeholders will be included in the final Basic Assessment Report to be submitted to GDARD.

## 2. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?

YES

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

Feedback from SAHRA:

- A Phase 1 Heritage Impact Assessment to be undertaken. Refer to Appendix E1 for comments received from stakeholders. All comments received have been included in the Comment and Response Report (Appendix E2).

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

Not applicable.

## 3. 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.

A summary of the public participation process followed is provided in this section.

### Pre-application

A Background Information Document (BID) (Appendix E3) was emailed to the following stakeholders:

- City of Johannesburg
- Department of Water and Sanitation



- Gauteng Department of Agriculture and Rural Development
- Friends of the Golden Harvest

Refer to Appendix E4 for emails sent.

A copy of the BID was uploaded onto the South African (SAHRIS).

Hard copies of the BID were made available at the entrance of Golden Harvest Park for visitors.

Site notices were placed at various positions around the Golden Harvest Park (Appendix E5).

**Project announcement and availability of the Draft Basic Assessment Report for public comment**

The project was announced and the availability of the Basic Assessment Report for public comment was communicated as follows:

- Advertisement in the Randburg Sun on 1 September 2022 (Appendix E6)
- Notification letters were sent via email to all identified stakeholders. Refer to Appendix E7 for a copy of the notification letter, and Appendix E8 for emails sent.

**Availability of the Draft Basic Assessment Report for public comment**

The Draft Basic Assessment Report is currently available for public comment for a period of 30 days from 1 September to 3 October 2022.

The report is available at the following public places:

- Golden Harvest Park entrance;
- Olivedale Public Library; and
- Boskruin Public Library.

**Submission of the Final Basic Assessment Report to the competent authority**

All comments obtained from stakeholders during the pre-application phase and received during the Draft Basic Assessment Report public comment period will be captured in the Comment and Response Report to be submitted with the Final Basic Assessment Report. This report will be submitted to the competent authority (GDARD) during October 2022.

**Decision**

Once a decision regarding the environmental authorisation application has been received from GDARD, all registered stakeholders will be informed via email.

Table 10 provides a review of the legal requirements for public participation in terms of NEMA EIA Regulations.

**Table 10: Legal requirements for public participation**

| <b>NEMA Regulation</b> | <b>Public Participation Regulation</b>  | <b>Process followed</b>   |
|------------------------|---|---|
| 39 (1)                 | If the proponent is not the owner or person in control of the land on which the activity is to be undertaken, the proponent must, before applying for an environmental authorisation in respect of such activity, obtain the written consent of the landowner or person in control of the land to undertake such activity on that land.                                       | The proponent (Johannesburg City Parks and Zoo) is also the landowner, therefore landowner consent is not required. |
| 39 (2)                 | Subregulation (1) does not apply in respect of –<br>(a) Linear activities<br>(b) Activities constituting, or activities directly related to prospecting or exploration of a mineral and petroleum resource or extraction and primary processing of a mineral or petroleum resource<br>(c) Strategic integrated projects as contemplated in the Infrastructure Development Act |   |
| 41 (2) (a)             | Fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of—<br>(i) the site where the activity to which the application or proposed application relates is or is to be undertaken; and<br>(ii) any alternative site;   | Site notices were placed at various positions around the Golden Harvest Park.<br>Refer to Appendix E5.              |
| 41 (2) (b)             | Giving writing notice to  |   |
| (i)                    | The occupiers of the site   | Site notices were placed at various positions around the Golden Harvest Park.<br>Refer to Appendix E5.              |

| <b>NEMA Regulation</b> | <b>Public Participation Regulation</b>   | <b>Process followed</b>   |
|------------------------|--|---|
| (ii)                   | Owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken   | The applicant, Johannesburg City Parks and Zoo is also the landowner of adjacent properties.  |
| (iii)                  | The municipal councillor of the ward   | A BID was emailed to City of Johannesburg Ward 101 Councillor Ralf Bittkau.<br>Refer to Appendix E4 for proof of email.   |
| (iv)                   | The municipality which has jurisdiction in the area  | A BID was emailed to the following persons at City of Johannesburg:<br>Nokuthula Thusi<br>Julius Sello<br>Gina Zanti<br>Refer to Appendix E4 for proof of email.  |
| (v)                    | Organ of state having jurisdiction in respect of any aspect of the activity  | BIDs were emailed to the following authorities: <ul style="list-style-type: none"> <li>• Department Water and Sanitation</li> <li>• Gauteng Department of Agriculture and Rural Development</li> <li>• SAHRA</li> </ul> Refer to Appendix E3 for a copy of the BID and Appendix E4 for emails sent. |
| (vi)                   | Any other party as required by the competent authority   | None  |
| 41 (2) (c)             | Placing an advertisement in one local newspaper  | An advertisement was placed in the Randburg Sun on 1 September 2022. Refer to Appendix E6.  |
| 41 (2) (d)             | Placing an advertisement in at least one provincial or national newspaper, if the activity may have an impact that extends beyond the boundaries of the metropolitan or district municipality.   | Not applicable. The activity does not have an impact that extends beyond the boundaries of the metropolitan.  |
| 41 (2) (e)             | Using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desirous of but unable to participate in the process due to- <ul style="list-style-type: none"> <li>(i) illiteracy;</li> <li>(ii) disability; or</li> <li>(iii) any other disadvantage</li> </ul>  | Not applicable.   |
| 41 (3)                 | A notice, notice board or advertisement must: <ul style="list-style-type: none"> <li>(a) give details of the application or proposed application which is subjected to public participation; and</li> <li>(b) state: <ul style="list-style-type: none"> <li>(i) whether a basic assessment or S&amp;EIR procedures are being applied to the application</li> <li>(ii) the nature and location of the activity to which the application relates</li> <li>(iii) where further information on the application can be obtained</li> <li>(iv) the manner in which and the person to whom representations in respect of the application or proposed application may be made</li> </ul> </li> </ul> | Site notices were placed at various positions around the Golden Harvest Park.<br>Refer to Appendix E5.  |
| 4                      | A notice board referred to in Subregulation (2) must <ul style="list-style-type: none"> <li>(a) be of a size of at least 60cm by 42cm</li> <li>(b) display the required information in lettering and in a format as may be determined by the competent authority</li> </ul>  |   |

#### 4. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is attached in the appropriate Appendix.

Appendix E1: Comments received from stakeholders

Appendix E2: Comment and Response Report

Appendix E3: Background Information Document

Appendix E4: BID emails

Appendix E5: Proof of site notices

Appendix E6: Proof of newspaper advertisements

Appendix E7: Written notices issued as required in terms of the regulations

Appendix E8: Written notices emails

Appendix E9: Copy of the register of stakeholders

Appendix E10 – Minutes of any public and/or stakeholder meetings

Appendix E –Comments from I&APs on Basic Assessment (BA) Report – Not applicable, as this is the Draft Basic Assessment Report for public comment

Appendix E – Comments from I&APs on amendments to the BA Report Not applicable, as a BA Report is not amended.

# SECTION D: RESOURCE USE AND PROCESS DETAILS

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

## Instructions for completion of Section D for alternatives

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

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

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

## 1. WASTE, EFFLUENT AND EMISSION MANAGEMENT

### Solid waste management

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

|                        |    |
|------------------------|----|
| YES                    | NO |
| Unknown m <sup>3</sup> |    |

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

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

Construction waste will include soil and rocks, vegetation, building rubble, pipe off-cuts etc. The soil arising from the excavation of the sewer trench will be reused as infill for the sewer trench. Any rocks excavated will be removed from the site or be crushed for road material. Other items will be disposed of to an approved landfill site, where they cannot be recycled. No vehicles will be serviced on site and thus no waste oil will be produced on the site.

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

Construction waste will be disposed of at an approved waste disposal site.

Will the activity produce solid waste during its operational phase?

|                |    |
|----------------|----|
| YES            | NO |
| m <sup>3</sup> |    |

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

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

Not applicable.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?

|     |    |
|-----|----|
| YES | NO |
|-----|----|

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

Not applicable

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

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

|     |    |
|-----|----|
| YES | NO |
|-----|----|

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

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

|     |    |
|-----|----|
| YES | NO |
|-----|----|

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

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

Not applicable

### 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 |
| m <sup>3</sup> |    |

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

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

|     |    |
|-----|----|
| YES | NO |
|-----|----|

Will the activity produce any effluent that will be treated and/or disposed of on-site?  
 If yes, what estimated quantity will be produced per month?

|                |           |
|----------------|-----------|
| Yes            | <b>NO</b> |
| m <sup>3</sup> |           |

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

|                |
|----------------|
| Not applicable |
|----------------|

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?  
 If yes, provide the particulars of the facility:

|     |           |
|-----|-----------|
| YES | <b>NO</b> |
|-----|-----------|

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

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

|                 |
|-----------------|
| Not applicable. |
|-----------------|

**Liquid effluent (domestic sewage)**

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?  
 If yes, what estimated quantity will be produced per month?

|                |           |
|----------------|-----------|
| YES            | <b>NO</b> |
| m <sup>3</sup> |           |

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

|     |           |
|-----|-----------|
| YES | <b>NO</b> |
|-----|-----------|

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

|     |           |
|-----|-----------|
| YES | <b>NO</b> |
|-----|-----------|

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

|  |
|--|
| Portable chemical toilets will be made available for construction workers on site. |
|--|

**Emissions into the atmosphere**

Will the activity release emissions into the atmosphere?

|     |           |
|-----|-----------|
| YES | <b>NO</b> |
|-----|-----------|

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

|     |           |
|-----|-----------|
| YES | <b>NO</b> |
|-----|-----------|

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 during the construction phase where possible short-term dust emissions due to vegetation clearing, wind and movement on site may impact air quality (dust fallout). Mitigation measures have been prescribed to minimise the dust impact during the construction phase. |
|---|

**2. WATER USE**

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

|                       |                           |             |                            |       |                                 |
|-----------------------|---------------------------|-------------|----------------------------|-------|---------------------------------|
| municipal<br><b>x</b> | Directly from water board | groundwater | river, stream, dam or lake | other | the activity will not use water |
|-----------------------|---------------------------|-------------|----------------------------|-------|---------------------------------|

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

|        |
|--------|
| liters |
|--------|

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

Does the activity require a water use permit from the Department of Water Affairs?

|            |           |
|------------|-----------|
| <b>YES</b> | <b>NO</b> |
|------------|-----------|

If yes, list the permits required

|  |
|--|
| A Water Use Licence is required for Section 21 (c) and (i) water uses in terms of the National Water Act (Act No. 36 of 1998) (NWA). |
|--|

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

|     |           |
|-----|-----------|
| YES | <b>NO</b> |
|-----|-----------|

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

|     |           |
|-----|-----------|
| YES | <b>NO</b> |
|-----|-----------|

**3. POWER SUPPLY**

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

|              |
|--------------|
| Municipality |
|--------------|

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

N/A

#### 4. ENERGY EFFICIENCY

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

N/A

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

N/A

## 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.

The following comments have been raised by stakeholders:

A Heritage Impact Assessment must be undertaken;

The development must be completed timeously and with the least possible impact on wildlife.

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

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

All comments received to date have been included in the Comment and Response Report. Refer to Appendix E2.

A Heritage Impact Assessment was undertaken, and results included in this Draft Basic Assessment Report. Refer to Appendix D2 for the Heritage Impact Assessment.

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

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

The significance of the identified impacts will be determined using an accepted methodology from the Department of Environmental Affairs and Tourism Guideline document on EIA Regulations, April 1998. As with all impact methodologies, the impact is defined in a semi-quantitative way and will be assessed according to methodology prescribed below.

**Table 11: Scale utilised for the evaluation of the Environmental Impact**

| Evaluation Component  | Rating | Scale     | Description / criteria  |
|---|--------|-----------|---|
| <b>MAGNITUDE of negative impact</b><br>(at the indicated spatial scale) | 10     | Very high | Bio-physical and/or social functions and/or processes might be <i>severely</i> altered.                       |
|   | 8      | High      | Bio-physical and/or social functions and/or processes might be <i>considerably</i> altered.                   |
|   | 6      | Medium    | Bio-physical and/or social functions and/or processes might be <i>notably</i> altered.                        |
|   | 4      | Low       | Bio-physical and/or social functions and/or processes might be <i>slightly</i> altered.                       |
|   | 2      | Very low  | Bio-physical and/or social functions and/or processes might be <i>negligibly</i> altered.                     |
|   | 0      | Zero      | Bio-physical and/or social functions and/or processes will remain <i>unaltered</i> .                          |
| <b>MAGNITUDE of POSITIVE IMPACT</b><br>(at the indicated spatial scale) | 10     | Very high | Positive: Bio-physical and/or social functions and/or processes might be <i>substantially</i> enhanced.       |
|   | 8      | High      | <b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>considerably</i> enhanced. |
|   | 6      | Medium    | <b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>notably</i> enhanced.      |
|   | 4      | Low       | <b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>slightly</i> enhanced.     |
|   | 2      | Very low  | <b>Positive:</b> Bio-physical and/or social functions and/or processes might be <i>negligibly</i> enhanced.   |
|   | 0      | Zero      | <b>Positive:</b> Bio-physical and/or social functions and/or processes will remain <i>unaltered</i> .         |

|   |   |                               |  |
|---|---|-------------------------------|--|
| <b>DURATION</b>   | 5   | <b>Permanent</b>              | <b>Impact in perpetuity. –</b>   |
|   | 4   | <b>Long term</b>              | Impact ceases after operational phase/life of the activity > 60 years.           |
|   | 3   | <b>Medium term</b>            | Impact might occur during the operational phase/life of the activity – 60 years. |
|   | 2   | <b>Short term</b>             | Impact might occur during the construction phase - < 3 years.                    |
|   | 1   | <b>Immediate</b>              | <b>Instant impact.</b>   |
| <b>EXTENT</b><br>(or spatial scale/influence of impact) | 5   | <b>International</b>          | <b>Beyond the National boundaries.</b>   |
|   | 4   | <b>National</b>               | Beyond provincial boundaries, but within National boundaries.                    |
|   | 3   | <b>Regional</b>               | Beyond 5 km of the pipelines and within the provincial boundaries.               |
|   | 2   | <b>Local</b>                  | Within a 5 km radius of the pipelines.   |
|   | 1   | <b>Site-specific</b>          | <b>On site or within 100 meters of the site boundaries.</b>                      |
|   | 0   | <b>None</b>                   | <b>Zero extent.</b>  |
| <b>IRREPLACEABLE</b><br>loss of resources               | 5   | <b>Definite</b>               | <b>Definite</b> loss of irreplaceable resources.                                 |
|   | 4   | <b>High potential</b>         | <b>High potential</b> for loss of irreplaceable resources.                       |
|   | 3   | <b>Moderate potential</b>     | <b>Moderate potential</b> for loss of irreplaceable resources.                   |
|   | 2   | <b>Low potential</b>          | <b>Low potential</b> for loss of irreplaceable resources.                        |
|   | 1   | <b>Very low potential</b>     | <b>Very low potential</b> for loss of irreplaceable resources.                   |
|   | 0   | <b>None</b>                   | <b>Zero potential.</b>   |
| <b>REVERSIBILITY</b><br>of impact                       | 5   | <b>Irreversible</b>           | Impact <b>cannot</b> be reversed.  |
|   | 4   | <b>Low irreversibility</b>    | <b>Low potential</b> that impact might be reversed.                              |
|   | 3   | <b>Moderate reversibility</b> | <b>Moderate potential</b> that impact might be reversed.                         |
|   | 2   | <b>High reversibility</b>     | <b>High potential</b> that impact might be reversed.                             |
|   | 1   | <b>Reversible</b>             | Impact <b>will be</b> reversible.  |
|   | 0   | <b>No impact</b>              | No impact.   |
| <b>PROBABILITY</b> (of occurrence)                      | 5   | <b>Definite</b>               | >95% chance of the potential impact occurring.                                   |
|   | 4   | <b>High probability</b>       | 75% - 95% chance of the potential impact occurring.                              |
|   | 3   | <b>Medium probability</b>     | 25% - 75% chance of the potential impact occurring.                              |
|   | 2   | <b>Low probability</b>        | 5% - 25% chance of the potential impact occurring.                               |
|   | 1   | <b>Improbable</b>             | <5% chance of the potential impact occurring.                                    |
|   | 0   | <b>No probability</b>         | <b>Zero probability.</b>   |
| <b>Evaluation Component</b>                             | <b>Rating scale and description / criteria</b>  |                               |  |
| <b>CUMULATIVE</b><br>impacts                            | <p><b>High:</b> The activity is one of several similar past, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p><b>Medium:</b> The activity is one of a few similar past, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p><b>Low:</b> The activity is localised and might have a negligible cumulative impact.</p> <p><b>None:</b> No cumulative impact on the environment.</p> |                               |  |

Once the Environmental Risk Ratings have been evaluated for each potential environmental impact, the Significance Score of each potential environmental impact is calculated by using the following formula:

- **SS (Significance Score) = (magnitude + duration + extent + irreplaceable + reversibility) x probability.**

The maximum Significance Score value is 150.

The Significance Score is then used to rate the Environmental Significance of each potential environmental impact as per Table 12 below. The Environmental Significance rating process is completed for all identified potential environmental impacts both before and after implementation of the recommended mitigation measures.

**Table 12: Scale used for the evaluation of the Environmental Significance Ratings**

| Significance Score | Environmental Significance | Description / criteria   |
|--------------------|----------------------------|--|
| 125 – 150          | <b>Very high (VH)</b>      | An impact of very high significance will mean that the project cannot proceed, and that impacts are irreversible, regardless of available mitigation options.  |
| 100 – 124          | <b>High (H)</b>            | An impact of high significance which could influence a decision about whether or not to proceed with the proposed project, regardless of available mitigation options.   |
| 75 – 99            | <b>Medium-high (MH)</b>    | If left unmanaged, an impact of medium-high significance could influence a decision about whether or not to proceed with a proposed project. Mitigation options should be relooked at.   |
| 40 – 74            | <b>Medium (M)</b>          | If left unmanaged, an impact of moderate significance could influence a decision about whether or not to proceed with a proposed project.  |
| <40                | <b>Low (L)</b>             | An impact of low is likely to contribute to positive decisions about whether or not to proceed with the project. It will have little real effect and is unlikely to have an influence on project design or alternative motivation. |
| +                  | <b>Positive impact (+)</b> | A positive impact is likely to result in a positive consequence/effect and is likely to contribute to positive decisions about whether or not to proceed with the project.   |

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.

Refer to Table 13 and Table 14 for identified impacts during the construction and operational phase respectively.



Table 13: Identified impacts during the construction phase for the Golden Harvest Park upgrade project

| POTENTIAL ENVIRONMENTAL IMPACT                        | ACTIVITY   | ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION |          |        |                  |               |             |       | Cumulative | Status | RECOMMENDED MITIGATION MEASURES/ REMARKS  | ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION   |           |          |        |                  |               |             |       |              |
|---|--|--|----------|--------|------------------|---------------|-------------|-------|------------|--------|---|---|-----------|----------|--------|------------------|---------------|-------------|-------|--------------|
|   |  | Magnitude                                    | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL |            |        |   | Significance  | Magnitude | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL | Significance |
| <b>Soils</b>  |  |  |          |        |                  |               |             |       |            |        |   |   |           |          |        |                  |               |             |       |              |
| Loss of soils to compaction and erosion               | Trench excavation and installation of sewer line<br>Construction of weirs<br>Upgrade of pedestrian and vehicle bridges | 4  | 2        | 2      | 3                | 3             | 4           | 56    | M          | Low    | Negative  | All construction contractors must obtain access by use of the existing roads that can be found in and around Golden Harvest Park.<br>A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill that it does not run into the surrounding areas.<br>The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use.<br>No servicing of equipment on site during construction unless necessary. Servicing of equipment must take place off site or in the depot area of Golden Harvest Park.<br>All contaminated soil stone shall be treated in situ or removed and be placed in containers.<br>Compacted areas are to be ripped to loosen the soil structure where necessary.<br>Erosion mitigation strategies and proper stormwater management must be considered to limit erosion within the development footprint area.<br>Implement appropriate stormwater management measures, including the temporary diversion of upstream run-off from the construction areas.<br>A rehabilitation strategy focussed on revegetation must be initiated after the construction phase. | 2         | 2        | 1      | 1                | 1             | 2           | 14    | L            |
| <b>Wetlands</b>                                       |  |  |          |        |                  |               |             |       |            |        |   |   |           |          |        |                  |               |             |       |              |
| Direct loss, disturbance and degradation of wetlands. | Site clearing and preparation  | 6  | 3        | 2      | 3                | 3             | 4           | 68    | M          | Low    | Restrict all construction related activities to within the proposed pipeline servitude.<br>Adhere to the prescribed wetland buffers for secondary activities.<br>Restrict all secondary activities (e.g. laydown yards, storage areas, cement mixing and equipment to outside of wetlands and their prescribed buffers.<br>Consider above ground crossings over wetland areas.<br>Alternatively, open trench crossings are permissible but backfilling and rehabilitation must be undertaken.<br>Open trench crossings must be achieved during the dry season period.<br>Indicate delineated wetlands on site layout plans.<br>Load wetland spatial data onto a GPS and use it to mark out the positions where the pipeline will enter and exits the prescribed buffer on the boundary of a wetland. Try to reduce the disturbance footprint and the unnecessary clearing of vegetation on either side of the trench as far as possible.<br>Demarcate the 10 m construction corridor as well as the prescribed m buffer on the ground (e.g. painted wooden poles).<br>Construct as far as possible during winter when flow volumes are lowest, prioritise this for crossing sites. This will reduce impacts to wetlands due to soil poaching and vegetation trampling under peak saturation levels. Additionally, the risk of vehicles getting stuck and further degrading the vegetation integrity is lowest during this time. | 4   | 2         | 1        | 2      | 1                | 2             | 20          | L     |              |

| POTENTIAL ENVIRONMENTAL IMPACT  | ACTIVITY   | ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION |          |        |                  |               |             |       | Cumulative | Status | RECOMMENDED MITIGATION MEASURES/ REMARKS | ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION  |           |          |        |                  |               |             |       |              |
|---|--|--|----------|--------|------------------|---------------|-------------|-------|------------|--------|--|--|-----------|----------|--------|------------------|---------------|-------------|-------|--------------|
|   |  | Magnitude                                    | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL |            |        |  | Significance   | Magnitude | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL | Significance |
| Increased bare surfaces, runoff and potential for erosion and resulting sedimentation of the wetlands   | Site clearing and preparation  | 6  | 3        | 2      | 3                | 3             | 4           | 68    | M          | Low    | Negative                                 | Keep the trench excavation neat and tidy. Only stockpile on one side of the trench (the same side as the excavator tracks). Separate topsoil and sub-soil, and backfill in same order. Ensure soil stockpiles and concrete / building sand are sufficiently safeguarded against rain wash. Mixing of concrete must under no circumstances take place in any wetland or the prescribed buffers. Scrape the area where mixing and storage of sand and concrete occurred to clean once finished. Do not situate any of the construction material laydown areas within any wetland or prescribed buffer. No machinery should be allowed to be parked in any wetlands. Ensure topsoil is spread back over trench area. Flatten and lightly till (no deeper than 30 cm) excavated / cleared areas to encourage vegetation establishment as soon as possible. | 4         | 2        | 1      | 2                | 1             | 2           | 20    | L            |
| Degradation of wetland vegetation and the introduction and spread of alien and invasive vegetation  | Site clearing and preparation  | 6  | 3        | 2      | 3                | 3             | 4           | 68    | M          | Low    | Negative                                 | Promptly remove all alien and invasive plant species that may emerge during construction (i.e. weedy annuals and other alien forbs) must be removed. The use of herbicides is not recommended in or near wetlands (opt for mechanical removal). Appropriately stockpile topsoil cleared from the project area. This can be used for rehabilitation of the servitude. Clearly demarcate construction footprint, and limit all activities to within this area. Minimize unnecessary clearing of vegetation. Landscape and re-vegetate all denuded areas as soon as possible.   | 4         | 2        | 1      | 2                | 1             | 2           | 20    | L            |
| Increased sediment loads to downstream reaches  | Trench excavation and installation of sewer line<br>Construction of weirs<br>Upgrade of pedestrian and vehicle bridges | 6  | 3        | 2      | 3                | 3             | 4           | 68    | M          | Low    | Negative                                 | See mitigation for increased bare surfaces, runoff and potential for erosion. Re-instate topsoil and lightly till disturbance footprint. At all crossings install sandbags on downstream side of the footprint to trap sediment until the site has been constructed and vegetation has re-established.   | 4         | 2        | 1      | 2                | 1             | 2           | 20    | L            |
| Contamination of wetlands with hydrocarbons due to machinery leaks and eutrophication of wetland systems with human sewerage and other waste. | Trench excavation and installation of sewer line<br>Construction of weirs<br>Upgrade of pedestrian and vehicle bridges | 6  | 3        | 2      | 3                | 3             | 4           | 68    | M          | Low    | Negative                                 | Make sure all excess consumables and building materials / rubble is removed from site and deposited at an appropriate waste facility. Appropriately contain any generator diesel storage tanks, machinery spills (e.g. accidental spills of hydrocarbons oils, diesel etc.) or construction materials on site (e.g. concrete) in such a way as to prevent them leaking and entering the wetland areas. Regularly maintain stormwater infrastructure, pipes, pumps and machinery to minimise the potential for leaks. Check for oil leaks, keep a tidy operation, install bins and promptly clean up any spills or litter. Provide appropriate sanitation facilities during construction and service them regularly.  | 4         | 2        | 1      | 2                | 1             | 2           | 20    | L            |
| <b>Biodiversity - Fauna and Flora</b>   |  |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |
| Loss of flora   | Site clearing and preparation  | 4  | 2        | 2      | 2                | 2             | 2           | 24    | L          | Low    | Negative                                 | Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion during flood events. This will also reduce the likelihood of encroachment by alien invasive plant species. All development areas to be rehabilitated immediately after construction and ensure that vegetation regrowth take place. Leaking equipment and vehicles must be repaired immediately or be removed from project area to facilitate repair.   | 2         | 2        | 1      | 1                | 1             | 2           | 14    | L            |

| POTENTIAL ENVIRONMENTAL IMPACT  | ACTIVITY   | ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION |          |        |                  |               |             |       | Cumulative | Status | RECOMMENDED MITIGATION MEASURES/ REMARKS | ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION  |           |          |        |                  |               |             |       |              |  |
|---|--|--|----------|--------|------------------|---------------|-------------|-------|------------|--------|--|--|-----------|----------|--------|------------------|---------------|-------------|-------|--------------|--|
|   |  | Magnitude                                    | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL |            |        |  | Significance   | Magnitude | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL | Significance |  |
| Spread and/or establishment of alien and/or invasive species  | Site clearing and preparation                    | 4  | 4        | 2      | 2                | 1             | 3           | 39    | L          | Low    | Negative                                 | Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion during flood events. This will also reduce the likelihood of encroachment by alien invasive plant species. Compilation of and implementation of an alien vegetation management plan. A pest control plan must be put in place and implemented; it is imperative that poisons not be used. | 2         | 2        | 1      | 1                | 1             | 2           | 14    | L            |  |
| Introduction of nuisance vectors (pests) such as rodents and flies  | Trench excavation and installation of sewer line | 6  | 2        | 1      | 2                | 1             | 3           | 36    | L          | Low    | Negative                                 | Ensure the correct handling, storage and operation of general waste generated on the construction site. Remove general waste generated frequently as to prevent the development of a breeding habitat for nuisance pests such as flies.  | 2         | 2        | 1      | 1                | 1             | 2           | 14    | L            |  |
|   | Construction of weirs                            |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
|   | Upgrade of pedestrian and vehicle bridges        |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
| <b>Heritage</b>   |  |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
| Damaging, alter or removal of archaeological material or objects due to construction activities.                    | Trench excavation and installation of sewer line | 6  | 5        | 2      | 4                | 4             | 3           | 63    | M          | Low    | Negative                                 | All existing structures in the park should be indicated on development plans and avoided during construction; The grave marker must be indicated on development maps, demarcated with danger tape, and avoided during construction. Any excavation in this area must be monitored by the ECO. Implementation of a chance find procedure for the project.   | 2         | 5        | 2      | 4                | 4             | 2           | 34    | L            |  |
| <b>Noise</b>  |  |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
| General rise in ambient noise levels  | Trench excavation and installation of sewer line | 4  | 2        | 2      | 1                | 1             | 4           | 40    | M          | Low    | Negative                                 | Ensure high level of equipment maintenance, especially intake and exhaust mufflers. Replace pure tone (beeping) with broadband (hissing) reversing alarms.   | 2         | 2        | 2      | 1                | 1             | 2           | 16    | L            |  |
|   | Construction of weirs                            |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
|   | Upgrade of pedestrian and vehicle bridges        |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
| <b>Air Quality</b>  |  |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
| Increased dust fallout  | Trench excavation and installation of sewer line | 4  | 2        | 1      | 1                | 1             | 4           | 36    | L          | Low    | Negative                                 | Apply dust suppressants to gravel roads used. Apply dust suppression on cleared surface during the construction phase. Set speed limits to 40 km/h to minimise the creation of fugitive dust within the Golden Harvest Park.   | 2         | 2        | 1      | 1                | 1             | 2           | 14    | L            |  |
|   | Construction of weirs                            |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
|   | Upgrade of pedestrian and vehicle bridges        |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
| <b>Social</b>   |  |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
| Benefits resulting from employment and income opportunities created by the proposed upgrades of Golden Harvest Park | Trench excavation and installation of sewer line | 4  | 2        | 2      | 2                | 1             | 3           | 33    | L          | Low    | Positive                                 | Develop a clear and concise employment policy prioritising local employment. Employ local works if qualified applicants with the appropriate skills are available. Purchase goods and services at a local level if available.  | 4         | 2        | 2      | 2                | 1             | 3           | 33    | L            |  |
|   | Construction of weirs                            |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |
|   | Upgrade of pedestrian and vehicle bridges        |  |          |        |                  |               |             |       |            |        |  |  |           |          |        |                  |               |             |       |              |  |

Table 14: Identified impacts during the operational phase for the Golden Harvest Park upgrade project

| POTENTIAL ENVIRONMENTAL IMPACT                                   | ACTIVITY  | ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION |          |        |                  |               |             |       | Cumulative | Status | RECOMMENDED MITIGATION MEASURES/ REMARKS | ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION   |           |          |        |                  |               |             |       |              |
|--|---|--|----------|--------|------------------|---------------|-------------|-------|------------|--------|--|---|-----------|----------|--------|------------------|---------------|-------------|-------|--------------|
|  |   | Magnitude                                    | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL |            |        |  | Significance  | Magnitude | Duration | Extent | Irreplaceability | Reversibility | Probability | TOTAL | Significance |
| <b>Soils</b>   |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| Soil contamination due to leaks                                  | Operation of sewer line                                 | 4  | 4        | 2      | 2                | 2             | 2           | 28    | L          | Low    | Negative                                 | Conduct regular inspection of manholes along the sewer line and fix leaks timeously. Engineers should advise on the frequency of pressure tests to detect leaks. Monitor water quality. Install leak detection devices. | 2         | 2        | 1      | 1                | 1             | 1           | 7     | L            |
| <b>Surface water and wetlands</b>                                |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| Increased water and sewerage inputs to downstream wetlands       | Operation of sewer line                                 | 4  | 4        | 2      | 2                | 2             | 2           | 28    | L          | Low    | Negative                                 | Conduct regular inspection of manholes along the sewer line and fix leaks timeously. Engineers should advise on the frequency of pressure tests to detect leaks. Monitor water quality. Install leak detection devices. | 2         | 5        | 1      | 1                | 3             | 2           | 24    | L            |
| <b>Biodiversity - Fauna and Flora</b>                            |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| No additional impacts are expected during the operational phase. |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| <b>Heritage</b>  |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| No additional impacts are expected during the operational phase. |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| <b>Noise</b>   |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| No additional impacts are expected during the operational phase. |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| <b>Air Quality</b>   |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| No additional impacts are expected during the operational phase. |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| <b>Social</b>  |   |  |          |        |                  |               |             |       |            |        |  |   |           |          |        |                  |               |             |       |              |
| Upgraded recreational area for residents of Randburg and beyond  | Operation of upgraded structures in Golden Harvest Park | 2  | 4        | 2      | 1                | 1             | 2           | 20    | L          | Low    | Positive                                 | Ensure maintenance of vehicle and pedestrian bridge to ensure that the structures are safe for use by the public.   | 4         | 4        | 2      | 1                | 1             | 3           | 36    | L            |

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 reports were used to populate the impact tables:

- Wetland Assessment
- Heritage Impact Assessment

Refer to Appendix D1 for a copy of the wetland assessment and Appendix D2 for a copy of the heritage impact assessment.

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

**Wetland report:**

The following limitations and assumptions are applicable to the wetland report:

- Wetland boundaries reflect the ecological boundary where the interaction between water and plants influences the soils, but more importantly the plant communities. The depth to the water table where this begins to influence plant communities is approximately 50 centimetres. This boundary, based on plant species composition, can vary depending on antecedent rainfall conditions, and can introduce a degree of variability in the wetland boundary between years and/or sampling period.
- The field survey was limited to two single day site visits, which were undertaken on the 7 and 10 September 2021 during which all wetlands within and immediately adjacent to the study area were identified and delineated.
- Large parts of the study area are characterised by a typical urban park landscape with mowed lawns. Of the remainder of the study area the bulk is characterised by extensive and dense stands of alien invasive trees. The vegetation of the study area is therefore highly transformed and could for the most part not be used to identify or delineate wetland boundaries (with exception of wetland units C and D). The wetland delineation was therefore based on soil wetness indicators as exposed with a handheld soil auger.
- Due to the presence of various infrastructures on site, specifically several occupied residential dwellings and associated garden areas, it was not possible to auger in some sections of the study area. Only current wetland habitat outside the footprint of existing infrastructures was therefore delineated.
- Due to the scale of the remote imagery used (1:10 000 orthophotos and Google Earth Imagery), as well as the accuracy of the handheld GPS unit used to delineate wetlands in the field, the delineated wetland boundaries cannot be guaranteed beyond an accuracy of about 15m on the ground. Should greater mapping accuracy be required, the wetlands would need to be pegged in the field and surveyed using conventional survey techniques.

**Heritage Impact Assessment:**

- Due to the dense vegetation in study area and the often-ephemeral nature of heritage resources, the possibility of discovery of heritage resources during the construction phase cannot be excluded. This limitation is successfully mitigated with the implementation of a chance find procedure and monitoring of the study area by the ECO.

### 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.

No decommissioning and closure phase is envisaged as the Golden Harvest Park is an existing park and will be in continued use in the future.

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

Not applicable

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

Not applicable

### 4. CUMULATIVE IMPACTS

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

According to the NEMA EIA Regulations, 2014, cumulative impact in relation to an activity means the impact of an activity that in itself may not be significant, but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Construction and operational activities from the proposed project can result in several effects on the natural and social environment. Although many of these are direct, the environmental effects of individual activities can combine

and interact with other activities in time and space which results in cumulative impacts. Effects from different activities could potentially accumulate to cause additional effects that may not be apparent when assessing the individual activities .

Table 15 provides a summary of the potential cumulative impacts of the proposed project.

**Table 15: Cumulative impacts**

| Aspect      | Cumulative impact   | Significance |
|-------------|---|--------------|
| Wetlands    | Cumulative impacts are assessed in context of the extent of the proposed project area; other developments in the area; and general wetland loss and transformation resulting from other activities in the area. The expected post-mitigation risk significance is expected to be low, and the overall cumulative impact is therefore expected to be low. The cumulative impacts are further mitigated by the fact the vehicle and pedestrian bridge developments are upgrades of existing facilities. | Moderate (-) |
| Air quality | Cumulative dust generation in the area will increase due to construction activities, but will be limited to the construction phase only and is therefore considered a temporary impact. By implementing the proposed management measures, this impact will be well managed and will not have a lasting impact on the surrounding community.   | Low (-)      |
| Noise       | Noise generated by the construction activities will add to the cumulative noise level. Construction activities, mainly earthmoving activities and movement of construction vehicles will add to the cumulative noise levels in the area. There are relatively few other noise sources in the area.  | Low (-)      |
| Heritage    | The proposed project will have a low cumulative impact with the implementation of the recommended mitigation measures as no significant heritage resources will be adversely affected.  | Low (-)      |

## 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

The following conclusions were drawn after undertaking the impact assessment for the proposed upgrades at Golden Harvest Park:

The study area is a public park that has been developed and maintained from 1972. The majority of the park is well tended with manicured lawns, although some parts of the park are highly overgrown, and some illegal dumping occurs. Examination of historical topographic maps and aerial images showed that the area includes structures and ruins from prior to 1943 with development in and around the park intensifying from the 1950's. No historical features are located in proximity to the upgrades. The lack of heritage sites in the development footprint was confirmed during the site visit and heritage finds close to the proposed upgrades were limited to a single informal grave marker.

According to the SAHRA Paleontological sensitivity map the study area is of insignificant paleontological significance and no further studies are required for this aspect.

Wetlands were identified and delineated within the 500m regulated area. The ecological status of these ranged from moderately modified to seriously modified. The ecological importance and sensitivity of the systems was determined to be moderate. The recommended ecological category for all wetland units were determined to be largely modified.

Several potential impacts of Moderate significance to the receiving wetlands were identified in the impact assessment. Most of these impacts have the potential to be reduced to a residual impact significance of low. A few impacts would result in Moderate residual impact significance

### Conclusion

From the results of the impact assessment undertaken, the proposed upgrades and developments at Golden Harvest Park will have the greatest impact during the construction phase of the development. Although the proposed activities are located in a sensitive environment (wetlands), the overall sensitivity was determined to be moderate, and impacts to the wetland could be managed by implementing several mitigation measures.

It is the opinion of the EAP that no fatal flaws have been identified for the proposed upgrades at Golden Harvest Park, and that the positive impacts after the upgrades have been implemented will result in an overall positive impact on the Golden Harvest Park and the users thereof (public). It is proposed that that the project be approved and proceed, provided that all mitigation measures in the EMP are implemented and adhered to in order to mitigate the potential impacts.

### Alternative 1

Not applicable

### Alternative 2

Not applicable

**No-go (compulsory)**

The no-go option of not implementing the proposed upgrades at Golden Harvest Park will result in no impacts occurring on the bio-physical environment (soils, vegetation, wetlands).

However, by not implementing the proposed upgrades, the park will not provide safe crossings for vehicles and pedestrians making use of the park for recreational activities.

By not replacing the current septic tank at the depot with a sewer line (that will tie in with an existing sewer line), the septic tank will continue to overflow and leak into the environment.

Implementation of the proposed upgrades will improve the conditions in the Park, and will provide safe crossings for pedestrians and vehicles.

The no go option is therefore not preferred.

**6. IMPACT SUMMARY OF THE PROPOSED OR PREFERRED ALTERNATIVE**

For proposal:

A summary of the impacts is listed below:

| Impact   | Significance before mitigation | Significance after mitigation |
|--|--------------------------------|-------------------------------|
| <b>Construction</b>  |                                |                               |
| Loss of soils to compaction and erosion  | Medium                         | Low                           |
| Direct loss, disturbance and degradation of wetlands   | Medium                         | Low                           |
| Increased bare surfaces, runoff and potential for erosion and resulting sedimentation of the wetlands  | Medium                         | Low                           |
| Degradation of wetland vegetation and the introduction and spread of alien and invasive vegetation   | Medium                         | Low                           |
| Increased sediment loads to downstream reaches   | Medium                         | Low                           |
| Contamination of wetlands with hydrocarbons due to machinery leaks and eutrophication of wetland systems with human sewerage and other waste | Medium                         | Low                           |
| Loss of flora  | Low                            | Low                           |
| Spread and/or establishment of alien and/or invasive species   | Low                            | Low                           |
| Introduction of nuisance vectors (pests) such as rodents and flies   | Low                            | Low                           |
| Heritage   | Medium                         | Low                           |
| General rise in ambient noise levels   | Medium                         | Low                           |
| Increased dust fallout   | Low                            | Low                           |
| Benefits resulting from employment and income opportunities created by the proposed upgrades   | Low                            | Low                           |
| <b>Operation</b>   |                                |                               |
| Soil contamination due to leaks of sewer line  | Low                            | Low                           |
| Increased sewerage inputs to downstream wetlands   | Low                            | Low                           |
| Upgraded recreational area for residents of Randburg and beyond  | Low                            | Low                           |

For alternative:

Not applicable.

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.

Not applicable.

## 7. SPATIAL DEVELOPMENT TOOLS

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

The Gauteng Spatial Development Framework (SDF) contain spatial development principles. To realise the spatial development vision for Gauteng, the SDF lists the following spatial development principles:

- Liveability;
- Concentration;
- Connectivity;
- Conservation;
- Diversity; and
- Viability.

One of the aspects under the liveability principle, reads as follows:

*"Allow all people easy access to enjoy public spaces for a range of educational, cultural and entertainment purposes, without fear" (Gauteng SDF 2030).*

The proposed upgrades at Golden Harvest Park will contribute to the maintenance, upkeep and improvement of infrastructure at Golden Harvest Park, thereby providing safe and operating facilities to visiting members of the public, and thereby complying to the principles set forth in the Gauteng SDF.

## 8. RECOMMENDTION OF THE PRACTITIONER

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

YES

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

Not applicable

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

Strict adherence to all mitigation measures stipulated in the EMPr (Refer to Appendix G).

## 9. THE NEEDS AND DESIRABILITY OF THE PROPOSED DEVELOPMENT

(as per notice 792 of 2012, or the updated version of this guideline)

The Golden Harvest Park is an open space established for use by the public for recreational purposes. The park was established in 1972 midst residential growth in the area, and provides a green space within the urban development. Green spaces within urban development provides ecological, social and environmental benefits.

Proper functioning green spaces have the following benefits:

### Ecological benefits:

- Provide a habitat for a variety of birds, fish, animals, insects, and other organisms, while also providing corridors and greenways to link habitats
- Prevent soil erosion and absorb rainwater, thereby improving drainage

### Social benefits:

- Provides a recreational place to play, meditate, gather, or rest within an urban area
- Give a sense of social place
- Introduce the natural into the urban environment.
- Provide a refreshing contrast to the urban environment, and stimulate the senses with their colour, sound and smell
- Foster a connection between community residents and the natural environment that surrounds them, thus allowing for a more liveable city

By undertaking the various upgrades in Golden Harvest Park, the area will be more inviting to the surrounding community.

The proposed upgrades at Golden Harvest Park will benefit the local communities as follow:

- Ensure that the park's river crossings are safe for residents utilising the park;
- Availability of adequate ablution facilities when visiting the park; and
- Use of playground equipment for families with small children.



**10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED**

(consider when the activity is expected to be concluded)

No decommissioning is required. The Golden Harvest Park is an existing park will function for indefinitely, with regular maintenance. The authorisation should be valid for this time.

**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

## 12. REFERENCES

1World Consultants (Pty) Ltd, 2021. **Heritage Impact Assessment: For the proposed upgrades at Golden Harvest Park, Gauteng Province**. Report Reference Number: 2272. May 2022.

Gauteng Provincial Government Gauteng. **Spatial Development Framework 2030**. ISBN: 978-0-621-45316-4.

Mucina, L. & Rutherford, M. C. (Eds), 2006. **The vegetation of South Africa, Lesotho and Swaziland**. Strelitzia 19. South African National Biodiversity Institute, Pretoria.

WCS Scientific (Pty) Ltd (WCS), 2021. **Wetland Delineation and Assessment for Golden Harvest Park, City of Johannesburg**. Report Reference Number: 5231-2021. October 2021.

# SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s) and Route position information

Appendix: Property Details – Not applicable as all property details are available in this Draft Basic Assessment Report.

Appendix D: Specialist reports

Appendix E: Public participation information

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

Appendix G: EMPr

Appendix H: Other information

## CHECKLIST

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

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