# DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

# FOR THE THE PROPOSED CONSTRUCTION OF A STUDENT ACCOMMODATION AND ASSOCIATED INFRASTRUCTURE ON PORTION 2 TO 102 OF ERF 1305 OF THE FARM RIETGAT JR SOSHANGUVE BLOCK M, WITHIN THE JURISDICTION OF THE CITY OF TSHWANE METROPOLITAN MUNICIPALITY

# GAUT-002/25-26/E0209

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# DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

## Contents Page

**List of Figures**



**List of Tables:**

| DOCUMENT STATUS | |
|---|---|
| **Client** | Govhani Student Accommodation |
| **Project Name** | The Proposed Construction of a Student Accommodation and associated Infrastructure on Portion 2 to 102 of Erf 1305 of the Farm Rietgat JR, Soshanguve Block M, within the Jurisdiction of the City of Tshwane Metropolitan Municipality |
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**APPROVAL**

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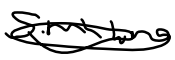
| **Prepared by** | **Sinnah Mhlongo**<br><br>*Can.Sci.Nat*<br>*Registered CHSO* |  | November 2025 |
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| | Department of Human Settlements |
| | Air Traffic Navigation Services |
| | Department of Higher Education and Training (DHET) |
| | Interested & Affected Parties |

**ACRONYMS & ABBREVIATIONS**

| | |
|---|---|
| BAR | Basic Assessment Report |
| CA | Competent Authority |
| CBA | Critical Biodiversity Area |
| CM | Contract Manager |
| DBAR | Draft Basic Assessment Report |
| DMP | Disposal Management Plan |
| EA | Environmental Authorisation |
| EAP | Environmental Assessment Practitioner |
| EAPASA | Environmental Assessment Practitioners Association of South Africa |
| ECA | Environment Conservation Act, 1989 (Act No. 73 of 1989) |
| EIS | Ecological Importance and Sensitivity |
| EMPr | Environmental Management Programme |
| EO | Environmental Officer |
| ESA | Ecological Support Area |
| GDEnv | Gauteng Department of Environment |
| GNR | Government Notice Regulation |
| HIA | Heritage Impact Assessment |
| I&AP | Interested and Affected Party |
| IAP | Invasive Alien Plants |
| IEM | Integrated Environmental Management |
| NEMA | National Environmental Management Act, 1998 (Act No. 107 of 1998) |
| NEMBA | National Environmental Management: Biodiversity Act, (Act No. 10 of 2004) |
| NHRA | National Heritage Resources Act, 1999 (Act No. 25 of 1999) |
| PAOI | Project Area of Influence |
| PC | Principal Contractor |
| PES | Present Ecological State |
| PM | Project Manager |
| SACNASP | South African Council for Natural Scientific Professions |
| SAHRA | South African Heritage Resources Agency |
| SANBI | South African National Biodiversity Institute |
| SCP | Selahle Consultancy & Projects |
| SIA | Social Impact Assessment |
| SO | Safety Officer |

## INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

The Environmental Impact Assessment (EIA) Regulations, promulgated in terms of the National Environmental Management Act (Act no. 107 of 1998 as amended) dated 8th of December 2014. In terms of Appendix 4(1) of the EIA Regulations 2014 as amended, an Environmental Management Programme (EMPr) must contain the information that is necessary for the competent authority to consider and come to a decision on the application and must include –

| Content of Environmental Management Programme (EMPr) | |
|---|---|
| (1) An EMPr must comply with section 24N of the Act and include-<br>(a) details of-<br>(i) the EAP who prepared the EMPr; and<br>(ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae. | Chapter 1 |
| (b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description; | Chapters 2 & 3 |
| (c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers; | Chapter 3 |
| (d) a description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-<br>(i) planning and design;<br>(ii) pre-construction activities;<br>(iii) construction activities;<br>(iv) rehabilitation of the environment after construction and in the case of a closure activity, closure; and<br>(v) where relevant, operation activities; | Chapter 7 |
| (f) a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to-<br>(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;<br>(ii) comply with any prescribed environmental management standards or practices; and<br>(iii) comply with any applicable provisions of the Act regarding closure, in the case of a closure activity; | Chapter 7 |
| (g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f); | Chapter 7 |
| (h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f); | Chapter 7 |
| (i) an indication of the persons who will be responsible for the implementation of the impact management actions; | Chapter 7 |

| Content of Environmental Management Programme (EMPr) | |
|---|---|
| (j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented; | Chapter 7 |
| (k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f); | Chapter 7 |
| (l) a program for reporting on compliance, taking into account the requirements as prescribed by the regulations; | Chapter 7 |
| (m) an environmental awareness plan describing the manner in which- (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and | Chapter 4 |
| (n) any specific information that may be required by the competent authority. | Not applicable |

# 1. DETAILS OF THE EAP

Table 1: Details of EAP

| | |
|---|---|
| Name of the Environmental Assessment Practitioner | Shonisani Selahle |
| Tel No: | 011 026 2560 |
| Fax No: | 086 685 9567 |
| Email: | shonie@scprojects.co.za / admin@scprojects.co.za |

## 1.1 Expertise of the EAP

- EAPASA Registered EAP: 2020/2646
- SACNASP Registered Scientist: 134271
- SACPCMP Registered Safety Manager: CHSM/1372/2025

**Qualifications**

- BSc Honours in Environmental Management - (UNISA) 2025
- N. Dip in Geology – (TUT) 2010
- NOSA, Implementation of ISO 45001:2018 & ISO 14001:2015

**Summary of the EAP's experience**

Shonisani Selahle is an Environmental Consultant with more than 14 years of experience in applying the principles of Integrated Environmental Management and in applying the Environmental Legislation to several development projects and initiatives in Southern Africa. She has coordinated and managed several diverse projects and programs related to the Environment and Waste within both the public and private sectors for national and international companies. She has a great understanding of relevant legislation about environment management (NEMA, ECA, NWA, MPRDA, etc).

**Curriculum Vitae Shonisani Selahle**

- Ability to carry out international environmental legislation research to interpret and incorporate it in proposals/EIAs/BAs
- Understanding and implementation of World Bank Guidelines and Equator Principles into EIA reports
- Technicalities of EIA Guidelines (Pre-consultation; Exemption of Environmental Authorisation, Environmental Screening Studies, Feasibility Studies, Fatal Flaw Studies, Basic Assessment, EIA, Scoping, EIA Public Participation and Appeals)
- Ability to undertake Environmental Authorisation Amendments (Minor and Substantive) Application
- Ability to carry out Occupational Health and Safety Compliance Monitoring and Audits in terms of the Occupational Health and Safety Act and Construction Regulations
- Ability to do EIA Reports independently and incorporate specialist input into reports.

- Ability to compile Environmental Management Plans
- Ability to coordinate Public Participation from call to register to compile issues and response Reports.
- Ability to undertake EIA's/BAs for Renewable energy projects.
- Ability to carry out Environmental Control Officer (ECO) duties (site inspection and site/client auditing) and work independently.
- Ability to liaise with clients and authorities.
- Ability to undertake site rehabilitation using Bio-remediation methods for contaminated sites,
- Ability to carry out Occupational Health and Safety Audits,
- Ability to apply Construction Health and Safety Permits with swift responses from the Department of Employment and Labour
- Ability to implement ISO 45001:2018 and ISO 18001:2015 standards per project description for companies.

# 2. INTRODUCTION

Selahle Consultancy and Projects (Pty) Ltd (SCP) was appointed by Govhani Student Acomodation to undertake the Environmental Authorisation processes for the Proposed Construction of a Student Accommodation and Associated Infrastructure in Soshanguve, Block M, within the jurisdiction of the City of Tshwane Metropolitan Municipality. The study area is located on Portion 2 to 102 of Erf 1305 of the Farm Rietgat JR. Projects of this nature trigger Listed Activities in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and the EIA Regulations, 2014 (amended). This document is compiled in accordance with the Integrated Environmental Management (IEM) philosophy which aims to achieve a desirable balance between conservation and development (DEAT, 1992).

Integrated Environmental Management (IEM) is a key instrument of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended [NEMA]. NEMA promotes the Integrated Environmental Management of activities that may have a significant effect on the environment, while IEM prescribes a methodology for ensuring that environmental management principles are fully integrated into all stages of the development process. It advocates the use of several environmental management tools that are appropriate for the various levels of decision-making. One such tool is an EMPr.

The EMPr is a detailed plan for the implementation of the mitigation measures to minimise the negative environmental impacts. The EMPr for this project includes a construction environmental monitoring plan specifying how the construction of the project is to be carried out. The EMPr also includes the actions required for the Post-Construction Phase (Operation and Maintenance Phase) to ensure that all potential environmental impacts are managed for the duration of the project's life cycle and will ensure environmental good practice.

The provisions of this EMPr are binding on the contractor during the life of the contract. They are to be read in conjunction with all the documents that comprise the collection of documents for this contract. If any conflict occurs between the terms of the EMPr and the project specifications or Environmental Approval, the terms herein shall be subordinate.

# 3. PROPOSED ACTIVITY

## 3.1 Project Background

Govhani Student Accommodation intends to construct 27 four (4) storey accommodation block buildings with a base bed capacity of 2505 beds in Soshanguve, located in Pretoria. The proposed development will be carried out under the Environmental Impact Assessment Regulations 2014, as amended under the National Environmental Management Act (Act 107 of 1998) as amended. The proposed development site is currently zoned as Residential 4, and it will be officially known as TUT Soshanguve Student Village with the following associated infrastructures:

- Canteen
- Recreational area
- Laundry area
- Refuse area
- Parking
- Security facilities

Furthermore, A large portion of the proposed development site falls within Class 3 Ridge, as per the Ridge Guidelines issued by the Gauteng Department of Agriculture and Rural Development (GDARD, 2019). According to these guidelines, Class 3 Ridges are those that have been transformed by 35% or more but by less than 65% as a result of human activities.

## 3.2 Project location

The proposed project is located approximately 30 km north of Pretoria, East of Mabopane on Portion 2 to 102 of Erf 1305 of the Farm Rietgat JR in Soshanguve Block M, Pretoria, under the jurisdiction of the City of Tshwane Metropolitan Municipality. The study area covers an extent of approximately 4.32 hectares, and the proposed study area can be accessed through Imphangele and Flower Streets in Soshanguve Block M. The coordinates for the site are **25°32'00.47"S 28°05'24.99"E**, (refer to Figure 1 for the site locality).

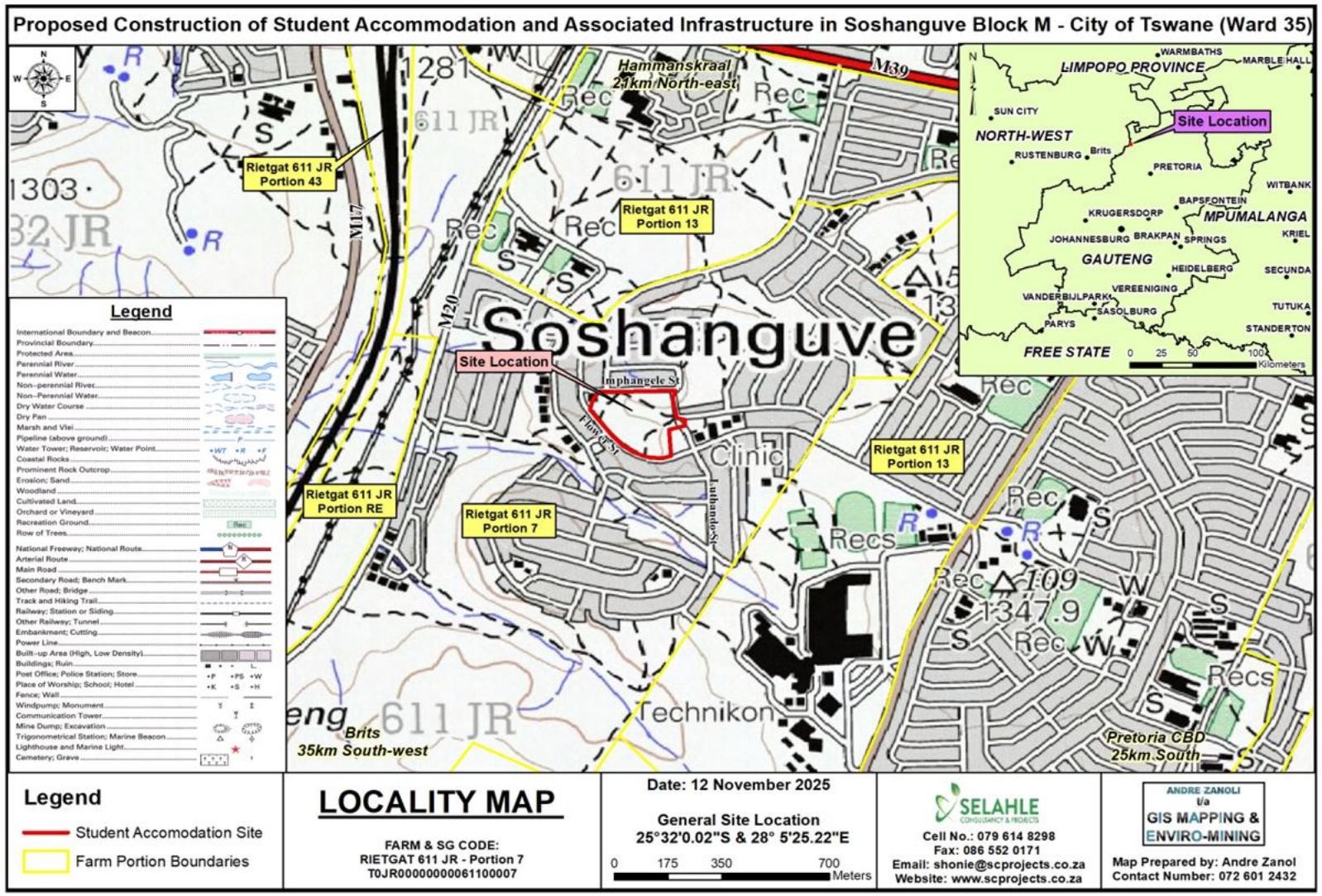


Figure 1: Locality Map for the Proposed Student Accommodation

## 3.3 The Principal Contractor's Environmental Liaison Officer (PC ELO)

The PC ELO will be appointed by the Contractor to implement the EMPr and monitor activities on site daily. The PC ELO will be the ECO's representative on the site and will report back on all audit trips. The PC ELO must report any major incidents immediately to the ECO.

Table 2: Responsibilities

| Responsibility | Function |
|---|---|
| ▪ Overall management of the project and EMPr implementation | Project Manager (PM) |
| ▪ Oversee site works, liaison with Contractor (PC ELO), PM and ECO | Senior Site Supervisor/ Contract Manager (CM) |
| ▪ Implementation of EMPr and monitoring of compliance with the requirements of the EMPr.<br>▪ Maintains close communication with the PC ELO, and oversees the PC ELO's environmental control, remediation and rehabilitation actions (including checking that the complaints register and register of environmental incidents are being maintained by the PC ELO).<br>▪ Environmental awareness training of the contractor and select main construction staff.<br>▪ Settlement of damage claims and completion of Damage Release Forms. | Environmental Control Officer (ECO) – Appointed by the proponent |
| ▪ Ensures the implementation and compliance with recommendations and conditions of the EMPr; Appoints a dedicated person (PC ELO) to work with ECO | Contractor (PC) |
| ▪ Monitoring of compliance with EMPr, environmental control of site actions, adjustment of environmental quality of works performed by construction staff, remediation and rehabilitation work.<br>▪ Reports back to the ECO through compilation of regular site inspection reports.<br>▪ Ensures compliance of construction activities with relevant environmental legislation.<br>▪ Maintains the complaints register that is kept on-site.<br>▪ Keeps record of all environmental incidents and ensures that corrective action is taken.<br>▪ Compiles method statements from the project-specific EMPr.<br>▪ Environmental awareness training of all staff. | Contractor-appointed Environmental Liaison Officer (PC ELO) |

| Responsibility | Function |
|---|---|
| ▪ Day-to-day management of landowner requirements and landowner liaison; ensures all landowner special conditions are met. | |

# 4. PLANNING AND DESIGN

## 4.1 Contractor Requirements

The Contractor must be aware of the issues and impacts surrounding the proposed development site. The Contractor must also be provided with a copy of the EMPr. The EMPr must form part of any tender documents for the proposed development.

## 4.2 The Environmental Control Officer (ECO)

The Environmental Control Officer (ECO) must be an independent environmental consultant appointed by the applicant or contractor to act as the applicant or contractor representative, to monitor and review the on-site environmental management and implementation of this EMPr by the Contractor.

The ECO must form part of the project team and be involved in all aspects of project planning that can influence environmental conditions on the site. The ECO must attend relevant project meetings, conduct inspections to assess compliance with the EMPr and be responsible for providing feedback on potential environmental problems associated with the development.

The ECO's duties will include the following:

- Confirming that all the environmental authorisations and permits required in terms of the applicable legislation have been obtained prior to construction commencing.
- Monitoring and verifying that the EMPr, Environmental Authorisation and Contract are adhered to at all times and taking action if specifications are not followed.
- Monitoring and verifying that environmental impacts are kept to a minimum.
- Reviewing and approving construction method statements with input from the ESO and Engineer, where necessary, in order to ensure that the environmental specifications contained within this EMPr, and environmental authorisation are adhered to.
- Inspecting the site and surrounding areas on a regular basis regarding compliance with the EMPr, Environmental Authorisation and Contract.
- Monitoring the undertaking by the Contractor of environmental awareness training for all new personnel on site.
- Ensuring that activities on site comply with all relevant environmental legislation.
- Ordering the removal of or issuing spot fines for person/s and/or equipment not complying with the specifications of the EMPr and/or environmental authorisation.

- Undertaking a continual internal review of the EMPr and submitting any changes to GDEnv (in case of major changes) for review and approval.
- Checking the register of complaints kept on site and maintained by the ECO and ensuring that the correct actions are/were taken in response to these complaints.
- Checking that the required actions are/were undertaken to mitigate the impacts resulting from non-compliance.
- Reporting all incidents of non-compliance to PM and the Principal Contractor.
- Conducting monthly environmental audits in respect of the activities undertaken relating to the project. The ECO shall also submit compliance audit reports to GDEnv, in accordance with the requirements of the environmental authorisation. Such reports shall be reviewed by client prior to submission.
- Keeping a photographic record of progress on site from an environmental perspective. This can be conducted in conjunction with the Safety Officer (SO) as the Safety Officer will be the person that will be onsite at all times and can therefore take photographic records weekly. The ECO would need to check and ensure that the SO understands the task at hand.
- Recommending additional environmental protection measures, should this be necessary.
- Providing a report back on any environmental issues at site meetings.

The ECO must have:

- A good working knowledge of all relevant environmental policies, legislation, guidelines, and standards.
- The ability to conduct inspections and audits and to produce thorough, readable and informative reports.
- The ability to manage public communication and complaints.
- The ability to think holistically about the structure, functioning and performance of environmental systems.

The ECO should be involved in any decisions that are taken on-site. This should include the approval of the layout plan and activities that are to be undertaken during the construction phase.

## 4.3 Waste Management

During the construction phase, the Contractor must ensure to make provision for the appropriate removal of waste from the site to a permitted waste disposal facility. The accumulation of construction waste materials must be avoided as far as possible.

A waste Disposal Management Plan (DMP) must be complied with and produced. This plan should ensure to specify where all the different waste streams would be stored on site as well as the mode of transportation of all hazardous waste to a registered landfill site. The DMP should also indicate as to how most waste would be recovered in means of Recycling, Reusing, and Recovering prior to it being disposed of at landfill sites.

## 4.4 Ecological Management Plan d.

An Ecological Management Plan (EMP) must be compiled before the commencement of the construction activities to outline the measures and responsibilities for maintaining the ecological integrity of the property. While the proposed Student Accommodation development will occur within a defined footprint, the site includes a Class 3 ridge, which is environmentally sensitive and requires protection throughout all project phases.

Below are the mitigation measures to be considered on the Ecological Management Plan in relation to the Proposed development:

- Demarcate work areas during the construction phase to avoid affecting outside areas. Use physical barriers e.g., safety tape, not painted lines, and use signage
- All activities must make use of existing roads and tracks as far as practically and feasibly possible. No new roads or servitudes should be constructed where existing infrastructure can be used.
- Do not clear areas of indigenous vegetation outside of the direct project footprint.
- Minimise vegetation clearing to the minimum required.
- Compile and implement a revegetation plan from the onset of the project.
- Revegetate areas as soon as they are no longer impacted by construction, the rehabilitated areas must be revegetated with indigenous vegetation.
- Progressive revegetation will enable topsoil to be returned more rapidly, thus ensuring more recruitment from the existing seedbank. Surplus rehabilitation material can be applied to other others in need of stabilisation and vegetation cover.
- Environmental Officer (EO) to provide supervision and oversight of vegetation clearing activities.
- Dust-reducing mitigation measures must be put in place and must be strictly adhered to, for all roads and bare (unvegetated) areas.
- A pest control plan must be put in place and implemented; it is imperative that poisons not be used.
- Prohibit staff from bringing any alien plant species into the PAOI or taking any indigenous species out of the PAOI outside of revegetation and landscaping activities. This includes both indigenous and exotic plants to prevent the spread of invasive species and illegal plant collection.
- Develop and strictly adhere to a Revegetation Plan for the development area that incorporates indigenous vegetation. This may be compiled by a landscaper.
- Cement must be mixed in a designated area on a liner away from water sources and buffers and that successful rehabilitation of the construction areas can take place.
- Leaking equipment and vehicles must be repaired immediately or be removed from project area to facilitate repair.
- Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use.
- No servicing of equipment on site unless necessary.

- All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers.
- Appropriately contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them from leaking and entering the environment.
- Construction activities and vehicles could cause spillages of lubricants, fuels and waste material negatively affecting the functioning of the ecosystem.
- All vehicles and equipment must be maintained, and all re-fuelling and servicing of equipment is to take place in demarcated areas outside of the PAOI.

## 4.5 Sensitive Areas

The Terrestrial Biodiversity Study for the proposed development, conducted by The Biodiversity Company, revealed that the site falls within a high-sensitivity ecological zone according to screening tool. However, field verification showed that the site is highly disturbed and lacks complete natural vegetation. The area is dominated by secondary grassland and ruderal species associated with urban environments, with no Species of Conservation Concern (SCC) recorded. The transformation of the land for the student accommodation is not expected to cause significant ecological loss, given the already degraded nature of the habitat.

Furthermore, the proposed student accommodation development is located within an area identified as a Class 3 ridge according to the Gauteng Department of Agriculture and Rural Development (GDARD) Ridges Policy Guidelines. This classification indicates that the ridge possesses moderate to high environmental and visual sensitivity, and therefore, development may be permitted only if it is environmentally responsive, low-impact, and designed to integrate with the natural topography

Based on this classification, the proposed development activities are permissible on the identified site, as the area is already significantly transformed. However, in accordance with the Ridge Guidelines, no further development exceeding 4 hectares in extent may be permitted once the proposed student accommodation has been completed, to prevent additional cumulative transformation of the Ridge.

## 4.6 Roads and Stormwater

The Roads and Stormwater study for the proposed development that was conducted by Civil Consult Consulting Engineers (Pty) Ltd found that the existing local road network surrounding the proposed site can accommodate the additional traffic volumes generated by the student accommodation project. The surrounding roads are in fair condition and are connected to the main major routes in Soshanguve, providing good accessibility. The study also assessed the stormwater runoff patterns and determined that proper drainage and attenuation systems are necessary to prevent downstream flooding during heavy rainfall events.

Below are the recommendations:

- Construct access roads to City of Tshwane geometric standards.
- Provide sufficient pavement width for emergency vehicle access.
- Install speed humps or raised crossings for student safety.
- Ensure pedestrian walkways are clearly marked and well lit
- Construct a full stormwater drainage system including kerb inlets, underground pipes, manholes, stormwater channels.
- Install attenuation ponds or tanks to reduce discharge to pre-development rates.
- Place energy dissipators at all stormwater outlet points.
- Prevent stormwater discharge onto adjacent private properties.
- During Construction use silt curtains and sediment traps in exposed areas
- Lastly, avoid stockpiling on natural drainage lines.

## 4.7 Engineering Services

The Engineering Report conducted by Civilconsult Consulting Engineers (Pty) Ltd assessed the availability and capacity of municipal infrastructure required to service the proposed student accommodation. Findings confirmed that the site is well-located within Soshanguve and can be supported by existing municipal water, sanitation, electrical, and road networks.

Below are the recommendations:

- Comply strictly with City of Tshwane electrical standards and SANS requirements.
- Submit full electrical design drawings for municipal approval.
- Provide sufficient space for MV switching station, transformers, mini-substations and back-up systems.
- Install LED lighting throughout the facility.
- Use smart meters on each Main Distribution Board.
- Incorporate energy-efficient appliances in communal areas.
- Integrate motion-sensor lighting in hallways, parking areas, and outdoor walkways
- Ensure earthing and lightning protection systems are fully compliant.
- Mark and fence all electrical trenching.
- Ensure only certified electricians work on live systems.
- Maintain as-built drawings and electrical compliance certificates.

## 4.8 Water and Sanitation

The Engineering Report conducted by Civil consult Consulting Engineers (Pty) Ltd confirmed that the City of Tshwane's existing municipal infrastructure can adequately service the proposed development. The site will be connected to the municipal water supply and sewage network, with sufficient capacity available for the projected demand. The study found no groundwater dependence or contamination risks.

Below are the recommendations:

- Provide adequate storage and booster systems where required.
- Install metered connections per building block.
- Use pressure-regulating valves to avoid excessive pressure
- Install low-flow faucets, dual-flush toilets, water-efficient shower heads and implement a leak detection plan.
- Install grease traps at kitchens and food areas.
- Prevent concrete washouts from entering stormwater or sewer systems.

### 4.9 Traffic

The Traffic Impact Assessment that was conducted by Infratrans (Pty) Ltd evaluated the anticipated vehicular movement resulting from the student accommodation and associated infrastructure. The analysis showed that the development would generate an estimated 51 vehicle trips during the morning peak hour and 75 during the afternoon peak hour, which the existing road network can accommodate with minor adjustments. The nearby intersections currently operate within acceptable capacity levels, though improvements could enhance safety and flow efficiency.

Below are the recommendations:

- Upgrade access intersections where required for improved capacity.
- Provide clear entry and exit signage.
- Ensure adequate turning radii for emergency and service vehicles.
- Provide separate pedestrian walkways and crossings.
- Install speed humps.
- Designate pickup/drop-off areas for deliveries.
- Schedule material deliveries outside peak hour traffic.
- Develop a Construction Traffic Management Plan.

## SITE ESTABLISHMENT

### 5.1 Contractor's Camp

The construction camp must preferably be located away from surrounding residential areas to minimise visual and noise impacts.

All movable materials and associated accessories must be stored overnight in the camp. The camp needs to be fenced with a lockable with access control for security purposes. No staff should be accommodated at the site camp except the overnight security guard. Proper facilities for the security personnel should be provided.

## 5.2 Complaints Registers

A complaint register must be always kept on site, and all complaints, issues and concerns shall be recorded in the register. All issues, concerns and complaints should also be incorporated in the feedback report and submitted to the competent authority (GDEnv).

Where complaints require corrective actions and/or measures, this must be communicated urgently to the relevant parties to ensure that the complainant is satisfied. All registered and identified Interested and Affected Parties (I&APs) should be notified prior to construction commencement.

## 5.3 Provision of Services

Chemical toilets should be provided for construction workers prior to construction commencement of any construction activities. These must be regularly maintained and emptied as and when required, at least weekly. The toilets must be located within walking distance of the work staff, and an average of one (1) toilet per thirty (30) workers for each sex must be provided in terms of Construction Regulation 30(1)(b) of the Occupational Health & Safety (Act no. 85 of 1993).

## 5.4 Staff and Environmental Awareness Plan

Staff must be made aware of their responsibilities to ensure that impacts such as fire, safety and pollution are taken care of. This must include an induction program. The movement of construction workers must be controlled and access to adjacent properties must be prohibited.

The purpose of training is to provide an understanding of environmental management obligations and regulations for the project. This training is intended for project team members who require a higher level of knowledge and understanding of the environmental management context and implementation framework for the project. On the other hand, Environmental Awareness aims to promote general awareness among the construction workforce about sensitive environmental features and how to implement environmental best practices.

The environmental awareness plan for the development incorporates both training and environmental awareness to ensure that the proposed development is implemented in compliance with the EMPr requirements and the environmental sensitivities on site are managed properly.

As part of this plan, the applicant must be committed to taking responsibility and being accountable for environmental practices on-site. It is essential for both the employer and employee to be aware of the potential environmental impacts that may result from their activities and tasks, and to take necessary measures to mitigate them.

All potential incidents to the environment may be effectively minimised through effective training and awareness of the employees using any of the following methods:

- Supervisory meetings (weekly).

- Induction training (annually).
- EMP Training (annually); and
- External environmental and/or health and safety courses (when applicable).

### *5.4.1 Meetings*

Weekly supervisory meetings are an excellent opportunity to increase awareness of any environmental hazards that may be pertinent for the upcoming week. During these meetings, a variety of topics related to safety can be discussed and should be properly documented. All attendees are required to sign an attendance register, and these records must be kept on file at the administrative office. The discussions may cover topics such as:

- Topics applicable to the entire operation
- Area-specific topics such as.
    - Stormwater management during construction
    - Sensitive Areas
    - Erosion control
    - Minimising traffic disturbances
    - Minimising impacts to stormwater
- General environmental awareness
    - Waste management
    - Spillages
    - Saving water
    - Dust control
    - Noise generation
    - Housekeeping
    - Indigenous vegetation
    - Alien vegetation
    - Fire making

Any additional issues that are identified by the ECO will be discussed in the weekly meetings.

### *5.4.2 EMPr Training*

The EMPr requires certain aspects to be chosen and addressed during training workshops at least once a year. These workshops may revolve around incidents that were frequently reported in the previous year and can cover the following topics:

- Hydrocarbon spillages
- Stormwater control
- Waste management
- Monitoring protocols and
- Safety topics.

Workers should be informed that they may refuse work that is harmful to human health and/or the environment.

### *5.4.3 Induction Training*

All newly hired employees must complete induction training before starting work. Existing and returning employees should undergo refresher induction training at least once a year. The induction training must include environmental awareness training, covering basic topics related to the environment:

- Environmental legislation
- Constitutional right pertaining to the environment
- Waste management hierarchy
- Environmental, social and economic concerns
- Sensitive environmental features and

## 5.5 Involvement of the ECO

The ECO should be involved in any decisions that are taken on-site. This should include the approval of the layout plan and activities that are to be undertaken during the construction phase.

# 5. LAYOUT OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

This EMPr addresses specific issues relating to the different phases of the project. The impact is identified, and a brief description is given. The phases of the development are then identified below

- Pre-construction
- Construction
- Operation Phase
- Rehabilitation Phase

This EMPr seeks to manage and keep to a minimum the negative impacts of a development and, at the same time, enhance the positive and beneficial impacts.

# 6. SUMMARY OF IMPACTS ASSOCIATED WITH THE PROPOSED ACTIVITY

| Impact | Before mitigation | After mitigation |
|---|---|---|
| **Non-compliance with the Environmental Management Plan, Permits and Environmental Authorisation. / Relevant Site Documentation** | High | Low |
| **Inappropriate design and selection of technology** | Medium | Low |
| **Non-compliance with Ridge Guidelines and other legislation** | High | Medium |

| Impact | Before mitigation | After mitigation |
|---|---|---|
| **Fauna and flora** | High | Low |
| **Geology and soils** | High | Low |
| **Topography** | Medium | Low |
| **Waste** | Medium | Low |
| **Dust** | Medium | Low |
| **Hazardous chemicals and waste** | Medium | Low |
| **Traffic** | High | Medium |
| **Soil Erosion** | High | Medium |
| **Storage of Hazardous or Dangerous Materials** | High | Medium |
| **Site and vegetation Clearing** | High | Medium |
| **Geohydrological, hydrological, Geological, Groundwater, Stormwater run-off and surface water disturbance** | High | Medium |
| **Noise** | Low | Low |
| **Dust** | Medium | Low |
| **Labour Impacts/concerns** | Medium | Low |
| **Spills and Contamination** | Medium | Low |
| **Heritage & Archaeological** | High | Low |
| **Occupational Health and Safety** | High | Low |
| **Employment/job opportunities created** | High (Positive) | High (Positive) |
| **Visual Impact** | High | Medium |
| **Loss of indigenous habitat** | High | Medium |
| **Alien Invasive Plant species in disturbed areas.** | High | Medium |
| **Mortality of fauna species, Emigration of fauna, alteration of ecological life cycles due to noise, light and dust and Loss of SCCs and/or protected species** | High | Medium |
| **Crime, Safety and Security** | Medium | Low |
| **Operational Phase** | | |
| **Fauna and flora** | Medium | Low |
| **Geology and soils** | Medium | Low |
| **Topography** | Low | Low |
| **Waste Management** | Low | Low |
| **Hazardous chemicals and waste** | Low | Low |
| **Soil Erosion** | Low | Low |
| **Traffic** | Low | Low |
| **Stormwater run-off** | Medium | Low |

| Impact | Before mitigation | After mitigation |
|---|---|---|
| **Geohydrological, hydrological, Geological, Groundwater, Stormwater run-off and surface water disturbance** | Medium | low |
| **Fragmentation and degradation of habitats and ecosystems** | Medium | Low |
| **Noise Pollution** | Low | Low |
| **Spread of alien and/or invasive species** | Low | Low |
| **Visual Impact** | High | Medium |
| **Crime, Safety and Security** | Low | Low |

1. Failure to comply with legislation & policies will lead to fines and conflicts with local, provincial and national stakeholders
2. Poor design and selection of technology for the proposed Solar panels. will lead to poor operation.
3. Loss of potential agricultural land due to land transformation.
4. Loss of sensitive habitat, particularly relating to the loss of micro-habitat for both faunal and floral species.
5. The construction of permanent structures on site will result in the loss of vegetation due to foundation excavation.
6. Soil disturbance and compaction from construction vehicles
7. Alteration of the Ridge due to excavations and the need to level the site in order to enable construction.
8. Waste will be generated on site during the construction phase; if not disposed of correctly, it will become a nuisance within the area.
9. Hazardous Waste generation during the construction phase will harm the environment if not controlled adequately.
10. The construction & Operational phase is likely to generate additional traffic in terms of construction vehicles and heavy vehicles delivering materials to the site.
11. Possible Reduced infiltration and increased runoff due to impervious surfaces
12. Potential for dust deposition on surrounding open ground.
13. Limit unnecessary soil disturbance during construction.
14. Implement stormwater control measures to prevent erosion.
15. Stabilise exposed areas after construction using grass cover or paving.
16. Construction machinery and earthworks may affect nearby residents.
17. Construction vehicles may increase road risks.
18. The proposed development will create approximately 250 employment opportunities during the construction phase.
19. landscape impact due to the presence of foreign elements and a loss of vegetation cover.
20. Rehabilitate disturbed areas around buildings as soon as practically possible after construction.
21. Plant trees along the perimeter of the site, to reduce the visual impact of viewers.
22.

# MITIGATION GUIDELINES

## 8.1 Environmental Management Programme

Mitigation guidelines are addressed through four phases, namely the Pre-construction (Site Establishment) Phase; the Construction Phase (and associated rehabilitation of affected environment) and the Operational Phase (Post-Construction) and the Closure Phase.

A set of prescribed impact management outcomes and associated actions has been identified. Holders of Environmental Authorisations (EAs), ECOs, and Contractors are responsible for ensuring that these outcomes and actions are implemented for all projects, as a minimum requirement. This is done to mitigate the impact of any impacts identified for the proposed development.

Before starting the activity, both the contractor and the EA holder must sign and date each page of the completed template. The method statements, which are prepared and agreed to by the holder of the EA, must be appended as well. Each method statement must also be duly signed and dated on each page by the contractor and the holder of the EA.

Each phase of the development and operation of the proposed infrastructure has specific issues unique to that period. The impact is identified, and a brief description is given. The four phases of the development are then identified and addressed below.

Table 3: Environmental Management Programme and Mitigation Measures

| IMPACT | MITIGATION ACTION REQUIRED | RESPONSIBLE PERSON | FREQUENCY |
|---|---|---|---|
| **PRE-CONSTRUCTION PHASE** | | | |
| **Site Preparation Activities** | ▪ Appointing an Environmental Control Officer | Proponent | Once Off |
| | ▪ The PC must draw up method statements for relevant construction activities. | PC | As required |
| | ▪ The PM and ECO must approve all the method statements before they become operational. | PM & ECO | As required |
| | ▪ Before construction begins, all areas to be developed must be demarcated with fencing or orange construction barriers where applicable. | PC | Throughout, monitored monthly |
| | ▪ The PC must ensure compliance with the conditions of the EMPr. | PC | Throughout, Monitored monthly |
| | ▪ The ECO must ensure compliance with the conditions of the EMPr. | ECO | Throughout, Monitored monthly |
| | ▪ All no-go areas on site must be properly fenced off / demarcated and signage placed prior to the onset of construction. | PC | Throughout, Monitored monthly |
| | ▪ Records of compliance / non-compliance with the conditions of the EMPr must be kept on-site and be available on request. A copy of these records must be made available to the provincial department on request throughout the project execution. | | Throughout, Monitored monthly |
| | ▪ All unskilled labourers must be drawn from the local market as far as possible, and use must be made of local semiskilled and skilled personnel where possible. | | Throughout, Monitored monthly |
| **Design and selection of technology** | ▪ Technology that meets approved acceptable technical standards such as SABS must be selected. | Engineer | Monitored Monthly |

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| | ▪ All the development designs must adhere to the relevant legislation and/or policies. | | |
| **Non-compliance with Ridge Guidelines and other legislation** | ▪ Adhere to GDARD Ridge Guidelines and relevant EMPr requirements<br>▪ Obtain necessary environmental authorisations and permits prior to construction. | ECO/PC | Monitored Monthly |
| **Construction Site Signage** | ▪ Construction site signage and warning signs must be erected where necessary informing the public of the construction area. Safety signage where required must also be erected. | PC | Monitored Monthly |
| **Site Access** | ▪ Use of planned access routes only. No new access routes are to be created without the necessary approvals.<br>▪ Converting the Aubrey Matlala / Flower Street intersection into a three-way stop and upgrading the Commissioner / Flower Street intersection to a signalised control as per the Traffic impact Study | PC | Monitored Monthly |
| **Water Supply** | ▪ Municipal sources only need to be used. Use of water from the nearby watercourses is strictly prohibited. No cleaning of vehicles or abstraction of water from the nearby watercourse may take place. | PC | Monitored Monthly |
| **Site and vegetation Clearing** | ▪ Areas which are not to be constructed on must not be cleared to reduce erosion risks. | PC | Monitored Monthly |
| | ▪ The area to be cleared must be clearly demarcated and this footprint strictly maintained. The footprint of clearance should not exceed the required development footprint and working area/servitude. A designated area is required where cleared vegetation is stockpiled until removal. | | Monitored Monthly |
| | ▪ Stripped topsoil must be stockpiled for reuse where possible (i.e., for post-construction rehabilitation). | | Monitored Monthly |

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| | ▪ Spoil (including excavated subsoils and topsoil) that is removed from the site must be stockpiled in a designated area and removed to an approved spoil site. | | Monitored Monthly |
| | ▪ All removed plant material (i.e., trees) must be disposed of at a suitable waste site. No burning of plant material removed from the construction site is allowed. | | Monitored Monthly |
| | ▪ Alien invasive vegetation is to be removed and controlled on the construction site. | | Monitored Monthly |
| **Dust** | ▪ Damping down of the unsurfaced access roads and site where required must be implemented to reduce dust and nuisance. This can be achieved through regular watering. | PC | Monitored Monthly |
| **Soil Erosion** | ▪ The necessary silt fences and erosion control measures must be implemented in areas where these risks are more prevalent. | PC | Monitored Monthly |
| **Worker Safety** | ▪ All the necessary Public Protective Equipment (PPE) must be provided to all workers on site (including but not limited to dust masks, dust goggles, gloves, earplugs, overalls and boots where applicable). | PC | Monitored Monthly |
| **Sanitation and Ablution Facilities** | ▪ Temporary chemical sanitation facilities are to be provided to workers at a ratio of 1 toilet to 30 workers (1:30) in terms of Construction Regulation 30(1)(b) of the Occupational Health & Safety (Act no. 85 of 1993). Use of the construction site and the nearby area is strictly prohibited. | PC | Monitored Monthly |
| **Vehicle and Machinery Maintenance** | ▪ All mechanical work, repairs or servicing will be done on-site. This must be undertaken at the relevant workshop. | PC | Monitored Monthly |
| | ▪ Emergency oil spill kits are required to be kept on-site in the case of any spills of oils or any other hazardous fluid or substance. | | |
| | ▪ Refueling of plant equipment by means of a diesel bowser must be undertaken over a bunded or impermeable surface. Any leakages or | | |

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| | spills must be cleaned up immediately, removed and disposed of accordingly in terms of hazardous substances. | | |
| **Storage of Hazardous or Dangerous Materials** | ▪ No diesel, fuel, hazardous fluids or substances are to be kept on site | PC | Monitored Monthly |
| **Solid Waste Facilities** | ▪ Waste collection bins are to be provided.<br>▪ Solid waste must be disposed of at a registered landfill with sufficient capacity to assimilate waste.<br>▪ Strictly no burning of solid waste on site. | PC | Monitored Monthly |
| **Excavations** | ▪ Excavations for stormwater must be demarcated with danger tape for workers' safety as well as to prevent further vegetation clearance outside the footprint. | PC | Monitored Monthly |
| **CONSTRUCTION PHASE** | | | |
| **Development of Construction and Laydown Area** | ▪ The choice of site for the Contractor's laydown area requires the Project Manager and ECO's permission and must take into account the location of residents and/or ecologically sensitive areas, including flood zones. A site plan must be submitted to the Project Manager for approval. The size of the Construction laydown area must be minimised | PC | Once Off |
| | ▪ Adequate parking must be provided for site staff and visitors. The Contractor must attend to the drainage of the campsite to avoid standing water and/or sheet erosion. | | Monitored Monthly |
| | ▪ Suitable control measures over the Contractor's yard, plant and material storage to mitigate any visual impact of the construction activity must be implemented. | | Monitored Monthly |
| | ▪ All laydown areas are to be fenced off in such a manner that unlawful entry is prevented and access is controlled. Signage shall be erected at all access points in compliance with all applicable occupational health | | Monitored Monthly |

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| | and safety requirements. All access points to the Construction laydown must be controlled by a guard or otherwise monitored to prevent unlawful access. | | |
| | ▪ The Construction laydown area must be set up in accordance with the EMPr. The ECO and Contractor must inspect this site to confirm and note any environmental sensitivity. | | Once off |
| | ▪ The construction layout plan must be provided to the ECO for approval prior to the construction of the laydown area. | | Once off |
| | ▪ Site establishment shall take place in an orderly manner, and all required amenities shall be installed at the construction laydown areas before the main workforce moves onto the site. | | Once off |
| | ▪ All construction equipment must be stored within the construction laydown area. | | Monitored Monthly |
| | ▪ All associated fueling and re-fueling must take place within this camp on a bunded or sealed surface such as a concrete slab. | | Monitored Monthly |
| | ▪ An area for the storage of hazardous materials must be established that conforms to the relevant safety requirements and that provides for spillage prevention and containment. | | Monitored Monthly |
| | ▪ The Construction Camps must be provided with portable fire extinguishing equipment, in accordance with all relevant legislation and must be readily accessible. | | Monitored Monthly |
| | ▪ The Contractor must inform all site staff to make use of supplied ablution facilities and under no circumstances shall indiscriminate sanitary activities be allowed. | | Monitored Monthly |
| | ▪ All imported materials (e.g., sand) must be stockpiled within the site boundary/Construction Zone. Sand and excavated material stockpiles should be protected against wind using temporary screens, and from | | Monitored Monthly |

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| | water erosion using tarpaulins where necessary. All stockpiles are to be limited to 1-2m in height to be suitably managed. | | |
| | ▪ It is likely that most of the cement requirements are to be transported to the site as "ready mix" from an off-site batching plant. To prevent spillage onto roads, "ready mix" trucks shall rinse off the delivery shoot into a suitable sump prior to leaving the Site. Cement/concrete shall not be mixed directly on the ground. Dagga boards, mixing trays and impermeable sumps shall be used at all mixing and supply points. Unused cement bags are to be stored so as not to be affected by rain or runoff events. Used cement bags shall be stored in weatherproof containers to prevent windblown cement dust and water contamination. Used cement bags shall be disposed of on a regular basis and shall not be used for any other purpose. | | Monitored Monthly |
| | ▪ All visible remains of excess concrete shall be physically removed on completion of the plaster or concrete pour section and disposed of. Washing the remains into the ground is not acceptable as groundwater contamination could occur. All excess aggregates shall also be removed. With respect to exposed aggregate finishes, the persons undertaking construction shall collect all contaminated water and store it in sumps for disposal at an approved waste site. | | Monitored Monthly |
| | ▪ No fires will be allowed, and the Contractor must make alternative arrangements for heating. LP Gas may be used, provided that all required safety measures are in place. The Contractor shall take specific measures to prevent the spread of veld fires, caused by activities at the campsites. These measures may include appropriate instruction of employees about fire risks and the construction of firebreaks around the site perimeter. | | Monitored Monthly |

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| **Hazardous Chemicals & Waste** | ▪ All visible remains of excess concrete shall be physically removed on completion of the plaster or concrete pour section and disposed of. Washing the remains into the ground is not acceptable as groundwater contamination could occur. All excess aggregate shall also be removed. With respect to exposed aggregate finishes, the persons undertaking construction shall collect all contaminated water and store it in sumps for disposal at an approved waste site. | PC | Monitored Monthly |
| | ▪ All major spills must be specified in the contractor emergency response procedure of any materials, chemicals, and fuels or other potentially hazardous or pollutant substances must be cleaned immediately, and the cause of the spill investigated. Preventative measures must be identified and submitted to the ECO for information. Emergency response procedures are to be followed and implemented | PC | Monitored Monthly |
| | ▪ The ECO shall further monitor that materials storage facilities are cleaned/maintained on a regular basis, and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil. | PC | Monitored Monthly |
| | ▪ All harmful materials must be properly stored in a dry, secure environment, with concrete or sealed flooring and a means of preventing unauthorized entry. Furthermore, it must be ensured that material storage facilities are cleaned/ maintained on a regular basis and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil. The management of such storage facilities and means of securing them shall be agreed. | PC | Monitored Monthly |
| | ▪ All excess cement and concrete mixes are to be contained on the construction site prior to disposal off-site. | PC | Monitored Monthly |
| | ▪ All fuel storage areas must be roofed to avoid creation of dirty storm water | PC | Monitored Monthly |

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| | ▪ Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible the available, MSDSs must additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes. | PC | Monitored Monthly |
| | ▪ All necessary approvals with respect to fuel storage and dispensing (if required on site) shall be obtained from the appropriate authorities. | PC | Monitored Monthly |
| | ▪ All excess cement and concrete mixes are to be contained on the construction site prior to disposal off-site. | PC | Monitored Monthly |
| | ▪ Choice of location for storage areas must consider prevailing winds, distances to water bodies, general onsite topography and water erosion potential of the soil. Impervious surfaces must be provided where necessary. Storage areas must be designated, demarcated, sign posted and fenced if necessary. | PC | Monitored Monthly |
| | ▪ The ECO shall further monitor that materials storage facilities are cleaned/maintained on a regular basis and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil. | ECO | |
| | ▪ Choice of location for storage areas must consider prevailing winds, distances to water bodies, general onsite topography and water erosion potential of the soil. Impervious surfaces must be provided where necessary. Storage areas must be designated, demarcated, sign posted and fenced if necessary. | PC | Monitored Monthly |
| **Traffic** | ▪ All equipment moved onto site or off-site is subject to legal requirements. | PC | Monthly Monitoring |
| | ▪ The Contractor shall meet these safety requirements under all circumstances. All equipment transported shall be clearly labelled in | | Monthly Monitoring |

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| | terms of its potential hazards according to specifications. All the required safety labelling on the containers and trucks used shall be in place. | | |
| | ▪ The Contractor shall ensure that all the necessary precautions against damage to the environment and injury to persons are taken in the event of an accident. | | Monthly Monitoring |
| | ▪ Routes and required access roads must be clearly defined. | | Monthly Monitoring |
| | ▪ Delivery of equipment must be undertaken with the minimum number of trips to reduce the carbon footprint of these activities. | | Monthly Monitoring |
| | ▪ Damping down or proper dust suppression of the un-surfaced access roads must be implemented to reduce dust and nuisance. | | Monthly Monitoring |
| | ▪ Vehicles and equipment shall be serviced regularly to avoid the contamination of soil from oil and hydraulic fluid leaks etc. The servicing of vehicles and equipment is not allowed to take place on-site. This must be undertaken off-site. | | Monthly Monitoring |
| | ▪ Servicing must be done in dedicated service areas on-site or else off-site if no such area exists. | | Monthly Monitoring |
| | ▪ Oil changes must take place on a concrete platform and over a drip tray to avoid pollution. | | Monthly Monitoring |
| | ▪ Any temporary access roads created for construction will need to follow due environmental processes and attain the necessary environmental approvals before being implemented (if required). Additionally, temporary roads are to be rehabilitated prior to contractors leaving the site. | | Monthly Monitoring |
| **Soil and Geology** | ▪ The Contractor must ensure that used oils/lubricants are not disposed of on/near the site or the surrounding environment, and that contractors purchasing these materials understand the liability under which they must operate. | PC | Monthly Monitoring |

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| | ▪ Appoint appropriate contractors to remove any residue from spillages from site. Handling, storage and disposal of excess or containers of potentially hazardous materials shall be in accordance with the requirements of the above-mentioned Regulations and Acts. | | Monthly Monitoring |
| | ▪ The Contractor must ensure that use and storage of fuels and chemicals that could potentially leach into the ground be controlled. Adequate spillage containment measures shall be implemented. | | Monthly Monitoring |
| | ▪ Construct separate storm water collection areas and interceptors at storage tanks, and other associated potential pollution activities | | Monthly Monitoring |
| | ▪ Ensure all storage tanks are designed, bunded and managed to prevent pollution of drains, groundwater and soils. | | Monthly Monitoring |
| | ▪ Waste generated from these should then be disposed of at a registered landfill site. | | Monthly Monitoring |
| | ▪ Ensure that the mixing/decanting of all chemicals and hazardous materials should take place on a tray or impermeable surface. | | Monthly Monitoring |
| | ▪ It is very important that the foundation excavations for the proposed structures be inspected prior to the placing of steel reinforcement or concrete to determine that the structure is being founded upon the correct material, and to detect whether any active layers have been exposed by the foundation excavation. | | Monthly Monitoring |
| | ▪ Construction activities should preferably take place during the dry months. All surface run-offs shall be managed in such a way as to ensure erosion of soil does not occur. All surfaces that are susceptible to erosion shall be covered with a suitable vegetative cover as soon as construction is completed. | | Monthly Monitoring |
| | ▪ Soils compacted during construction must be deeply ripped to loosen compacted layers and re-graded to even running levels. Topsoil must be re-spread over landscaped areas. | | Monthly Monitoring |

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| | ▪ Should a batching plant be required on site, the concrete batching plant must be contained within a bunded area. | | Monthly Monitoring |
| | ▪ Stockpiles must be kept clear of weeds and alien vegetation growth by regular weeding. | | Monthly Monitoring |
| | ▪ Stockpiles must not exceed 2m in height unless otherwise permitted by the Engineer. Similarly, the footprint of the resultant stockpiles is to be minimised to reasonably sized area. | | Monthly Monitoring |
| | ▪ Subsoil and overburden in all construction and lay down areas must be stockpiled separately to be returned for backfilling in the correct soil horizon order. | PC | Monthly Monitoring |
| | • The full depth of topsoil must be stripped from areas affected by construction and related activities prior to the commencement of major earthworks. This must include the building footprints, working areas and storage areas. | | Monthly Monitoring |
| | ▪ Implement effective erosion control measures as identified by the ECO. | | Monthly Monitoring |
| | ▪ Rehabilitation of soil and vegetation must be undertaken where excavation has taken place. | ECO | |
| **Erosion Control** | ▪ It is recommended that construction only be undertaken during agreed working times and permitted weather conditions. | PC | Monthly Monitoring |
| | ▪ If heavy rain is expected activities should be put on hold to reduce the risk of erosion. | | Monthly Monitoring |
| | ▪ If earthworks are required, then stormwater control and wind screening should be undertaken to prevent soil loss from the site. | | Monthly Monitoring |
| | ▪ Oil traps must be installed to remove the bulk of the oil from the stormwater, which water can then be used on haul roads for dust suppression or as wash-down water in the wash bays. | | Monthly Monitoring |

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| **Waste** | ▪ Any litter must be cleared immediately. | PC | Monthly Monitoring |
| | ▪ The Contractor shall supply waste collection bins where such is not available, and all solid waste collected shall be disposed of at registered/licensed landfill. | | Monthly Monitoring |
| | ▪ Refuse bins must be placed at strategic positions to ensure that litter does not accumulate within the construction site. | | Monthly Monitoring |
| | ▪ Where considerable quantities of waste are generated, this must be placed in 200 litre bins or skip containers and removed once full. Additionally, the generated waste will need to be disposed of in line with station's waste management procedures. | | Monthly Monitoring |
| | ▪ Storm water management must be enforced by monitoring runoff levels. At the start of erosion, accelerated run-off must be diverted away from bare soil. | | Monthly Monitoring |
| | ▪ Disturbed surfaces must be kept to a minimum. All surfaces must be rehabilitated. | | Monthly Monitoring |
| **Heritage & Archaeological** | ▪ Implement a Chance Finds Procedure throughout construction and site clearance activities. | PC | Monthly Monitoring |
| | ▪ Appoint a heritage specialist to brief all contractors through toolbox talks on identifying heritage resources. | | Monthly Monitoring |
| | ▪ Stop construction immediately if any. stone tools, ceramics, bones, fossils, charcoal/ash layers, historical foundations or structures, human remains are uncovered. | | Monthly Monitoring |
| | If Heritage Resources Are Found:<br>▪ Secure the area with temporary fencing to prevent disturbance.<br>▪ Inform PHRAG (Provincial Heritage Resources Authority – Gauteng) immediately. | | Monthly Monitoring |

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| | ▪ Allow only a qualified archaeologist to inspect and record the find.<br>If human remains are uncovered:<br>▪ Treat as a crime scene until forensic pathologists confirm it is not forensic in nature.<br>▪ Follow PHRAG relocation procedures for burial grounds as per Section 36 of NHRA.<br>▪ Engage community representatives if remains are identified as historical graves. | | |
| **Spills and Contamination** | ▪ Depending on the nature and extent of the spill, contaminated soil must be either excavated or treated on-site. | PC | Monthly Monitoring |
| | ▪ Excavation of contaminated soil must involve careful removal of soil using appropriate tools/machinery to store containers until treated or disposed of at a licensed hazardous landfill site. | | As spill occurs |
| | ▪ The ECO must determine the precise method of treatment for polluted soil. This could involve the application of soil-absorbent materials as well as oil-digesting powders to the contaminated soil. | | As spill occurs |
| | ▪ If a spill occurs on an impermeable surface such as cement or concrete, the spill must be contained using oil-absorbent material. Alternatively, any spill must follow the station's dirty water channels. | | As spill occurs |
| | ▪ The ECO must determine the precise method of treatment for polluted soil. This could involve the application of soil-absorbent materials as well as oil-digestive powders to the contaminated soil. | | As spill occurs |
| | ▪ If a spill occurs on an impermeable surface such as cement or concrete, the spill must be contained using oil-absorbent material. Alternatively, any spill must follow the station's dirty water channels. | | As spill occurs |
| | ▪ Materials used for the remediation of petrochemical spills must be used according to product specifications and guidance for use. Contaminated remediation materials must be carefully removed from the area of the spill | | As spill occurs |

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| | to prevent further release of petrochemicals to the environment and stored in adequate containers until appropriate disposal. | | |
| | ▪ The ECO must determine the precise method of treatment for polluted soil. This could involve the application of soil-absorbent materials as well as oil-digestive powders to the contaminated soil. | | |
| | ▪ Materials used for the remediation of petrochemical spills must be used according to product specifications and guidance for use. Contaminated remediation materials must be carefully removed from the area of the spill to prevent further release of petrochemicals to the environment and stored in adequate containers until appropriate disposal. | | As spill occurs |
| **Noise** | ▪ The construction phase must aim to adhere to the relevant noise regulations (SANS 10328:2008) and limit noise to within standard working hours and acceptable industrial limits (61 dBA for industrial noise) to reduce disturbance of dwellings near the development. | PC | Monthly Monitoring |
| | ▪ Truck traffic must be routed away from noise-sensitive areas, where possible. | | Monthly Monitoring |
| | ▪ Construction activities are to be conducted at reasonable hours during the day and early evening (weekdays from 06:00 am to 18:00 pm). Night-time activities near noise-sensitive areas must not be allowed. | | Monthly Monitoring |
| | ▪ Construction workers must wear necessary Personal Protection Equipment (PPE). | | Monthly Monitoring |
| | ▪ Noise suppression measures must be applied to all construction equipment. Construction equipment must be kept in good working order and, where appropriate fitted with silencers which are kept in good working order. Should the vehicles or equipment not be in good working order, the contractor may be instructed to<br>▪ remove the offending vehicle or machinery from site. | | Monthly Monitoring |

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| | ▪ Applying regular and thorough maintenance schedules to equipment and processes. An increase in noise emission levels is very often a sign of the imminent mechanical failure of a machine. | | Monthly Monitoring |
| | ▪ Should blasting be required, the contractor will need to obtain a blasting permit. Moreover, the contractor must make the public aware of when blasting is to take place as well as the specific times of blasting. Blasting activities must take place at reasonable times and during daily working hours | | Monthly Monitoring |
| **Stormwater Runoff** | ▪ Stormwater water runoff must be diverted from active construction zones.<br>▪ All site personnel must adhere to designated no-go zones especially near drainage lines.<br>▪ The construction schedules should prioritise low-rainfall periods.<br>▪ Monitoring dust generation (suppress), erosion, topsoil stockpile locations and handling procedures.<br>▪ Implementing a phased construction schedule with progressive rehabilitation of disturbed areas.<br>▪ Proper bunding and impermeable surfaces must be used for all chemical and fuel storage locations.<br>▪ Erosion and sediment control mechanisms such as silt traps, sediment fences, and outlet energy dissipaters should be included along the study area.<br>▪ The establishment of vegetated berms is encouraged to prevent erosion.<br>▪ Areas potentially contaminated by machinery or construction activities must be diverted away from clean environments.<br>▪ Incorporating erosion control measures along sloped and exposed areas.<br>▪ Reinforcing diversion channels, and proper design of site access routes.<br>▪ Stormwater water runoff must be diverted from active construction zones. | PC | As and when required |

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| | ▪ Monitoring dust generation (suppress), erosion, topsoil stockpile locations and handling procedures. | | |
| **Labour Impacts/concerns** | ▪ The use of labour-intensive construction measures must be used where appropriate. | PC | Throughout |
| | ▪ All unskilled labourers must be drawn from the local market i.e., and where possible use must be made of local semiskilled and skilled personnel. | | Throughout |
| | ▪ Local suppliers to be used where and as far as possible | | Throughout |
| | ▪ The recruitment process must be equitable and transparent. A concerted effort will be made to guard against nepotism and/or any form of favoritism during the process | | Throughout |
| | ▪ Record of official complaints by employees to authorities i.e., Labour and Social Security (see Appendix A for complaints record sheet). | | Throughout |
| **Occupational Health and Safety** | ▪ Safety measures for work procedures must be implemented. | PC | Throughout |
| | ▪ First aid kits must be available and accessible on site. | | Monthly Monitoring |
| | ▪ A health and safety plan in terms of the Occupational Health and Safety Act (Act No. 85 of 1993) must be drawn up by the Contractor and approved by the ECO to ensure worker safety. | | Monthly Monitoring |
| | ▪ Workers must be thoroughly trained in using potentially dangerous equipment. | | Monthly Monitoring |
| | ▪ Contractors must ensure that all equipment is maintained in a safe operating condition. | | Monthly Monitoring |
| | ▪ A safety officer must be appointed. | | Monthly Monitoring |
| | ▪ A record of health and safety incidents must be kept on site. | | Monthly Monitoring |

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| | ▪ Any health and safety incidents must be reported to the Project Manager immediately. | | Monthly Monitoring |
| | ▪ First aid facilities must always be available on site and several employees trained to carry out first aid procedures. | | Monthly Monitoring |
| | ▪ Workers have the right to refuse work in unsafe conditions. | | Monthly Monitoring |
| | ▪ The Contractor shall take all the necessary precautions against the spreading of disease, such as measles, foot and mouth, etc. | | Monthly Monitoring |
| | ▪ A record shall be kept of drugs administered to construction staff at the station's health facilities or precautions taken and the time and dates when this was done. This can then be used as evidence in court should any claims be instituted against the Proponent or the Contractor. | | Monthly Monitoring |
| | ▪ A record of health and safety incidents must be kept on site. | | Monthly Monitoring |
| | ▪ Material stockpiles or stacks must be stable and well secured to avoid collapse and possible injury to site workers/residents. | | Monthly Monitoring |
| | ▪ Working areas must be provided with adequate ventilation and dust/fume extraction systems to ensure that inhalation exposure levels for potentially corrosive, oxidising, reactive or siliceous substances are maintained and managed at safe levels. | | Monthly Monitoring |
| | ▪ Eye wash and emergency shower systems must be provided in areas where there exists the possibility of chemical containment of workers and the need for rapid treatment. | | Monthly Monitoring |
| | ▪ Use of electrical safety devices on all final distribution circuits and appropriate testing schedules applied to such safety systems. | | Monthly Monitoring |

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| | ▪ All sources of hazardous energy or hazardous substances must have written procedures for isolation, identifying how the system, plant or equipment can be made and kept safe. | | Monthly Monitoring |
| | ▪ Use of contrast colouring on equipment/machinery including the provision of reflective markings to enhance visibility. | | Monthly Monitoring |
| | ▪ Use of moving equipment/machinery equipped with improved operator sight lines. | | Monthly Monitoring |
| | ▪ Issuing workers with high visibility clothing. | | Monthly Monitoring |
| | ▪ Personal Protective Equipment (PPE) must be made available to all construction staff and must be compulsory. Hard hats and safety shoes must be always worn, and other PPE worn were necessary i.e., dust masks, ear plugs etc. | | Monthly Monitoring |
| | ▪ No person is to enter the site without the necessary PPE. | | Monthly Monitoring |
| | ▪ Emergency numbers for local police and fire department etc. must be placed in a prominent area | | Monthly Monitoring |
| | ▪ All speed limits must be adhered to. | | Monthly Monitoring |
| | ▪ All equipment used for construction must be in good working order with up-to-date maintenance records. | | Monthly Monitoring |
| | ▪ From the construction phase, an emergency evacuation plan must be drawn up to ensure the safety of the staff and surrounding land users in the case of an emergency. | | Monthly Monitoring |

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| | ▪ All permanent staff must undergo safety training. | | Monthly Monitoring |
| | ▪ The construction activities must fall within the construction site. | | Monthly Monitoring |
| **Visual Impact Assessment** | ▪ Use building colours that blend with the surrounding urban character (earthy/neutral tones).<br>▪ Plant trees and shrubs along boundaries to soften visual edges.<br>▪ Landscape open spaces with indigenous vegetation.<br>▪ Use down-lighting to avoid glare. | ECO/PC | DAILY |
| **Loss of indigenous habitat** | ▪ Development activities and uses that have a high environmental impact are not permitted on a Class 3 Ridge.<br>▪ Low impact development activities, such as tourism facilities, which comprise of an ecological footprint of 5% or less of the property may be supported (the ecological footprint includes all areas directly impacted on by a development activity, including all paved surfaces, landscaping, property access and service provision).<br>▪ The Class 3 Gauteng Ridge must be rehabilitated and maintained as a natural 'green space' on the property.<br>▪ Vehicles and personnel must make use of authorised access routes only.<br>▪ Roads and road edges should be designed to facilitate faunal movement. These movement corridors must be in the designated areas, and well sign-posted with speed controls enforced. | ECO/PC | Daily |
| **Encroachment of Alien Invasive Plant species in disturbed areas.** | ▪ Compile and implement an alien vegetation management plan from the onset of construction. The plan must identify areas for action (if any) and prescribe the necessary removal methods and frequencies to be applied. This plan must also include a monitoring plan and be updated as/when new data is collated.<br>▪ Implement a stormwater management plan for all developable areas.<br>▪ Implementation of a waste management plan. | ECO/PC | Daily |

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| | ▪ Temporary storage of domestic waste shall be in covered waste skips.<br>▪ Removal of domestic waste on a regular basis, no overspill is permitted. | | |
| **Direct mortality of fauna species, Emigration of fauna, Reduced dispersal/migration of fauna, Disruption/alteration of ecological life cycles due to noise, light and dust and Loss of SCCs and/or protected species** | ▪ Clearly mark construction zones to prevent impact on surrounding areas, using physical barriers like safety tape and signs instead of painted lines.<br>▪ Prior to vegetation clearing activities, the area to be cleared should be walked on foot by 1-2 individuals to create a disturbance in order for fauna to move off. Disturbance must occur as soon before vegetation clearing as possible and no unnecessary disturbance to the area is permitted.<br>▪ Any tortoises present should be removed from the affected areas before the start of site clearing/ construction and relocated to safe areas of natural habitat outside the Project Area of Influence (PAOI).<br>▪ Any fauna threatened by the construction activities should be removed safely by an appropriately qualified environmental officer or removal specialist.<br>▪ Construction should take place during the dry season (May -July) as much as feasible, especially considering the fauna and their movement.<br>▪ Safely relocate any wildlife at risk from construction activities with the help of a qualified environmental officer or specialist.<br>▪ Wildlife-permeable fencing with holes large enough for mongoose and other smaller mammals should be installed, the holes must not be placed in the fence where it is next to a major road as this will increase road killings in the area.<br>▪ Conduct excavations progressively and cover any open holes overnight to prevent wildlife from falling in. Inspect these areas before backfilling.<br>▪ Focus work on one area at a time to reduce the extent of on-site activities, allowing wildlife to relocate as the project progresses. This helps smaller animals find refuge in nearby undisturbed areas. | ECO/PC | Daily |

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| | ▪ Minimise the time between clearing an area and starting development to prevent wildlife from returning to disturbed sites.<br>▪ Conduct excavations progressively and cover any open holes overnight to prevent wildlife from falling in. Inspect these areas before backfilling.<br>▪ Implement noise and light mitigation measures for any nighttime construction activities to minimise disturbances to nocturnal species expected in the area.<br>▪ | | |
| **OPERATION PHASE** | | | |
| **Decommissioning of Construction Site** | ▪ All structures comprising the construction camp are to be removed from site. | PC | To take place at the end of the Construction Phase |
| | ▪ The area that previously housed the construction camp is to be checked for spills of substances such as oil etc., and these shall be cleaned up. | | Inspection at end of Construction Phase |
| | ▪ All hardened surfaces within the construction camp area must be ripped, all imported materials removed, and the area shall be top soiled and regressed using the guidelines set out in the rehabilitation section that follows in this document. | | Inspection at end of Construction Phase |
| | ▪ Surfaces are to be checked for waste products from activities such as concreting and cleared in a manner approved by the Engineer. | | Inspection at end of Construction Phase |
| | ▪ All surfaces hardened due to construction activities are to be ripped, and imported material thereon is to be removed. | | Inspection at end of Construction Phase |
| | ▪ All rubble is to be removed from the site to in line with the stations waste management procedures. Burying rubble on site is prohibited. | | Inspection at end of Construction Phase |
| | ▪ The construction camp site is to be cleared of all litter. | | Inspection at end of Construction Phase |

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| | ▪ Fences, barriers and demarcations associated with the construction phase are to be removed from the site unless otherwise stipulated by the Engineer. | | Inspection at end of |
| | ▪ All residual spoil and topsoil stockpiles must be removed to spoil or spread on site as directed by the Engineer. | | Inspection at end of Construction Phase |
| | ▪ All residual building materials must be returned to the depot or removed from the site. | | Inspection at end of Construction Phase |
| **Soil Erosion** | ▪ All damaged areas shall be rehabilitated upon completion of the contract | PC | Inspection at end of Construction Phase |
| | ▪ All natural areas impacted during construction must be rehabilitated with locally indigenous grasses typical of the representative botanical unit. | | Inspection at the end of the Construction Phase |
| | ▪ Rehabilitation must take place in a phased approach as soon as possible. | | Inspection at the end of Construction Phase |
| | ▪ Rehabilitation must be executed in such a manner that surface run-off will not cause erosion of disturbed areas. | | Inspection at the end of the Construction Phase |
| **Waste** | ▪ The site must always be kept clear of litter | PC | Inspection at the end of Construction Phase |
| | ▪ Solid waste separation and recycling must take place for the duration of the operational phase for the development in line with the plant's waste management procedures. | | Continuous |
| | ▪ All waste must be removed promptly | | Continuous |
| | ▪ In-house treatment procedures must be followed strictly. | | Continuous |
| | ▪ Solid waste must be collected regularly. | | Continuous |

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| **Continued fragmentation and degradation of habitats and ecosystems** | ▪ The Class 3 Gauteng Ridge that overlaps the property must be maintained as a natural 'green space' and controlled for alien and invasive plant species.<br>▪ Implement stormwater management plan.<br>▪ Restrict all activities to authorised footprint areas only.<br>▪ Address any observed erosion promptly using suitable erosion control structures and revegetation methods.<br>▪ Conduct follow-up rehabilitation and re-vegetation of any bare areas with local indigenous grasses, shrubs, and trees. | PC | Continuous |
| **Spread of alien and/or invasive species** | ▪ Develop and execute a plan for managing alien vegetation.<br>▪ Conduct regular checks for alien invasive plant (AIP) encroachment during the operational phase to prevent alien invasion issues due to disturbances. Monitoring should occur every three months for the first two years and every six months thereafter for the project's duration.<br>▪ Create and implement a Solid Waste Management Plan. Prioritise waste management by ensuring all waste is collected, stored, and disposed of properly. It is recommended to remove waste from the site at least weekly.<br>▪ Implement a pest control plan, ensuring that no poisons are used. | PC | Continuous |
| **Ongoing displacement and direct mortalities of faunal community (including SCC) due to disturbance (road collisions, noise, light, dust, vibration)** | ▪ Design and limit outdoor lighting to reduce its impact on wildlife. Use fixtures with baffles, hoods, or louvres, directing light downward and away from sensitive areas like wetlands. Avoid fluorescent and mercury vapor lights, opting for sodium vapor (yellow) lights whenever possible.<br>▪ Utilise motion detection lighting where feasible to minimise unnecessary illumination.<br>▪ Keep noise levels low from dusk to dawn to avoid disturbing amphibians and nocturnal mammals.<br>▪ Safely relocate any wildlife threatened by maintenance and operational activities with the help of a qualified individual. | | |

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| | ▪ | | |
| **Health and Safety** | ▪ Upon completion of the construction phase, an emergency evacuation plan must be drawn up to ensure the safety of the staff and surrounding land users in the case of an emergency. | PC | Once-off |
| | ▪ The site is to be regularly maintained. A maintenance schedule must be drawn up and records of all maintenance kept. | | Continuous |
| | ▪ Firefighting equipment in the form of fire hydrants or fire extinguishers must be available on the site. These must be regularly maintained by an appropriate company. | | Continuous |
| | ▪ A spill kit needs to be kept on site to address any unforeseen spillages. | | Continuous |
| | ▪ Transport of all hazardous substances must be in accordance with the relevant legislation. | | Continuous |
| **Visual** | ▪ Lighting must be kept to a minimum and restricted to low level, downward facing lights to reduce light spill. | PC | Continuous |
| | ▪ Lighting must be inward and downward pointing to reduce glare in surrounding areas. | | Continuous |
| | ▪ The site and surrounds must be kept clean, tidy and well maintained to reduce negative visual impacts. | | Continuous |
| | ▪ Surrounding roads must be well maintained. | | Continuous |
| | ▪ Regular maintenance of the associated infrastructure must be undertaken. | | Continuous |

# 8. REPORTING

## 9.1 Administration

Before the contractor begins each construction activity, the Contractor shall give to the ECO and engineer a written method statement setting out the following:

- The type of construction activity.
- Locality where the activity will take place.
- Identification of impacts that might result from the activity.
- Identification of activities or aspects that may cause an impact.
- Methodology and/or specifications for impact prevention for each activity or aspect.
- Methodology and/or specifications for impact containment for each activity or aspect.
- Emergency/disaster incident and reaction procedures.
- Treatment and continued maintenance of impacted environment.

The contractor may provide such information in advance of any or all construction activities provided that new submissions shall be given to the ECO and/or engineer whenever there is a change or variation to the original.

The ECO and/or engineer may provide comment on the methodology and procedures proposed by the Contractor, but he shall not be responsible for the contractor's chosen measures of impact mitigation and emergency/disaster management systems. However, the contractor shall demonstrate at inception and at least once during the contract that the approved measures and procedures function properly.

## 9.2 Auditing

A monitoring programme will be implemented for the duration of the construction phase of the development. The ECO will be responsible for liaising with the construction team and the approving authorities if so required. The ECO must submit monthly environmental audit reports to the applicant and contractor. These audit reports must contain the following information:

- Description of the general state of the site, with specific reference to sensitive areas and areas of non-conformance.
- Establishing a baseline through the taking of photographs of identified environmental aspects and potential impact sites prior to construction
- Weekly monitoring during the first month of construction where after monthly audits will be conducted by the Environmental Control Officer for the remainder of the construction phase to ensure compliance to the EMPr conditions, and where necessary make recommendations for corrective action. These audits can be conducted randomly and do not require prior arrangement with the Project Coordinator.

- Compilation of an audit report with a rating of compliance with the EMPr. The ECO shall keep a photographic record of any damage to areas outside the demarcated site and construction area.
- A register shall be kept of all complaints from the Landowner or community. All complaints / claims shall be handled immediately to ensure timeous rectification / payment by the responsible party.

## 9.3 Good Housekeeping

The contractor shall undertake “good housekeeping” practices during construction. This will help avoid disputes on responsibility and allow for the smooth running of the contract. Good housekeeping extends beyond the wise practice of construction methods that leaves production in a safe state from the ravages of weather to include the care for and preservation of the environment within which the site is situated.

## 9.4 Record Keeping

The engineer and the ECO will continuously monitor the contractor’s adherence to the approved impact prevention procedures, and the engineer shall issue to the contractor a notice of noncompliance whenever transgressions are observed. The ECO should document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the noncompliance, the action taken to mitigate its effects and the results of the actions. The noncompliance shall be documented and reported to the engineer in the monthly report. These reports shall be made available to Gauteng Department of Environmental when requested.

The Contractor shall ensure that an electronic filing system identifying all documentation related to the EMP is established.

A list of reports likely to be generated during the proposed Poultry Farm Expansion is provided below, and all applicable documentation must be included in the environmental filing system catalogue or document retrieval index as follows:

- Relevant Environmental Approvals
- Final design documents and diagrams issued to and by the Contractor.
- All communications detailing changes of design/scope that may have environmental implications.
- Daily, weekly and monthly site monitoring reports.
- Complaints register.
- Medical reports.
- Training manual.
- Training attendance registers.
- Incident and accident reports.

- Emergency preparedness and response plans.
- Copies of all relevant environmental legislation.
- Permits and legal documents, including letters authorising specific personnel of their duties as part of emergency preparedness teams e.g., fire teams, etc.
- Crisis communication manual.
- Disciplinary procedures.
- Monthly site meeting minutes during construction.
- All relevant permits.
- All method statements from the Contractor for all phases of the project.

### 9.5 Document Control

The Contractor and resident engineer shall be responsible for establishing a procedure for electronic document control. The document control procedure should comply with the following requirements:

- Documents must be identifiable by organisation, division, function, activity and contact person.
- Every document should identify the personnel and their positions, who drafted and compiled the document, who reviewed and recommended approval, and who finally approved the document for distribution.
- All documents should be dated, provided with a revision number and reference number, filed systematically, and retained for a five-year period.

The Contractor shall ensure that documents are periodically reviewed and revised, where necessary, and that current versions are available at all locations where operations essential to the functioning of the EMPr are performed. All documents shall be made available to the independent external auditor.

## 9. CONCLUSION

It is the view of the Environmental Assessment Practitioner that the Proposed Student Accommodation will not have any significant negative geophysical, biophysical or socio- economic environmental impacts provided that the sensitivity of the Class 3 ridge is respected and adequately managed along with the recommendations regarding the mitigation measures presented in this EMPr are adhered to. The issues related to respect of landowner's property and general conduct during construction phase is very important. No construction work shall commence until the final EMPr is authorised by the GDEnv.

Furthermore, environmental biophysical and social impacts of the project have been assessed to be spread throughout the project life. Both positive and negative project-related impacts have been

identified but it has been concluded that all the negative impacts could be perfected to acceptable levels or made negligible through the implementation of the mitigation measures contained within this EMPr. The following section briefly describes some of the major impacts and proposed mitigation measures within each of the project phases.

## 10.1 Pre-Construction Phase

The first site activities, before mobilization of equipment, will be a survey for final development designs. There will be negative impacts on land associated with the site preparation and laydown areas (temporary loss), site and vegetation clearing, water supply, excavations, dust, soil erosion, worker safety, storage of hazardous or dangerous materials, vehicle and machinery maintenance. Adequate signage and temporary sanitation and ablution facilities must be provided to mitigate health and safety potential impact. Construction contracts will include environmental monitoring and management procedures and requirements. These must be in place prior to the commencement of any pre-construction activities.

## 10.2 Construction Phase

This phase of the project could result in both positive and negative impacts. The positive impacts are employment opportunities offered to the construction workers and any other labourer who will be hired to provide his/her services during the construction phase. The potential negative impacts would include establishment of the construction lay-down area, storage of materials, traffic, soil and geology, erosion control, water use and pollution, surface and groundwater concerns, waste, spills and contamination, biodiversity concerns, dust control, noise, labour impact concerns, occupational health and safety concerns and heritage and palaeontological concerns. Most of the negative impacts are minor and temporary. However, on mitigating negative impacts, the contractor shall ensure that all staff have adequate protective clothing and are adequately trained. The whole range of mitigation measures are however, outlined in the EMPr in this regard.

## 10.3 Operational Phase

The proposed project will have minimal potential negative effects which mainly relates to decommissioning of the construction site, soil erosion, waste, health and safety concerns and visual concerns. The impacts on the operational phase will be managed through the EMPr, Biosecurity and Waste Management Plans. These potential negative impacts are unlikely to occur when mitigated to acceptable levels. Mitigation measures stipulated in this EMPr outline procedures that should be followed in the event of potential negative impacts occurring

# ENVIRONMENTAL INCIDENTS

| ENVIRONMENTAL INCIDENT LOG | | | | |
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| **Date** | **Env. Condition** | **Comments** *(Include any possible explanations for current condition and possible responsible parties. Include photographs, records etc. if available)* | **Corrective Action Taken** (*Give details and attach documentation as far as possible)* | **Signature** |
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# COMPLAINTS RECORD SHEET

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| **Complaints Record Sheet** | **File Ref:**<br>Page …. of …. | **Date:** |
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| **COMPLAINT RAISED BY:** | | |
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| **COMPLAINT RECORDED BY:** | | |
| **COMPLAINT:** | | |
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