**UPDATED DRAFT ENVIRONMENTAL & SOCIAL MANAGEMENT PROGRAMME**

**PROPOSED** **DEVELOPMENT AND UPGRADING OF INFRASTRUCTURE WITHIN THE GREAT FISH RIVER NATURE RESERVE, EASTERN CAPE PROVINCE**

**DFFE Ref: 14/12/16/3/3/1/2804**

**OCTOBER 2023**

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| **SYNOPSIS** | | | | | | | | |
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**DEFINITIONS**

For the purpose of this document the following definitions will apply:

***Alien vegetation*** means all undesirable vegetation, defined as but not limited to, all declared category 1 and category 2 plants in terms of the Conservation of Agricultural Resources Act (43 of 1983) (CARA) amended regulations 15 and 16 as promulgated in March 2001.

***Construction activity*** refers to any action taken by the Contractor, his subcontractors, suppliers, or personnel in undertaking the construction work.

***Construction area(s)*** refers to all areas used by the Contractor in order to carry out the required construction activities. This includes, all offices, accommodation facilities, testing facilities/laboratories, batching areas, storage & stockpiling areas, workshops, spoiling areas, access roads, traffic accommodation (e.g., bypasses), etc.

***Contractor*** is a person or company appointed by the Applicant to carry out construction activities.

***Emergency*** is an undesired event that does result in a significant environmental impact and requires the notification of the relevant statutory body, such as a Local Authority.

***Environment*** means the surroundings within which humans exist and that are made up of -land, water, and atmosphere; micro-organisms, plant and animal life; any part or combination of the above and the interrelationships among and between them; the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

***Environmental Control Officer*** is an individual appointed to monitor and audit the implementation and of the ESMPr.

***Environmental Impact*** is a change to the environment, whether adverse or beneficial, wholly, or partially, resulting from an organisation’s activities, products, or services.

***Environmental and Social Management Programme***is a detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life cycle of a project. This ESMPr focuses on the Construction, Post Construction Rehabilitation and Operation / Maintenance Phases of the proposed project.

***Environmental Impact*** refers to any change to the environment, whether desirable or undesirable, that would result directly or indirectly from any construction activity.

***Hazardous material/substances*** refer to any substance that contains an element of risk and could have a deleterious effect on the environment.

***Incident*** is an undesired event which may result in a significant environmental impact but can be managed through internal response.

**ABBREVIATIONS**

|  |  |
| --- | --- |
| **AfRSG** | African Rhino Specialist Group |
| **AVCP** | Alien Vegetation Clearing Programme |
| **BA** | Basic Assessment |
| **BAR** | Basic Assessment Report |
| **DFFE** | Department of Forestry, Fisheries and the Environment |
| **DWS** | Department of Water and Sanitation |
| **EA** | Environmental Authorisation |
| **EAP** | Environmental Assessment Practitioner |
| **ECO** | Environmental Control Officer |
| **ECPTA** | Eastern Cape Parks and Tourism Agency |
| **EIA** | Environmental Impact Assessment |
| **ELO** | Environmental Liaison Officer |
| **ESMPr** | Environmental and Social Management Programme |
| **ER** | Employers Representative |
| **GFRNR** | Great Fish River Nature Reserve |
| **IAP** | Interested and Affected Party |
| **IDP** | Integrated Development Plan |
| **MEC** | Member of the Executive Council |
| **MS** | Method Statement |
| **NEMA** | National Environmental Management Act, 1998 (Act No. 107 of 1998) |
| **NEM:PAA** | National Environmental Management: Protected Areas Act |
| **WCB** | Wildlife Conservation Bond |

**ENVIRONMENTAL & SOCIAL MANAGEMENT PROGRAMME**

**PROPOSED DEVELOPMENT OF INFRASTRUCTURE AND UPGRADING WITHIN THE GREAT FISH RIVER NATURE RESERVE, EASTERN CAPE PROVINCE**

**DFFE Ref: 14/12/16/3/3/1/2804**

# INTRODUCTION AND PROJECT DESCRIPTION

Protected Areas (PAs) in South Africa are increasingly under threat; resulting in adverse impacts on the biodiversity and ecosystems they harbour, on the rural population dependent on them, and on the broader regional and national economies. Illegally traded natural resources contribute significantly to the loss of biodiversity and threaten sustainable and inclusive development. One of such illegal activities is rhino poaching.

The Great Fish River Nature Reserve (GFRNR), in the Eastern Cape Province, supports a particular significant black rhino population that meets the African Rhino Specialist Group (AfRSG) criteria for Key 1 status. The Eastern Cape Parks and Tourism Agency (ECPTA) is responsible for the management of provincial nature reserves in the Eastern Cape, including the GFRNR.

The GFRNR, approximately 40 000 Ha in extent, straddles the Great Fish River in the south-east of the Eastern Cape Province, and is located north-west of the N2, midway between Makhanda (Grahamstown) and Qonce (King William’s Town). The central GPS co-ordinates of the project site are Latitude: 33°06'38.55" S; Longitude: 26°49'41.83" E.

The GFRNR has been selected as one of two sites to participate in the World Bank funded Wildlife Conservation Bond (WCB) project, which is an innovative financial instrument that channels investments to achieve conservation outcomes.

In addition to aspects relating to rhino population management, the following activities are proposed to be undertaken as part of the infrastructure development and upgrading within the GFRNR to secure the rhino population in the reserve - **PLEASE NOTE: The infrastructure requiring EA is represented in blue text below:**

1. **Perimeter fence and perimeter road (4 x 4 track) and associated gabion structures:**

* Repair and maintenance to sections of the approximately 100 km perimeter fence around the reserve;
* Establishment of a 4 x 4 track on the internal side of the fence which will require the clearing of vegetation along a cumulative length of 89 km and up to a maximum width of 2 m;
* Installation of new gabions structures and repair works to existing gabions along this perimeter track; and
* Refurbishment of existing river crossings within their current footprint.

1. **Internal roads and associated low-level crossings:**

* Maintenance of sections of the existing internal gravel road network measuring approximately 3 m wide and with a cumulative length of approximately 63 km. All road maintenance activities will occur within the current footprints; however, any vegetationthat has become established within these existing sections of road will be cleared;
* Existing low-level crossings, along these internal roads, that have fallen into a state of disrepair will also be repaired within their current footprint. No more than 10m3 (cumulative total for all 8 crossings) of material will be removed and/or excavated from the drainage lines for the proposed repair/maintenance works at these existing low-level crossings; and,
* Additionally, a new road will be developed around the eastern side of the Double Drift airfield strip measuring approximately 470 m in length and 3 m in width.

1. **Watering points:**

* Upgrading of three (3) existing watering points at Botha’s Post, Ballysaggart, and Inkerman. Each of these watering points have a current capacity not exceeding 600 m3. Once upgraded by means of excavation and repairing the walls, each watering point will have a new capacity not exceeding 2 000 m3; and,
* Decommissioning of eleven (11) unwanted small farm watering points by removal of watering point walls and the earth to be spread over the area of the watering points.

1. **Airfields (runway) strips:**

* Refurbishment of the airfield (runway) strips at Kamadolo and Double Drift. Refurbishment activities will occur within the current footprints; however, vegetation that has established on these runways will be cleared; and
* The existing alignment of the Double Drift runway will only be graded while the Kamadolo airfield strip will undergo both earthworks and grading to extend it by 100 m x 15 m, thereby increasing the footprint of the airfield by 1 500 m2 (0.15 Ha).

JG Afrika (Pty) Ltd. has been appointed as the independent Environmental Assessment Practitioners by the Eastern Cape Parks and Tourism Agency (ECPTA) to apply for Environmental Authorisation subject to a Basic Assessment (BA) process, in terms of the Environmental Impact Assessment (EIA) Regulations (2014, as amended) promulgated under the National Environmental Management Act (NEMA) (Act 107 of 1998), for those proposed infrastructure developments and upgrades in the GFRNR.

Since the WCB project is a World Bank funded project, the ECPTA must comply with the World Bank’s Environmental and Social Standards (ESSs) which are articulated in its Environmental and Social Framework (ESF[[1]](#footnote-2)). In addition to complying with the ESF, the ECPTA must also adhere to subordinate World Bank policy and good practice documents. The ECPTA’s commitments to the World Bank in relation to the WCB are further outlined in the Environmental and Social Management Framework (ESMF) and associated Labour Management Procedures (LMP). Although this Environmental & Social Management Programme (ESMPr) has been produced to meet the requirements of Appendix 4 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) NEMA: Environmental Impact Assessment (EIA) Regulations (2014, as amended) (refer to Section 2.1.2), it is aligned with the requirements of *Annexures 2* and *3* of the *ESMF*, relating to the *Standard Good Practice Procedures* and *Generic Terms of Reference for Preparation*, respectively.

# LEGISLATIVE REQUIREMENTS

Chapter 2 of the Constitution comprises the Bill of Rights which makes provision for Environmental Rights. These include that everyone has the right:

* To an environment that is not harmful to their health or well-being; and
* To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
  + Prevent pollution and ecological degradation;
  + Promote conservation; and
  + Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.



## NEMA: EIA Regulations (2014, as amended)

The EIA Regulations (2014, as amended) as promulgated in terms of Section 24(5) and Section 44 of the NEMA (Act 107 of 1998) consists of the following:

* Regulation 982 provide details on the processes and procedures to be followed when undertaking an Environmental Authorisation process.
* Listing Notice 1 define activities which will trigger the need for a BA process.
* Listing Notice 2 define activities which trigger an EIA process. If activities from both R 983 and R 984 are triggered, then an EIA process will be required.
* Listing Notice 3 define certain additional listed activities for which a BA process would be required within identified geographical areas.

### Listed Activities

The above regulations were reviewed to determine which activities in terms of the above listing notices would be triggered by the proposed project, and what Environmental Authorisation Process would be required. As per the current application, the following Listed Activities in terms of the NEMA: EIA Regulations of 2014 (as amended), as indicated in Table 2‑1 below, are being applied for and will be undertaken if approved:

Table ‑: Listed Activities triggered by the proposed development.

| **ACTIVITY AND NOTICE NUMBER** | **LISTED ACTIVITY** | **DISCUSSION IN TERMS OF APPLICABILITY** |
| --- | --- | --- |
| **Activity 12**  **Listing Notice 1** of GNR. 327 (983)  (EIA Regulations (2014, as amended)) | *The development of—*  *(ii) infrastructure or structures with a physical footprint of 100 square metres or more;*  *where such development occurs—*  *(a) within a watercourse;*  *(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —* | **Perimeter fence and perimeter road (4x4 track) and associated gabion structures:**  **The establishment of a 4x4 track as well as the installation of gabion structures along the road and perimeter fence will exceed the cumulative footprint of 100 m2 and works will occur both within and within 32 m of watercourses. This Listed Activity is therefore TRIGGERED.** |
| **Activity 19**  **Listing Notice 1** of GNR. 327 (983)  (EIA Regulations (2014, as amended)) | *The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles, or rock of more than 10 cubic metres from a watercourse;*  *but excluding where such infilling, depositing, dredging, excavation, removal or moving—* | **Perimeter fence and perimeter road (4x4 track) and associated gabion structures:**  **The installation of gabion structures along the road and perimeter fence will involve the excavation, removal and/or moving of material (soil) of a cumulative volume of more than 10 m3 from watercourses. This Listed Activity is therefore TRIGGERED.**  **Watering points to be upgraded:**  **The proposed activity of expanding 3 existing watering points will involve the dredging, excavation, removal or moving of soil of more than 10 m3 for each dam. As these watering points are considered ‘watercourses’, this Listed Activity is TRIGGERED.**  **Watering points to be closed:**  **The proposed activity of closing 11 unwanted farm watering points will involve earthworks by bulldozer, removal of the watering point walls and the earth to be spread over the area of the watering points. The watering points are considered ‘watercourses’, and the closing of the watering points will include the moving of soil. As such, this Listed Activity is TRIGGERED.** |
| **Activity 48**  **Listing Notice 1** of GNR. 327 (983)  (EIA Regulations (2014, as amended)) | *The expansion of –*   1. *infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or*   *Where such expansion occurs-*   1. *within a watercourse;*   *(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse…* | **Watering points to be upgraded:**  **The proposed activity of expanding 3 existing watering points will involve the dredging, excavation, removal or moving of soil of more than 10 m3 for each dam. As these watering points are considered ‘watercourses’, this Listed Activity is TRIGGERED.** |
| **Activity 12**  **Listing Notice 3** of GNR. 324 (985)  (EIA Regulations (2014, as amended)) | *The clearance of an area of 300 square metres or more of vegetation where 75% or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.*   1. *In the Eastern Cape* 2. *Within critical biodiversity areas identified in bioregional plans;*   *(v) On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.* | **Perimeter fence and perimeter road (4x4 track) and associated gabion structures AND Internal roads and associated low-level crossings:**  **If it is assumed that all vegetation to be cleared is indigenous, and so, more than 300m2 of indigenous vegetation will be cleared along the fence line for the development of the new 4x4 track along the fence. For the internal roads, any vegetation that has become established within the roads itself will be cleared.**  **The proposed clearing activity falls within ecosystems not identified as critically endangered or endangered according to Section 52 of the NEMBA (2004). In addition, the NBA (2018) listed these areas as “Least Concern”. Furthermore, the Eastern Cape Biodiversity Conservation Plan (ECBCP, 2019) itself is not a Bioregional Plan, but is rather deemed in terms of the EIA Regulations (2014, as amended) to be a Systematic Biodiversity Conservation Plan adopted by the competent authority. Therefore, although the site falls within a CBA as contemplated in the ECBCP, this is not one of the geographical areas as contemplated in Activity 12. However, the zoning of the land is conservation. As such, this Listed Activity is therefore TRIGGERED.**  **Watering points to be upgraded:**  **Each watering point will be expanded by 300 m2 or more, and so the expansion activity will require the clearance of vegetation. It is likely that 75 % or more of the vegetation to be cleared is indigenous. The proposed development falls within ecosystems not identified as critically endangered or endangered according to Section 52 of the NEMBA (2004). In addition, the NBA (2018) listed these areas as “Least Concern”. Furthermore, the Eastern Cape Biodiversity Conservation Plan (ECBCP, 2019) itself is not a Bioregional Plan, but is rather deemed in terms of the EIA Regulations (2014, as amended) to be a Systematic Biodiversity Conservation Plan adopted by the competent authority. Therefore, although the site falls within a CBA as contemplated in the ECBCP, this is not one of the geographical areas as contemplated in Activity 12. However, However, the zoning of the land is conservation. This Listed Activity is therefore TRIGGERED.**  **Airfields (runway) strips:**  **The airfield strips will require the clearance of vegetation of an area of more than 300 m2. It is likely that that 75 % or more of the vegetation to be cleared is indigenous. The proposed activity falls within ecosystems not identified as critically endangered or endangered according to Section 52 of the NEMBA (2004). In addition, the NSBA (2004) listed these areas as “Least Concern”. Furthermore, the Eastern Cape Biodiversity Conservation Plan (ECBCP, 2019) itself is not a Bioregional Plan, but is rather deemed in terms of the EIA Regulations (2014, as amended) to be a Systematic Biodiversity Conservation Plan adopted by the competent authority. Therefore, although the site falls within a CBA as contemplated in the ECBCP, this is not one of the geographical areas as contemplated in Activity 12. However, the zoning of the land is conservation. This Listed Activity is TRIGGERED.** |
| **Activity 14**  **Listing Notice 3** of GNR. 324 (985)  (EIA Regulations (2014, as amended)) | *The development of –*  *(ii) infrastructure or structures with a physical footprint of 10 square metres or more;*  *where such development occurs –*   1. *Within a watercourse;* 2. *…within 32 meters of a watercourse, measured from the edge of the watercourse;* 3. *In Eastern Cape:*   *i. Outside urban areas:*  *(aa) A protected area identified in terms of NEMPAA, excluding conservancies;*  *(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;*  *(hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;* | **Perimeter fence and perimeter road (4x4 track) and associated gabion structures:**  **The establishment of a 4x4 track as well as the installation of gabion structures along the road and perimeter fence will exceed the cumulative footprint of 100 m2. These developments will occur both within and within 32 m of watercourses.**  **The developments will occur outside urban areas within a protected area in terms of NEMPAA (2003), i.e., the Great Fish River Nature Reserve (GFRNR). In addition, the GFRNR also falls within CBA’s as identified by the ECBCP (2019). This Listed Activity is therefore TRIGGERED.** |
| **Activity 23**  **Listing Notice 3** of GNR. 324 (985)  (EIA Regulations (2014, as amended)) | *The expansion of—*  *(ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more;*  *where such expansion occurs—*  *(a) within a watercourse;*  *(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a*  *watercourse;*  ***a. Eastern Cape***  *i. Outside urban areas:*  *(aa) A protected area identified in terms of NEMPAA, excluding conservancies;*  *(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;*  *(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;* | **Watering points to be upgraded:**  **All three (3) watering points will be expanded by more than 10 m2 cumulatively. These existing watering points are considered ‘watercourses’. The development occurs outside urban areas within a protected area in terms of NEMPAA (2003), i.e., the Great Fish River Nature Reserve (GFRNR). In addition, the GFRNR also falls within CBA’s as identified by the ECBCP (2019). This Listed Activity is therefore TRIGGERED.** |

The proposed activities require Environmental Authorisation (EA) prior to commencement, subject to a BA in terms of the NEMA. The applicant, the ECPTA, must therefore apply to the Competent Authority, the national Department of Forestry, Fisheries, and the Environment (DFFE), for EA to proceed with the project.

### ESMPr Requirements

Moreover, in terms of Section 19 of the EIA Regulations, an ESMPr is required to accompany the BAR. This document constitutes such management programme. Appendix 4 of the NEMA: EIA Regulations (2014, as amended) sets out the required content of an ESMPr. This ESMPr has been developed in fulfilment of these requirements. Refer to Table 2‑2 below which references applicable sections in this document to the information required.

Table ‑: Content of the ESMPr

| **Information required in terms of Appendix 4 of the EIA Regulations (2014, as amended) – Content of ESMPr** | **Reference in the ESMPr** |
| --- | --- |
| 1. Details of – 2. The EAP who prepared the ESMPr; and 3. The expertise of that EAP to prepare an ESMPr, including a curriculum vitae. | Section 4 – the authors and reviewers of the ESMPr  Appendix B – compilers’ CV |
| 1. A detailed description of the aspects of the activity that are covered by the ESMPr as identified in the project description | Section 2.1.1.1 – Listed Activities  Section 1 – Project Description  Section 5 – Specialist Studies  Section 6 – Aspects and Activities |
| 1. 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. | Appendix A – Project Maps |
| 1. A description of the impact management objectives, 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 – 2. Planning and design; 3. Pre-construction activities; 4. Construction activities; 5. Rehabilitation of the environment after construction and where applicable, post-closure; and 6. Where relevant, operational activities. | Section 8 – Impact Management Objectives and Outcomes |
| 1. A description and identification of impact management outcomes required for the aspects contemplated in paragraph (d). | Section 8 – Impact Management Objectives and Outcomes |
| 1. A description of proposed impact management actions, identifying the way the impact management objectives and outcomes contemplated in paragraphs (d) and (e) will be achieved, and must, where applicable, include actions to – 2. avoid, modify, remedy, control or stop ant action, activity or process which causes pollution or environmental degradation; 3. comply with any prescribed environmental management standards or practices; 4. comply with any applicable provisions of the Act regarding closure, where applicable; and 5. comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable. | Section 0 – Impact Management Actions |
| 1. The method of monitoring the implementation of the impact management actions contemplated in paragraph (f). | Section 10 – Monitoring |
| 1. The frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f). | Section 10 – Monitoring |
| 1. An indication of the persons who will be responsible for the implementation of the impact management actions. | Section 7.2 – Roles and Responsibilities |
| 1. The time periods within which the impact management actions contemplated in paragraph (f) must be implemented. | Sections 8 and 10 |
| 1. The mechanism for monitoring compliance with the impact management actions contemplated in in paragraph (f). | Section 10 – Monitoring |
| 1. A program for reporting on compliance, taking into account the requirements as prescribed by the Regulations. | Section 10 – Monitoring |
| 1. An environmental awareness plan describing the manner in which – 2. The applicant intends to inform his or her employees of any environmental risk which may result from their work; and; 3. Risks must be dealt with in order to avoid pollution or the degradation of the environment. | Section 7.3 – Environmental Awareness Plan |
| 1. Any specific information that may be required by the competent authority. | This will be addressed, if required, if Environmental Authorisation (EA) is issued. |

This ESMPr, which forms an integral part of all contract documents for the project, informs ECPTA, and all its appointed Agents, of their duties in the fulfilment of the project objectives, with reference to the prevention and mitigation of environmental impacts caused by construction and operational / maintenance activities associated with the project.

The ECPTA and all appointed Agents should note that the obligations imposed by the ESMPr are legally binding in terms of environmental statutory legislation. As such, failure to comply with the ESMPr will constitute an offence and ECPTA and/or their Agents may be liable for penalties and/or legal action. Therefore, it is important for all the responsible parties to understand their duties and undertake them with due care.

It is expected that the ECPTA and its appointed Agents will be conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the project, including, but not limited to:

* Constitution of the Republic of South Africa No. 108 of 1996;
* National Development Plan 2030;
* National Environmental Management Act No. 107 of 1998 (NEMA);
* National Environmental Management Waste Act No. 59 of 2008 (NEMWA);
* Norms and Standards for the Storage of Waste and List of Waste Activities (November 2013);
* National Environmental Management: Biodiversity Act, No. 10 of 2004;
* National Water Act No. 36 of 1998 (NWA);
* South African Heritage Resources Act, No 25 of 1999;
* Occupational Health and Safety Act No. 85 of 1993 (OHSA);
* Hazardous Substances Act No. 15 of 1973;
* Basic Conditions of Employment Act No. 75 of 1997;
* Employment Equity Act No. 55 of 1998;
* Labour Relations Act No. 66 of 1995;
* Protected Areas Act No. 57 of 2003;
* Promotion of Equality and Prevention of Unfair Discrimination Act No. 4 of 2000;
* National Building Regulations and Building Standards Act, No 103 of 1977;
* Relevant regulations as promulgated under the Standards Act, No 30 of 1982; and
* Relevant municipal by-laws.

In addition to the legislative requirements listed above, the appointed contractor shall be required to comply with the World Bank Environmental and Social Standards as well as their Environmental, Health and Safety guidelines including but not limited to:

* ESS1: Assessment and Management of Environmental and Social Risks and Impacts;
* ESS2: Labour and Working Conditions;
* ESS3: Resource Efficiency and Pollution Prevention and Management;
* ESS4: Community Health and Safety;
* ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
* ESS10: Stakeholder Engagement and Information Disclosure;

In terms of environmental, health, and safety guidelines, the project will apply the World Bank Group’s General Guidelines, which require the early identification of potential activity hazards and risks informing the site selection and design of activities; an activity risk management strategy which reduces risks to human health and the environment by preventing irreversible and/or significant impacts, eliminating hazards, and reducing and minimizing remaining impacts; and the preparedness of workers and communities to deal with accidents. Specific guidelines may apply to activities and mitigation measures, as relevant are included in this site-specific ESMPr.

# APPLICABLE DOCUMENTATION

The following environmental documentation is applicable for the project, and must be read in conjunction with this ESMPr:

1. *Final Basic Assessment Report* (JG Afrika (Pty) Ltd, October 2023).
2. *Environmental Authorisation* (once issued).
3. *ECPTA’s standard ESMPr for construction and maintenance projects* - As all proposed development and upgrading activities will take place within the GFRNR, the ECPTA, as the management authority, is responsible for ensuring that all activities within GFRNR are executed in an environmentally sound manner. A Standard ESMPr has been developed by the ECPTA (attached as Appendix C to this document), and so, should also be implemented in conjunction with this ESMPr compiled by JG Afrika (Pty) Ltd.

# DETAILS OF THE AUTHOR/s

JG Afrika (Pty) Ltd. is a South African consulting engineering and environmental consulting firm with a complement approximately 221 staff comprising engineers, environmental scientists, specialist professionals and administrative staff working together with a common goal: to provide the highest quality of consulting engineering services for the benefit of the community and the environment.

Established in 1922 and headquartered in Johannesburg, JG Afrika has offices in major South African cities and provides consulting services in all fields of civil and structural engineering, as well as environmental services, throughout Africa. Apart from the main operating company, the Group comprises specialist companies operating in the fields of geotechnical, environmental and geosciences consultancy, pavement technology, traffic and transportation, materials testing, and institutional support. JG Afrika is member of Consulting Engineers South Africa (CESA) and affiliated to FIDIC and GAMA. The company has rigorous quality assurance standards and is ISO 9001 accredited.

Table 4‑1 below provides information on the Environmental Scientists and Environmental Assessment Practitioner who compiled this document.

Table ‑: Details of compilers

|  |  |  |  |
| --- | --- | --- | --- |
| **NAME AND POSITION** | **QULAIFICATIONS. PROFESSIONAL REGISTRATION AND AFFILIATIONS** | **EXPERIENCE** | **CONTACT DETAILS** |
| Ryan Jonas -  Senior Environmental Scientist | M.Sc (Environmental Science), BSc (Natural Sciences),  EAPASA Registered EAP, SACNASP Pr. Sci. Nat. | 16 years | Tel: 021 530 1800  E-mail: jonasr@jgafrika.com |
| Cherize Coetzee -  Environmental Scientist | MSc (Zoology)  IAIAsa | 10 years | Tel: 041 390 8700  E-mail: coetzeec@jgafrika.com |
| Linmarie Troskie –  Environmental Scientist | BSc (Hons) (Botany and Environmental Management)  IAIAsa  SACNASP Registered Candidate Natural Scientist | 2 years | Tel: 041 390 8700  E-mail: troskiel@jgafrika.com |

Refer to Appendix B for the Curriculum Vitae of compilers.

# SPECIALIST STUDIES

Five (5) specialist studies have been conducted for the BA, namely an Aquatic Impacts Assessment, Terrestrial Biodiversity and Plant Species Impact Assessment, Faunal Impact Assessment, Archaeological Impact Assessment and Palaeontological Impact Assessment (PIA). These studies were undertaken to determine the potential impact of the project on the surrounding area within the different areas mentioned above. It was also used to identify and rank impacts and to ascertain the mitigation measures / action items as detailed in Section 0 of this ESMPr. The following must be noted with regards to environmental sensitive areas/ sites that are to be impacted by the proposed activities, and in some cases likely to be impacted by the activities, within the GFRNR as reported by the various specialists:

### Terrestrial and Plant Biodiversity Impact Assessment

Site sensitivity was determined for two environmental themes as listed in the DFFE Screening Report (for the entire GFRNR). Due to the nature of the Reserve, intact and pristine faunal habitats are present throughout the site, thus the entire GFRNR site has been classified as follows:

• Very High to High Sensitivity for Terrestrial Biodiversity

• High Sensitivity for Plant Species

Owing to the extent of the project area, various vegetation units are present that are in pristine to near pristine condition, this carries a high probability for high plant biodiversity occurring across the different construction areas. Various common as well as sensitive plant species occur on site. The GFRNR is a proclaimed protected area (according to the National Environmental Management Protected Areas Act; NEMPAA) which increases the probability for high biodiversity environments and a variety of plant SCC’s.

A total of 244 plant species were identified to potentially occur in the GFRNR. Species biodiversity is considered as high to very high with little alien invasive plants present. Various plant SCCs were observed during the site visit.

All proposed development footprints must undergo a Search and Rescue (S&R) exercise before any clearing commences. The S&R must be done by a qualified botanist. A Threatened or Protected Species (ToPS) permit must be obtained for any SCC found on site. This includes species found on site but not listed in the specialist report.

### Terrestrial Animal Species Impact Assessment

As the site is a nature reserve with intact and pristine faunal habitats occurring throughout the site, the entire GFRNR site has been classified as Very High Sensitivity for faunal species. This would usually mean that no development be allowed in the site but because of the nature of the proposed development within the GFRNR (upgrading internal infrastructures for the better management of the Nature Reserve and to provide income through tourism), the proposed development activities may be allowed provided all mitigation activities as described in this report are implemented. This will ensure a reduced risk on identified faunal sensitivities within the GFRNR.

### Aquatic Impact Assessment

No buffers are proposed for the actual activities; however, buffers are prescribed for the location of the site camps, construction storage areas or ablution facilities. All such facilities associated with each of the construction sites must be placed at a distance greater than 40m from the demarcated edge of the riparian vegetation.

It is the specialist’s opinion that the establishment and operations of the proposed infrastructure associated with the implementation and operation of the proposed infrastructure at the Great Fish River Nature Reserve should be authorised as the pose a LOW to NO risk to the characteristics of the identified aquatic features if the implantation of the management and mitigation measures are ensured.

### Archaeological and Cultural Heritage Impact Assessment

Due to the cultural significance of the wider area within the GFRNR it is important that special care must be taken where upgrading and maintenance is done near any of the heritage sites along the perimeter fence and elsewhere within the reserve such as historical buildings or graves. Should there be any doubt about the impact of the use of heavy machinery or equipment on any of these sites a historian / heritage practitioner must be appointed to assess the site/s and to make recommendations for mitigation (if required). This is also applicable if any British military or other historical artefacts or structures are exposed as a result of the activities.

### Palaeontological Impact Assessment

A two day-site-specific field survey of the development footprint was conducted on foot and motor vehicle in late February and early March 2023. New fossiliferous sites containing in situ Glossopteris leaves, and trace fossils were detected within the sub-project areas (see Figures 26 and 28 in PIA Report). Loose fragments of fossilized wood were also detected during the site visit (Figure 29 in PIA Report).

It is recommended that a buffer of 5m is placed around the in-situ trace fossil and 15m buffer around the *Glossopteris* and loose wood fossils (Figure 2 of Appendix A in PIA Report). If possible, these fossils could be used for educational purposes with information available for the tourists. By implementing mitigation measures the significance of the impact will be reduced to low. If mitigation measures are followed the development will not lead to detrimental impacts on the palaeontological reserves of the area and construction of the development may be authorised to its whole extent.

Refer to Appendix E of the Final BAR for copies of these specialist reports.

# ACTIVITIES AND ASPECTS

The proposed project activities will interact with the existing environment (resulting in potential environmental impacts) during the Construction and Operation Phase. The Construction Phase includes all the construction related activities to be undertaken by the appointed Contractor/s on site, including site clearing, excavations, importing of material, etc. A breakdown of the construction related activities are stated in Table 6‑1: below.

Even though this document primarily refers to the construction phase, a section on the operational phase has also been included. The impacts, which are anticipated during the operational phase, are those resulting from inappropriate maintenance management of the road and other applicable facilities. By taking pro-active measures during the operation of the plant, potential environmental impacts emanating during the operational phase will be minimised.

Table ‑: Details of the construction activities to be undertaken.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of Activity** | **Size of activity** | **Type of equipment to be used during construction** | **Duration of construction** | **Labourers Required** | **Nature of waste and waste disposal** |
| Perimeter fence and perimeter road (4x4 track) and associated gabion structures | **Perimeter road:** Approximately 109 sections along the fence, with a cumulative length of 89 km. Those sections requiring clearance of 1m in width amount to approximately 5.5 Ha while those sections requiring clearance of 2 m in width add up to approximately 7 Ha. Thus 13 Ha in total.  **Gabions:** Typical mesh baskets ranging from 1–2 m in length and 0.5–1 m in width and height and stacked with stones (100–250 mm) brought in from a registered quarry. Each gabion will not exceed 2m3 in size. | **Perimeter road:** chainsaws and brush cutters  **Gabions**: bulldozer / excavator | 24 months (Taking into consideration the delays due to terrain and inclement weather conditions) | 25 labourers, based on assumption that it is maintenance and not a completely new erection. | Cleared vegetation material.  Alice waste disposal facility |
| Maintenance of the internal and existing gravel road network and development of a new gravel road east of Double Drift airfield strip.  In addition, low-level crossings along the internal roads will be refurbished. | **Internal gravel road network:** 22 x road sections measuring approximately 3 m wide and a cumulative length of approximately 63 km. Thus approximately 19 Ha in total.  **Double Drift Road:** 1 410 m2  **Low-level crossings:** average size of 3m x 3m x 3m | **Internal gravel road network:** Most of the roads will be graded, while some will need to be ripped by a bulldozer and then graded.  **Double Drift Road:** Will undergo earthworks and grading.  **Low-level crossings:** Blocked pipe culverts under the road will be cleared, and repairs will be undertaken to any damaged concrete work and the road surface over the pipes. Concrete surfaces of the crossings will be cleared of accumulated materials and any damaged concrete works will be repaired. | 24 months (Taking into consideration the delays due to terrain and inclement weather conditions) | 15 Labourers, excluding the professional team. | Vegetation material, soil, and debris from blocked pipes  Alice waste disposal facility |
| Upgrading of watering points | 3 x watering points with upgraded volume not exceeding 2 000 m3 | A bulldozer and excavator will be used, and the excess material will be pushed to the existing watering point wall and compacted. | 6 Months | 20 Labourers | N/A |
| Unwanted small farm watering points are to be decommissioned | 11 x watering points with average volume of 1 050 m3 | This will involve breaking the watering point walls with a bulldozer and then spreading the material over the surface of the watering point. | N/A |
| Extension and/or grading of airfield strips | 1 500 m2 | **Kamadolo Airstrip:** Will undergo earthworks and grading.  **Double Drift Airstrip:** Will only require grading during refurbishment process. | 8 Months | 15 Labourers | N/A |

# GENERAL REQUIREMENTS OF THE ESMPR

## ESMPr Administration

### Construction Phase

During the Construction Phase, copies of this ESMPr shall be kept at the construction site office and must be distributed to all senior contract personnel. All senior personnel shall be required to familiarise themselves with the contents of this document and will further be required to sign a register confirming their understanding of the document. As changeover of senior personnel takes place during the construction phase, senior personnel will be required to educate their workers regarding the contents of this document and how to comply with its requirements. This register shall be continuously updated.

It is recommended that site inspections be undertaken monthly by the ECO for the duration of the construction phase and compile monthly audit reports after the second inspection regarding the compliance of the Contractor with the audit checklist. Copies of monthly audit reports should be kept in the Environmental File on site and submitted to the World Bank on request. The contractor/ ECO will be required to submit the monthly reports to the GFRNR Environmental & Social specialist assigned to the project.

### Post-construction / Rehabilitation Phase

It is recommended that a Post-Construction / Close-Out and Rehabilitation Audit be undertaken upon completion of both construction and rehabilitation.

### Operational Phase

During the Operational Phase, a copy of this ESMPr must be maintained by the ECPTA. All senior operational and maintenance staff, including those sub-contracted by the ECPTA, will be required to familiarise themselves with the contents of the document and will have to sign a register to the effect that they have read and understood the contents of the document.

## Roles and Responsibilities

The successful implementation of this ESMPr requires co-operation between ECPTA and the appointed Project Manager, Contractors, and the Environmental Control Officer (ECO).

The project has not yet been authorised in terms of the EIA Regulations and no contractors have been formally appointed for the project at the time of the compilation of this Updated Draft ESMPr. However, general roles and responsibilities have been outlined in Table 7‑1 and the Project Team will be required to comply with the conditions defined herein.

In terms of employment of labour, contractors will be expected to maximise the employment of individuals with the required skills residing in the area or adjacent residential area. The ECPTA should make use of local construction companies as far as possible. Contractors outside of the area should only be used to provide skills not readily available in the area.

Table ‑: Roles and Responsibilities

|  |  |
| --- | --- |
| **RESPONSIBLE AGENT** | **ROLE / RESPONSIBILITY** |
| Applicant / Employer (The Eastern Cape Parks & Tourism Agency) | * Under South African environmental legislation, the Applicant/Employer is accountable for the potential impacts of the activities that are undertaken and is responsible for managing these impacts. * Ensure that the implementation of this ESMPr complies with the relevant legislation and the conditions of the EA. * The Employer will appoint a Contractor to undertake the construction and operation of the proposed development but will still ultimately be responsible for any environmental impacts. |
| Reserve Manager (RM) | * Controls all personnel and staff that enter the site and grants permission if staff need to stay on after hours (when reserve gates close). |
| Project Manager (PM) / Environmental Planner (EP) | * Ensure compliance with the contract and legislative environmental requirements as well as those of the World Bank (WB); * Maintain overall responsibility for ensuring that the functions defined in the ESMPr are carried out effectively; * Ensure that a copy of the applicable ESMPr, EA (when issued) and all agreed Method Statements and a layout plan are available on-site; * Ensure that all environmental protection procedures defined in this ESMPr are being adhered to; * Ensure adherence to DFFE conditions of authorisation, the WB’s requirements and any other laws and standards relevant to construction of the new facilities; * Appoint appropriately qualified contractors to co-ordinate, supervise and expedite different tasks; * Appoint an independent ECO to monitor implementation of the ESMPr, during construction; * Ensure all staff, Sub-contractors, suppliers, etc. are familiar with and understand the ESMPr, EA and all agreed Method Statements; and * Liaise with DFFE and Interested and Affected Parties (IAPs), if required. * Provide quarterly reports to the World Bank and immediately report ESHS incidents to the Applicant and WB. * Monitor, audit and implement the requirements in this ESMP as well as any contractor specific sub-project specific management plans or method statements that may need to be prepared. * Ensure that the necessary permits, if any, have been obtained prior to commencement of the project. * Identify the environmental and social risks and impacts associated with the sub-project activities and propose actions/ requirements necessary to avoid and or mitigate the identified environmental and social impacts and risks. Follow-up on areas of non-compliance and corrective actions taken by the contractor to address environmental and social impacts and risks. * Undertake regular site visits to monitor the contractor’s implementation of the ESMP and keep photographic records of the construction site prior, during and after completion of the units’ activities. * Report back to the Reserve Manager and Bank on any environmental and social issues/ incidents and review the contractors monthly ESHS reports. * Review contractor environmental and social management plans and if necessary, update the sub-project specific environmental and social instruments for the project. * Prepare environmental, social, health and safety performance reports on a bi-annual basis or upon request for the Bank. |
| Community Liaison Officer (CLO) | * Participate and oversee any stakeholder engagement related to the sub-project activities set out in this ESMP. * Ensure that the project remains a standing item in the existing park forum meetings and provide an update on the status of implementation of the sub-project activities during these meetings. * Oversee the management of the grievance mechanism, including separate procedures to manage SEA/SH-related complaints and ensure that the contractors have adequate workers grievance mechanisms in place which allows for safe reporting of any SEA/SH-related matters. * Participate in the monthly project committee monthly meetings during which comments, feedback, and status of resolution of correspondence received via the GRM will be discussed. * Proactively identify stakeholders, project risks and opportunities and inform the Parks Manager to ensure that the necessary planning can be done to either mitigate risk or exploit opportunities. * Review the contractors labour management practices to ensure it is in line with the legislative requirements and those set out in the ESMP. * Participate in induction and sensitization sessions to ensure contractors are aware of the GFRNP and project Code of Conduct, and matters related to GBV/SEA/SH, HIV/AIDS and interaction with local communities. The socio-economic transformation officer will conduct inspections to ensure all workers have signed and are adhering to the CoC developed for this project. |
| Contractor | * Ensure all personnel are fully aware of all environmental, social and occupational health and safety issues relating to construction activities being undertaken on site and the related precautions that need to be taken; * Ensure compliance with the project environmental, social, health and safety requirements as stipulated in the bidding documents, this ESMP and any other applicable environmental and social instruments or rules provided by GFRNR. * Ensure all mitigation measures outlined in this ESMPr are properly and competently directed, guided, and executed during construction; * Ensure that all workers, including sub-contractors and suppliers are aware of the requirements set out in this document, either through induction or including it as part of the sub-contractor procurement requirements. * Conduct self-monitoring to ensure compliance with the requirements in this ESMP and provide monthly compliance reports to GFRNR. * Ensure that incidents are immediately reported to GFRNR and that the necessary corrective and preventative measures are implemented to prevent re-occurrence. * Ensure that all workers are trained on the necessary environmental and social including Code of conduct and SEA/SH requirements of the project. * Pro-actively identify any activities that may pose an environmental, social or health and safety risk and put measures in place to either avoid or mitigate the risks in line with the ESMP and prepare and submit activity specific method statements for GFRNR review. * Ensure that all documented records as stipulated in this ESMP are kept for GFRNR or Bank review. * Ensure that sufficient budget provisions have been made available to ensure compliance with the sub-project ESHS requirements. |
| Contractor’s Environmental, Health and Safety (EHS) Officer | * Conduct daily evaluations of the activities on site to ensure compliance. * Identify issues relating to day-to-day activities that can have a detrimental effect on the environment or health and safety of the workers, public and community members. * Conduct induction and site-specific training to ensure workers and sub-contractors are familiar with the project ESHS risks and requirements. * Participate in the preparation of risk assessments and method statements to ensure all relevant activity specific EHS risks and hazards have been identified and addressed. * Ensure that the correct Personal Protective Equipment (PPE) is available, issued and used by all workers and sub-contractors. * Conduct regular inspection on construction equipment to ensure that it is in a good working condition and do not pose a risk to users. * Ensure that all EHS documentation, records and competencies have been obtained, are up to date and kept in the EHS file. * Take charge of EHS incidents or emergency situations and correspond with the relevant emergency response units as needed. * Ensure that incidents are reported, investigated as needed and corrective actions implemented. |
| Environmental Control Officer (ECO) | * Ensure contractors have copies of the ESMPr (including revisions), EA (when issued) and all agreed Method Statements; * Undertake independent monthly audits (or as per conditions of EA), and record key findings. This includes monitoring of the construction site and an evaluation of the implementation, effectiveness, and level of compliance of on-site construction activities with the ESMPr and associated plans and procedures; * Record and provide monthly reports (written documentation) of non-conformances with the ESMPr that require ECPTA or its Contractor/s to implement corrective action; * Review preventative and corrective actions to ensure implementation of recommendations made from audits and site inspections; * Via the Client’s, order the Contractor to suspend part or all of the works if the Contractor and/or any sub-contractors, suppliers, etc. fail to comply with any aspect of either the ESMPr or EA; * Advise the Project Manager on actions or issues impacting on the environment and provide appropriate recommendations to address and rectify these matters; * Identify possible areas of improvement in the execution of the contract from an environmental perspective; * Assess the suitability and/or effectiveness of the ESMPr on an on-going basis, in liaison with the Contractor/s and the Project Manager. Make recommendations accordingly; * Submission of audit reports to the Project Team (or as per conditions of EA); * Monitor the processing of public complaints relating to the construction activities; and * Ensure that revisions to this ESMPr (as necessary) are communicated to the ECPTA, PM, and the contractor and that they understand the requirements. |

## Environmental and Social Awareness Training

Appendix 4 of the EIA Regulations (2014, as amended) requires the development of an Environmental Awareness Plan, describing the way the Contractor intends informing its employees of any environmental risks which may result from their work as well as the manner in which the risk must be dealt with to avoid pollution or degradation of the environment.

All internal staff and external agents undertaking work on the proposed development must undergo Environmental Inductions and Training which must include the contents of the approved ESMPr. During the construction phase, regular Health and Safety Toolbox Talks must be held to discuss how to address potential occupational health and safety and environmental risks, near misses or incidents and how they can be avoided in future. Regular drills are to be held to ensure that all staff are aware of the spill contingency and other environmental health and safety emergency procedures as applicable and can perform these procedures in reasonable timeframes. The Contractor shall ensure that adequate environmental and social awareness training of senior site personnel takes place and that all construction phase workers receive an induction on the importance and implications of the ESMPr. The presentation shall be conducted, as far as possible, in the employees’ *language of choice*.

The OHS measures will be designed and implemented to address:

(a) identification of potential hazards to project workers, particularly those that may be life threatening;

(b) provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances;

(c) training of project workers and maintenance of training records;

(d) documentation and reporting of occupational accidents, diseases, and incidents;

(e) emergency prevention and preparedness and response arrangements to emergency situations; and

(f) remedies for adverse impacts such as occupational injuries, deaths, disability, and disease.

As a minimum, training shall include:

* Explanation of the importance of complying with the ESMPr;
* Discussion of the potential environmental, social and occupational health and safety impacts of construction / operational activities;
* The benefits of improvement personal performance;
* Employees’ roles and responsibilities, including emergency preparedness;
* Explanation of the mitigation measures that must be implemented when carrying out their activities;
* Explanation of the specifics of this ESMPr and its implementation; and
* Explanation of the management structure of individuals responsible for matters pertaining to the ESMPr.

The contractor shall keep records of all environmental training sessions, including names, dates and the information presented. These records will be presented at the project meetings and to the ECO on request during his/her audits.

## Method Statements

Method Statements (MS) are written submissions by the Contractor to the PM in response to the requirements of this ESMPr or to a request by the PM. The Contractor shall be required to prepare Method Statements for several specific construction activities and/or environmental management aspects. The Contractor shall not commence the activity for which a Method Statement is required until PM has approved the relevant Method Statement.

Method Statements must be submitted at least 20 working days prior to date on which approval is required to the PM. The PM must in turn accept or reject the Method Statement within 10 working days of receipt. *Failure to submit a Method Statement may result in suspension of the activity concerned until such time as a Method Statement has been submitted and approved.*

An approved Method Statement shall not absolve the Contractor from any of his obligations or responsibilities in terms of the contract. However, any damage caused to the environment through activities undertaken without an approved Method Statement shall be rehabilitated at the Contractor’s expense.

The Method Statements shall cover relevant details with regard to:

* Construction procedures and location of the construction camp
* Start date and duration of the procedure;
* Materials, equipment, and labour to be used;
* How materials, equipment and labour would be moved to and from the site as well as on site during construction;
* Storage, removal and subsequent handling of all materials, excess materials, and waste materials of the procedure;
* Emergency procedures in case of any reasonably potential accident/incident which would occur during the procedure; and
* Compliance/non-compliance with the ESMPr specifications and motivation if non-compliant.

Based on the specifications in this ESMPr, the following MS’s are required as a minimum:

**MS1**: Construction camp layout and establishment

**MS2**: Vegetation Clearing

**MS3**: Topsoil removal and stockpiling

**MS4**: Working in watercourses

**MS5**: Handling, storage, and disposal of hazardous substances

**MS6**: Waste management

**MS7**: Soil erosion control and Stormwater management

**MS8**: Alien vegetation control

**MS9**: Rehabilitation Management Plan

# IMPACT MANAGEMENT OBJECTIVES AND OUTCOMES

The intention of this ESMPr is to document appropriate objectives and actions and to assign responsibility and timing for those actions, to ensure that any impacts resulting from the construction, associated with the establishment of the residential development and its associated infrastructure, are minimised, and mitigated. This ensures that the basis on which any environmental decision is taken, is accurate and that the impacts on the surrounding environment are minimised.

The purpose of this ESMPr is to:

* Outline the ECPTA’s environmental management commitments for construction of the proposed infrastructural upgrades;
* Act as a performance standard that construction activities can be audited against; and
* Ensure that appropriate monitoring is undertaken.

Research and the results of the specialist studies undertaken during the BA process informed the Impact Management Objectives and Outcomes as provided in Table 8‑1. Specific Impact Management Actions are detailed in Section 9 of this ESMPr.

Table ‑: Impact Management Objectives & Outcomes

| **IMPACT** | **IMPACT MANAGEMENT OBJECTIVES** | **IMPACT MANAGEMENT OUTCOMES** | **TIMEFRAME** |
| --- | --- | --- | --- |
| Alteration to surface water features | A sufficient stormwater management plan must be in place. | Minimum alteration to surface water features | Progress on rectification of all ESMPr non-conformances as identified by the ECO in the audit report, is to be reported in the subsequent audit report.  All construction phase outcomes to be achieved prior to final handover of the site. |
| Prevention of Surface water and ground water contamination | A sufficient stormwater management plan must be in place to avoid impacts on the aquatic features present. | Quality of surface water and groundwater resources are not negatively impacted |
| Prevention of soil contamination | Management of site activities should adhere to the protocols in place to ensure minimal cement or hydrocarbon contamination. | Little to no soil contamination |
| Loss of natural vegetation and SCC’s | Buffer / No-Go areas are adhered to, and construction only takes place in designated areas.  Conducting a formal search and rescue and obtain the requisite permits from the applicable authorities before vegetation clearance. | Minimum destruction to natural vegetation.  SCC’s are not destroyed but protected |
| Proliferation of alien vegetation in disturbed areas | The spread of alien vegetation prior, during, and post construction should be eradicated and appropriately disposed of. | Alien & Invasive Plant Species successfully eradicated |
| Fauna | Faunal species present on site are not harmed but rather relocated to a similar habitat.  Conducting a formal search and rescue and obtain the requisite permits from the applicable authorities before vegetation clearance. | Faunal species are not harmed but protected |
| Soil disturbance | Any erosion is to be addressed immediately by implementing relevant erosion control measures. All areas disturbed are to be rehabilitated. | Little to no soil disturbance |
| Solid Waste Pollution | Construction activities are to be properly managed by following the correct waste management protocols to avoid pollution in and around the construction areas. This includes general waste, hazardous waste, and chemical (toilet) waste.  Licensed waste disposal facilities are to be utilised.  No waste to be buried on site. | Minimal solid waste pollution |
| Damage to archaeological and Cultural heritage sites | Maintain presence of archaeological and cultural heritage sites by ceasing all work in the immediate area should any human remains and/or other archaeological remains be uncovered during construction. Report to the Albany Museum in Makhanda or to the Eastern Cape Provincial Heritage Resources Authority. A chance finds procedure must be implemented. | Archaeological and cultural heritage sites are not damaged |
| Damage to palaeontological sites | Maintain presence of palaeontological sites by implementing a chance find protocol immediately if paleontological remains are uncovered during clearing and excavations. | Palaeontological sites are not damaged |
| Deterioration of local air quality | Management measures and techniques must be implemented to keep dust and vehicle emissions to a minimum. | Air quality does not deteriorate |
| Increase in noise | Construction workers are sensitised to the need to minimise noise impacts.  The regular servicing of all construction machinery and equipment and road dampening will ensure minimum noise. | Minimum noise impacts |
| Visual aesthetic intrusion | Generation of dust will increase the visibility of the project, and it is therefore important to employ techniques to suppress dust generation during construction.  The contractor should maintain good housekeeping on site to prevent litter and minimise waste.  Erosion risks should be assessed and minimised as erosion scarring can create areas of strong visual contrast with the surrounding vegetation.  Equipment not being used should be removed from site. | No interference with the visual aesthetics |
| Fire Risk | The Contractor shall take all reasonable steps to avoid increasing the risk of fire through activities on site.  All fire management should be done in compliance with the Fire Management Plan of the Protected Area. | No fire damage |
| Construction Traffic impedance | Minimise/reduce significant traffic disruptions due to construction activities.  Repair any damage that may result from construction activities. | Minimal construction traffic impedance |
| Occupational Health & Safety | Occupational Health and Safety measures need to be implemented to ensure that incidents are resolved/prevented via regular site inspections, training, and the use of PPE. | No serious occupational health & safety incidents. |
| Staff Management | Staff Management measures need to be implemented to ensure that grievances are prevented via regular site inspections and staff meetings. | Staff management grievances are effectively resolved |
| Safety and security are jeopardised | Safety and security measures must be place for the duration of the construction period. | Maintain safety and security |
| Disturbance to existing infrastructure | Avoid damage or disturbance to all existing structures and infrastructure where possible by following management measures described in Section 9. | No damage to existing infrastructure disturbance |
| Socio-Economic | Employment & skills training of local labour is maximised. | Local communities receive adequate employment & skills training |

# IMPACT MANAGEMENT ACTIONS

The Impact Management Actions required to meet the Impact Management Objectives and Outcomes are provided in Table 9‑1, Table 9‑2, Table 9‑3, Table 9‑4 overleaf for the Pre-Construction, Construction, and Post-Construction / Rehabilitation and Operational Phases. The following abbreviations have been used in these tables to follow: ECO = Environmental Control Officer; EA = Environmental Authorisation; C = Contractor; PM = Project Manager; MS = Method Statement.

Table ‑: Impact Management Actions during the Pre-construction phase.

| **ASPECT** | **MANAGEMENT OUTCOMES** | **IMPACT MANAGEMENT ACTIONS** | **RESPONSIBLE AGENT** |
| --- | --- | --- | --- |
| Permitting | Non-compliance with the relevant legislation and policies of South Africa, as they pertain to the environment, could lead to damage to the environment, unnecessary delays in planned construction activities, and could potentially result in criminal cases, based on the severity of the non-compliance, being brought against the proponent and their Contractors. | * All necessary permitting and authorisations must be obtained prior to the commencement of any construction activities; and * A suitably qualified Environmental Control Officer (ECO) must be appointed prior to the commencement of the construction phase. | PM |
| Environmental, Occupational Health & Safety, and Social Awareness Training | To make all employees aware of the environmental, OHS and social risks which may result from their work and the manner in which the risk must be dealt with to avoid pollution or degradation of the environment | * An upfront training session must be held to ensure all construction personnel are aware of the provisions contained in the ESMPr. * The training session shall be conducted, as far as possible, in the employees’ language of choice. * As a minimum, training shall include:   + Explanation of the importance of complying with the ESMPr;   + Discussion of the potential environmental impacts of construction activities;   + The benefits of improvement personal performance;   + Employees’ roles and responsibilities, including emergency preparedness;   + Explanation of the mitigation measures that must be implemented when carrying out their activities;   + Explanation of the specifics of this ESMPr and its implementation; and   + Explanation of the management structure of individuals responsible for matters pertaining to the ESMPr. * The contractor shall keep records of all environmental, social and OHS training sessions, including names, dates and the information presented. These records will be presented to the ECO on request during his/her audits. | C |
| Translocation and protection of plant species of conservation concern (SCC’s) | Requisite permits from the applicable authorities must be obtained should species of special concern be destroyed by the development | * Permits must be obtained to remove any plant SCC and protected species identified prior to commencement of any activity on site. * A Plant Search and Rescue must be conducted by a qualified botanist prior to commencement of any activity on site. * As many SCC and permitted plants as possible must be relocated into the surrounding areas. * A nursery will not be required if all plant species are immediately relocated to the surrounding environment. * No plant harvesting will be allowed. | Applicant/PM |
| Faunal Search & Rescue |  | * A Faunal Search and Rescue must be conducted by a qualified Faunal specialist prior to commencement of any activity on site. * As many SCC as possible must be relocated into the surrounding areas. * No animals must be kept in cages or containers for longer than necessary during relocation. * It is recommended that only small mammals, frogs, scorpions, baboon spiders and reptiles be relocated. There is no need to relocate any big faunal species as they will naturally move away from the construction areas. * The construction site must be daily inspected (before activities for the day starts) for any trapped faunal species. These species must be relocated to nearby No-Go areas by an employee that is qualified in dangerous animal handling. | Applicant/PM |
| Method Statements | Ensure all construction works are undertaken in accordance with the approved Method Statements | Method Statements must be submitted at least 20 working days prior to date on which approval is required to the PM. The PM must in turn accept or reject the Method Statement within 10 working days of receipt. | PM/C |
| Site Establishment | No construction work to take place outside of the designated construction footprint | Demarcate all constructed areas to prevent work taking place outside of the designated footprint areas prior to commencement of works. (For linear activities, the construction footprint at that point in time must be demarcated with barrier mesh (barricade) netting.) | C |

Table ‑: Impact Management Actions during the Construction Phase. Blue text refers to the standard good practice (Annex 2) and Generic Terms of Reference for Preparation of ESMP (Annex 3).

| **ASPECT** | **MANAGEMENT OUTCOMES** | **IMPACT MANAGEMENT ACTIONS** | **RESPONSIBLE AGENT** |
| --- | --- | --- | --- |
| Site Establishment | The footprint of the construction site will be limited as far as possible. | * The Contractor is to adhere to the following with regards to the Materials Storage Area and Contractors Camp: * All servitudes and existing services must be verified prior to establishment. * The camp site must be fenced before construction commences. * The Contractor shall restrict all his activities, materials, equipment, and personnel to within the area specified in the approved Construction Site Development Plan. * The Contractor shall ensure that the approved construction area will be adequate to cover the project without further space adjustments being required later. * Adequate parking must be provided on site for site staff and visitors. | C |
| Movement of Personnel & Equipment | All staff and equipment must remain within the demarcated work areas at all times. | * This should be monitored by the Contractor if appointed or by the Reserve Manger. Permission should be obtained from the Reserve Manager prior to movement of staff and/or equipment outside the boundaries of the agreed work areas. | C |
| Ablutions | Ablution facilities will not negatively impact on the environment or human health. | * Portable chemical toilets must be provided for the construction workforce. These facilities must be regularly serviced by an appropriate service provider. Ablutions must be provided at a ratio of at least 1 facility per 15 workers. Separate facilities for males and females must be provided. * Temporary chemical toilets must be provided for the duration of the construction period. These toilets must be made available for all site staff during the construction phase and should be at least 50m from any watercourse present on-site or in proximity. The developers should also appoint and enter a contract with a qualified third-party service provider for the maintenance of the sanitation system. * The construction of long drop toilets is forbidden. * The Contractor shall be responsible for ensuring that all ablution facilities are maintained in a clean and sanitary condition to the satisfaction of the PM. Evidence of appropriate management (in the form of service receipts / waybills) must be maintained and presented to the ECO during audits. * Sanitation facilities should be well maintained and serviced, any breakages or leaks should be fixed immediately to prevent loss of containment. * Under no circumstances may neighbouring open areas or the surrounding bush be used as a toilet facility. * To prevent toilets from blowing over, they must be properly secured, containing a function door and lock. | C |
| Water supply | A sustainable and lawful water supply will be utilised. | * The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas. * All drinking water must be from a legal source and comply with recognised standards for potable use. * If water is stored on site, drinking water and multi-purposed water storage facilities shall be clearly distinguished and demarcated. | C |
| Eating Facilities | Ensure that no food is left outside overnight or discarded into the surrounding areas | * No food may be left outside unattended, and no foodstuff is to be left overnight. No food may be disposed of in the surrounding areas. | C |
| Access & Movement | Ensure safety and environmental well-being during the duration of the construction phase. | * Access shall only be granted to the site during normal working hours (08:00-17:00) Mondays – Fridays, unless specified. * All personnel shall be off site by gate closing time unless permission was granted by the Reserve Manager to stay on site and proved for as part of the contract. * Work areas and access routes must be demarcated by snow netting on site posts or temporary fencing to minimise environmental impact. * All vehicles must remain within demarcated access router and working areas on site. * To ensure no disturbance to PA management activities, especially for compliance monitoring, all existing roads should not be blocked during the project. * The proclaim speed limit of 40 km/h, unless otherwise specified in the PA must be strictly adhered to. * The Contractor’s EHS Officer should monitor the conduct of drivers and report any negative impact to the Contractor immediately. * Upon the completion of the project, the Contractor (if appointed) or Reserve Manager must ensure that the access roads are returned to a state no worse than prior to commencement of works. A photographic record should be documented of the construction camp (if required), all access roads and proposed development sites. * If two-way traffic movement is to take place, passing bays are to be used where specified by the environmental officer to prevent access/detours into the surrounding areas. The drivers delivering project materials to site are to be made aware of this. They may not drive off the road in order to allow another vehicle to pass. * Continual use of dirt access roads by heavy machinery and increased transport loads means they will have to be carefully monitored and regularly graded as soon as potholes or rutting occurs. * All Contractors, subcontractors and staff shall be identified by clothing with company logos and be in possession of valid South African identity documents. * All drivers of vehicles must be in possession of a valid drivers licence while driving within the PA. * Deliveries, removals etc. are to be completed during gate open times only. | C/Reserve Manager (ECPTA) |
| Soil disturbances | Soil disturbances outside the development footprint are minimised. | * The Contractor shall remove topsoil from all areas where topsoil will be impacted on by construction activities, including temporary activities such as storage and stockpiling areas. * Stripped topsoil shall be stockpiled in areas identified in the approved Construction Site Development Plan, for later use in rehabilitation and shall be adequately protected. Topsoil is considered to be the natural soil covering, including all the vegetation and organic matter. The depth of the soil may vary and due to this reason the top 300mm of soil must be removed and preserved as topsoil. * Topsoil must be treated with care, must not be buried or in any other way be rendered unsuitable for further use (e.g., by mixing with spoil) and precautions must be taken to prevent unnecessary handling and compaction. * Topsoil stockpiles shall be convex in shape and no more than 1,5m high. Stockpiles shall be shaped so that no surface water ponding can take place. * Topsoil stockpiles shall be protected from erosion by wind and rain by providing suitable stormwater and cut-off drains and/or the establishment of temporary indigenous vegetation. * Topsoil stockpiles shall not be subject to compaction greater than 1 500 kg/m2 and shall not be pushed by a bulldozer for more than 50m. * Topsoil stockpiles shall be monitored regularly to identify any alien plants. If any establish, these must be removed when they germinate to prevent contamination of the soil. Before topsoil is to be re-used the stockpiles should be fertilised. * Any topsoil contaminated by hazardous substances shall not be used but shall be disposed of at a registered H:h landfill site. Proof of appropriate disposal must be filed in the Environmental File in the Contractor’s Camp. * The Contractor shall be held responsible for the replacement, at his expense, of any unnecessary loss of topsoil due to his failure to work according to the requirements of this ESMPr. * Soil must be stockpiled in such a way as to minimize erosion. | C |
| Soil erosion | Soil erosion is prevented. | • Clearing of vegetation should be kept to a minimum, keeping the width and length of the earth works to a minimum.  • Construction activities should not exceed the proposed construction boundaries by more than 2m to avoid the secondary impact of construction and increasing the areas that would require clearing and rehabilitation  • Any bare soils exposed to surface water runoff should be managed.  • Prior to any construction within the estuary, a silt curtain (fence created from geofabric) must be placed at the toe of the proposed works area and remain until the vegetation has stabilised any bare or loose soils.   * The Contractor shall, as and when necessary, implement erosion control measures to the satisfaction of the Project Engineer or PM. * Any runnels or erosion channels developed during the construction or maintenance period shall be backfilled and compacted and the areas restored to a proper condition similar to the condition before the erosion occurrence. * Traffic and movement over stabilised areas shall be restricted and controlled and damage to stabilised areas shall be repaired and maintained to the satisfaction of the PM. * Stripped topsoil shall be stockpiled in areas identified in the approved Construction Site Development Plan, for later use in rehabilitation and shall be adequately protected. * Exposed areas must be promptly rehabilitated with indigenous vegetation to avoid soil erosion at the earliest possible stage. Where necessary, temporary stabilisation measures must be used until vegetation establishes. * Plan for the worst case, that is, for heavy rainfall and runoff events, or high winds. * Appropriate erosion control measures must be implemented (e.g., silt traps) and a monitoring programme established to ensure that no erosion is taking place. At the first sign of erosion the necessary remedial action must be taken. | C |
| Watercourses | Prevent any damage either via erosion, pollution, or contamination | * All activities should be conducted at least 40m away from all watercourses unless directed to do so through the relevant permits. * No vehicles allowed in watercourse areas. * No destruction of watercourses is allowed unless permitted to do so by the relevant permit(s). * The project area footprint should be maintained at a bare minimum to minimise the potential ecological impacts. * No dumping of any excess building materials or other wastes or litter should be allowed within the watercourse. * No soil (for any purposes) will be sourced from the watercourse. * Earthmoving equipment and vehicles should be inspected and services regularly to allow for timeous identification of fluid leaks. * Subsistence hunting or harvesting of fauna or flora within the watercourse is prohibited. * Digging and construction of boreholes will be undertaken after appropriate clearances from authorities | C |
| Altered hydrological regime | Impacts associated with altered stormwater flows are controlled and minimised. | * The Contractor shall submit a Method Statement to the PM for approval detailing the method of stormwater control measures for the entire project area. * Temporary stormwater control measures must be installed as and when necessary, to prevent and minimise the erosion of exposed soils. * To prevent stormwater damage, the increase in stormwater runoff resulting from the construction activities must be estimated and the drainage patterns accessed accordingly. A drainage plan must be submitted to the PM for approval. * Temporary cut off drains and berms may be required to capture stormwater and promote infiltration. | C |
| Contamination of surface water and groundwater resources/ Management of Hazardous Material | Surface water and groundwater resources are not negatively impacted by the construction works | * A Method Statement (MS) for the handling, storage, and management of hazardous substances during the construction phase must be drawn up by the appointed Contractor and approved by the PM in consultation with the ECO, prior to the commencement of construction. This MS must, as a minimum, include the following: * A list of all potentially hazardous materials used during the construction phase * Provision for all potentially hazardous materials (including cement and solvents) to be housed under cover and within bunded areas. * Reasonable measures to prevent potential spills of these substances. * All potentially hazardous materials must be handled, stored, and managed in line with the approved method statement. * A Spill Contingency Procedure must be developed by the Contractor and approved by the PM in consultation with the ECO. This plan must detail measures for the immediate clean-up of spills, as well as the appropriate storage and disposal of contaminated material, so as to prevent environmental pollution or contamination. * All spills must be cleared up, stored, and disposed of in accordance with the approved spill contingency procedure. * Stormwater to be managed to avoid contaminated. * Chemicals used for construction must be stored safely on site within bunds. Chemical storage containers must be regularly inspected so that any leaks are detected early. * Littering and contamination of water sources during construction must be prevented by effective construction camp and on-site management. Adequate waste disposal (litter) bins must be available on site. These must be properly secured and scavenger proof. * No stockpiling should take place within a watercourse. * All stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised, and be surrounded by bunds. * The construction camp and necessary ablution facilities meant for construction workers must not be located in any of the delineated watercourses. Temporary chemical toilets must be provided for the duration of the construction period. These toilets must be made available for all site staff during the construction phase and should be at least 50m from any watercourse present on-site or in proximity to the site footprint. The developers should also appoint and enter into a contract with a qualified third-party service provider for the maintenance of the sanitation system. * Drip trays will be placed underneath all stationary plant (excavators, trucks, and mobile cranes) whether they are in operation or not. Drip trays will also be in place where fuel is transferred. The contents of drip trays will be appropriately disposed of in a manner that prevents environmental pollution or contamination. * If concrete or cement mixing is to be undertaken on the site, this must be undertaken on an impermeable surface. Any contaminated water generated by these activities must be contained and appropriately treated / disposed of. No contaminated water may be discharged to the environment. * At the end of each day, any leftover / unused cement is to be removed from the site for appropriate disposal by the concrete supplier. * Used cement bags shall be collected and stored in containers to prevent wind-blown cement dust and water contamination. * The re-use of discarded cement bags on site is forbidden. * Water from concrete washing must either be re-used in concrete mixes or must be stored in drums, then removed from the site and disposed of at a licensed municipal dump site. * Washing of the excess concrete into the ground is not allowed. * Establish a dedicated area for construction vehicles to refuel. Vehicle re-fuelling must only take place on impervious surfaces and/or drip trays. * Ensure all construction machinery is in sound working order to prevent oil leaks. | C |
| Loss of indigenous vegetation | Clearance of indigenous vegetation on the site is minimised. | * The construction footprint must be surveyed and demarcated prior to construction commencing. All contractors must be made aware of this demarcation. * All areas outside the demarcated footprint will be considered as No-Go areas. * No construction activities (temporary or permanent) will be allowed in these No-Go areas. * Temporary infrastructure such as the site camps, laydown areas and storage areas must be placed in areas already transformed and within the construction footprint. * Care shall be taken to preserve all vegetation in the immediate area of temporary stockpiles and during site clearing. * No on-site fires will be permitted. This will reduce the risk of accidental veld fires and further vegetation loss. * ECPTA’s standard ESMPr for construction and maintenance projects (Appendix C). * No plants outside the demarcated work areas may be damaged. * No firewood may be collected. * No natural features should be defaced, painted, damaged or marked, if these should occur (e.g., trees, rock formations, buildings) situated in or around the site the environmental officer must be informed at once. * The areas of vegetation that are to be protected during construction/maintenance project must be demarcated and indicated on a site plan. A method statement is to be submitted to the environmental officer by the Contractors, detailing the method of fencing for protection of the conservation areas. | C |
| Loss of SCCs | Any SCCs found during construction are relocated to a similar suitable habitat. | * Permits must be obtained to remove any plant SCC and protected species identified prior to commencement of any activity on site. * A Plant Search and Rescue must be conducted by a qualified botanist prior to commencement of any activity on site. * As many SCC and permitted plants as possible must be relocated into the surrounding areas. * A nursery will not be required if all plant species are immediately relocated to the surrounding environment. * No plant harvesting will be allowed. | C/PM |
| Fire Management | Ensure the prevention of a wildfire outbreak | * No fires are permitted in areas that are not dedicated for such purposes. * All relevant fire-fighting equipment should be kept on site. * Due to the threat of fire poses to the PA smoking will only be allowed in designated smoking area which are clearly demarcated and signposted with a facility for safe containment and disposal of cigarette butts. * Firebreak should be maintained around offices (including temporary construction offices). * All fire management should be done in compliance with the Fire Management Plan of the PA. * Emergency contact details of the PA fire department should be clearly displayed on site. | C |
| Spread of alien invasive vegetation | Alien vegetation currently established on the site is completely cleared and appropriately disposed of.  Any new alien invasive vegetation establishing on site during construction is cleared and appropriately disposed of. | * Develop and implement an Alien Vegetation Management Plan to mitigate the establishment and spread of undesirable alien plant species during construction. * All visible alien plants must be continually removed during construction phase. * Removal must occur through appropriate methods such as hand pulling, application of chemicals, cutting, etc. as in accordance with the NEMBA: Alien Invasive Species Regulations. | C |
| Fauna | Any faunal species encountered on site during construction are not harmed but rather relocated by a professional handler. | * A Faunal Search and Rescue must be conducted by a qualified Faunal specialist prior to commencement of any activity on site. * As many SCC as possible must be relocated into the surrounding areas. * No animals must be kept in cages or containers for longer than necessary during relocation. * It is recommended that only small mammals, frogs, scorpions, baboon spiders and reptiles be relocated. There is no need to relocate any big faunal species as they will naturally move away from the construction areas. * Construction and/or maintenance activities shall be confined to the demarcated areas to avoid accidental injury of animals. * No animals, including mammals, birds, snakes, and invertebrates may be harmed or killed. * The construction site must be daily inspected (before activities for the day starts) for any trapped faunal species. These species must be relocated to nearby No-Go areas by an employee that is qualified in dangerous animal handling. * Trapping, poisoning and/or shooting animals is strictly forbidden. * No domestic pets or livestock are permitted on site. | C/PM |
| Construction Traffic and Road Safety | Traffic congestion in the external road network is limited.  A reduction in road safety conditions on the road network, for all road users, is avoided. | * The delivery of construction materials must be scheduled out of peak hours to avoid traffic, where possible * Road repairs must be made immediately should construction machinery cause damage to any of the existing roads. * All construction vehicles must be roadworthy and should be serviced regularly * Flag staff should regularly patrol areas especially on site to prevent onsite incidents * Construction vehicles must adhere to the relevant speed limits * Appropriate signage must be used to indicate the construction site; and * All mitigation measures/recommendations as set out in the TIA must be adhered to. | C |
| Damage of sub-surface heritage resources | Sub-surface heritage resources uncovered by excavation (if any) are not damaged or destroyed. | * If any archaeological or paleontological artefacts or remains/graves are uncovered during earthmoving activities, work in the vicinity of the find shall cease immediately. The Contractor shall immediately notify the PM, who shall contact the relevant Competent Authority who will take appropriate steps. * The Contractor will be required to abide by the specifications as set out by the Competent Authority or the heritage specialist appointed to investigate the find. * The environmental officer shall inform the relevant agency and arrange for a palaeontologist/ archaeologist to inspect, and if necessary excavate, the material, subject to acquiring the requisite approval from the relevant Heritage Agency * Note that without a permit issued by the responsible Heritage Agency it is illegal to destroy, damage, excavate, alter, deface or otherwise disturb any archaeological site or archaeological material. The latter is a criminal offence under the National Heritage Resources Act. * The Contractor may not, without a permit issued by the relevant heritage resources authority, destroy, damage, excavate, alter, deface or otherwise disturb archaeological material. * Archaeological walk-throughs should be conducted after vegetation clearing has been done and archaeological reports (Phase 1b) submitted for the following areas:   + Internal roads and associated culvert and/or gabion structures.   + Dams and pipeline infrastructure associated with existing boreholes. * Accommodation units:   + The overgrown cemetery near Double Drift should be fenced with an access gate, and a sketch plan and photographic record submitted to EC PHRA.   + Old buildings/structures as well as the cemetery should be included in the CMP. * There should be archaeological training for ECO-on-site monitoring. * Chance Find Protocol:   + If a chance find is made the person responsible for the find must immediately stop working and all work that could impact that finding must cease in the immediate vicinity of the find.   + The person who made the find must immediately report the find to his/her direct supervisor which in turn must report the find to his/her manager and the ESO or site manager. The ESO or site manager must report the find to the relevant Heritage Agency (South African Heritage Research Agency, SAHRA). (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Tel: 021 462 4502. Fax: +27 (0)21 462 4509. Web: [www.sahra.org.za](http://www.sahra.org.za)). The information to the Heritage Agency must include photographs of the find, from various angles, as well as the GPS co-ordinates.   + A preliminary report must be submitted to the Heritage Agency within 24 hours of the find and must include the following: 1) date of the find; 2) a description of the discovery and a 3) description of the fossil and its context (depth and position of the fossil), GPS co-ordinates.   + Photographs (the more the better) of the discovery must be of high quality, in focus, accompanied by a scale. It is also important to have photographs of the vertical section (side) where the fossil was found.   + Upon receipt of the preliminary report, the Heritage Agency will inform the ESO (or site manager) whether a rescue excavation or rescue collection by a palaeontologist is necessary.   + The site must be secured to protect it from any further damage. No attempt should be made to remove material from their environment. The exposed finds must be stabilized and covered by a plastic sheet or sand bags. The Heritage agency will also be able to advise on the most suitable method of protection of the find.   + In the event that the fossil cannot be stabilized the fossil may be collected with extreme care by the ESO (site manager). Fossils finds must be stored in tissue paper and in an appropriate box while due care must be taken to remove all fossil material from the rescue site.   + Once the Heritage Agency has issued the written authorisation, the developer may continue with the development on the affected area. | C |
| Air quality impacts on nearby residents | Deterioration of local air quality arising as a result of dust and vehicle emissions is minimised and prevented. | * Dust minimisation and control measures should be implemented on the construction site at regular intervals. This could include wetting down by water tankers. * The frequency of implementation of dust suppression measures should be increased when it is expected that high wind conditions will develop. Cognisance should however be given to the current water restrictions. * Vegetation clearing shall take place in a phased manner in order to retain vegetation cover for as long as possible. * During dry periods, a high moisture content should be maintained on unpaved surfaces or soil stockpiles within the construction site to reduce windblown dust as far as practically possible. * When stockpiling topsoil during construction, the drop heights from front end loaders and stackers should be minimised to control the fall of materials and, thus, reduce dust emissions. * Vegetation clearing should only take place immediately prior to the commencement of construction activities in an area, in order to minimise the amount of exposed soil on the site. * Limit spillages on paved roads and ensure that vehicle speeds are maintained as required on-site to reduce the possibility of the entrainment of dust on paved roads. * Limit vehicle idling and keep vehicles well maintained to minimise particulate and gaseous emissions. * If fine building materials/sands are to be transported at the back of trucks, they must be adequately covered. * Provide dust masks for the workers where necessary. * If possible, bulk earth work or work creating fugitive dust must be ceased during periods of strong winds. | C |
| Visual Impacts | Minimise visual intrusions | * Generation of dust will increase the visibility of the project, and it is therefore important to employ techniques to suppress dust generation during construction. * Dust from exposed soil surfaces shall be minimised at all times, only using water spray during very windy conditions. * The contractor should maintain good housekeeping on site to prevent litter and minimise waste. * Erosion risks should be assessed and minimised as erosion scarring can create areas of strong visual contrast with the surrounding vegetation. * Equipment not being used should be removed from site. * Lighting will be sufficient to ensure security but will not constitute ‘light pollution’ to the surrounding areas. * The site will be shielded from the adjacent landowners to minimise the visual impact where this is feasibly possible. | C |
| Solid Waste Generation/Pollution | All waste material is handled and disposed of according to waste type.  Waste generation is minimisation.  Waste generated by the construction phase does not give rise to environmental pollution or contamination. | * The Contractor must, prior to the commencement of construction prepare a Waste Management Procedure/method statement. This plan must identify all waste types generated on the construction site, which may include, but is not limited to:   + General solid wastes   + Hazardous solid wastes;   + Sewage and effluent;   + Hazardous liquid wastes;   + Cement bags;   + Scrap metal;   + Building rubble;   + Cleared vegetation. * This plan must be approved by the PM (in consultation with the ECO) ECO and must be implemented during construction so to prevent pollution of the surrounding environment or creation of a health hazard. * Rubble and other construction waste produced should be re-used if possible and where it is not possible must be disposed of at the nearest registered waste disposal facility (Port Alfred). * Litter must be controlled during construction – adequate bins must be made available on site at all times. These must be made scavenger proof and must be emptied on a regular basis. * Ensure that all litter is collected daily from the work area and transported back to the main camp for proper disposal. All bins shall be emptied daily. * All waste should be discarded at a registered waste management facility/landfill site particularly those waste or materials that could have an impact on surface or groundwater quality when coming into contact with water. * Construction materials stored on site must be secured – i.e., plastics must be anchored to prevent being blown off site. Skips must be regularly emptied and must be covered. * Any hazardous materials that need to be stored on site must be done under lock and key. * The excavation and use of rubbish pits on site are forbidden. * The burning of waste is forbidden. * Contaminated soil (resulting from oil spills, etc.), unwanted cement bags and water used for washing concrete equipment are regarded as hazardous waste and should be disposed of at a permitted hazardous waste landfill site. Written proof of disposal at the permitted waste landfill site should be obtained and provided to the environmental officer. * General good housekeeping should be practiced on site. | C |
| Management & Storage of Materials | Materials to be used during construction/demolition/maintenance shall only be stored at demarcated sites. | * Contractors will not be allowed to store new material outside demarcated areas (e.g., on the sides of the access road or among the natural vegetation or next to the existing access road). * All vehicles and equipment must be maintained in a good condition in order to minimise the risk of leakage and possible contamination of the soil or storm water by fuels, oils and hydraulic fluids. * Earthmoving equipment and vehicles should be inspected and services regularly to allow for timeous identification of fluid leaks. * If relevant, a method statement should be provided for activities related to the scope of work:   + Type and quantity of materials to be stored;   + Whether any oil contaminated/containing equipment will be stored;   + How (including what type of vehicles will be required) the materials will be delivered on site at the necessary storage area; and   + Where there is any risk of spill or runoff of any materials or chemicals and how the risk/spill will be mitigated. | C |
| Administration | The administration of the construction phase has regard to environmental sensitivity | * A copy of the EA (if issued), this ESMPr as well as any other environmental permits / licenses must be maintained on site in the Environmental File. * A Complaints Register must be maintained on the site for the duration of the construction phase. This should be kept in the Environmental File. An example of the format of the complaints register is attached in Appendix D. * An Environmental Incidents Register must be maintained on the site for the duration of the construction phase. This should be kept in the Environmental File. An example of the format of the environmental incidents register is attached in Appendix E. | C |
| Socio-economic | Employment & skills training of local labour is maximised. | Local labour shall be utilised wherever possible, and skills training will be provided. | C/PM |
| Occupational Health & Safety | The application of all OHS regulations must be adhered to at all times. | * The contractor must ensure that a health and safety plan is in place for all construction, including emergency procedures and COVID-19 mitigation for the duration of the pandemic, in the form of a simplified OHS Plan in line with the requirements of ESS2.   **ESS2 OHS Requirements:**   * The OHS measures will be designed and implemented to address:   + identification of potential hazards to project workers, particularly those that may be life threatening;   + provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances;   + training of project workers and maintenance of training records;   + documentation and reporting of occupational accidents, diseases, and incidents;   + emergency prevention and preparedness and response arrangements to emergency situations;   + remedies for adverse impacts such as occupational injuries, deaths, disability, and disease. * All parties who employ or engage project workers will develop and implement procedures to establish and maintain a safe working environment, including that workplaces, machinery, equipment, and processes under their control are safe and without risk to health, including by use of appropriate measures relating to chemical, physical and biological substances, and agents. Such parties will actively collaborate and consult with project workers in promoting understanding, and methods for, implementation of OHS requirements, as well as providing information to project workers, training on occupational safety and health, and provision of personal protective equipment without expense to the project workers. * Workplace processes will be put in place for project workers to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health. Project workers who remove themselves from such situations will not be required to return to work until necessary remedial action to correct the situation has been taken. Project workers will not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal. * Project workers will be provided with facilities appropriate to the circumstances of their work, including access to canteens, hygiene facilities, and appropriate areas for rest. Where accommodation services are provided to project workers, policies will be put in place and implemented on the management and quality of accommodation to protect and promote the health, safety, and well-being of the project workers, and to provide access to or provision of services that accommodate their physical, social, and cultural needs. * Where project workers are employed or engaged by more than one party and are working together in one location, the parties who employ or engage the workers will collaborate in applying the OHS requirements, without prejudice to the responsibility of each party for the health and safety of its own workers. * A system for regular review of occupational safety and health performance and the working environment will be put in place and include identification of safety and health hazards and risks, implementation of effective methods for responding to identified hazards and risks, setting priorities for taking action, and evaluation of results. * The contractor must adhere to healthy and safety regulations by making use of cover buckets for trucks carrying construction materials such as sand, quarry dust, etc. * The contractor must mark active construction areas with high-visibility tape * The contractor needs to ensure that open trenches and excavated areas are backfilled and or secured * The contractor must provide adequate sanitary facilities * The contractor must provide PPEs for construction workers * The contractor must ensure that construction workers are educated on the on-site rules/regulation and hygiene and disease (HIV/AIDS) prevention * The contractor must make provision for the availability of clean drinking water to all staff as well as proper sanitation services – one ablution facility must be present for every 20 workers; all such facilities associated with each of the construction sites must be placed at a distance greater than 40m from the demarcated edge of the riparian vegetation.   **ESMF OHS Requirements:**   * In accordance with the PA’s OHS policies, every individual engaged has the duty to:   + Uphold health and safety in the premises and outside of ECPTA premises.   + Take care of their own health and safety and that of other persons who might be affected by their acts or omissions.   + Comply with all the health and safety rules, instructions, training, supervision and all the safety systems provided through the program.   + Attend health and safety training sessions.   + Use personal protective equipment (PPE) provided by the employer.   + Refrain from damaging, misusing or interfering with anything that has been provided for health and safety reasons.   + Inform the safety representatives, safety committees and any health and safety organ of any situation that may be considered to be threatening the health and safety or any shortcomings in the safety program.   + Undertake only those tasks that they are trained and authorized to undertake. * The GFRNR is required to ensure the availability of health and safety policies and guidelines, alert employees to potential hazards, retain updated risk assessments and post risk profiles, have clear health surveillance arrangements, provided adequate PPE, and maintain clear accident and emergency procedures. * Safety induction is coordinated between the OHS office and the HR department. Training, including refresher courses, must be provided to ensure that all employees have instructions proportionally to their assigned tasks and responsibilities. * Persons who are required to use PPE must receive proper training in use. Registers will be kept of training and acceptance of PPE. * Every supervisor and at least one of every 50 employees must have first aid training. These first aid representatives must retain a valid certificate of competence. * First aid boxes are posted in accessible and well-known locations in the work locations and content must be replenished upon use. * Any incidents requiring first aid are recorded; in case of serious incidents the heads of departments must be notified. * The PA must regularly conduct fire drills, inspect escape routes, and maintain fire warning systems and equipment. * Incidents must be reported immediately and within the same shift to the ECPTA and Bank within the prescribe format. | C/Applicant (ECPTA) |
| Staff Management | Staff Management Protocols need to be adhered to prior and during construction. | * **Age of Employment**   + The minimum age for engagement in the Project is 18.   + Project activities may not engage child labour, defined as any person below 18 years of age. The GFRNR, contractors, and sub-contractors are therefore required to retain records of anyone engaged in activities funded by the Project and verify age through details obtained from the South African National Identify Card.   + Should contractor or sub-contractor be found to be in violation of this policy they will be suspended pending further investigation and may face government prosecution. * **Terms & Conditions**   + The employer will obtain a signed agreement with the following details when a worker is engaged. The information captured shall be readily available during inspection of contractor records by PAs and during World Bank supervision missions. The agreement, as applicable to the type of engagement, should be jointly signed by worker and employer.     - Name of employer(s)     - Job description     - Employee details     - South African National Identify Card     - Name     - Date of Birth     - Contact details/address     - Resident in PA community (yes/no)     - Date of employment commencement     - Wage agreement     - Remuneration     - Frequency of payment     - Method of payment     - Mandatory deductions, as relevant (taxes, other)   + The employer must keep a signed record that affirms that the following information has been provided to the worker and associated induction training records:     - Collective agreement, if applicable     - Hours of work     - Probation period     - Notice period     - Acknowledgement of knowledge of access to grievances related to Project and/or employment (signature)     - Leave entitlements     - Code of Conduct (see following section)     - Other benefits, as relevant (Pension, Transport, Housing, Holiday, Education, Health) * **Code of Conduct**   + The PAs have a strict policy to prevent sexual harassment as well as procedures for settling complaints or grievances. To reflect these procedures, and associated GBV or SEA, as well as procedures required to adhere to good procedures for OHS, all persons engaged under the Project must adhere to standard principles reflected in the GFRNR’s Code of Conduct related to promote exemplary conduct in the workplace.   + The GFRNR must ensure that any employer is responsible to ensure that any persons engaged, including consultants, are appraised of the principles and keep diligent records of acceptance along with the records affirming terms and conditions (see prior section). * Contractor and sub-contractor’s personnel procured for works may submit their existing Codes of Conduct for review of equivalence in response to request for proposals or adopt Code of Conduct from the World Bank’s Standard Procurement Document, which is provided in Annex 9 of the ESMF. This document, or the Contractors approved Code of Conduct, must be signed by the worker engaged and maintained as part of the labour management procedure. | C/Applicant (ECPTA) |
| Noise Control | Minimum noise impacts | * Noise levels must be kept within acceptable limits for a PA and must not be of such nature as to detract from the natural experience of visitors. * The Contractors shall take into consideration that the project areas are located within a natural environment and that noise could be a major disturbance/ nuisance for the fauna and visitors. * No music shall be allowed on site. * Maintenance, construction and demolition activities shall be limited to normal working hours and not allowed during weekends. | C |
| Safety and security | Maintain a safe and secure site | * Thorough background checks must be conducted on contractor’s employees before hiring them full time. Maintain a list of all individuals, including contractors, who are authorised to be on the job site. * Encourage employees to report theft or suspicious activity. Be sure to maintain complete records of any security incidents, as they can be beneficial to law enforcement in the event of theft, vandalism or similar occurrences. * Trespassing on private/commercial properties bordering the site is forbidden. Any construction personnel found trespassing must be subjected to a disciplinary hearing. | C |
| Existing infrastructure disturbance | * Damage to fences, or other existing structures or infrastructure could occur during the construction phase. * The proposed development/ registration will take place within the vicinity of the following Eskom powerlines:-   1. Committees/Breakfastvlei 66kV Overhead Line   2. Peddie/Naudeshoek 22kV Overhead Line (Albany CNC section)   3. Fort Beaufort/Katberg 11kV Overhead Line (Alice CNC section)   4. Committees/Fort Brown 22kV Overhead Line   There is a building and tree restriction from the centre/structure of the powerline which must be observed in all future developments:   1. 11m from the 66kV powerline and 2. 9m from the 11&22kV powerline | * Avoid damage or disturbance to all existing structures and infrastructure where possible. * The following standard conditions must be adhered to:   + Eskom services and equipment must be always acknowledged and may not be tampered or interfered with. The proposed development must be registered subject to Eskom existing powerlines. * No construction work may be executed closer than 9m of the Eskom Distribution structure or 6 meters from structure supporting mechanism. * Natural ground level must be maintained within Eskom servitude area. * All work within Eskom servitude area must be carried out in accordance with the requirements of the Occupational Health and Safety Act, 85 of 1993. Special attention must be given to clearances between Eskom’s conductors, structures, cables, electrical apparatus and proposed work as stipulated in Government notice GN R1593 of 12 August 1998 amended to GN R1185 of 1 June 1990 promulgated under the aforementioned act. * Eskom shall not be liable for the death or injury of any person, or for loss of or damage to any property, whether as a result of encroachment or use of the area where Eskom has its services, by applicant, his/her agents, contractors, employees or successors in title. * The applicant indemnifies Eskom against loss, claims or damages, including claims pertaining to interference with Eskom services, apparatus, or otherwise. * Eskom shall at all times have unobstructed access to and egress from its services. * No dumping shall be allowed with Eskom servitude area. * Any developments which necessitate the relocation of Eskom service will be to the account of the developer. Quote for relocations can be lodged with Eskom contact centre at number 086 0037566. * Should the applicant or his/ her contractor damage any of Eskom service during commencement of any work whatsoever, the incident must be reported to Eskom 24 hour Contact Centre (086 0037566) immediately. | C  Applicant |

Table ‑: Impact Management Actions during the Post-Construction and Rehabilitation Phase. Blue text refers to the standard good practice (Annex 2) and Generic Terms of Reference for Preparation of ESMP (Annex 3).

| **ASPECT** | **MANAGEMENT OUTCOMES** | **IMPACT MANAGEMENT ACTIONS** | **RESPONSIBLE AGENT** |
| --- | --- | --- | --- |
| Site Clean-up & Rehabilitation | All areas that have been disturbed or impacted by construction are clean and rehabilitated. | * Ensure that all temporary structures, materials and waste (including areas contaminated during the project, e.g. oil spillages on soil) should be removed from the PA. * All disturbed areas should be fully rehabilitated. * When landscaping and rehabilitating only indigenous plants from the area where the PA is located should be used. * The final list of indigenous plants should be approved by the relevant Ecologist and Reserve Manager. | C |
| Alien vegetation | Control the spread of alien vegetation | * + Eradicate alien plants from the impacted area for one year post-construction every six months. | C |
| Soil disturbance | Reduction in erosion and siltation | * Stripped topsoil stockpiled during construction to be used in rehabilitation. * Exposed areas must be promptly rehabilitated with indigenous vegetation to avoid soil erosion at the earliest possible stage. Where necessary, temporary stabilisation measures must be used until vegetation establishes. * Banks must be rehabilitated, including re-establishment of vegetation cover. | C |

Table ‑: Impact Management Actions during the Operational Phase. Blue text refers to the standard good practice (Annex 2) and Generic Terms of Reference for Preparation of ESMP (Annex 3).

| **ASPECT** | **MANAGEMENT OUTCOMES** | **IMPACT MANAGEMENT ACTIONS** | **RESPONSIBLE AGENT** |
| --- | --- | --- | --- |
| Alien Vegetation | The increase and spread of alien invasive species is controlled and minimised throughout the operational phase, keeping the indigenous vegetation of the reserve intact. | * Areas of natural vegetation disturbed by the operational activities must be monitored for invasion by alien vegetation. Appropriate and continual removal and control measures must be implemented as necessary. Removal must occur through appropriate methods such as hand pulling, application of chemicals, cutting, etc. as in accordance with the NEMBA: Alien Invasive Species Regulations. * Develop and implement alien vegetation management /control, as part of the ESMPr, to mitigate the establishment and spread of undesirable alien plant species. | Applicant |
| Vehicle Collisions with wildlife | Wildlife within the reserve (especially slow-moving species) are not harmed as a result of vehicle collisions due to high speeds. | * A designated speed limit must be set by the ECPTA to limit possible road collisions. A speed limit of 40km/h is recommended. Appropriate signage must be used to indicate the speed limit. * All ECPTA / GFRNR vehicles must be roadworthy and must be serviced regularly. * Experienced drivers employed by ECPTA are to be used in the GFRNR. * All vehicles must take heed of normal road safety regulations; thus, all ECPTA personnel and tourists must obey and respect the law of the road. A courteous and respectful driving manner should be enforced and maintained so as not to cause harm to any individual.   Enforce safe driving and take disciplinary action against repeat offenders. | Applicant |
| Stormwater management | Increased runoff as a result of hardened surfaces is avoided through proper stormwater management procedures. | * Where possible, energy dissipaters should be installed at stormwater discharge points. * The discharge points should be monitored for erosion. If necessary, appropriate steps must be taken to repair and prevent erosion. * Areas of natural vegetation disturbed by the operational activities must be monitored for invasion by alien vegetation. Appropriate alien vegetation removal and control measures must be implemented as necessary. | Applicant |
| Fire Risk | The risk of increased veld fires is avoided through the implementation of proper fire control and prevention techniques. | * Fires are only permitted at designated locations. * ECPTA shall ensure that basic fire-fighting equipment is available at various locations across the reserve. * Firebreak should be maintained around the reserve’s offices. * ECPTA shall ensure that all reserve personnel are aware of the procedure to be followed in the event of a fire. * ECPTA staff and tourists must make use of designated smoking areas in the. These must be clearly demarcated and signposted for safe containment and disposal of cigarette butts. * All fire management should be done in compliance with the Fire Management Plan of the Protected Area. | Applicant |
| Noise pollution | Noise pollution resulting from aircraft activity is minimised. | * The pilots can adjust their descent profiles so that a level off close to the ground is avoided. This so-called continuous descent approach reduces the requirement for the application of high thrust by the engines, which reduces the noise produced by the aircraft. * ECPTA staff can familiarise themselves with the behaviour and lifecycles of on-site wildlife, so that you can avoid noisy maintenance during peak foraging or breeding times. * Properly sited vegetation can help with noise control. The best sound buffers consist of dense, indigenous vegetation that extends down to the ground. A combination of trees and shrubs can provide soundproofing. For maximum impact, the vegetation should be planted close to the noise source (such as a roadway or equipment room), rather than near the natural area you want to protect. | Applicant |
| Air emissions | Air emissions resulting from reserve vehicles are kept to a minimum. | * ECPTA vehicles should be serviced regularly to minimise exhaust fume pollution. * A designated speed limit must be set by the ECPTA to limit dust. A speed limit of 40km/h is recommended. Appropriate signage must be used to indicate the speed limit. | Applicant |
| Safety, Security & surveillance | Increased awareness of activities in and around the reserve ensuring the protection of the Black Rhino population. | The operational phase may involve implementing and managing surveillance systems, such as cameras or patrols, to monitor the fences and ensure their effectiveness. This can involve additional staffing and technological investments. | Applicant |
| Increased accessibility to and within the reserve via road vehicles and aircraft | The functionality and longevity of the roads and airstrips are ensured, protecting the resources within the reserve. | Upgraded infrastructure such as roads and airstrips may require ongoing maintenance to ensure their functionality and longevity. The operational phase must therefore involve the following:   * allocating adequate resources. * providing sufficient budget.   scheduling maintenance activities so as to not disrupt the reserve’s operations. | Applicant |
| Socio-economic | The safety of the reserves Black Rhino population is ensured while creating regular jobs for neighbouring communities. | * The new and upgraded infrastructure related to the rhinos’ habitat and containment will require ongoing maintenance to ensure the infrastructures’ functionality and longevity. This will in turn bolster counter-poaching operations in the GFRNR and thus securing the rhino population in the GFRNR. The operational phase must therefore involve the following:   + allocating adequate resources,   + providing sufficient budget, and,   + scheduling maintenance activities so as to not disrupt the reserve’s operations. * Ensure that the local communities from Makana, Ngqushwa and Raymond Mhlaba local municipalities are given preferred employment opportunities and provided with training (skilled) in terms of the reserve’s operation and maintenance tasks. | C |

# MONITORING

The key to a successful ESMPr is appropriate monitoring and review to ensure effective functioning of the ESMPr and to identify and implement corrective measures in a timely manner. In the event where discrepancies are identified, the problem must be investigated and attended to. All the results obtained during environmental monitoring must be documented for audit purposes.

The ECPTA is to appoint an independent auditor / ECO who is suitably qualified and experienced to undertake such audits. An audit of the environmental monitoring and management actions undertaken is essential to ensure that it is effective, is meeting specified goals, and performs in accordance with relevant regulations and standards.

Compliance monitoring is to be undertaken as specified in Table 10‑1 below.

Table ‑: Implementation of Compliance Monitoring

|  |  |  |  |
| --- | --- | --- | --- |
| **TIMEFRAME** | **METHOD OF MONITORING** | **MONITORING FREQUENCY** | **REPORTING FREQUENCY** |
| **External Monitoring by ECO** | | | |
| Planning, design, and pre-construction | A site visit and associated pre-construction audit report to be prepared immediately prior to the start of construction. The report will document existing pre-construction conditions and any non-compliance to be addressed prior to the start of construction. | Once off | Once off |
| Construction | Minimum of monthly site visits with an audit report generated and submitted to the ECPTA and Contractor and the competent authority (if required) for the duration of construction. | Monthly | Monthly |
| Post-construction | A site visit and associated post-construction and post-rehabilitation audit report to be prepared upon completion of construction and rehabilitation. The report will document the state of the environment post-construction and any remaining non-compliance. | Once off | Once off |
| Operation | None proposed at this time. | None | None |

During audits, the ECO will make observations regarding the implementation of the impact management outcomes. The ECO will then assess the extent to which the impact management outcomes are being achieved and issue non-conformances as required. Non-conformances will therefore be based on compliance with both the impact management outcomes and actions and will be reported to the ECPTA and its appointed Agents (including PM & Contractors) as well as the Competent Authority.

# AMENDMENTS

This Updated Draft ESMPr produced for the construction phase will be amended to include comments received during the review of the Final BAR and the conditions of Environmental Authorisation. Amendments to the approved Final ESMPr may also be required as the project proceeds. Regulation 36 (1) states:

“*Where an amendment is required to the impact management actions of an ESMPr, such amendments may immediately be effected by the holder and reflected in the next environmental audit report submitted as contemplated in the environmental authorisation and regulation 34.*”

Regulation 36 (2) states:

“*Where an amendment to the impact management outcomes or objectives of and ESMPr or an amendment of the closure objectives of a closure plan is required before an audit is required in terms of the environmental authorisation, an ESMPr or closure plan may be amended on application by the holder of the environmental authorisation.*”

Therefore, while the impact management actions of the approved Final ESMPr can be amended without a formal amendment application process, amendment of the impact management outcomes or objectives will require application to the authority and a public participation process as outlined in Regulation 37.

Any proposed amendment to the impact management actions of the approved Final ESMPr in terms of Regulation 36(1) are to be discussed during site visits. Any amendments should then be agreed to by the Project Manager, Contractor, and ECO prior to being included in the audit reports.

# EASTERN CAPE PARKS AND TOURISM AGENCY ACCEPTANCE

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (full name) representing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (company name) have read, understood and accept the above environmental management plan as a framework for my company’s environmental performance during the above mentioned project.

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# project manager’S ACCEPTANCE

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (full name) representing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (company name) have read, understood and accept the above environmental management plan as a framework for my company’s environmental performance during the above mentioned project.

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# CONSTRUCTION CONTRACTOR’S ACCEPTANCE

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (full name) representing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (company name) have read, understood and accept the above environmental management plan as a framework for my company’s environmental performance during the above mentioned project.

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Appendix A: Project maps

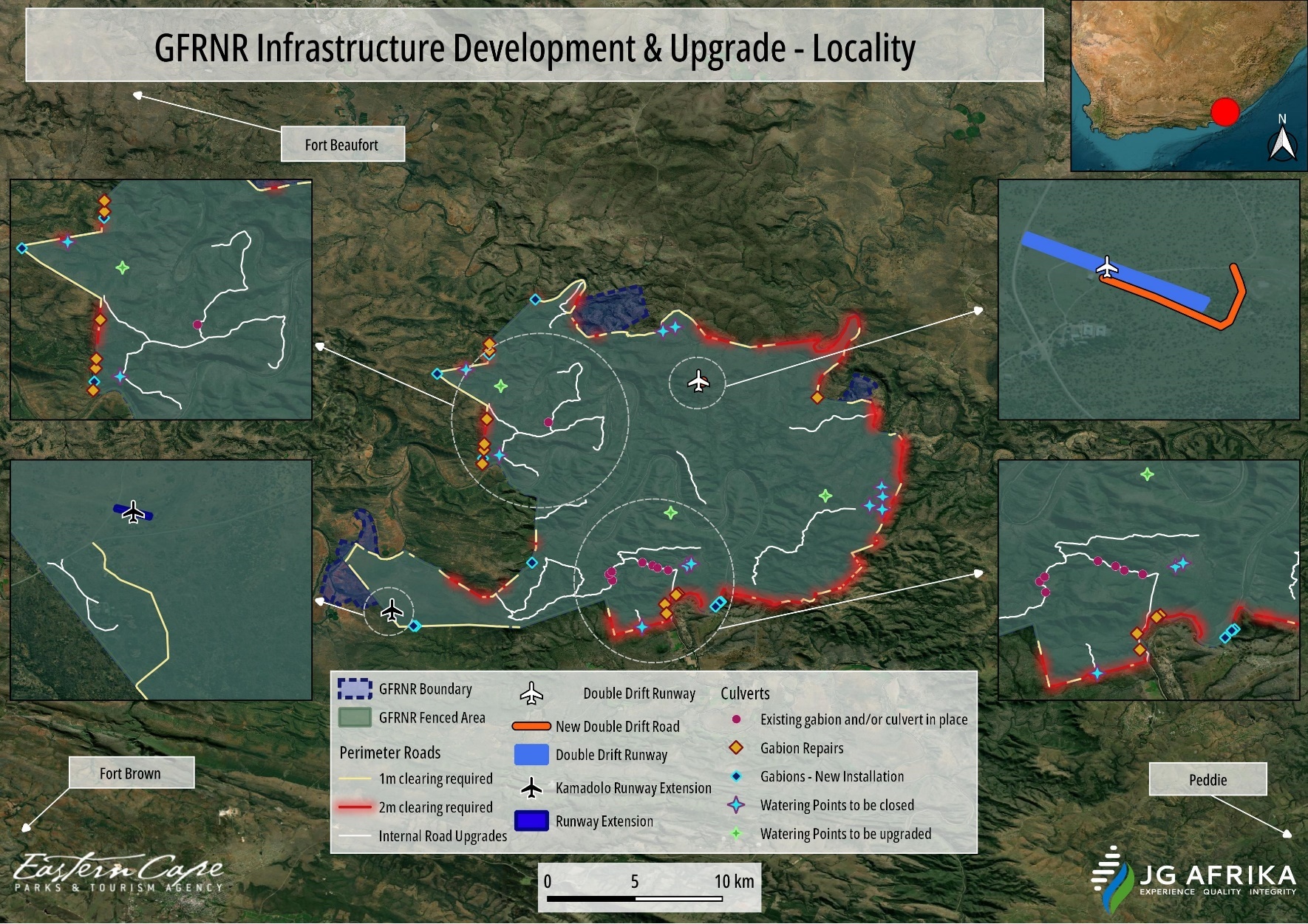


Figure : Locality Map showing all proposed infrastructure components to be developed or upgraded.

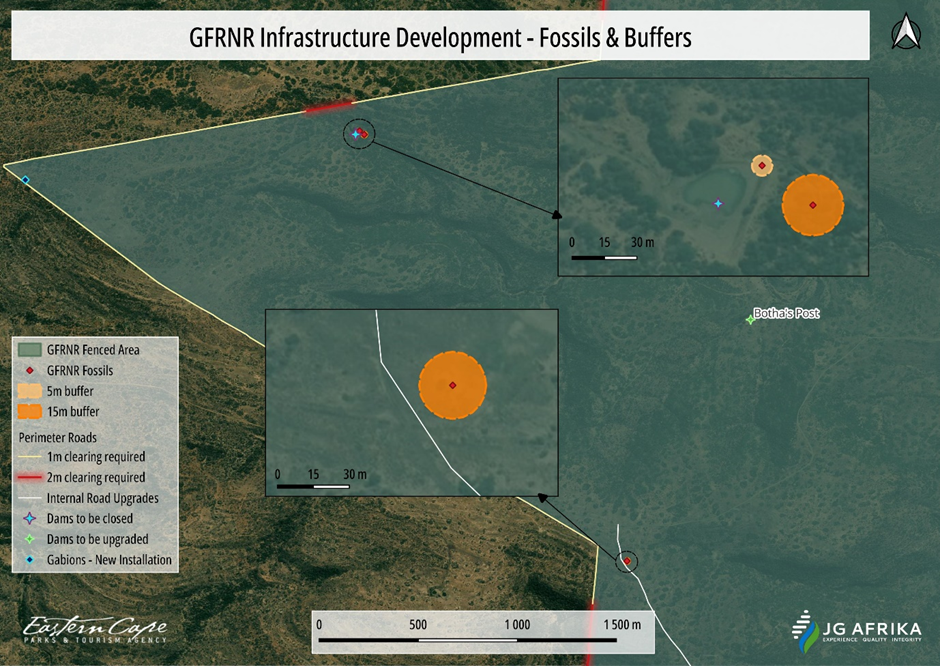


Figure : Buffers indicated around fossiliferous sites as identified through the PIA

Appendix B: Curriculum Vitae of EAP & Environmental Scientists

Appendix C: ECPTA’s standard ESMPr for construction and maintenance projects

Appendix D: Complaints Register

**Complaints Register**

**This a register for recording all complaints received from neighbours i.e., Complaints about noise, odours, dust etc.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date of Complaint** | **Complainant’s Name** | **Contact Details** | **Nature of Complaint** | **Corrective Action Taken** | **Date Action Completed** |
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Appendix E: Environmental Incident Register

**Environmental Incident Register (template as contained in Annex 6 of ESMF)**

**This is record of incidents as defined in NEMA. Incidents should be recorded and reported to the applicable authorities.**

|  |  |
| --- | --- |
| Incident Report Summary | Reference #: |
|  | |
| Month: | Year: |
|  | |
| Incident type: | |
|  | |
| Date and time of incident: | |
|  | |
| Location of incident: | |
|  | |
| Description of the incident (include situation leading up to the incident): | |
|  | |
| Individuals involved (include contact details): | |
|  | |
| Assessed consequences to the company and to community members (include a description of injuries or damage sustained, if applicable): | |
|  | |
| Management actions: | |
|  | |
| Prepared by: | Approved by: |
|  |  |
| Date: | Date: |
|  | |

1. World Bank. 2016. World Bank Environmental and Social Framework. World Bank, Washington, DC.]

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