

## PART C

# 8 SITE SPECIFIC ENVIRONMENTAL ATTRIBUTES

If any specific environmental sensitivities/attributes are present on the site which require more specific impact management outcomes and actions, not included in the pre-approved generic EMPr template, to manage impacts, those impact management outcomes and impact management actions must be included in this section. These specific management controls must be referenced spatially and must include impact management outcomes and impact management actions. The management controls including impact management outcomes and impact management actions must be presented in the format of the preapproved generic EMPr template. This applies only to additional impact management outcomes and impact management actions that are necessary.

If Part C is applicable to the development as authorised in the EA, it is required to be submitted to the CA together with the BAR or EIAR, for consideration of, and decision on, the application for EA. The information in this section must be prepared by an EAP and the name and expertise of the EAP, including the curriculum vitae are to be included. Once approved, Part C forms part of the EMPr for the site and is legally binding.

This section will **not be required** should the site contain no specific environmental sensitivities or attributes.

Specific Environmental Attributes for the proposed development include (refer to sensitivity maps under Sub-section 2):

The mitigation measures provided by the Specialists through the Basic Assessment are included below:

## 8.1 Agricultural Production, Potential and Soils - Johann Lanz

<b>Project phase</b>	<b>Construction, Decommissioning</b>
<b>Impact</b>	<b>Loss of agricultural potential (land)</b>
<b>Description of impact</b>	<p>The loss of agricultural production and potential results from the following mechanisms:</p> <ul style="list-style-type: none"> <li>• Loss of agricultural land use caused by direct occupation of land by the facilities' footprint;</li> <li>• Soil erosion caused by alteration of the surface characteristics;</li> <li>• Generation of dust caused by alteration of the surface characteristics;</li> <li>• Loss of topsoil in disturbed areas, causing a decline in soil fertility; and</li> <li>• Degradation of surrounding grazing land due to vehicle trampling.</li> </ul>
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• Maintain, where possible, all vegetation cover and facilitate revegetation of denuded areas to stabilise the soil against erosion.</li> <li>• Implement an effective system of storm water runoff control using berms (raised, low walls of soil) and ditches, where it is required (i.e. points where water might accumulate).</li> <li>• Strip and stockpile topsoil from all areas where soil will be disturbed below surface, for example, excavations for cabling and mounting structures. It is not necessary to strip topsoil from the whole development area, if the soil below surface is not being disturbed.</li> <li>• All soil above the rock or hardpan, to a maximum depth of 25cm should be stripped and stockpiled. Any additional soil overburden from below that depth must be stripped and stockpiled separately.</li> <li>• After cessation of disturbance, re-spread topsoil over the surface and revegetate. Any additional overburden where they will not bury the topsoil of agricultural land, must be disposed of appropriately.</li> </ul>

<b>Project phase</b>	<b>Construction &amp; Decommissioning</b>
<b>Impact</b>	<b>Loss of grazing resources (social)</b>
<b>Description of impact</b>	<p>The activities associated with the construction and decommissioning phases have the potential to result in the loss of land available for grazing and other agricultural activities. The key construction phase related issues are linked to the movement of heavy construction vehicles on the site and the establishment of laydown areas and access roads. The loss of grazing land could impact on sheep farming activities.</p> <p>The owner of Sous Farm indicated to the social specialist that the construction of Khobab WEF has resulted in some unnecessary damage to the veld in places due to careless activities, including off-road driving. This concern would also apply to the establishment of power lines. Given the low rainfall, damaged veld can take many years to recover.</p> <p>The final disturbance footprint can be reduced by careful site design and placement of power lines. The impact on grazing associated with the construction phase can therefore be mitigated by minimising the footprint of the construction related activities and ensuring that disturbed areas are fully rehabilitated on completion of the construction phase.</p>
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• The final location of pylons, access roads, laydown areas, switching stations etc. should be discussed with and confirmed with the locally affected landowners before being finalised.</li> <li>• The footprint areas for the establishment of infrastructure should be clearly demarcated prior to commencement of construction activities. All construction related activities should be confined to the demarcated area and minimised where possible.</li> <li>• All areas disturbed by construction related activities, such as access roads on the site, construction platforms, workshop area etc., should be rehabilitated at the end of the construction phase. The rehabilitation plan should be informed by input from an appropriately qualified professional, with experience in arid regions.</li> <li>• The implementation of a rehabilitation programme should be included in the terms of reference for the contractor/s appointed.</li> <li>• The implementation of the Rehabilitation Programme should be monitored by the ECO.</li> </ul>

## 8.2 Terrestrial and Aquatic Ecology - Brian Colloty

The plans proposed in this section will only be undertaken once the contractor has been appointed, i.e. post environmental authorisation and post REIPPPP bidding. The plans mentioned hereunder relate directly to *impact management actions* and will be attached to the EMPr and audited with the EMPr in accordance to Section 7 bullet number two which refers to regulation 36 of the EIA Regulations (GNR No.326): “ 36. (1) *Where an amendment is required to the impact management actions of an EMPr, 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.*”

<b>Project phase</b>	<b>Construction</b>
<b>Impact</b>	Disturbance or destruction of aquatic species of special concern
<b>Description of impact</b>	During construction the proposed activities could result in the disturbance or destruction of the surrounding habitat, both terrestrial and aquatic. However as the very sensitive habitats will be avoided or spanned (Aquatic), impacts will occur within the vegetation units found throughout the greater region. The only residual impacts are related to the limited sources of topsoil disturbance, which then relates to long-term revegetation of areas such as the laydowns required.
<b>Potential mitigation</b>	Develop and implement a Rehabilitation and Monitoring plan. This plan can be developed for the EMPr post Environmental Authorisation once the final tower positions, laydowns and access roads have been determined coupled to a final walk down.

<b>Project phase</b>	<b>Construction and Decommissioning</b>
<b>Impact</b>	Disturbance or destruction of faunal species through noise and physical disturbance



<b>Description of impact</b>	During construction the proposed activities could result in the disturbance or destruction of the surrounding habitat. However as the very sensitive habitats will be avoided or spanned (aquatic), impacts will occur within the vegetation units found throughout the greater region. This coupled to the fact that the observed species, with the exception of the slower moving tortoises are highly mobile and will disperse to other available habitat within the region.
<b>Potential mitigation</b>	Develop a Plant and Animal Search and Rescue Plan for implementation prior to any construction activities with the requisite permits in place as supplied by DENC. This plan can be developed for the EMPr post Environmental Authorisation once the final tower positions, laydowns and access roads have been determined coupled to a final walk down.

<b>Project phase</b>	<b>Construction and Decommissioning</b>
<b>Impact</b>	<b>Disturbance or destruction of faunal and floral species listed or protected</b>
<b>Description of impact</b>	During construction the proposed activities could result in the disturbance or destruction of the surrounding habitat. Several animals and plants observed are protected under Provincial legislation.
<b>Potential mitigation</b>	Develop a Plant and Animal Search and Rescue Plan for implementation prior to any construction activities with the requisite permits in place as supplied by DENC. This plan can be developed for the EMPr post Environmental Authorisation once the final tower positions, laydowns and access roads have been determined coupled to a final walk down.

<b>Project phase</b>	<b>Construction, Operational and Decommissioning</b>
<b>Impact</b>	<b>Increased in the numbers and types of alien plant species</b>
<b>Description of impact</b>	Currently a small number (2) of alien species was found within the site, and with disturbance coupled to the fact that plant / machinery brought to site may contain soil/debris from other sites with seed, the potential for an increased spread of alien plants is possible
<b>Potential mitigation</b>	Develop alien management plan, for implementation during the construction phase, coupled to a detailed walkdown of the proposed layout. The management should then continue into all future phases of the project

<b>Project phase</b>	<b>Construction</b>
<b>Impact</b>	<b>Damage or loss of alluvial systems, wetlands and water courses through the placement of new crossings or infrastructure.</b>
<b>Description of impact</b>	Construction could result in the loss of alluvial riverine systems and wetland systems that are still functional and provide an ecosystem services within the site especially where new access roads are required. Loss can also include a functional loss, through change in vegetation type via alien encroachment for example. However aquatic systems rated with a High sensitivity have been avoided.
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• A pre-construction walkthrough with an aquatic specialists is recommended and they can assist with the development of the stormwater management plan and Rehabilitation and Monitoring plan, coupled to micro-siting of the final layout where crossings occur.</li> <li>• All alien plant re-growth, which is currently low within the greater region must be monitored and should it occur, these plants must be eradicated within the project footprints and especially in areas near the proposed crossings. Prosopis (alien invasive tree) is prevalent in areas to the south of the site, thus care in transporting any material, while ensuring that such materials is free of alien seed, coupled with pre and post alien clearing must be stipulated in the EMPr.</li> <li>• Where roads and crossings are upgraded, the following applies:</li> <li>• All pipe culverts must be removed and replaced with suitable sized box culverts, where road levels are raised.</li> <li>• River levels, regardless of the current state of the river / water course will be reinstated thus preventing any impoundments from being formed. The related designs must be assessed by an aquatic specialist during a pre-construction walkdown.</li> <li>• Where large cut and fill areas are required these must be stabilised and rehabilitated during the construction process, to minimise erosion and sedimentation.</li> <li>• Suitable stormwater management systems must be installed along roads and other areas and monitored during the first few months of use. Any erosion / sedimentation must be resolved through whatever additional interventions maybe necessary (i.e., extension, energy dissipaters, spreaders, etc).</li> </ul>

<b>Project phase</b>	<b>Construction and Decommissioning</b>
<b>Impact</b>	<b>Potential impacts on localised water quality, although unlikely due to the ephemeral nature of the systems, but would occur during when rainfall does occur</b>
<b>Description of impact</b>	<ul style="list-style-type: none"> <li>During construction earthworks will expose and mobilise earth materials, and a number of materials as well as chemicals will be imported and used on site and may end up in the surface water, including soaps, oils, grease and fuels, human wastes, cementitious wastes, paints and solvents, etc. Any spills during transport or while works are conducted in proximity to a watercourse has the potential to affect the surrounding biota. Leaks or spills from storage facilities also pose a risk and due consideration to the safe design and management of the fuel storage facility must be given.</li> </ul>
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>Any dust suppression must be kept to a minimum, to prevent the formation of pools, or runoff that may then contain pollutants.</li> <li>All liquid chemicals including fuels and oil, including the BESS must be stored in secondary containment (bunds or containers or berms) that can contain a leak or spill. Such facilities must be inspected routinely and must have the suitable PPE and spill kits needed to contain likely worst-case scenario leak or spill in that facility, safely.</li> <li>Washing and cleaning of equipment must be done in designated wash bays, where rinse water is contained in evaporation/sedimentation ponds (to capture oils, grease cement and sediment).</li> <li>Mechanical plant and bowzers must not be refuelled or serviced within 100m of a river channel.</li> <li>All construction camps, lay down areas, wash bays, batching plants or areas and any stores should be more than 50 m from any demarcated water courses.</li> <li>Littering and contamination associated with construction activity must be avoided through effective construction camp management;</li> <li>No stockpiling should take place within or near a water course</li> <li>All stockpiles must be protected and located in flat areas where run-off will be minimised and sediment recoverable;</li> </ul>

<b>Project phase</b>	<b>Operation</b>
<b>Impact</b>	<b>Impact on aquatic systems through possible increase in surface water runoff within the wind farm site.</b>
<b>Description of impact</b>	Increase in hard surface areas, and roads that require stormwater management will increase through the concentration of surface water flows that could result in localised changes to flows (volume) that would result in form and function changes within the riverine / wetland systems, which are currently ephemeral, i.e. riverine systems become tree rather than shrub dominated, with a loss in instream plant biodiversity through shading, which then results in habitat changes / loss.
<b>Potential mitigation</b>	A stormwater management plan must be developed in the preconstruction phase, detailing the stormwater structures and management interventions that must be installed to manage the increase of surface water flows directly into any natural systems. This stormwater control systems must be inspected on an annual basis to ensure these are functional. Effective stormwater management must include effective stabilisation (gabions and Reno mattresses or similar) of exposed soil and the re-vegetation of any disturbed watercourses.

<b>Project phase</b>	<b>All phase combined</b>
<b>Impact</b>	Cumulative Impact of the proposed grid connection on any terrestrial resources and aquatic resources.
<b>Description of impact</b>	The cumulative assessment considers other grid connections located within 30 km of the project site that are currently operational or approved.
<b>Potential mitigation</b>	The project should share roads and infrastructure with neighbouring projects where possible to reduce the overall footprint and reduce stormwater and erosion and sedimentation related impacts

## 8.3 Avifauna - Chris van Rooyen

<b>Project phase</b>	<b>Construction</b>
<b>Impact</b>	Displacement of priority species
<b>Description of impact</b>	Displacement of priority species due to disturbance associated with construction of the grid and switching station

<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• Construction activity should be restricted to the immediate footprint of the infrastructure.</li> <li>• Access to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of priority species.</li> <li>• Measures to control noise and dust should be applied according to current best practice in the industry.</li> <li>• Maximum used should be made of existing access roads and the construction of new roads should be kept to a minimum.</li> <li>• Construction activities within 1km of the Martial Eagle nest on the Helios – Juno 400kV transmission line should be avoided during the breeding season (May to November).</li> </ul>
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<b>Project phase</b>	<b>Operation</b>
<b>Impact</b>	Displacement
<b>Description of impact</b>	Displacement of priority species due to habitat transformation associated with the operation of the OHL and onsite switching station.
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• Vegetation clearance should be limited to what is absolutely necessary.</li> <li>• The mitigation measures proposed by the vegetation specialist must be strictly enforced.</li> </ul>

<b>Project phase</b>	<b>Operation</b>
<b>Impact</b>	Mortality of priority species
<b>Description of impact</b>	Mortality of priority species due to collisions with the 132kV OHL
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• The avifaunal specialist must conduct a walk-through prior to implementation to demarcate sections of powerline that need to be marked with Eskom approved bird flight diverters. The bird flight diverters should be installed on the full span length on the earthwire (according to Eskom guidelines - five metres apart). Light and dark colour devices must be alternated to provide contrast against both dark and light backgrounds respectively. These devices must be installed as soon as the conductors are strung.</li> </ul>

<b>Project phase</b>	<b>Operation</b>
<b>Impact</b>	Mortality
<b>Description of impact</b>	Electrocution of priority species in the onsite switching station
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• The hardware within the proposed switching station yard is too complex to warrant any mitigation for electrocution at this stage. It is recommended that if on-going impacts are recorded once operational, site specific mitigation (insulation) be applied reactively. This is an acceptable approach because Red Data priority species is unlikely to frequent the switching station and be electrocuted.</li> </ul>

<b>Project phase</b>	<b>Decommissioning</b>
<b>Impact</b>	Displacement
<b>Description of impact</b>	Displacement of priority species due to disturbance associated with decommissioning of the grid and onsite substation

<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>Decommissioning activity should be restricted to the immediate footprint of the infrastructure as far as possible.</li> <li>Access to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of priority species.</li> <li>Measures to control noise and dust should be applied according to current best practice in the industry.</li> <li>Maximum used should be made of existing access roads and the construction of new roads should be kept to a minimum.</li> <li>The existing transmission lines must be inspected for active raptor nests prior to the commencement of the decommissioning activities. Should any active nests be present, decommissioning activities during the breeding season should be avoided if possible.</li> </ul>
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## 8.4 Archaeology and Heritage - Jayson Orton

<b>Project phase</b>	<b>Construction</b>
<b>Impact</b>	Destruction of archaeological resources
<b>Description of impact</b>	Destruction of and damage to archaeological materials during earthmoving activities
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>Pre-construction survey of any hilltops or potentially sensitive</li> <li>Archaeological excavations, sampling and recording of sites.</li> </ul>

## 8.5 Palaeontology - John Almond

<b>Project phase</b>	<b>Construction</b>
<b>Impact</b>	Damage and/ or destruction to palaeontological heritage resources
<b>Description of impact</b>	It is possible that the construction phase of the proposed switching stations and pylons for the overhead transmission line may lead to the damage or destruction of buried palaeontological resources. However, the palaeontologist identified that the area in which the proposed grid connection infrastructure is located is underlain by several formations of potentially fossiliferous sediments of the Ecca Group (Karoo Supergroup) that are extensively intruded by unfossiliferous igneous rocks of the Karoo Dolerite Suite. It is generally considered that while finds might occur on site, their sensitivity is low and the important mammalian remains known in pan and river sediments are rare and their occurrence is unpredictable. Furthermore, it is known that there are high levels of bedrock weathering and thermal metamorphism in the study area.
<b>Potential mitigation</b>	The Environmental Control Officer (ECO) / Environmental Site Officer (ESO) responsible for the grid connection developments should be made aware of the potential occurrence of scientifically-important fossil remains within the development footprint. During the construction phase all major clearance operations (e.g. for new or widened access roads, pylon footings, laydown areas) and deeper (> 1 m) excavations should be monitored for fossil remains on an on-going basis by the ECO and on-site Environmental Officer (ESO). Should substantial fossil remains - such as vertebrate bones and teeth, or petrified logs of fossil wood - be encountered at surface or exposed during construction, the ECO or ESO should safeguard these, preferably in situ. They should then alert the South African Heritage Resources Agency, SAHRA, as soon as possible (Contact details: Dr Ragna Redelstorff, Heritage Officer Archaeology, Palaeontology & Meteorites Unit, SAHRA. 111 Harrington Street, Cape Town, 8001. Tel: +27 (0)21 202 8651. Fax: +27 (0)21 202 4509. E-mail: rredelstorff@sahra.org.za). This is to ensure that appropriate action (i.e. recording, sampling

	<p>or collection of fossils, recording of relevant geological data) can be taken by a professional palaeontologist at the proponent's expense.</p> <p>The palaeontologist concerned with any mitigation work will need a valid fossil collection permit from SAHRA and any material collected would have to be curated in an approved depository (e.g. museum or university collection). All palaeontological specialist work would have to conform to international best practice for palaeontological fieldwork and the study (e.g. data recording fossil collection and curation, final report) should adhere as far as possible to the minimum standards for Phase 2 palaeontological studies developed by SAHRA (2013).</p>
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## 8.6 Visual Landscape - Stephen Stead

<b>Project phase</b>	<b>Construction, Operation and Decommissioning</b>
<b>Impact</b>	<b>Visual obstruction of landscape to sensitive receptors</b>
<b>Description of impact</b>	<p>The visual impacts associated with the proposed development include the use and movement of large vehicles and a crane to raise the power line structures. Small maintenance access routes would be created along the proposed transmission line route which could result in soil erosion if not adequately managed. Due to the small footprint of the monopole and small track, windblown dust is likely to be limited.</p> <p>The impacts are likely to be similar in each of the project phases, although the frequency of vehicles and use of crane is likely to be more significant in the construction phase.</p> <p>Very limited mitigation is available to screen a 25m high structure and therefore the only mitigation available refers to the management of erosion. The impact will not change with mitigation for any of the three transmission line corridors.</p>
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• Soil erosion measures need to be adequately implemented and routinely monitored by the ECO during construction and by the owner of the infrastructure during operation. This should occur monthly during construction, bi-annual during operation, and bi-annual for a year following decommissioning.</li> <li>• Should the infrastructure be decommissioned, all structures should be removed and recycled where possible.</li> <li>• The rubble should be managed according to the NEM:WA and deposited at a registered landfill if it cannot be recycled or reused.</li> <li>• All compacted areas should be ripped and then rehabilitated according to a rehabilitation specialist.</li> </ul>

## 8.7 Electromagnetic Interference (EMI) & Radio Frequency Interference (RFI) - Callie Fouché

Due to the >90km separation distance no mitigation is required for grid connection infrastructure.

## 8.8 Eskom general requirements for works at or near Eskom infrastructure

Please find attached Eskom general requirements for works at or near Eskom infrastructure.

1. Eskom's rights and services must be acknowledged and respected at all times.
2. Eskom shall at all times retain unobstructed access to and egress from its servitudes.
3. Eskom's consent does not relieve the developer from obtaining the necessary statutory, land owner or municipal approvals.
4. Any cost incurred by Eskom as a result of non-compliance to any relevant environmental legislation will be charged to the developer.
5. If Eskom has to incur any expenditure in order to comply with statutory clearances or other regulations as a result of the developer's activities or because of the presence of his equipment or installation within the servitude restriction area, the developer shall pay such costs to Eskom on demand.
6. The use of explosives of any type within 500 metres of Eskom's services shall only occur with Eskom's previous written permission. If such permission is granted the developer must give at least fourteen working days prior notice of the commencement of blasting. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued in terms of the blasting process. It is advisable to make application separately in this regard.
7. Changes in ground level may not infringe statutory ground to conductor clearances or statutory visibility clearances. After any changes in ground level, the surface shall be rehabilitated and stabilised so as to prevent erosion. The measures taken shall be to Eskom's satisfaction.
8. Eskom shall not be liable for the death of or injury to any person or for the loss of or damage to any property whether as a result of the encroachment or of the use of the servitude area by the developer, his/her agent, contractors, employees, successors in title, and assignees. The developer indemnifies Eskom against loss, claims or damages including claims pertaining to consequential damages by third parties and whether as a result of damage to or interruption of or interference with Eskom's services or apparatus or otherwise. Eskom will not be held responsible for damage to the developer's equipment.
9. No mechanical equipment, including mechanical excavators or high lifting machinery, shall be used in the vicinity of Eskom's apparatus and/or services, without prior written permission having been granted by Eskom. If such permission is granted the developer must give at least seven working days' notice prior to the commencement of work. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued by the relevant Eskom Manager

Note: Where and electrical outage is required, at least fourteen work days are required to arrange it.

10. Eskom's rights and duties in the servitude shall be accepted as having prior right at all times and shall not be obstructed or interfered with.
11. Under no circumstances shall rubble, earth or other material be dumped within the servitude restriction area. The developer shall maintain the area concerned to Eskom's satisfaction. The



developer shall be liable to Eskom for the cost of any remedial action which has to be carried out by Eskom.

12. The clearances between Eskom's live electrical equipment and the proposed construction work shall be observed as stipulated by Regulation 15 of the Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

13. Equipment shall be regarded electrically live and therefore dangerous at all times.

14. In spite of the restrictions stipulated by Regulation 15 of the Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), as an additional safety precaution, Eskom will not approve the erection of houses, or structures occupied or frequented by human beings, under the power lines or within the servitude restriction area.

15. Eskom may stipulate any additional requirements to highlight any possible exposure to Customers or Public to coming into contact or be exposed to any dangers of Eskom plant.

16. It is required of the developer to familiarise himself with all safety hazards related to Electrical plant.

17. Any third party servitudes encroaching on Eskom servitudes shall be registered against Eskom's title deed at the developer's own cost. If such a servitude is brought into being, its existence should be endorsed on the Eskom servitude deed concerned, while the third party's servitude deed must also include the rights of the affected Eskom servitude.

## 8.9 SAHRA recommendations in terms of Section 38(4), 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Recommendations provided in the report include the following:

- The developer must contract an archaeologist to review the final alignment of the powerlines. Any locations that are likely to be sensitive (e.g. hilltops, pan margins) must be checked on the ground if they have not already been covered by the survey reported in the present report, to inform micro-siting and confirm if any sites require pre-construction mitigation work (i.e. sampling/ recording);
- The developer must contract an archaeologist to carry out mitigation work as required once the final alignment has been confirmed and reviewed. This must happen well in advance of construction to allow time for the permit process, actual work, and approval of the report by SAHRA;
- The environmental control officer (ECO) should ensure that all work occurs within the authorised footprints;
- Any unsurveyed portions of the final alignment that cross hilltops or other potentially sensitive areas (e.g. pans, low rock outcrops) must be surveyed before construction to inform micro-siting and/or to determine preconstruction mitigation requirements as appropriate;
- Any significant sites that might be impacted must be sampled and recorded prior to construction. This includes those at 526, 527 and 1952 if they are to be impacted; and
- If any archaeological material or human burials are uncovered during the course of development then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

- Further additional specific conditions are provided for the development as follows:
  - A report of the survey of the final alignment must be submitted to SAHRA prior to the construction phase;
  - Sites 526, 527 and 1952 must be avoided with a no-go bufferzone of 30 m;
  - Should it not be possible to avoid sites 526, 527 and 1952, the sites must be mitigated subject to a permit application in terms of section 35 and 48 of the NHRA and Chapter II and IV of the 2000 NHRA Regulations;
  - 38(4)c(i) – If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Natasha Higgitt/Phillip Hine 021 462 5402) must be alerted as per section 35(3) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule;
  - 38(4)c(ii) – If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Mimi Seetelo 012 320 8490), must be alerted immediately as per section 36(6) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule;
  - 38(4)d – See section 51 of the NHRA for offences;
  - 38(4)e – The following conditions apply with regards to the appointment of specialists:
    - With reference to the mitigation work noted above, a qualified archaeologist must be appointed to undertake the work in terms of the permit applied for as noted above;
    - If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA;

## 8.10 DFFE, Biodiversity Conservation recommendations

- A preconstruction walk-through of the approved development footprint will be conducted to ensure that sensitive habitats and species are avoided where possible during micro-siting of infrastructure.
- A search and rescue plan will be developed to excise the relocation/ removal for any TOPs or species of conservation concern that have the likelihood of occurring in the study area. This will be initiated by the contractor prior to construction commencing.
- Permits from relevant authorities will be obtained for the removal or disturbance of any TOPs, Red Data listed or provincially protected species. This will be initiated by the contractor prior to construction commencing.
- Specific sensitive habitats in close proximity to the development footprint will be avoided/demarcated as No-Go area (i.e. Drainage lines and Nest). This will be monitored by the Environmental Control Officer. However, due to the expansive nature of the project all areas not approved as part of the development footprint of this, or any other project, or which forms part of existing infrastructure, e.g. roads, will be deemed no-go areas during construction and operation.

- Alien Invasive Plant Species Management and Rehabilitation Plans will be developed and implemented on site, in accordance with the provisions of the generic EMPs adopted by the Competent Authority, which are applicable to this development.
- Suitable bird repelling structures and bird diverters will be considered to avoid collision of birds with the power lines. This will be considered by the avifaunal specialist during the detailed pre-construction walkthroughs, as stipulated in the EMP.