



Preliminary Terrestrial Biodiversity Scoping Report

Proposed Harmony Target PV facility

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Draft Report

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1 Introduction

1.1 Background

Savannah Environmental were appointed to undertake an environmental application, for a Photovoltaic (PV) energy facility for the Harmony Gold Mine outside Allanridge, Free State Province. As part of this application, a terrestrial Biodiversity Assessment is required.

1.2 Purpose of Report

The purpose of this report is to serve as a terrestrial biodiversity scoping report, in terms of its ecological status, as well the requirements in terms of the relevant Environmental Legislation to inform the assessment phase requirements. The report comprises a preliminary desktop assessment which identifies likely bioregional and site risks and provides the proposed methodology to be followed during the assessment phase. The report has been compiled in compliance with EIA Regulations of 2014, as amended on 07 April 2017 as well as the Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes (20 March 2020 and 30 October 2020).

1.3 Aspects of the project that could potentially have Biodiversity related Impacts

The key components of the project and their respective impacts upon the terrestrial vegetation and faunal environment are as follows:

COMPONENT	POTENTIAL BIODIVERSITY AND ECOLOGICAL IMPACTS
PV Facility	
The construction of the proposed facility will require selective and localised clearing for PV infrastructure.	The terrestrial environment will permanently be impacted where vegetation clearing is required to construct the PV facility and will be limited to the footprint area as well as any additional area for cut and fill requirements.
Overhead Powerline	
The construction of the proposed facility will require selective clearing for pylon construction.	The terrestrial environment will permanently be impacted where vegetation clearing is required to construct any pylons and will be limited to a minimal area where the pylon foundations will be constructed as well as a limited temporary work area surrounding this, which will likely self-rehabilitate to pre-construction conditions with 2 years.
Access Roads	
The construction of the proposed facility will require selective clearing of vegetation along any access roads for construction and operation.	Access roads will be required to access the various PV facilities during construction as well as during operations for maintenance purposes. It is likely that the road will be heavily used during construction phase after which traffic will be relatively light, dependant on maintenance needs.

2 Site Locality and Topography

The proposed project consists of an area to the south of Harmony Target Mine, situated to the south-west of Allanridge (located north-west of Welkom) within the Free State province (Figure 1), in an extensive relatively flat plain (Figure 2), with some scattered, slightly irregular undulating plains and hills, bisected by non-perennial watercourses and interspersed with small to medium sized water bodies, mostly associated with water storage relating to the surrounding urban, mining and agricultural activities. The area under assessment includes an area of approximately 245 Ha, a portion of which will be utilised for the proposed PV facility. The proposed overhead powerline will connect the PV facility with the electrical network within the Target Mine area.

Project : Harmony Target PV Layout - Topographic Locality Map

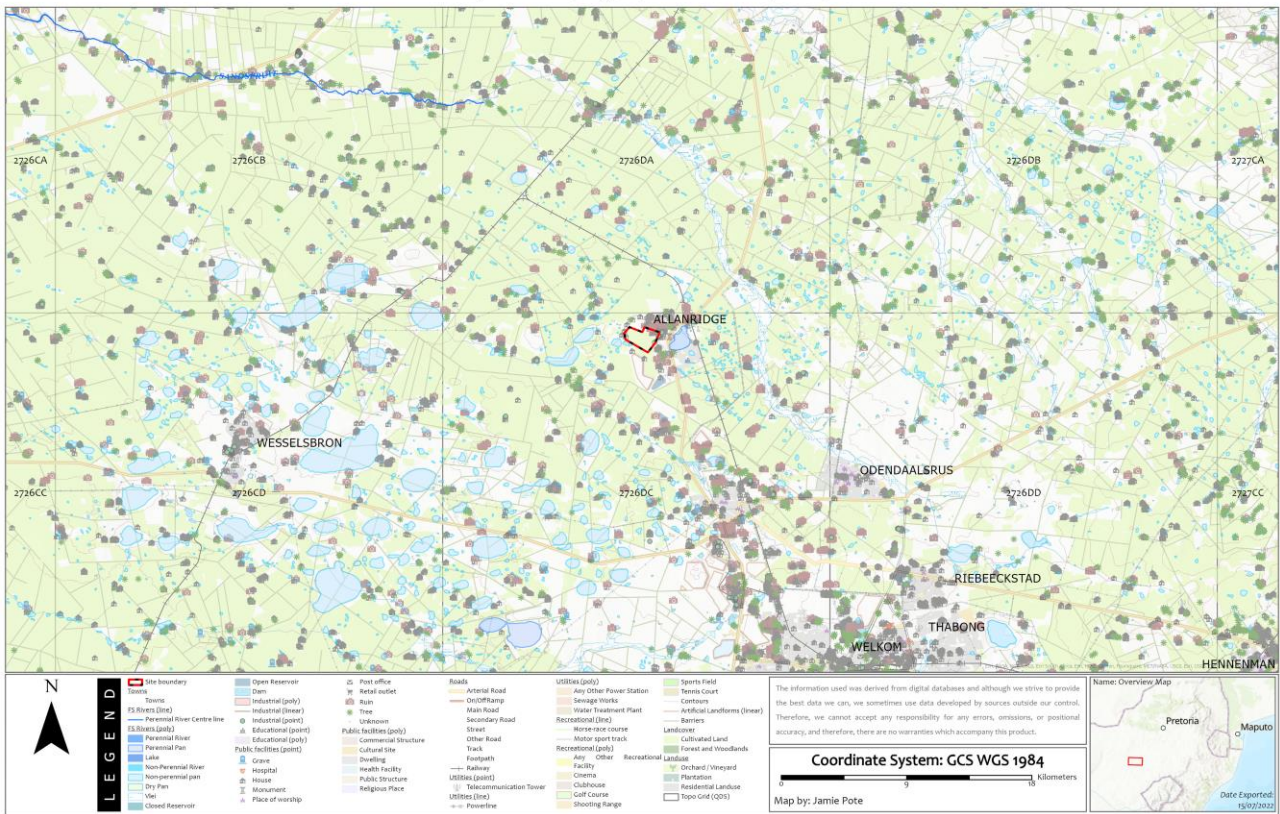


Figure 1: Site Locality.

Project : Harmony Target PV Layout - Aerial Map

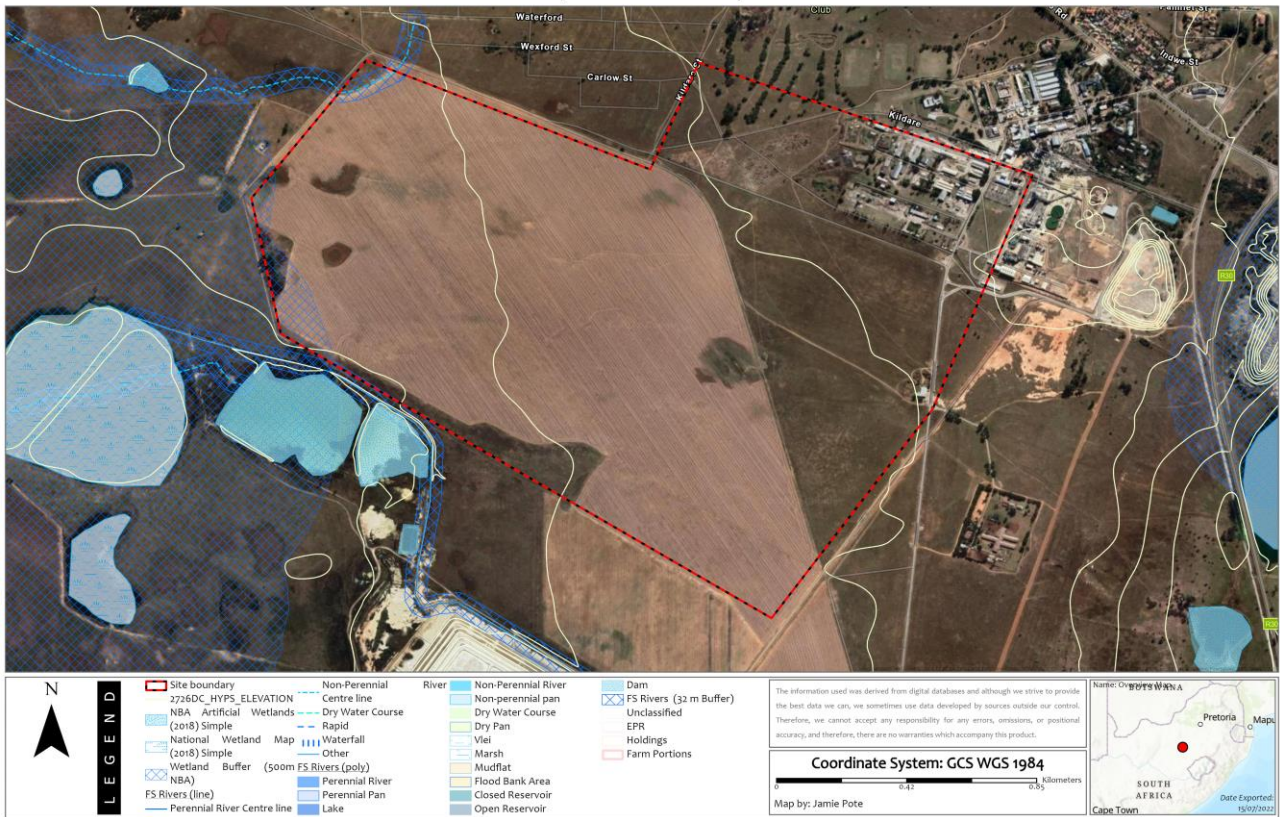


Figure 2: Aerial Photo of project area.

3 Rivers And Wetlands

The general area is bisected by an intricate network of drainage lines and watercourses (Figure 3), primarily non-perennial. These watercourses drain into the Sandspruit River (Class C: Moderately Modified) to the north of the site, which is a tributary of the Vaal River (Class D: Largely Modified), to the north-west.

Project : Harmony Target PV
Layout - Rivers and Wetlands

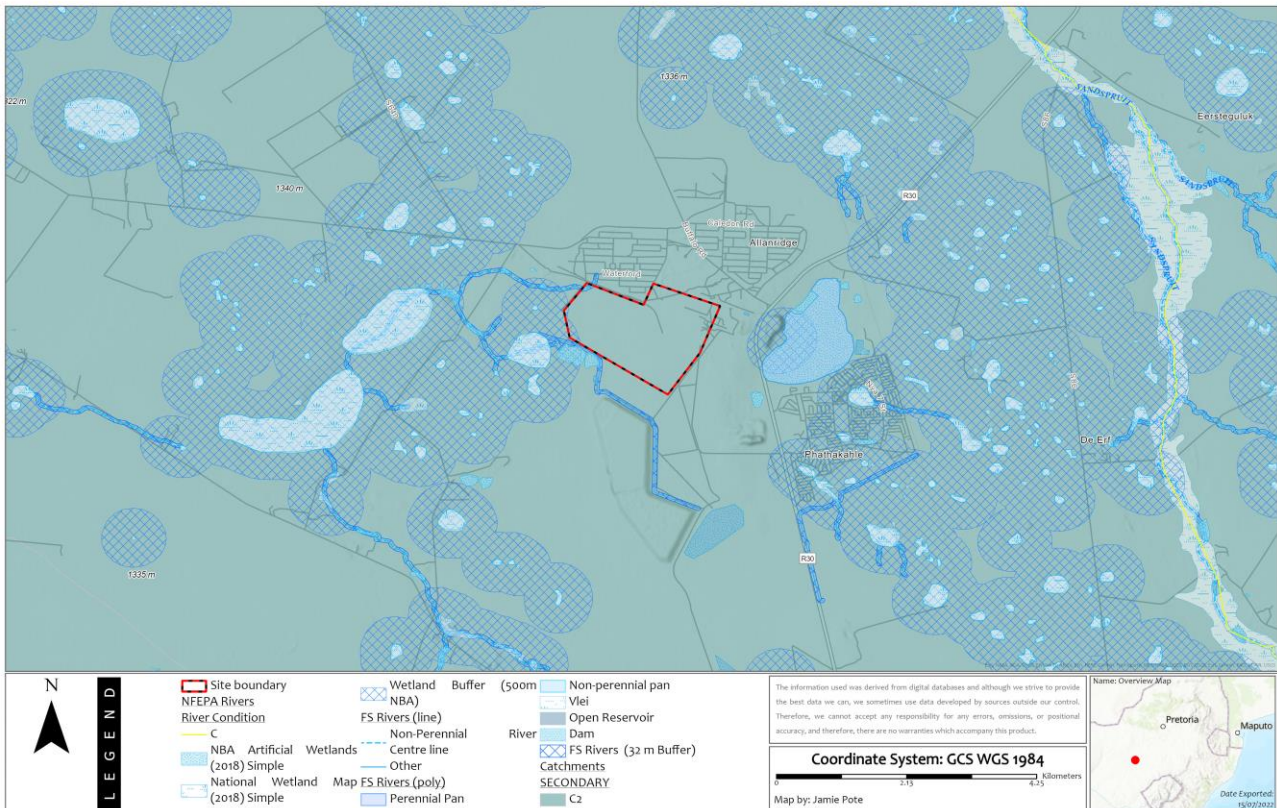


Figure 3; Rivers and Wetlands.

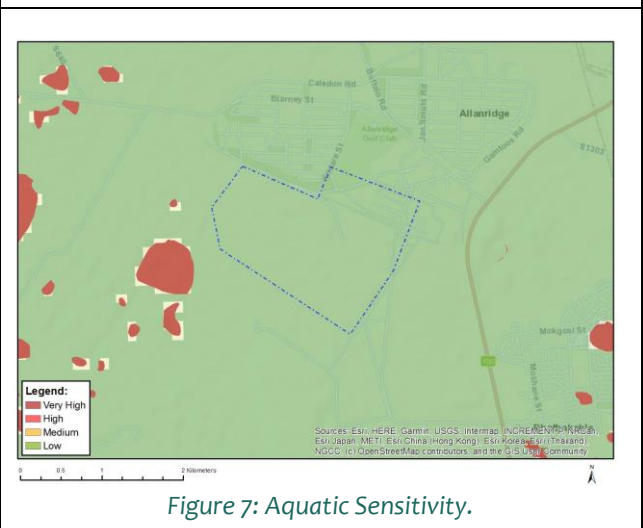
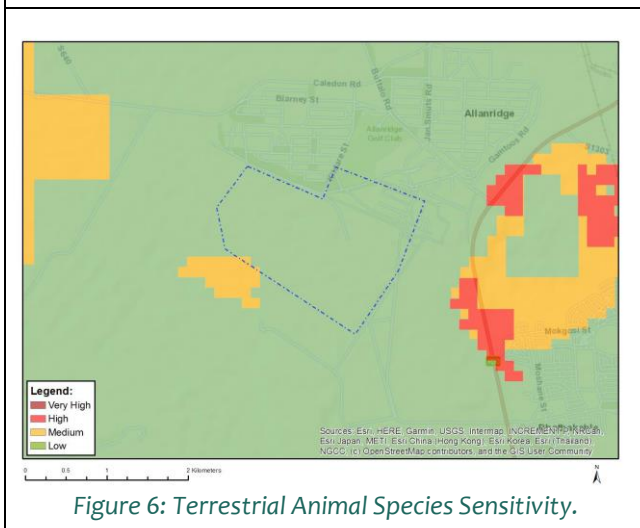
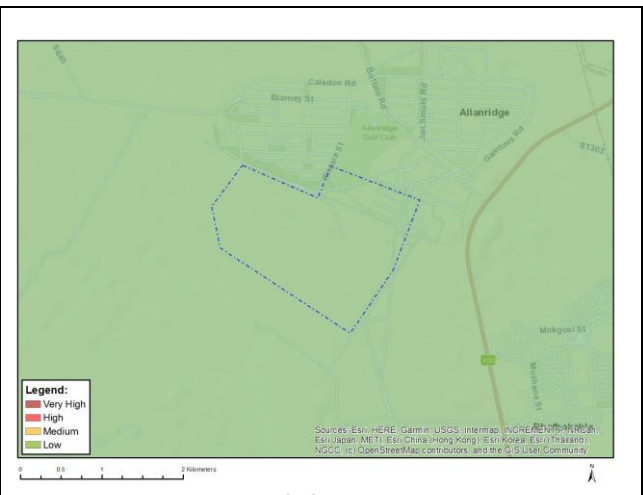
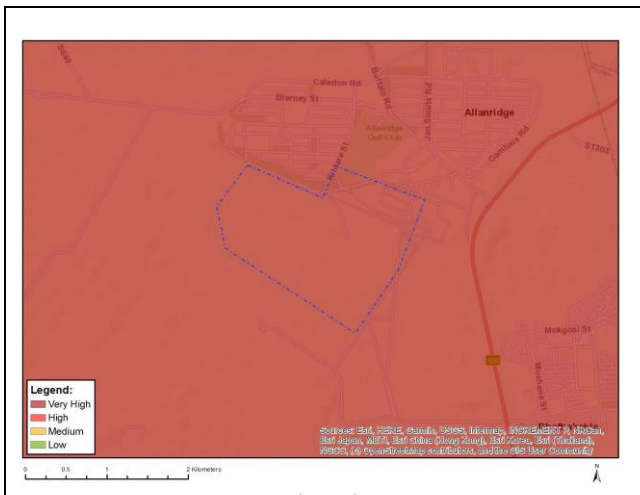
The non-perennial watercourses are generally single narrow channels surrounded by extensive wetland/pan/seep areas that are seasonally inundated with standing water, some for short time periods. Much of these have been transformed by agriculture related land clearing. Although often transformed, these watercourses including rivers and drainage lines, as well as wetlands, pans and seep areas are an important and significant ecological component of the arid landscape, being an integral part of many of the faunal species' habitat and should be avoided.

4 Bioregional Planning Frameworks

4.1 National Environmental Screening Tool

The DFFE Screening Tool indicates the following:

- Terrestrial Biodiversity is Very High (Figure 4).
- Plant species sensitivity is Low (Figure 5).
- Animal Species sensitivity is Low & Medium (Figure 6).
- Aquatic Sensitivity is Low (Figure 7)



Terrestrial Sensitivity	Feature(s) in proximity (Taaibos)
Very High	Critical Biodiversity Area 1, Ecological Support Area 2 & Endangered ecosystem
High	None
Medium	None
Low	None
Plant Sensitivity	Feature(s) in proximity
Very High	None
High	None
Medium	None
Low	Present
Animal Sensitivity	Feature(s) in proximity
Very High	None
High	None
Medium	<i>Hydroprogne caspia</i> (bird)
Low	None
Aquatic Sensitivity	Feature(s) in proximity
Very High	None
High	None
Medium	None
Low	Present

As apparent from the DFFE National Environmental Screening Tool, the following can be deduced:

- The **Terrestrial Biodiversity Theme** is **Very High**, with Critical Biodiversity Area (CBA) 1 & 2, Ecological Support Area (ESA) and an Endangered ecosystem covering the site and broader surrounding area. It is

noted that it is likely that the entire site is likely to have been transformed at some stage historically, for agriculture and any vegetation present is likely secondary regeneration. The site visit and assessment will clarify this further.

2. The **Plant Species Theme** is Low with no flagged species of conservation concern. The site visit will assess the presence or likely presence of any other species of conservation concern, including those requiring permits for removal.
3. The **Animal Species Theme** is Low with Medium and High sensitivity area in the broader area, associated with the bird species *Hydroprogne caspia* (Caspian Tern). This association is related to the waterbodies and associated riparian vegetation and the species the site is unlikely to provide suitable habitat being transformed, other than as an occasional transient visitor.
4. The **Aquatic Theme** is Low, with no watercourses or wetlands/pans flagged by the screening tool. It is noted that analysis of aerial photographs does indicate some possible, although severely disturbed, aquatic features within the site, which will require demarcation to avoid such areas.

The site assessment will physically screen for the presence of these, and other possible species or ecological risks not identified in the screening tool. Not all features are directly affected, but being in proximity, the risks associated with the activity will be investigated further and addressed in the report.

4.2 Bioregional Planning Summary

A screening of Systematic Planning Framework for the region was undertaken (summarised in Table 1), that addresses the following features:

- Critically Endangered and Endangered Ecosystems
- Critical Biodiversity Areas & Ecological Support Areas
- Vulnerable Ecosystems
- River, Estuarine and Wetland Freshwater Ecosystem Priority Areas (FEPAs) and buffers
- Protected Areas (and buffers) and NPAES
- Critical Habitat for Red Listed, Endemic or Protected Species.

Table 1: Summary of Regional Planning Biodiversity features.

FEATURE ¹	DESCRIPTION	IMPLICATIONS/COMMENT
National Environmental Screening Tool (Terrestrial Biodiversity) [refer to Figure 4 to Figure 7]	Very High Terrestrial Biodiversity sensitivity Low Plant species sensitivity Low & Medium Animal Species sensitivity Low Aquatic Sensitivity	CBA 1, ESA 2 & Endangered Ecosystem Animal & Plant species potentially present include only <i>Hydroprogne caspia</i> (animal) and sensitive areas are peripheral to the affected site. River, Wetland & FEPA quinary catchment features are potentially present.
National Vegetation Map (NVM, 2018) & National Biodiversity Assessment (2018) [refer to Figure 8]	Vaal-Vet Sandy Grassland	Endangered
Critically Endangered and Endangered Ecosystems (NBA, 2018) [refer to below]	Vaal-Vet Sandy Grassland	Near natural or natural areas are designated CBA and transformed areas as ESA, indicating significant loss of natural habitat.

¹ Refer to Figure 8 to Figure 12.

FEATURE ¹	DESCRIPTION	IMPLICATIONS/COMMENT
Vulnerable Ecosystems (NBA, 2018) [refer to below]	None	N/A
Free State Conservation Plan (2016) [refer to Figure 9]	Most of site area is designated ESA 2, with a patch of CBA 1 in the north-west corner of the site, most likely associated with possible natural or near natural vegetation.	Development of any designated CBA area (or any natural or near natural vegetation) should be avoided as far as possible due to the elevated status of the vegetation unit. Development of any designated ESA areas should ensure that ecological connectivity within the broader landscape is maintained.
Protected Areas (SAPAD, 2020) [Refer to Figure 10]	None directly affected nor in close proximity.	No protected areas nor any ecological processes associated with them are affected by the proposed development.
NPAES (2018) [Refer to Figure 10]	No National Protected Area Expansion Strategy areas in close proximity.	No NPAES nor any ecological processes associated with them are affected by the proposed development.
Strategic Water Source Areas (SWSA)	Not situated within any designated SWSA	N/A
Freshwater Ecosystem Priority Areas (FEPA's) [refer to Figure 12]	None	N/A
Regional Hotspots & Regions of Endemism	None	N/A
Important Bird Areas (IBA's) [refer to Figure 10]	None	N/A
World Heritage Sites	None	N/A
Key Biodiversity Areas (KBA's) [refer to Figure 10]	The site is not located within or near any Key Biodiversity Areas.	The specific activity is unlikely to have any impact on designated Key Biodiversity Areas or ecological processes associated with such sites.
Marine/Coastal areas	None	N/A
RAMSAR sites	None	N/A
Within 32 m of Watercourses [refer to Figure 12]	The surrounding area does have numerous non-perennial watercourses, and it is possible that infrastructure (as a minimum) may occur within 32 m of such features.	Any crossings of watercourses should be kept to minimum. Aquatic habitat should be excluded from development footprint.
Within 100 m of Rivers [refer to Figure 12]	No perennial rivers are situated within or near the site.	N/A
Within 500 m of Wetlands [refer to Figure 12]	Extensive wetland habitat is associated with the surrounding dams.	No wetland or riparian habitat should be affected, as any such habitat should be excluded from the development footprint.
Estuaries	None	N/A
Forest	None	N/A
Surrounding Land Uses	Mostly agriculture (dryland pastures) and mining.	High levels of disturbance are likely present in the surrounding landscape associated with agriculture and mining, with limited patches of intact or semi-intact vegetation likely remaining.
Critical Habitat for listed endemic/protected species	Several endemic or other protected species are known from the broader area; however, the region is not known to be a biodiversity hotspot. None are flagged for the proposed footprint.	

Project : Harmony Target PV Layout - Vegetation and Status (National)

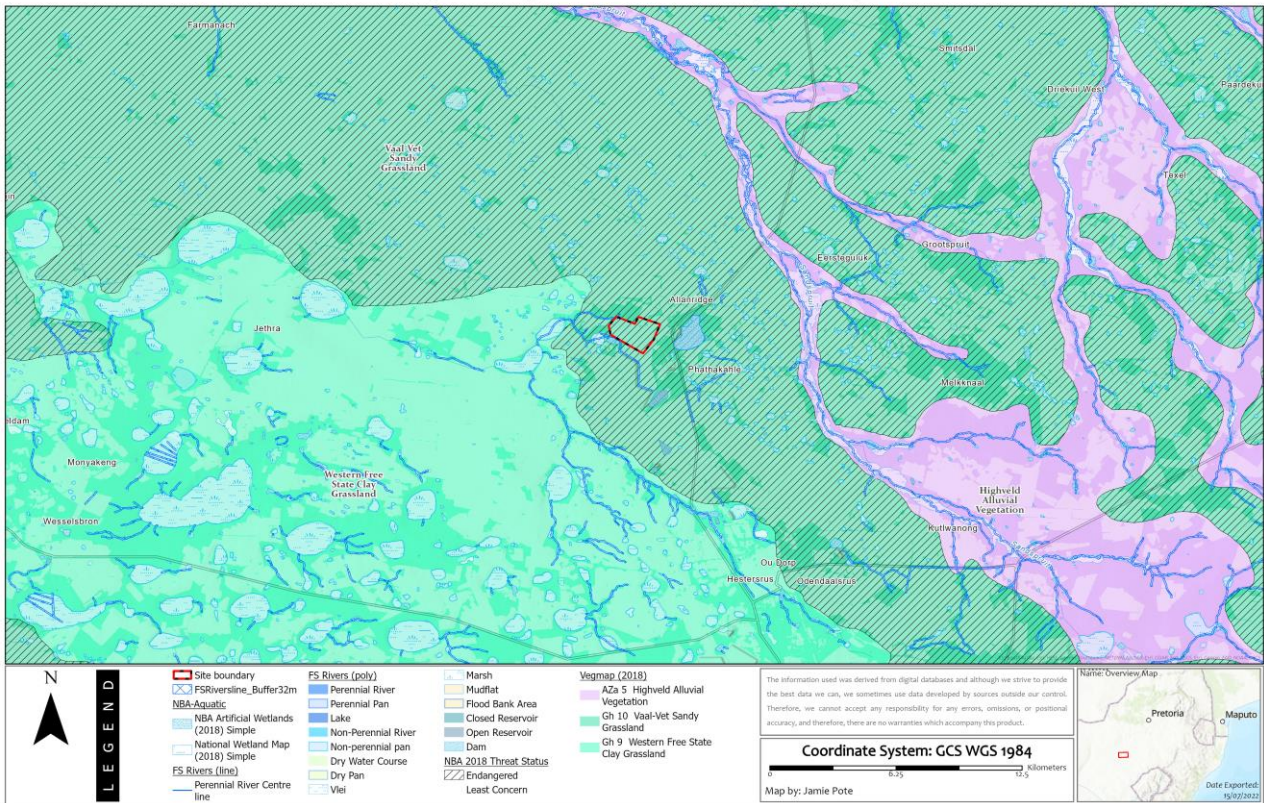


Figure 8: Vegetation Type and NBA Status.

Project : Harmony Target PV Layout - Free State BSP (Terrestrial)

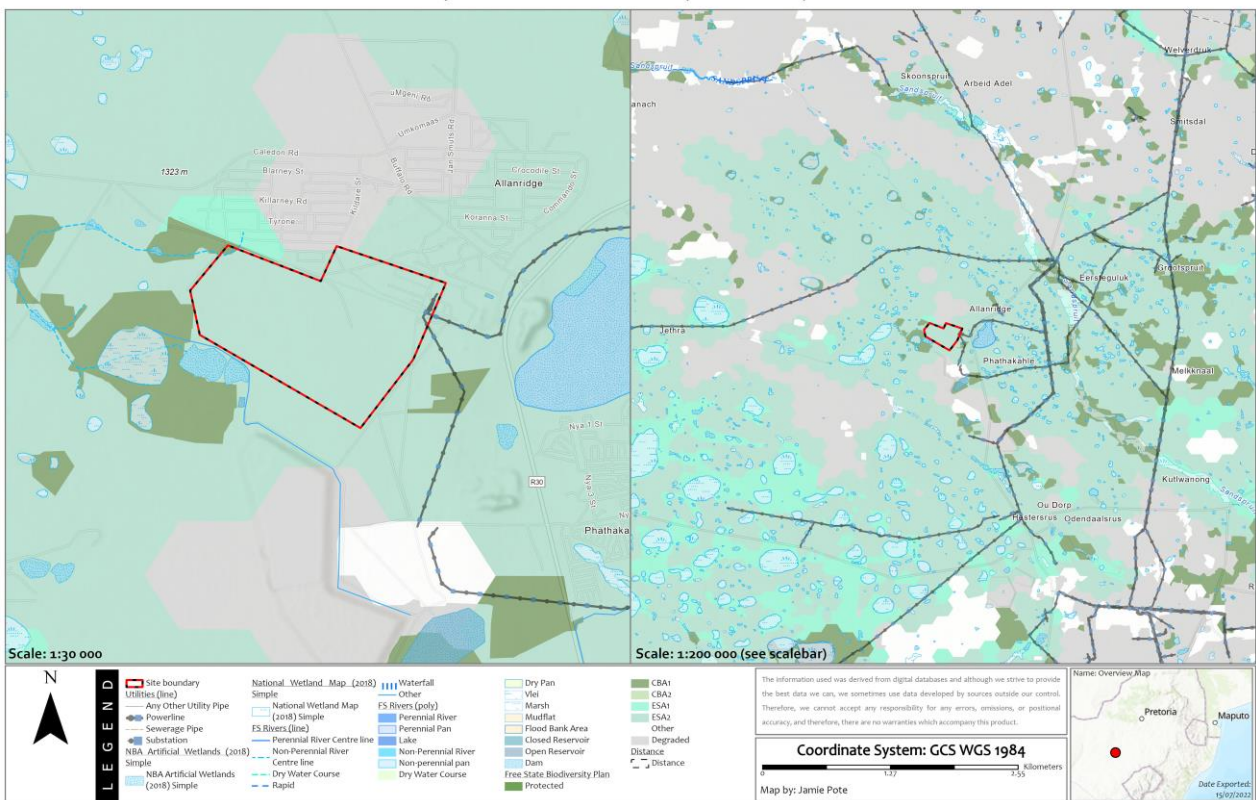


Figure 9: Provincial Regional Biodiversity Planning (Free State Bioregional Plan).

Project : Harmony Target PV Layout - Free State Protected Areas

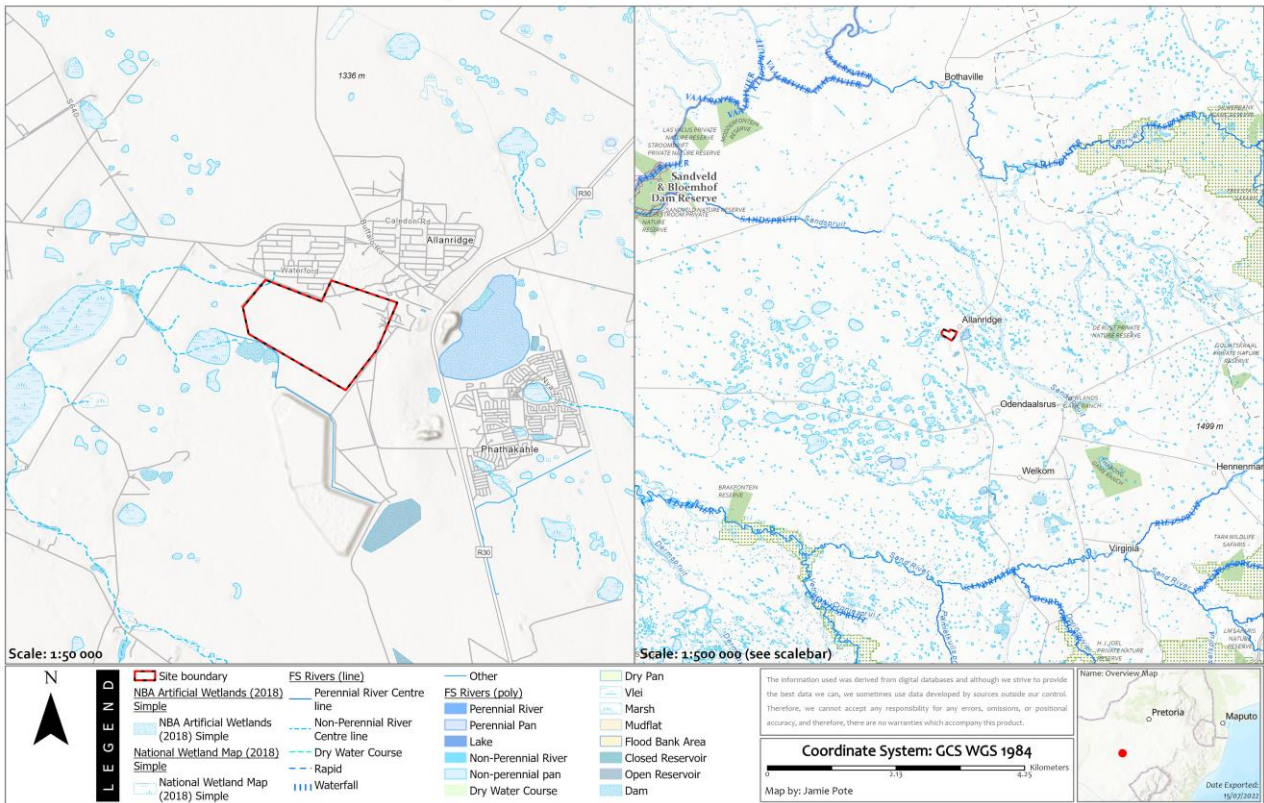


Figure 10: National and Regional Protected Areas, Protected Area Expansion Strategy Areas (N/PAES) and IBA's.

Project : Harmony Target PV Layout - Free State BSP (Aquatic)

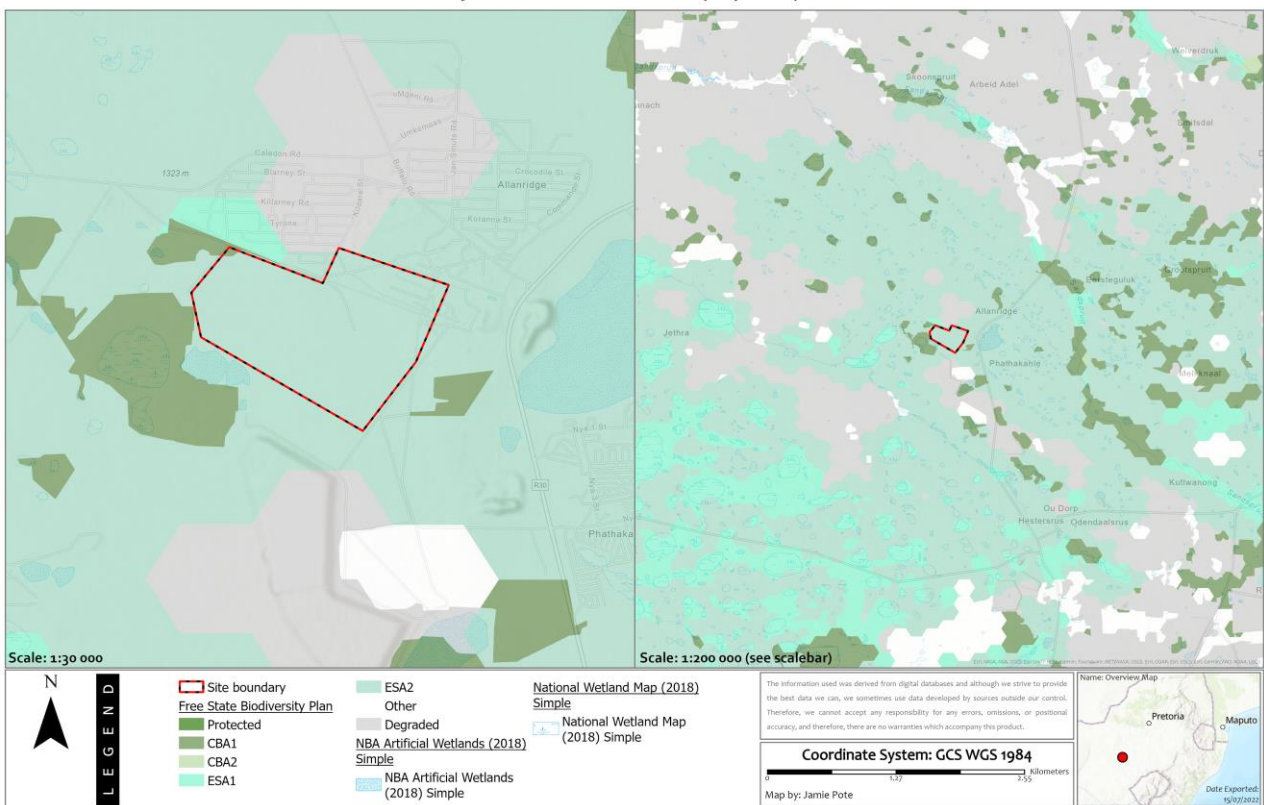


Figure 11: Provincial Regional Biodiversity Planning (Northern Cape and adjacent Western Cape along the southern boundary of Taabos).

Project : Harmony Target PV Layout - Rivers and Wetlands

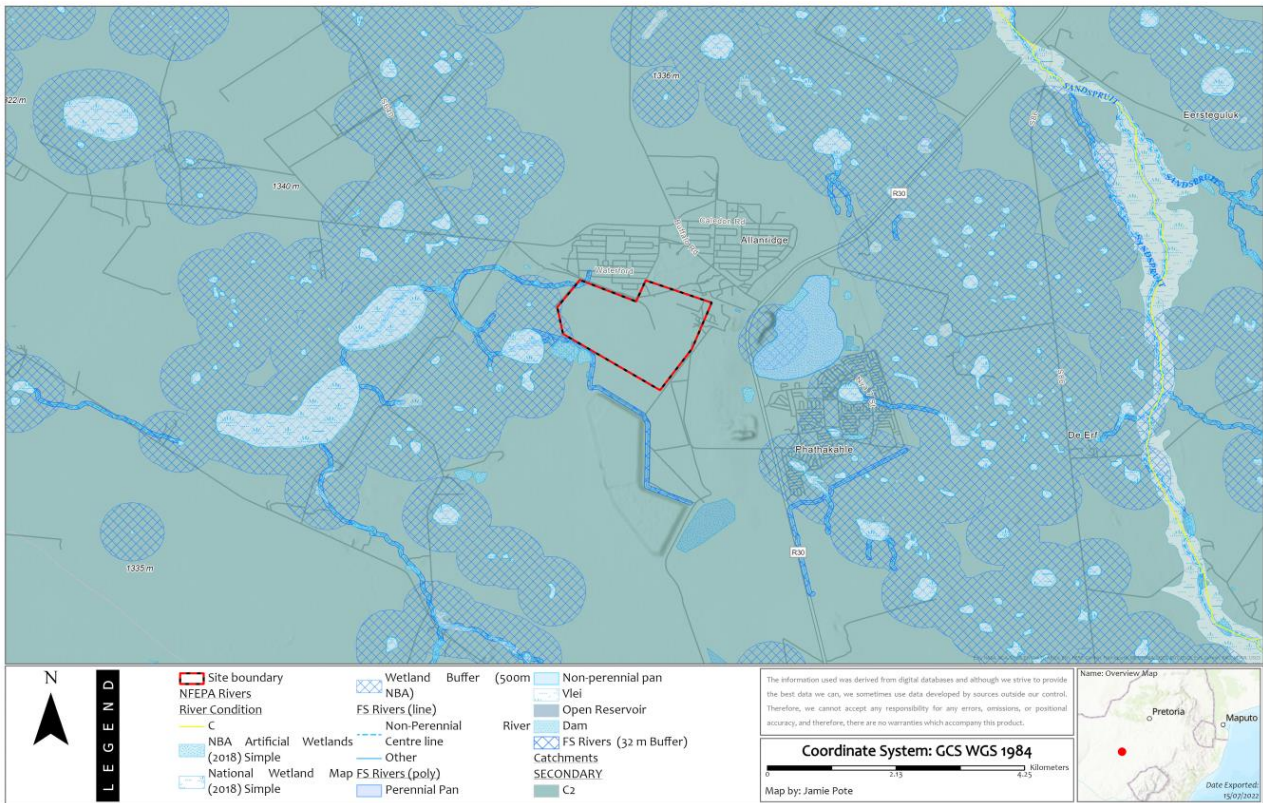


Figure 12: Rivers and Wetlands and Catchments.

5 Vegetation and Status

The National Vegetation Map, as depicted in Figure 8 in the preceding section, designates the project area to have Vaal-Vet Sandy Grassland (NBA, 2019), having an **Endangered** status (NBA, 2019). Much of the vegetation unit is transformed, being prime agricultural land, with remnant patches comprising natural and near natural (sometimes secondary) remaining. Further information and on the communities are provided in the sections below.

5.1 Vaal-Vet Sandy Grassland (Gh 10)

VT 50 Dry Cymbopogon–Themeda Veld (47%), VT 48 Cymbopogon–Themeda Veld (sandy) (24%) (Acocks 1953). LR 37 Dry Sandy Highveld Grassland (74%) (Low & Rebelo 1996).

Distribution North-West and Free State Provinces: South of Lichtenburg and Ventersdorp, stretching southwards to Klerksdorp, Leeudoringstad, Bothaville and to the Brandfort area north of Bloemfontein.

Altitude 1 220–1 560 m, generally 1 260–1 360 m.

Vegetation & Landscape Features Plains-dominated landscape with some scattered, slightly irregular undulating plains and hills. Mainly low-tussock grasslands with an abundant karroid element. Dominance of *Themeda triandra* is an important feature of this vegetation unit. Locally low cover of *T. triandra* and the associated increase in *Elionurus muticus*, *Cymbopogon pospischilii* and *Aristida congesta* is attributed to heavy grazing and/or erratic rainfall.

Geology & Soils Aeolian and colluvial sand overlying sandstone, mudstone and shale of the Karoo Supergroup (mostly the Ecca Group) as well as older Ventersdorp Supergroup andesite and basement gneiss in the north. Soil forms are mostly Avalon, Westleigh and Clovelly. Dominant land type Bd, closely followed by Bc, Ae and Ba.

Climate Warm-temperate, summer-rainfall climate, with overall MAP of 530 mm. High summer temperatures. Severe frost (37 days per year on average) occurs in winter. See also climate diagram for Gh 12 Vaal-Vet Sandy Grassland (Figure 8.23).

GROWTH FORM	DESCRIPTION/SPECIES
Grasses	<i>Antheophora pubescens</i> (d), <i>Aristida congesta</i> (d), <i>Chloris virgata</i> (d), <i>Cymbopogon caesius</i> (d), <i>Cynodon dactylon</i> (d), <i>Digitaria argyrograpta</i> (d), <i>Elionurus muticus</i> (d), <i>Eragrostis chloromelas</i> (d), <i>E. lehmanniana</i> (d), <i>E. plana</i> (d), <i>E. trichophora</i> (d), <i>Heteropogon contortus</i> (d), <i>Panicum gilvum</i> (d), <i>Setaria sphacelata</i> (d), <i>Themeda triandra</i> (d), <i>Tragus berteronianus</i> (d), <i>Brachiaria serrata</i> , <i>Cymbopogon pospischilii</i> , <i>Digitaria eriantha</i> , <i>Eragrostis curvula</i> , <i>E. obtusa</i> , <i>E. superba</i> , <i>Panicum coloratum</i> , <i>Pogonarthria squarrosa</i> , <i>Trichoneura grandiglumis</i> , <i>Triraphis andropogonoides</i>
Herbs	<i>Stachys spathulata</i> (d), <i>Barleria macrostegia</i> , <i>Berkheya onopordifolia</i> var. <i>onopordifolia</i> , <i>Chamaesyce inaequilatera</i> , <i>Geigeria aspera</i> var. <i>aspera</i> , <i>Helichrysum caespitium</i> , <i>Hermannia depressa</i> , <i>Hibiscus pusillus</i> , <i>Monsonia burkeana</i> , <i>Rhynchosia adenodes</i> , <i>Selago densiflora</i> , <i>Vernonia oligocephala</i> .
Low Shrubs	<i>Felicia muricata</i> (d), <i>Pentzia globosa</i> (d), <i>Anthospermum rigidum</i> subsp. <i>pumilum</i> , <i>Helichrysum dregeanum</i> , <i>H. paronychioides</i> , <i>Ziziphus zeyheriana</i> .
Geophytic Herbs	<i>Bulbine narcissifolia</i> , <i>Ledebouria marginata</i> .
Succulent Herbs	<i>Tripteris aghillana</i> var. <i>integrifolia</i> .
Endemic Taxa	<i>Lessertia phillipsiana</i> (herb)

Conservation Endangered. Target 24%. Only 0.3% statutorily conserved in the Bloemhof Dam, Schoonspruit, Sandveld, Faan Meintjies, Wolwespruit and Soetdoring Nature Reserves. More than 63% transformed for cultivation (ploughed for commercial crops) and the rest under strong grazing pressure from cattle and sheep.

Erosion very low (85.3%) and low (11%).

References Louw (1951), Morris (1973, 1976), Bredenkamp & Bezuidenhout (1990), Kooij et al. (1990b, 1992), Bezuidenhout et al. (1994a).

5.2 Species of Conservation Concern

No flora Species of Conservation Concern are flagged in the National Environmental Screening Tool (designated NEST in this report). A single faunal bird species (*Hydroprogne caspia*) is flagged. Which is likely associated with the waterbodies surrounding the site and thus not likely to be directly affected, within the scope of this terrestrial assessment. The assessment will however independently screen for any species including those that may require permits in terms of regional legislation for removal.

5.2.1 Red Listed, Endemic and Protected Fauna

The site falls within the general distribution range of a single faunal species (bird) as indicated in Table 2 below. This species appears to be associated with the surrounding waterbodies and is thus likely to be peripheral to the site or development footprint.

Table 2: Fauna Species of Conservation Concern

SCIENTIFIC NAME	FAMILY	STATUS ²	COMMENT/PRESENCE
BIRDS			
<i>Hydroprogne caspia</i> (Caspian Tern)	Laridae	Least Concern	This species does not meet the criterion for a Vulnerable status, having a large range, increasing and large population. This species has a cosmopolitan but scattered distribution across North America, Europe, Asia, Africa, and Australasia. The habitat is largely confined to the coast, also occurring inland on fresh or saline wetlands, reservoirs and sewage ponds. It is thus most likely associated primarily with the nearby waterbodies and the specific site is unlikely to provide irreplaceable habitat, bearing in mind the baseline elevated levels of disturbance in the surrounding area.

² **NEST** – National Environmental Screening Tool (Very High, High, Medium, Low); **ToPS** – Threatened or Protected Species [NEM:BA]; IUCN: Least Concern (**LC**), Near Threatened (**NT**), Vulnerable (**VU**), Endangered (**EN**), Critically Endangered (**CR**); **CITIES** - Conservation for International Trade in Endangered Species.

5.2.2 Red Listed, Endemic and Protected Flora

None of concern identified in initial screening process. The site visit will physically screen for the presence of any species and any such populations will be assessed as required.

5.3 Preliminary Regional Planning Risk Assessment Mapping

A short description of these risks and issues is provided below, to be read in conjunction with the maps provided:

1. **Critical Biodiversity Area 1 (CBA 1)** – CBA 1 designated areas are those that have been identified as priority areas to be retained in order to meet conservation targets. The land use guidelines for CBA 1 designated areas recommend no further development. The designation may not necessarily be based on the condition of the habitat, species composition, ecological connectivity or overall ecological value since it is largely based on a statistical analysis process, which will be assessed during the assessment phase, based on the proposed layout.
2. **Critical Biodiversity Area 2 (CBA 2)** – As for above, however these areas are deemed to be degraded but deemed priority areas. The land use recommendations for CBA 2 designated areas are broadly speaking restore and maintain to meet conservation targets. None flagged.
3. **Aquatic CBA and/or Freshwater Ecosystem Priority Areas** – None flagged, site visit to confirm presence of any aquatic or riparian habitat.
4. **National Protected Area Expansion Strategy Areas (NPAES)** – No National PAES areas overlay with the site, nor are in vicinity.
5. **Watercourses, Rivers and Wetlands** – None flagged during the desktop phase, site confirmation will be required to verify features which do have characteristics of watercourse and wetlands.
6. **Rocky Dolerite Hills, Ridges and Outcrops** – None present.

6 Terrestrial Biodiversity and Species Risk and Impact Assessment

6.1 Potential Terrestrial Biodiversity Impacts (Direct)

The main impacts likely to result from the proposed activity include the following:

Table 3: Summary of Potential Terrestrial Biodiversity, Plant and Animal Species Impacts.

IMPACT	NATURE OF IMPACT	EXTENT OF IMPACT	NO-GO AREAS
Vegetation	<u>Permanent or temporary loss of indigenous vegetation</u> cover because of site clearing. Site clearing before construction will result in the blanket clearing of vegetation within the affected footprint.	Local/Regional	Near-natural or natural vegetation should be avoided.
Flora Species	<u>Loss of flora Species of Conservation Concern</u> during pre-construction site clearing activities. Several special of concern are known from surrounding areas, which could be destroyed during site preparation.	Local	Site verification required, none likely.
Alien Invasive Species	<u>Susceptibility of post construction disturbed areas to invasion</u> by exotic and alien invasive species and removal of exotic and alien invasive species during construction. Post construction disturbed areas	Local	Site verification required, none anticipated.

IMPACT	NATURE OF IMPACT	EXTENT OF IMPACT	NO-GO AREAS
	having no vegetation cover are often susceptible to invasion by weedy and alien species, which can not only become invasive but also prevent natural flora from becoming established.		
Erosion	<u>Susceptibility of some areas to erosion</u> because of construction related disturbances. Removal of vegetation cover and soil disturbance may result in some areas being susceptible to soil erosion after completion of the activity.	Local	Site verification required.
Ecological Processes	<u>Disturbances to ecological processes:</u> Activity may result in disturbances to ecological processes.	Local/Regional	Ecological connectivity with surrounding landscape to be maintained due to ESA status.
Aquatic and Riparian processes	<u>Aquatic and Riparian processes:</u> Activity may result in disturbances to aquatic ecological processes (including flora and fauna).	Local/Regional	Site verification required. Watercourses and wetlands to be avoided.
Faunal Habitat	<u>Loss of Faunal Habitat:</u> Activity will result in the loss of habitat for faunal species.	Local	Site verification required, none anticipated.
Faunal Processes	Impacts to <u>faunal processes</u> because of the activity	Local/Regional	Site verification required, none anticipated.
Faunal Species	<u>Loss of faunal SCC</u> due to construction activities: Activities associated with bush clearing, killing of perceived dangerous fauna, may lead to increased mortalities among faunal species.	Local	Site verification required, none anticipated.
<p><u>Description of expected significance of impact</u> The proposed development site has a long history of transformation and is surrounded by an urban, mining and agricultural area. The impacts on the terrestrial environment are therefore likely to be minimal. Habitat and species represented in and around such transformed areas are often cosmopolitan generalists with a wide range of habitat types. Due to the elevated status of the vegetation unit, disturbance to remnant natural or near natural pockets of habitat should be avoided or limited to linear activities such as access roads or powerline crossings.</p>			
<p><u>Gaps in knowledge & recommendations for further study</u></p> <ul style="list-style-type: none"> Assessing the condition of habitat represented within the site (or area of influence) and delineation of any no-go areas. Identification and assessment of protected species requiring permits and species of special concern having an elevated conservation status within the site. Mapping potential faunal habitat used in breeding, foraging, roosting, aestivation and hibernation. 			
<p><u>Recommendations with regards to general field surveys</u></p> <ul style="list-style-type: none"> Surveys must include the proposed development site and adjacent surrounding areas with indigenous vegetation and habitats within area of influence. An active search may be required for any protected species and species of concern that have a high probability of occurrence which will be impacted by the proposed activity, but dependant to some extent on the baseline level of degradation and transformation. 			

7 Proposed Methodology

The proposed **Harmony Target PV** footprint (to be provided) will be assessed. The purpose of the specialist study is to assess the impacts of the proposed activity in line with the authorities' requirements for Terrestrial Biodiversity Assessment and Plant Species Assessment for the proposals and, as a minimum will include the following:

1. A comprehensive desktop study and identify potential risks for a vegetation and flora assessment report relating to of the site and immediate surrounding area. This will include the relevant Regional Planning frameworks and review of previous studies.
2. A single site visit to assess the following:
 - a. Verification of findings of previous specialists.
 - b. Broad level Field survey of vegetation, flora and habitats present (including any riparian vegetation or wetland vegetation).
 - c. Verify and update species list, identifying, highlighting and locating *flora* species that are of Conservation Concern, Threatened, Red Data species and species requiring permits for destruction/relocation in terms of NEMBA and any respective Provincial Ordinances. Mapping of any populations of such species observed during the site visit.
 - d. Mapping of the various habitat units and assessment of habitat integrity, ecological sensitivity, levels of degradation and transformation, alien invasion and flora species of special concern, the outcome being a detailed sensitivity map ranked into high, medium or low classes.
 - e. The proposed fee includes a single site visit only but depending on when the initial site visit is undertaken, additional follow-up visits in different seasons may be required, in order to meet the species assessment protocol requirements.
3. Detailed reporting will be comprised of a *Draft Terrestrial Biodiversity Assessment Report* (for public review and comment) and a *Final Terrestrial Biodiversity Assessment Report* for submission. The draft and final detailed reports will address the following (as per the gazetted Terrestrial Biodiversity Assessment Protocol):
 - a. Indicate any assumptions made and gaps in available information. Assessment of all the vegetation types and habitat units within the relevant Regional Planning Frameworks.
 - b. A detailed flora species list highlighting the various species of special concern categories (endemic, threatened, Red Data species and other protected species requiring permits for destruction/relocation and invasive/exotic weeds). Clearly indicate the need for any further permitting/licensing or detailed studies to specification of animal and plant species protocols.
 - c. Faunal assessment will be compromised of a general fauna desktop assessment, as well as specific taxa specialist assessments, which would include on-site assessments as required and camera trapping. It is not anticipated that any methods requiring fauna capture will be followed.
 - d. Description and assessment of the habitat units and site sensitivities ranked into high, medium or low classes based on sensitivity and conservation importance. A standard methodology has been developed based on other projects in the specific area.
 - e. A habitat sensitivity map will be compiled, indicting the sensitivities as described above, inclusive of a riparian delineation for the aquatic report.
 - f. A map indicating buffers to accommodate Regional Planning requirements (if required).
 - g. Assessment of Impacts and Mitigation Measure, as well as specific measure that may be required for alternative development plans.
 - h. A comprehensive EMPr for inclusion in the reports and EMP with specific management actions for construction and Operation.
 - i. Address any comments raised by IAP's or identified in the project in the final draft and final report.

8 Stakeholder Engagement

Note possible Stakeholders relating to Biodiversity could include the following key groups:

- Neighbouring Property Owners
- Local Regional and National Conservation Authorities as well as any local faunal conservation bodies or working groups.

No Stakeholder Engagement will be conducted specifically by the Specialist. Stakeholder Engagement will be undertaken by the EAP as part of the environment application public participatory process. Any comments raised relating to Biodiversity will be addressed by the specialist in the final report. During the site visit, some consultation with landowners and local residents during the site visit may be undertaken informally relating to Biodiversity aspects, depending on need and availability of such persons, and if applicable.

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