Compliance Statement
Aquatic Biodiversity Theme

Midas Battery Energy Storage System

Prepared by:

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Project Title	**Midas Battery Energy Storage System**	
Report Name	Compliance Statement	
Specialist Theme	Aquatic Biodiversity Theme	
Project Reference	Midas BESS SSVr	
Date	11 July 2024	
Fieldwork	Divan van Rooyen (SACNASP 157927)	
Report Writer	Andrew Husted (SACNASP 400213/11)	
Reviewer	Rian Pienaar (SACNASP 135544)	
Declaration	The Biodiversity Company and its associates operate as independent consultants under the auspice of the South African Council for Natural Scientific Professions. We declare that we have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, Amended. We have no conflicting interests in the undertaking of this activity and have no interests in secondary developments resulting from the authorisation of this project. We have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time and budget) based on the principals of science.	

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1 Introduction

Midas BESS (Pty) Ltd ('the Applicant') is proposing the construction of the Midas Battery Energy Storage (BESS) Facility, located on Portion 10 of the Farm Uitval No. 280, approximately 18 km east of Carletonville in the Gauteng Province. The Applicant is also proposing to utilise the existing public road on Portion 8 and Portion 10 of the Farm Uitval No. 280 to access the site (Figure 1-1).

The Biodiversity Company was appointed to undertake an aquatic biodiversity assessment for the proposed Midas BESS project. This development area is referred to as the Project Area of Influence (PAOI), comprising the BESS.

This assessment was conducted in accordance with the amendments to the Environmental Impact Assessment Regulations. 2014 (GNR 326, 7 April 2017) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). The approach has taken cognisance of the recently published Government Notices (GN) 320 (20 March 2020): "*Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation*" (Reporting Criteria). The National Web based Environmental Screening Tool has characterised the aquatic biodiversity theme sensitivity of the project area as "Very High".

The purpose of conducting the specialist study is to provide relevant input into the overall Environmental Authorisation application process, with a focus on the proposed project activities and their associated impacts. This report, after taking into consideration the findings and recommendations provided by the specialist herein, should inform and guide the Registered Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision making as to the ecological viability of the proposed project.

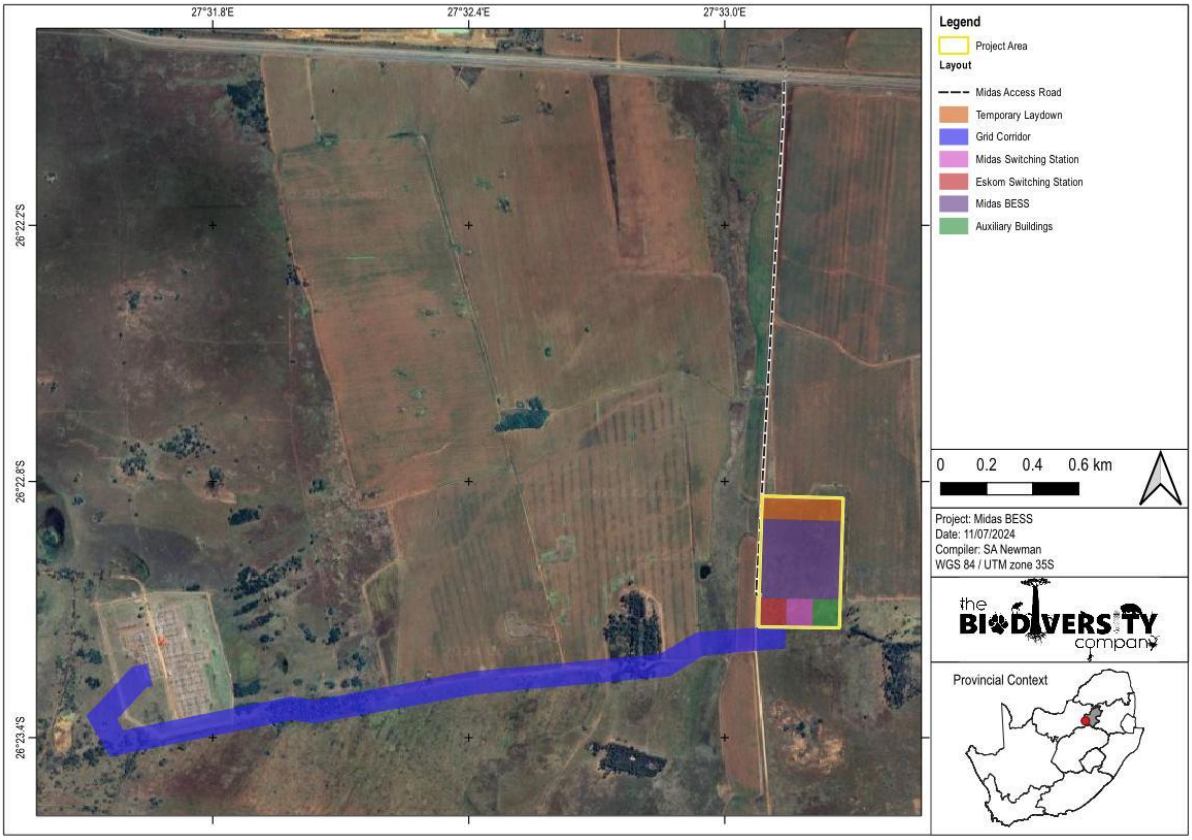


Figure 1-1 The site development plan

1.1 Legal Framework

This report is compiled in consideration of the exclusion Norm Gazetted on 27 March 2024 (no. 4557). The adoption of the Norm is for the exclusion of identified activities associated with the development and expansion of battery storage facilities in areas of low or medium environmental sensitivity from the requirement to obtain an Environmental Authorization (EA).

This Norm, entitled "Norm for the Exclusion of Identified Activities Associated with the Development and Expansion of Battery Storage Facilities in Areas of Low or Medium Environmental Sensitivity", has been prepared to provide rules under which activities associated with the development and expansion of battery storage facilities identified in terms of section 24(2)(a) and {b) of the National Environmental Management Act, 1998 {Act No, 107 of 1998) and contained in the Environmental Impact Assessment Regulations Listing Notice 1, 2 or 3 of 2014, promulgated under section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), are excluded from the requirement to obtain an environmental authorisation prior to commencement, while meeting the objectives of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

The site sensitivity verification must be undertaken:

- For the footprint on which the proposed activities are proposed to take place and the corridor;
- By specialists, registered in the field for which they are undertaking the site sensitivity verification and where relevant, with demonstrated experience in the taxonomic group of the species being considered;
- Within the season which would be most relevant to identify the specific species or vegetation of interest; and
- For a period of time as necessitated by the sensitivity of the proposed site and size of the proposed facility.

1.2 Project Description

Midas BESS (Pty) Ltd (‘the Applicant’) is proposing the construction of the Midas Battery Energy Storage (BESS) Facility, located on Portion 10 of the Farm Uitval No. 280, approximately 18 km east of Carletonville in the Gauteng Province. The Applicant is also proposing to utilise the existing public road on Portion 8 and Portion 10 of the Farm Uitval No. 280 to access the site.

The Midas BESS facility will have a total development footprint of up to approximately 15 ha and will have a maximum export capacity of 77 MW. The development area is situated within the Merafong City Local Municipality and the Rand West City Local Municipality. The site is accessible via existing gravel roads from the R501 and N12.

The proposed Midas BESS will cover approximately 15 ha and will include the following infrastructure:

- Solid State Battery Energy Storage System (BESS) (up to 10 ha);
- Inverters and transformers;
- Site and internal access roads (up to 8m wide);
- Operation and Maintenance buildings including a gate house and security building, control centre, offices, warehouses and workshops for storage and maintenance (up to 1 ha);
- Laydown areas (3 ha temporary and 1 ha permanent);

- A 132 kV facility substation (up to 1 ha); and
- 33 kV cabling between the project components and the facility substation.

1.3 Scope of Work

In accordance with the procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of Sections 24(5)(a) and (h) and 44 of the NEMA, 1998, when applying for environmental authorisation the current use of the land and the environmental sensitivity of the site under consideration as identified by the national web-based environmental screening tool, must be confirmed by undertaking a site sensitivity verification.

The outcome of this site sensitivity verification is to:

- Confirm or dispute the current use of the land and the environmental sensitivity as identified by the screening tool; and
- Motivate and provide evidence of either the verified or different use of the land and environmental sensitivity of the site.

1.4 Assumptions and Limitations

The following limitations should be noted for the assessment:

- The assessment area was based on the spatial file provided by the client, which considered a larger area. The findings herein are based on the latest/final layout provided;
- The seasonality of the site survey is not considered to be a limiting factor for this project;
- The GPS used for delineations is accurate to within five meters. Therefore, the delineation plotted digitally may be offset by at least five meters to either side; and
- It is noted that the aquatic theme sensitivity for the area is “Very High”. The sensitivity was confirmed to be “Low” for the project and this only warrants a compliance statement to be submitted.

2 Receiving Environment

2.1 South African Inventory of Inland Aquatic Ecosystems

The South African Inventory of Inland Aquatic Ecosystems (SAIIAE) wetland dataset is a recent outcome of the National Biodiversity Assessment (NBA, 2018) and, was a collaborative project by the South African National Biodiversity Institute (SANBI) and the Council for Scientific and Industrial Research (CSIR). The SAIIAE dataset provides further insight into wetland occurrences and extents building on the information from the NFEPA, as well as other datasets. No systems are located within the PAOI.

2.2 National Freshwater Ecosystem Priority Areas

The National Freshwater Ecosystem Priority Areas (NFEPA) database forms part of a comprehensive approach to the sustainable and equitable development of South Africa’s scarce water resources. This database provides guidance on how many rivers, wetlands and estuaries, and which ones, should remain in a natural or near-natural condition to support the water resource protection goals of the National Water Act (Act 36 of 1998) (NWA). This directly applies to the NWA, which feeds into Catchment Management Strategies, water resource classification, reserve determination, and the setting and monitoring of resource quality objectives (Nel *et al.,* 2011). The NFEPAs are intended to be

conservation support tools and envisioned to guide the effective implementation of measures to achieve the biodiversity goals of the National Environment Management Biodiversity Act (NEM:BA) (Act 10 of 2004), informing both the listing of threatened freshwater ecosystems and the process of bioregional planning provided for by this Act (Nel *et al*., 2011). Figure 2-1 presents the location of a seep wetland proximal to the project infrastructure. This seep was confirmed to not be present for the PAOI.

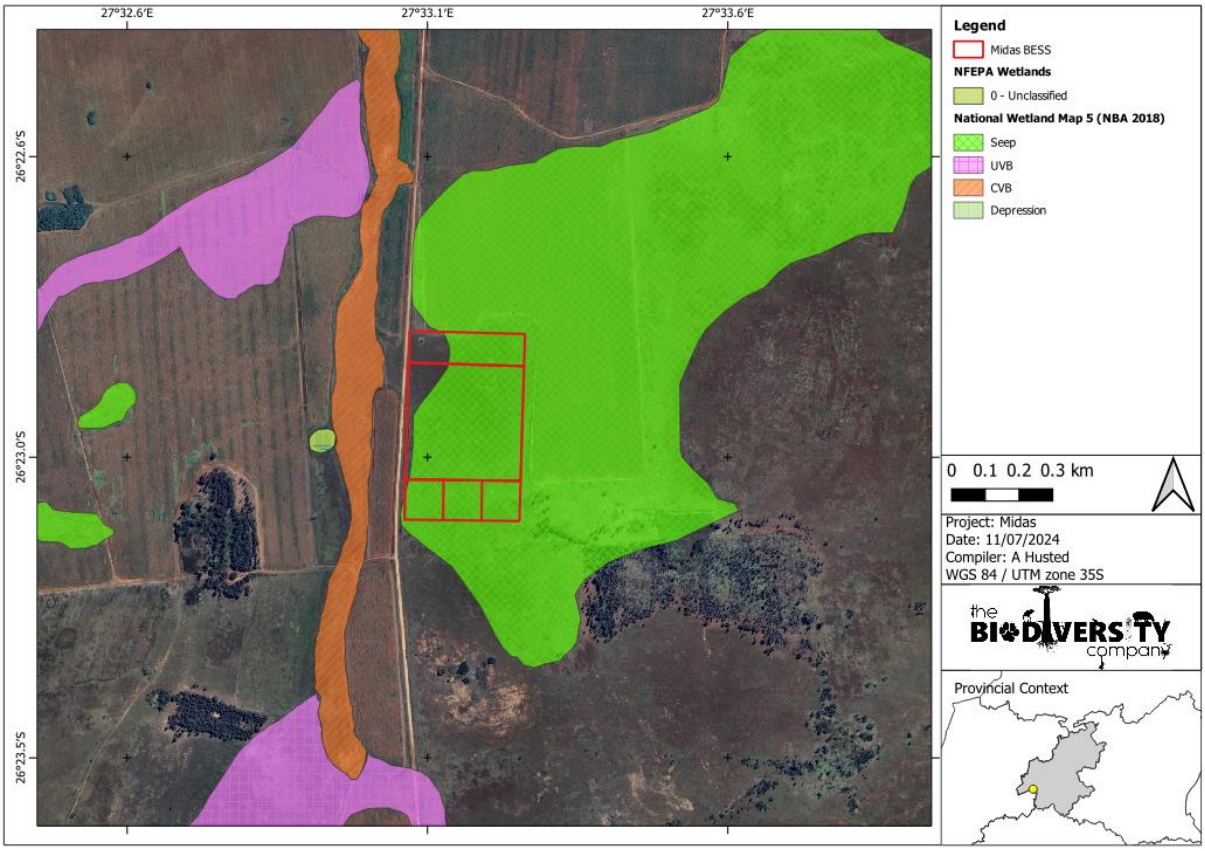


Figure 2-1 NFEPA & NWM5 systems identified proximal to the PAOI

3 Results & Discussion

3.1 Survey Sites

A field survey for the area was undertaken on the 6th of June 2024, and again on 10 July 2024, which is a dry-season survey, to determine the presence of surface aquatic features (wetlands). This was deemed sufficient for the proposed development. The larger project area was also surveyed in February 2024.

The following sections discuss the results from the field survey that was conducted for the proposed project. Figure 3-1 presents the specialist tracks and selected sampling sites.

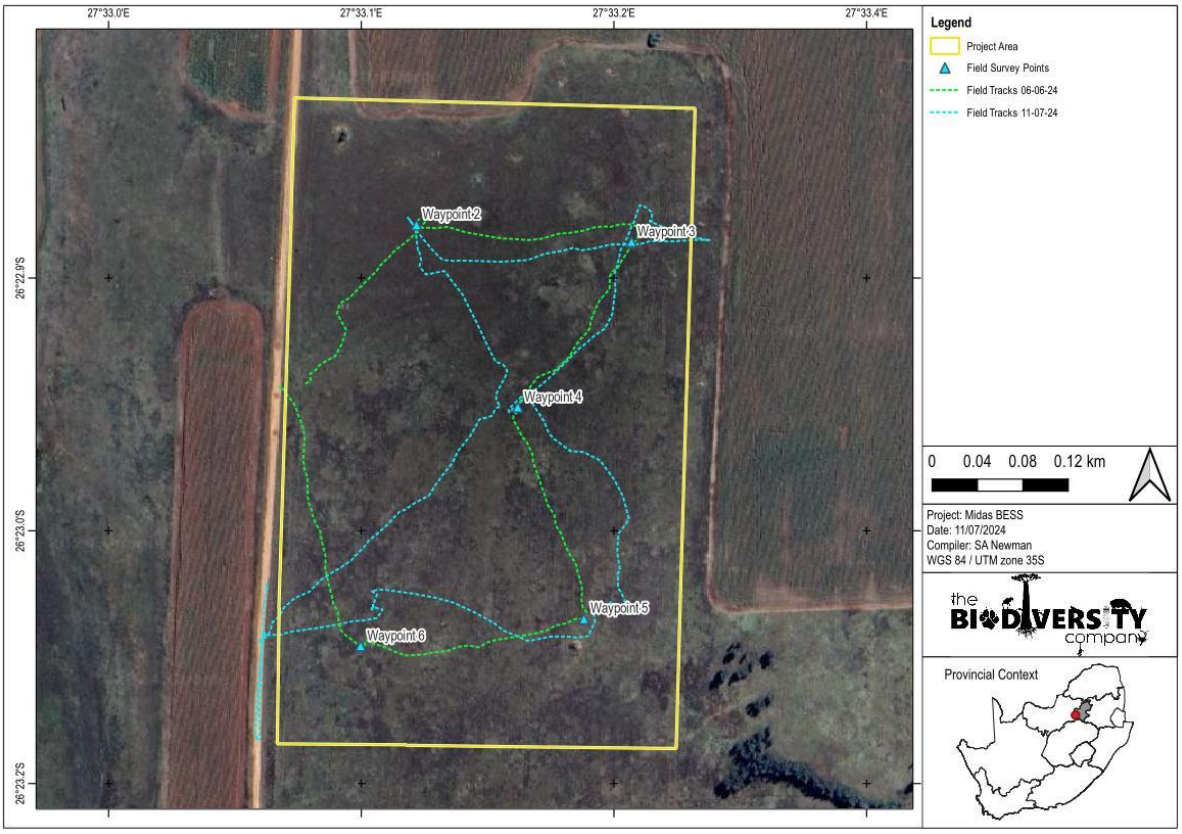


Figure 3-1 Field survey coverage and sample sites

Table 3-1 Sensitivity summary of the survey points within the development footprint

Survey Point	Habitat	Photograph
Site GPS Reference: Waypoint 2 Date: 06/06/2024 GPS Coordinates: 26°22'53.69"S 27°33'8.78"E	**Disturbed Grassland** Carletonville Dolomite Grassland habitat that has experienced some anthropogenic disturbance attributed to the edge effects associated with the adjacent agricultural activities. No flora or fauna SCC were recorded, and none are expected.	
Site GPS Reference: Waypoint 3 Date: 06/06/2024 GPS Coordinates: 26°22'54.24"S 27°33'15.08"E	**Disturbed Grassland** Carletonville Dolomite Grassland habitat that has experienced some anthropogenic disturbance attributed to the edge effects associated with the adjacent agricultural activities. No flora or fauna SCC were recorded, and none are expected.	
Site GPS Reference: Waypoint 4 Date: 06/06/2024 GPS Coordinates: 26°22'58.88"S 27°33'11.66"E	**Disturbed Grassland** Carletonville Dolomite Grassland habitat that has experienced some anthropogenic disturbance attributed to the edge effects associated with the adjacent agricultural activities. No flora or fauna SCC were recorded, and none are expected.	

Survey Point	Habitat	Photograph
Site GPS Reference: Waypoint 5 Date: 06/06/2024 GPS Coordinates: 26°23'4.92"S 27°33'13.55"E	**Disturbed Grassland** Carletonville Dolomite Grassland habitat that has experienced some anthropogenic disturbance attributed to the edge effects associated with the adjacent agricultural activities. No flora or fauna SCC were recorded, and none are expected.	
Site GPS Reference: Waypoint 6 Date: 06/06/2024 GPS Coordinates: 26°23'5.69"S 27°33'7.19"E	**Disturbed Grassland** Carletonville Dolomite Grassland habitat that has experienced some anthropogenic disturbance attributed to the edge effects associated with the adjacent agricultural activities. No flora or fauna SCC were recorded, and none are expected.	

3.2 Survey Results

No watercourses were identified and delineated within the development footprint. The absence of water resources within the PAOI has been confirmed (Figure 3-2). A valley bottom wetland and dam were identified and delineated approximately 60 m west of the PAOI.

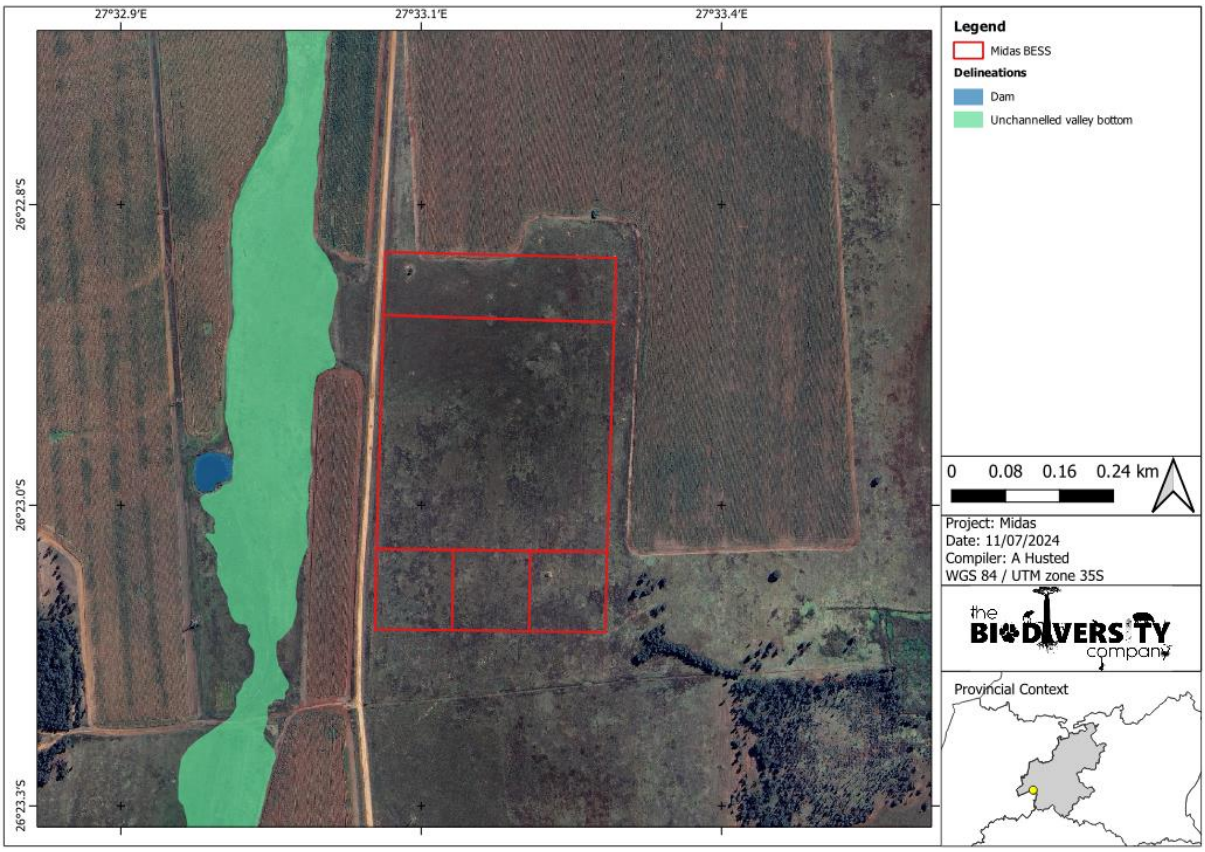


Figure 3-2 Identified systems in relation to the proposed development

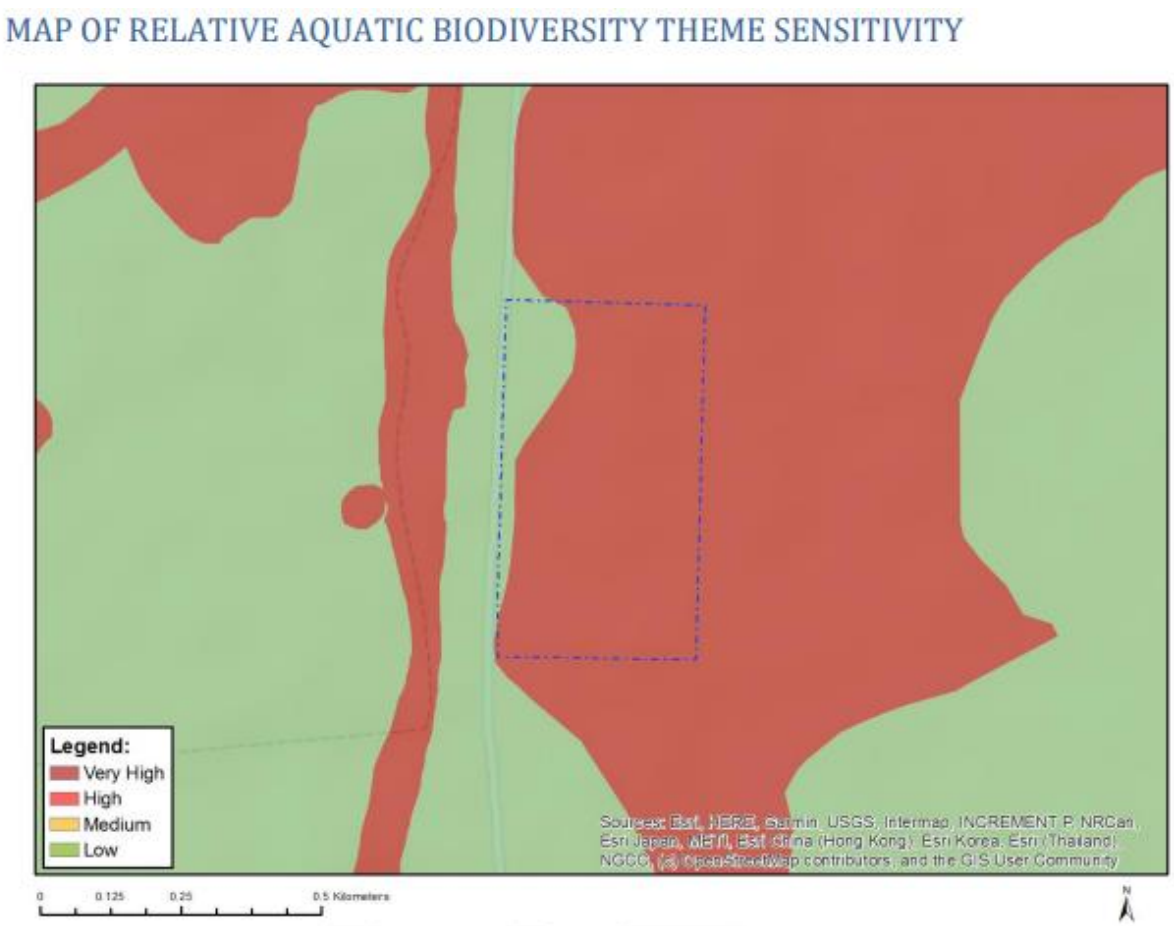
3.2.1 Buffer Requirements

No buffer stipulations are required for the development.

3.2.2 Desktop Ecological Senstivity

The following is deduced from the National Web-based Environmental Screening Tool Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended):

- Aquatic Biodiversity Theme Sensitivity is Very High for the proposed development area (Figure 3-3).



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Wetlands_Dry Highveld Grassland Bioregion (Seep)

Figure 3-3 Aquatic Biodiversity Theme Sensitivity

3.2.3 Screening Tool Comparison

The allocated sensitivities for each of the relevant themes are either disputed or validated for the assessed areas in Table 3-2 below. A summative explanation for each result is provided as relevant. The specialist-assigned sensitivity ratings are based largely on the level of modification of the identified features and their expected resilience to impact. The overall aquatic biodiversity theme sensitivity was determined to be low (Figure 3-4).

Table 3-2 Summary of the screening tool vs specialist assigned sensitivities

Project Component	Screening Tool Theme	Screening Tool	Specialist Finding	Tool Validated or Disputed by Specialist - Reasoning
BESS	Aquatic Theme	**Very High**	**Low**	Disputed – No natural surface water resources were identified within the proposed BESS development areas. The 'suggested' seep wetland (NWM5) area is not present.

Figure 3-4 The aquatic biodiversity theme sensitivity

4 Impact Assessment

A formal impact assessment is not required due to the avoidance of notable impacts, direct and indirect to wetland systems. It has been assumed for the purposes of this assessment that substation, access roads and other project components will avoid direct impacts to natural wetland systems. A cumulative impact assessment has been completed for the proposed project.

4.1 Cumulative Impact

The quantitative impact of the proposed project in isolation on aquatic biodiversity is anticipated to be "Low" due to the avoidance of natural systems (Table 4-1). The cumulative impact of the proposed project on aquatic biodiversity is also anticipated to be "Low", due to the avoidance of natural systems.

Table 4-1 Cumulative Impacts to avifauna associated with the proposed project

Status	Cumulative Effect	Impact Significance	Impact Rating	Can impact be mitigated?	Is the impact acceptable ?
Impact in isolation	1	10	Low (6-28)	Yes	Yes
Cumulative impact	1	12	Low (6-28)		

5 Conclusion

A field survey for the area was undertaken on the 6th of June 2024, and again on 10 July 2024, which is a dry-season survey, to determine the presence of surface aquatic features (wetlands). This was deemed sufficient for the proposed development. Seasonality is not considered to be a limitation for the project. The larger project area was also surveyed in February 2024.

No watercourses were identified and delineated within the development footprint. The absence of water resources within the PAOI has been confirmed.

5.1 Ecological Sensitivity

The overall aquatic biodiversity sensitivity was confirmed to be “Low”.

Project Component	Screening Tool Theme	Screening Tool	Specialist Finding	Tool Validated or Disputed by Specialist - Reasoning
BESS	Aquatic Theme	**Very High**	**Low**	Disputed – No natural surface water resources were identified within the proposed BESS development areas. The ‘suggested’ seep wetland (NWM5) area is not present.

6 References

Department of Water Affairs and Forestry (DWAF). 2005a. A Practical Field Procedure for Identification and Delineation of Wetlands and Riparian Areas.

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Ollis DJ, Snaddon CD, Job NM, and Mbona N. 2013. Classification System for Wetlands and other Aquatic Ecosystems in South Africa. User Manual: Inland Systems. SANBI Biodiversity Series 22. South African Biodiversity Institute, Pretoria.

SANBI. 2009. Further Development of a Proposed National Wetland Classification System for South Africa. Primary Project Report. Prepared by the Freshwater Consulting Group (FCG) for the South African National Biodiversity Institute (SANBI).

7 Appendix Items

7.1 Appendix A – Specialist Declaration of Independence

I, Andrew Husted, declare that:

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. “the Protocols”) and in Government Notice No. 1150 of 30 October 2020.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing –
    - any decision to be taken with respect to the application by the competent authority; and;
    - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence and is punishable in terms of the NEMA Act.

Andrew Husted

Freshwater Ecologist

The Biodiversity Company

July 2024

7.2 Appendix B – Specialist CV

Andrew Husted

M.Sc Aquatic Health (*Pr Sci Nat*)

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Email: andrew@thebiodiversitycompany.com
Identity Number: 7904195054081
Date of birth: 19 April 1979

Profile Summary

Working experience throughout South Africa, West and Central Africa and also Armenia & Serbia.

Specialist experience in exploration, mining, engineering, hydropower, private sector and renewable energy.

Experience with project management for national and international multi-disciplinary projects.

Specialist guidance, support and facilitation for the compliance with legislative processes, for in-country requirements, and international lenders.

Specialist expertise include Instream Flow and Ecological Water Requirements, Freshwater Ecology, Terrestrial Ecology and also Ecosystem Services.

Areas of Interest

Sustainability and Conservation.

Instream Flow and Ecological Water Requirements.

Publication of scientific journals and articles.

Key Experience

- World Bank, Equator Principles and the International Finance Corporation requirements
- Environmental, Social and Health Impact Assessments (ESHIA)
- Environmental Management Programmes (EMP)
- Ecological Water Requirement determination experience
- Wetland delineations and ecological assessments
- Rehabilitation Plans and Monitoring
- Fish population structure assessments
- The use of macroinvertebrates to determine water quality.
- Aquatic Ecological Assessments
- Aquaculture

Country Experience

Angola, Botswana, Cameroon

Democratic Republic of Congo

Ghana, Ivory Coast, Lesotho

Liberia, Mali, Mauritius, Mozambique

Nigeria, Republic of Armenia,

Senegal, Serbia, Sierra Leone, South Africa

Tanzania

Nationality

South African

Languages

English – Proficient

Afrikaans – Conversational

German - Basic

Qualifications

- MSc (University of Johannesburg) – Aquatic Health.
- BSc Honours (Rand Afrikaans University) – Aquatic Health
- BSc Natural Science
- Pr Sci Nat (400213/11)
- Certificate of Competence: Mondi Wetland Assessments
- Certificate of Competence: Wetland WET-Management
- SASS 5 (Expired) – Department of Water Affairs and Forestry for the River Health Programme
- EcoStatus application for rivers and streams

7.3 Appendix C – Methodology

7.3.1 Ecological Classification and Description

The National Wetland Classification Systems (NWCS) developed by the South African National Biodiversity Institute (SANBI) will be considered for this study. This system comprises a hierarchical classification process of defining a wetland based on the principles of the hydrogeomorphic (HGM) approach at higher levels, and then also includes structural features at the lower levels of classification (Ollis *et al.,* 2013).

7.3.2 Wetland Systems

7.3.2.1 Identification and Mapping

The wetland areas were delineated in accordance with the DWAF (2005) guidelines, a cross section is presented in Figure 7-1. The outer edges of the wetland areas were identified by considering the following four specific indicators:

- The Terrain Unit Indicator helps to identify those parts of the landscape where wetlands are more likely to occur;
- The Soil Form Indicator identifies the soil forms, as defined by the Soil Classification Working Group (1991), which are associated with prolonged and frequent saturation.
    - The soil forms (types of soil) found in the landscape were identified using the South African soil classification system namely; Soil Classification: A Taxonomic System for South Africa (Soil Classification Working Group, 1991);
- The Soil Wetness Indicator identifies the morphological "signatures" developed in the soil profile because of prolonged and frequent saturation; and
- The Vegetation Indicator identifies hydrophilic vegetation associated with frequently saturated soils.

Vegetation is used as the primary wetland indicator. However, in practice the soil wetness indicator tends to be the most important, and the other three indicators are used in a confirmatory role.

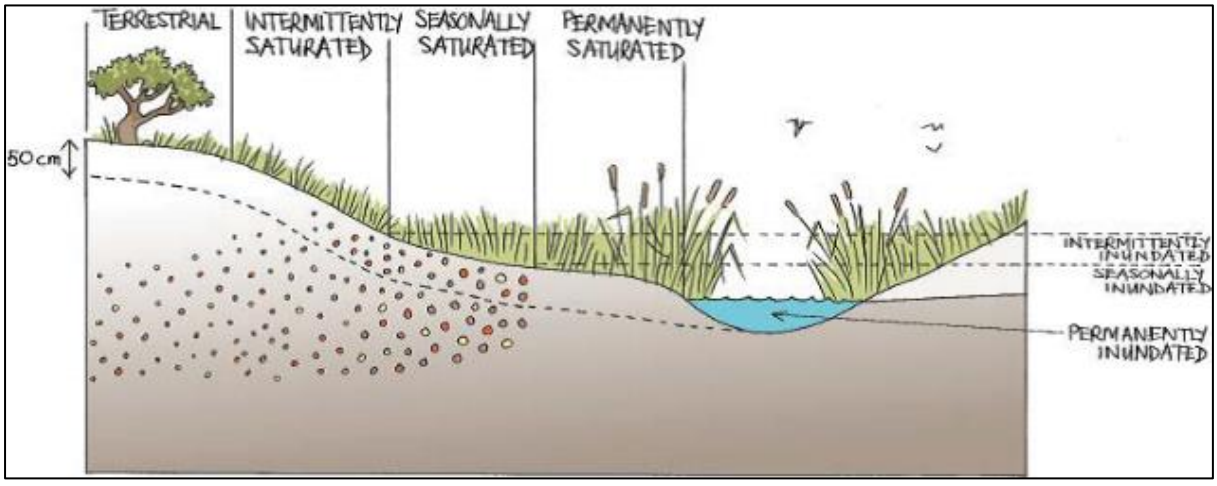

Figure 7-1 Cross section through a wetland, indicating how the soil wetness and vegetation indicators change (Ollis et al. 2013)

7.3.3 Functional Assessment

Wetland Functionality refers to the ability of wetlands to provide healthy conditions for the wide variety of organisms found in wetlands as well as humans. Eco Services serves as the main factor contributing to wetland functionality.

The assessment of the ecosystem services supplied by the identified wetlands was conducted per the guidelines as described in WET-EcoServices (Kotze *et al*. 2008). An assessment was undertaken that examines and rates the following services according to their degree of importance and the degree to which the services are provided (Table 7-1).

Table 7-1 Classes for determining the likely extent to which a benefit is being supplied

Score	Rating of likely extent to which a benefit is being supplied
< 0.5	Low
0.6 - 1.2	Moderately Low
1.3 - 2.0	Intermediate
2.1 - 3.0	Moderately High
> 3.0	High

7.3.4 Present Ecological Status

The overall approach is to quantify the impacts of human activity or clearly visible impacts on wetland health, and then to convert the impact scores to a Present Ecological Status (PES) score. This takes the form of assessing the spatial extent of impact of individual activities/occurrences and then separately assessing the intensity of impact of each activity in the affected area. The extent and intensity are then combined to determine an overall magnitude of impact. The Present State categories are provided in Table 7-2.

Table 7-2 The Present Ecological Status categories (Macfarlane, et al., 2008)

Impact Category	Description	Impact Score Range	PES
None	Unmodified, natural	0 to 0.9	A
Small	Largely Natural with few modifications. A slight change in ecosystem processes is discernible and a small loss of natural habitats and biota may have taken place.	1.0 to 1.9	B
Moderate	Moderately Modified. A moderate change in ecosystem processes and loss of natural habitats has taken place, but the natural habitat remains predominantly intact.	2.0 to 3.9	C
Large	Largely Modified. A large change in ecosystem processes and loss of natural habitat and biota has occurred.	4.0 to 5.9	D
Serious	Seriously Modified. The change in ecosystem processes and loss of natural habitat and biota is great, but some remaining natural habitat features are still recognizable.	6.0 to 7.9	E
Critical	Critical Modification. The modifications have reached a critical level and the ecosystem processes have been modified completely with an almost complete loss of natural habitat and biota.	8.0 to 10	F

7.3.5 Importance and Sensitivity

The importance and sensitivity of water resources is determined to establish resources that provide higher than average ecosystem services, biodiversity support functions or are particularly sensitive to impacts. The mean of the determinants is used to assign the Importance and Sensitivity (IS) category as listed in Table 7-3.

Table 7-3 Description of Importance and Sensitivity categories

IS Category	Range of Mean	Recommended Ecological Management Class
Very High	3.1 to 4.0	**A**

High	2.1 to 3.0	**B**
Moderate	1.1 to 2.0	**C**
Low Marginal	< 1.0	**D**

7.3.6 Recommended Ecological Category and Recommended Management Objective

The Recommended Ecological Category (REC) and Recommended Management Objective (RMO) (Table 7-4) was determined based on the results obtained from the PES and EIS of the assessed wetlands, with the objective of recommending how a water resource should be managed. This is achieved by either maintaining or improving the ecological integrity of the wetland in order to ensure continued ecological functionality (DWA, 1999).

Table 7-4 Recommended Ecological Category and Recommended Management Objectives for water resources based on Present Ecological State and Ecological Importance and Sensitivity scores

		Ecological Importance and Sensitivity			
		Very High	*High*	*Moderate*	*Low*
PES	*A (Pristine)*	A Maintain	A Maintain	A Maintain	A Maintain
	B (Natural)	A Improve	A/B Improve	B Maintain	B Maintain
	C (Good)	A Improve	B/C Improve	C Maintain	C Maintain
	D (Fair)	C Improve	C/D Improve	D Maintain	D Maintain
	E/F (Poor)	D Improve	E/F Improve	E/F Maintain	E/F Maintain

7.3.7 Buffer Requirements

The “Preliminary Guideline for the Determination of Buffer Zones for Rivers, Wetlands and Estuaries” (Macfarlane *et al.,* 2014) was used to determine the appropriate buffer zone for the proposed activity.