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AQUATIC BIODIVERSITY COMPLIANCE STATEMENT

FOR THE PROPOSED

GROOTBRAK WWTW PV SOLAR PLANT AND BATTERY STORAGE SYSTEMS ON PORTION 23 OF THE FARM WOLVEDANS 129, GROOTBRAK RIVIER

DATE: 18 March 2024

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REPORT SUMMARY

The aquatic verification study was undertaken using desktop data analysis, site assessment, GIS mapping and scientific knowledge. It was determined that there are no natural aquatic habitats within, nor surrounding, the proposed site. Therefore, the site has a Low sensitivity, and the project will not impact aquatic biodiversity. The Compliance Statement for the Aquatic Biodiversity theme concludes that the project does not require further assessment and should be deemed as acceptable.

Declaration of Independence

I, Debbie Fordham, declare that I:

- Act as an independent specialist consultant, in this application, in the field of wetland ecology;
- Do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the amended EIA Regulations, 2014 (amended);
- Have, and will have, no vested interest in the proposed activity proceeding;
- Have no, and will not engage in, conflicting interests in the undertaking of the activity;
- Undertake to disclose, to the competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the amended EIA Regulations, 2014; and
- Will provide the competent authority with access to all the information at my disposal regarding the application, whether such information is favourable to the applicant or not.

The following report has been prepared:

- As per the requirements of Section 32 (3) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) Environmental Impact Assessment Regulations 2017 as per Government Notice No. 326 Government Gazette, 7 April 2017.
- In accordance with Section 13: General Requirements for Environmental Assessment Practitioners (EAPs) and Specialists as well as per Appendix 6 of GNR 982 - Environmental Impact Assessment 2014 Regulations and the National Environmental Management Act, 1998.

- With consideration to Cape Nature's standard requirements for biodiversity assessments.
- In accordance with DEA&DP's Guideline on Involving biodiversity specialists in the EIA process.
- Independently of influence or prejudice by any parties.

Specialist's Qualifications

Debbie Fordham is an ecologist and Professional Wetland Scientist, registered with the SWSPCP (No. 3683) and SACNASP (119102). She has over 12 years of working experience, specialising in aquatic ecology. She has authored over 100 reports and applications, and she constantly contributes to the scientific and local community. Debbie holds a M.Sc. degree in Environmental Science from Rhodes University, by thesis, entitled: The geomorphic origin and evolution of the Tierkloof Wetland, a peatland dominated by *Prionium serratum* in the Western Cape. She is internationally accredited by the Council of Engineering and Scientific Specialty Boards (CESB). She is a member of the Society for Wetland Scientists and sits on the SWS Publication Committee, a member of the South African Wetland Society, the Southern African Association of Geomorphologists, and SACNASP.

Tertiary Education

- M.Sc. Environmental Science (Rhodes University):

Master of Science thesis entitled: The geomorphic origin, evolution and collapse of a peatland dominated by *Prionium serratum*: a case study of the Tierkloof Wetland, Western Cape.

- BA Hons. Environmental Science (Rhodes University):

Honours dissertation: The status and use of Aloe ferox. Mill in the Grahamstown commonage, South Africa.

Courses: Wetland Ecology, Environmental Water Quality /Toxicology, Biodiversity, Non-Timber Forest Products (NTFPs) and Rural Livelihoods, Environmental Impact Assessment (EIA), Statistics

- BA - Environmental Science and Geography (Rhodes University)

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PHOTO PLATES

1 INTRODUCTION

Debbie Fordham of Upstream Consulting has been appointed by Mossel Bay Municipality to undertake an aquatic biodiversity sensitivity assessment for the proposed Grootbrak Waste Water Treatment Works PV Solar Plant on Portion 23 of the Farm Wolvedans 129, Mossel Bay.

The site sensitivity verification assessment, undertaken on the 24th of February 2024, confirmed the Low aquatic biodiversity sensitivity rating of the DFFE Screening Tool and the requirement of a Compliance Statement. This report is in alignment with the requirements for the assessment and reporting of impacts of development on aquatic biodiversity (Table 1) which are set out in the 'Protocol for the assessment and reporting of environmental impacts on aquatic biodiversity published in Government Notice No. 648, Government Gazette 45421, on the 10 of May 2019, and the' Protocol for the specialist assessment and minimum report content requirements for environmental impacts on aquatic biodiversity' published in Government Notice No. 320, Government Gazette 43110, on the 20th of March 2020.

Table 1: The report content guide in relation to the minimum information and report requirements for a Compliance Statement for the Aquatic Biodiversity Theme

3	Aquatic Biodiversity Compliance Statement Requirements	Relevant section of this report:
3.1	The compliance statement must be prepared by a suitably qualified specialist registered with the SACNASP, with expertise in the field of aquatic sciences.	SWSPCP (No. 3683) and SACNASP (119102) (Page iii) and Section 9 - Specialist CV
3.2	The compliance statement must:	
3.2.1	be applicable to the preferred site and the proposed development footprint;	Section 1.1 – Location and Section 2 – Desktop Assessment
3.2.2	confirm that the site is of "low" sensitivity for aquatic biodiversity; and	Section 5 – Results and Findings
3.2.3	indicate whether or not the proposed development will have an impact on the aquatic features.	Section 7 – Compliance Statement
3.3	The compliance statement must contain, as a minimum, the following information:	
3.3.1	contact details of the specialist, their SACNASP registration number, their field of expertise and a curriculum vitae;	SWSPCP (No. 3683) & SACNASP (119102) (Page iii) and Specialist CV
3.3.2	a signed statement of independence by the specialist;	Section 10
3.3.3	a statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;	Approach and Methods Section 3.2

3.3.4	a baseline profile description of biodiversity and ecosystems of the site;	Section 5.2 – Results: Site Assessment
3.3.5	the methodology used to verify the sensitivities of the aquatic biodiversity features on the site including the equipment and modelling used where relevant;	Section 3.1 and Section3.2 – Approach and Methods
3.3.6	in the case of a linear activity, confirmation from the aquatic biodiversity specialist that, based on the mitigation and remedial measures proposed, the land can be returned to the current state within two years of completion of the construction phase;	Not applicable
3.3.7	where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr;	Section 6 -Mitigation for inclusion into EMP
3.3.8	a description of the assumptions made as well as any uncertainties or gaps in knowledge or data; and	Section 4 -Assumptions and Limitations
3.3.9	any conditions to which this statement is subjected.	Section 6 and 7 -Statement

1.1 Location and background

The site is located approximately 2 km inland of the coastline, between the towns of Grootbrak Rivier and Kleinbrak Rivier. Refer to Figure 1. The property is situated directly north of the wastewater treatment works on vacant agricultural land (Plate 1). The proposed site within the property is approximately 4.7 ha in total. Refer to site layout plan in Figure 2.

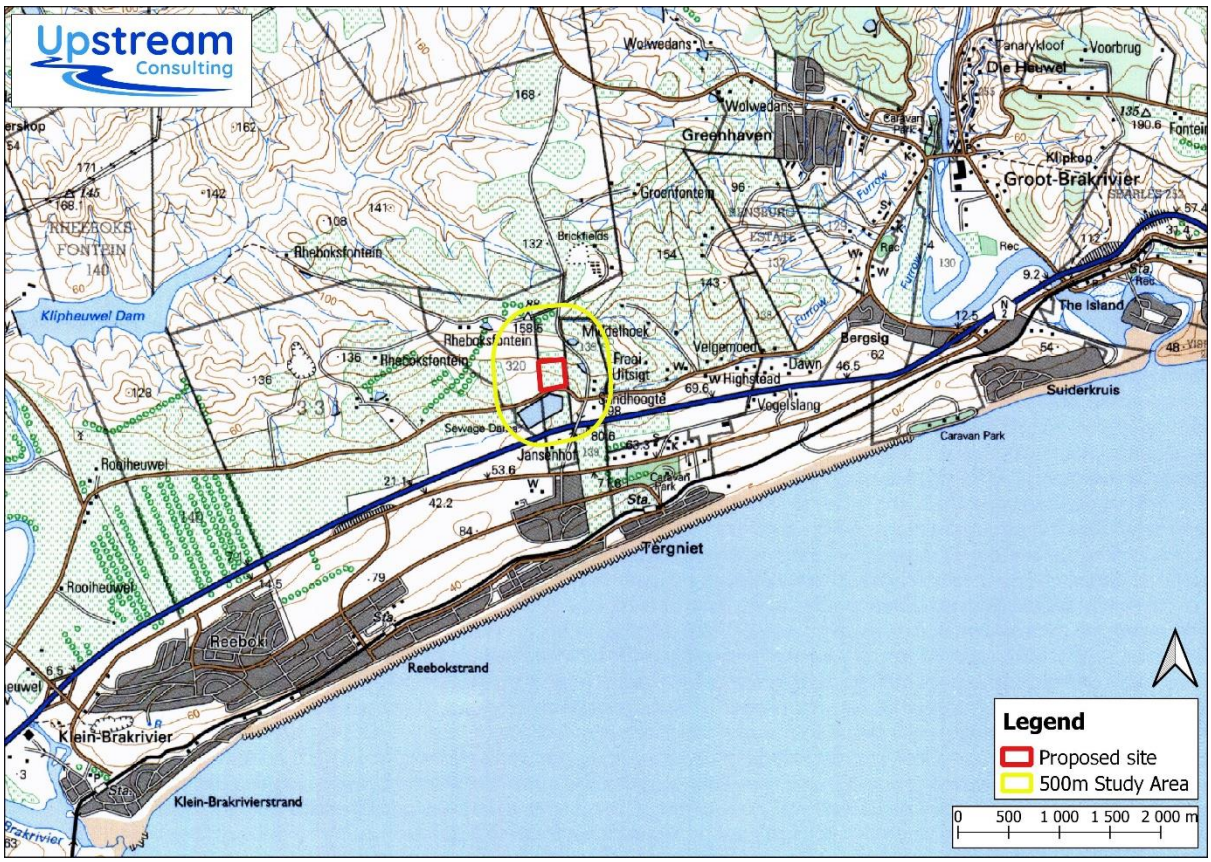

Figure 1: Locality map

Plate 1: Photograph of the site (indicated by red polygon) as viewed from the hilltop towards the wastewater treatment works to the south

Figure 2: The draft site development plan provided for assessment (Element Consulting Engineers, January 2024)

1.2 Current Land Use

The site is situated on a south-facing slope at an elevation of 65m - 100m above sea level (Figure 3). Runoff moves in a south westerly direction towards the wastewater treatment works in the valley bottom. However, most precipitation infiltrates the soil prior to reaching the gravel road or wastewater treatment works beyond the boundary. The land is currently vacant but was previously used for livestock grazing. The Western Cape Department of Agriculture Crop Census (2017) indicates the field crop boundaries mapped during the 2017/18 Western Cape commodity census and digitised using the aerial photography of 2016. According to this data, the land upon which the site is proposed is old, planted pasture (Figure 4).

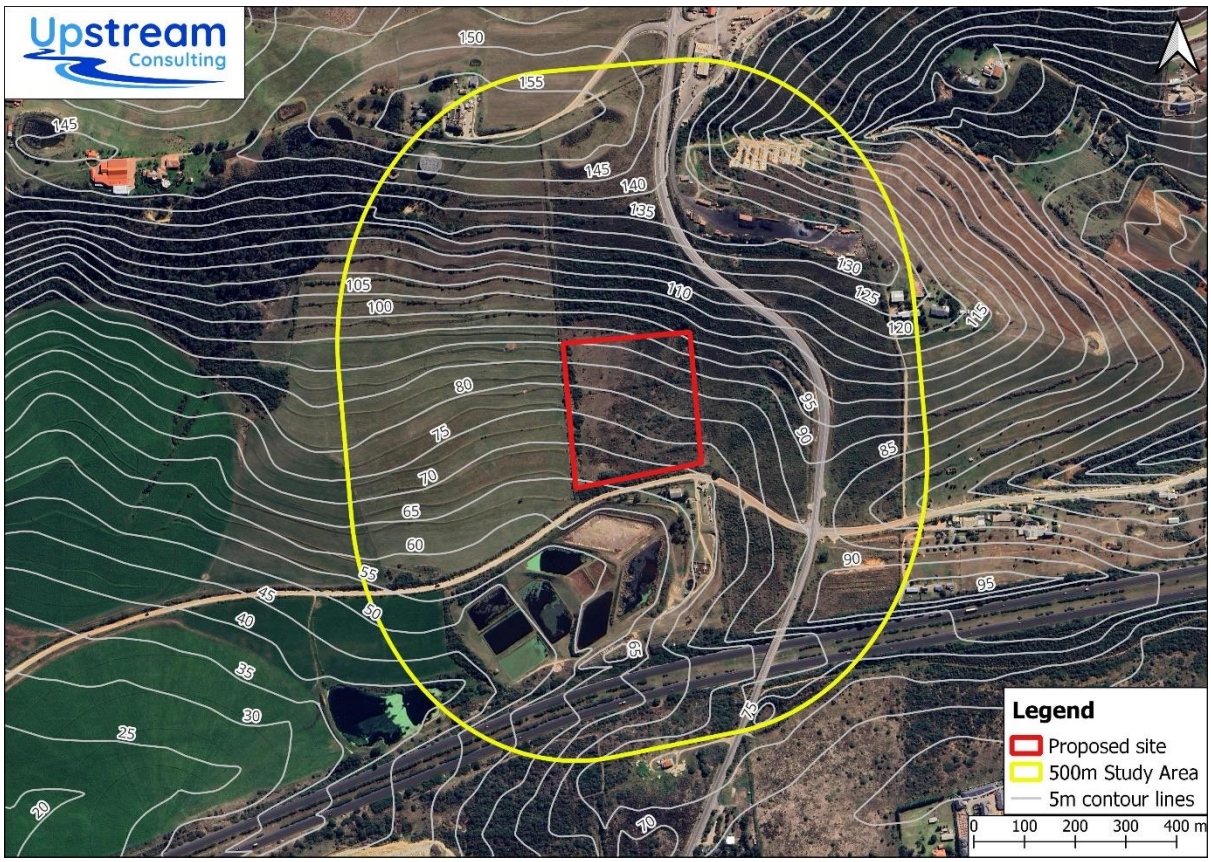

Figure 3: Map showing the site topography and land use

Figure 4: CapeFarmMapper map showing the old agricultural lands on the site

1.3 DFFE Screening Tool

Based on the DFFE Screening Tool, the site has Low Aquatic Biodiversity sensitivity (Figure 5). This sensitivity rating was confirmed following site verification. The site verification specialist findings were informed by a site visit undertaken on the 24th of February 2024.

It was determined that there are seven aquatic features within the 500m radius study area, with six of these features being artificial in nature. Within the site, there are two artificial wetlands. HGM1 is a small, excavated depression previously used for livestock drinking water. HGM2 is a seep wetland formed by road stormwater runoff and/ or a leaking pipeline. HGM1 and HGM2 artificial wetlands will be impacted by the proposed project. However, these are artificial features and have very limited biodiversity importance. The other features are at no risk of being impacted by the project.

It was therefore confirmed that the site sensitivity is 'Low' for the aquatic biodiversity theme and that a Compliance Statement be submitted.

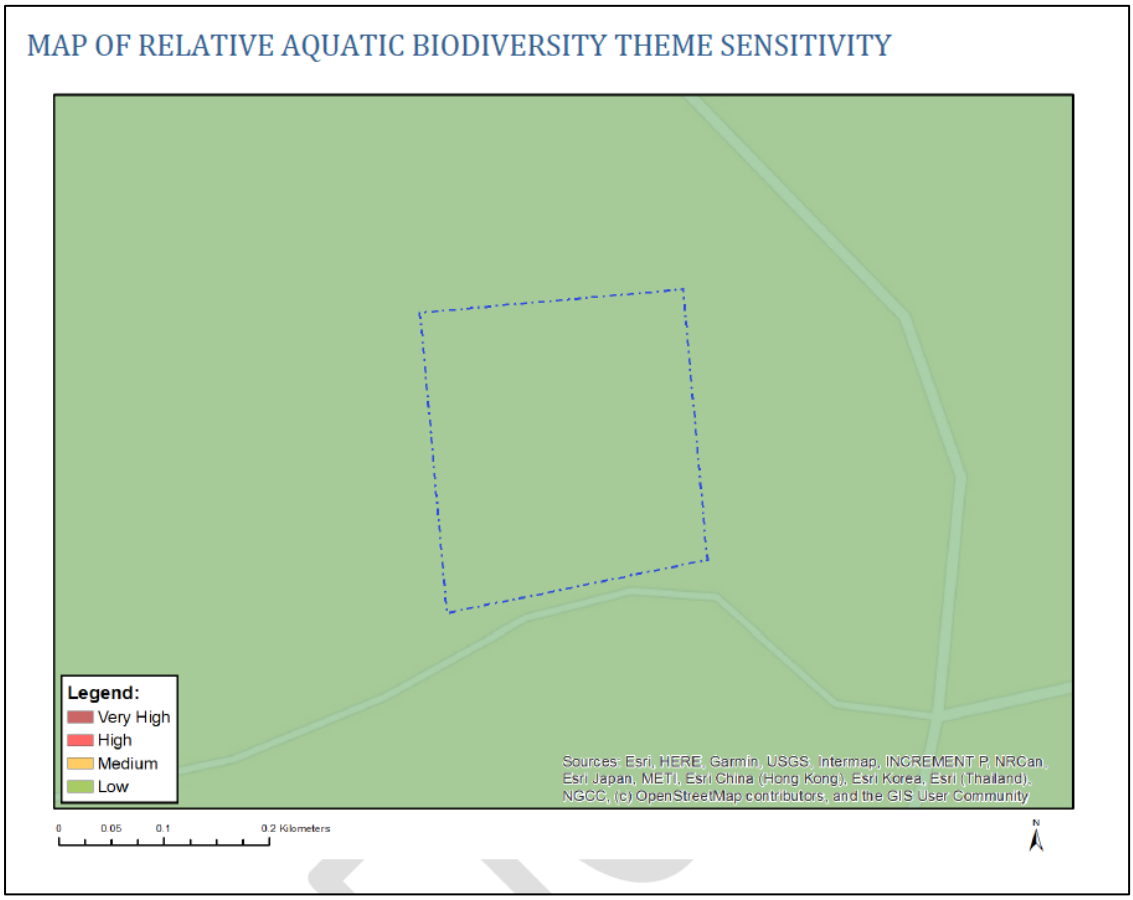

Figure 5: The DFFE Screening Tool results for the site for the aquatic biodiversity theme

1.4 Relevant Legislation

The protection of water resources is essential for sustainable development and therefore many policies and plans have been developed, and legislation promulgated, to protect these sensitive ecosystems. The proposed project must abide by the relevant legislative requirements. Table 2 below shows an outline of the environmental legislation relevant to the project.

Table 2: Relevant environmental legislation

Legislation	Relevance
South African Constitution 108 of 1996	The constitution includes the right to have the environment protected
National Environmental Management Act 107 of 1998	Outlines principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions exercised by organs of state.
Environmental Impact Assessment (EIA) Regulations	The 2014 regulations have been promulgated in terms of Chapter 5 of NEMA and were amended on 7 April 2017 in Government Notice No. R. 326. In addition, listing notices (GN 324-327) lists activities which are subject to an environmental assessment.
The National Water Act 36 of 1998	Chapter 4 of the National Water Act addresses the use of water and stipulates the various types of licensed and unlicensed entitlements to the use of water. Any uses of water which do not meet the requirements of Schedule 1 or the GAs, require a license which should be obtained from the Department of Water and Sanitation (DWS).
General Authorisations (GAs)	Government Notice R509 of 2016 was issued as a revision of the General Authorisations (No. 1191 of 1999) for section 21 (c) and (i) water uses (impeding or diverting flow or changing the bed, banks or characteristics of a watercourse) as defined under the NWA. Determining if a water use licence is required is associated with the risk of impacting on that watercourse.
National Environmental Management: Biodiversity Act No. 10 of 2004	This is to provide for the management and conservation of South Africa's biodiversity through the protection of species and ecosystems; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; and the establishment of a South African National Biodiversity Institute.
Conservation of Agricultural Resources Act 43 of 1967	To provide for control over the utilization of the natural agricultural resources to promote the conservation of the soil, water sources and vegetation and the combating of weeds and invader plants.

1.5 Scope of Work

The Aquatic Biodiversity Compliance Statement was prepared by a suitably qualified specialist in the field of aquatic sciences in order to verify:

a. That the site is of low sensitivity for aquatic biodiversity; and
b. Whether or not the proposed development will have an impact on the aquatic features.

The Aquatic Biodiversity Compliance Statement contains, as a minimum, the following information:

a. Contact details and curriculum vitae of the specialist;
b. A signed statement of independence by the specialist;
c. Baseline profile description of biodiversity and ecosystems, including the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;
d. Methodology used to verify the sensitivities of the aquatic biodiversity features on the national web based environmental verification tool;
e. Methodology used to undertake the Initial Site Sensitivity Verification and preparation of the Compliance Statement, including equipment and modelling used, where relevant;
f. Where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr;
g. A description of the assumptions made and any uncertainties or gaps in knowledge or data as well as a statement of the timing and intensity of site inspection observations; and any conditions to which the statement is subjected.

The above is in terms of the latest NEMA Minimum Requirements and Protocol for Specialist Aquatic Biodiversity Impact Assessment as contained in the "*Procedures to be followed for the assessment and minimum criteria for reporting of identified environmental themes of Section 45 (a) and (h) of the National Environmental Management Act, 1998, when applying for Environmental Authorization*" (10 May 2020).

2 DESKTOP ASSESSMENT

Mapping the locality of aquatic habitat is essential for classification into the different wetland and river ecosystem types across the country, which in turn can be used with other data to identify aquatic systems of conservation significance. The verification study was informed by the available datasets relevant to water resources, as well as historic and the latest aerial imagery, to develop an understanding of the fluvial processes of the study area.

2.1 Catchment characteristics

The property falls within quaternary catchment K10F of the Breede-Gouritz water management area (Figure 6). The main river in this catchment is the Klein Brak River, however, the site is not connected to the drainage network. The site does not fall within a sub-quaternary catchment (SQC) that has been categorised as a Freshwater Ecosystem Priority Area (FEPA) or a Strategic Water Source Area (SWSA).

Table 3 below shows a summary of the relevant biophysical desktop information.

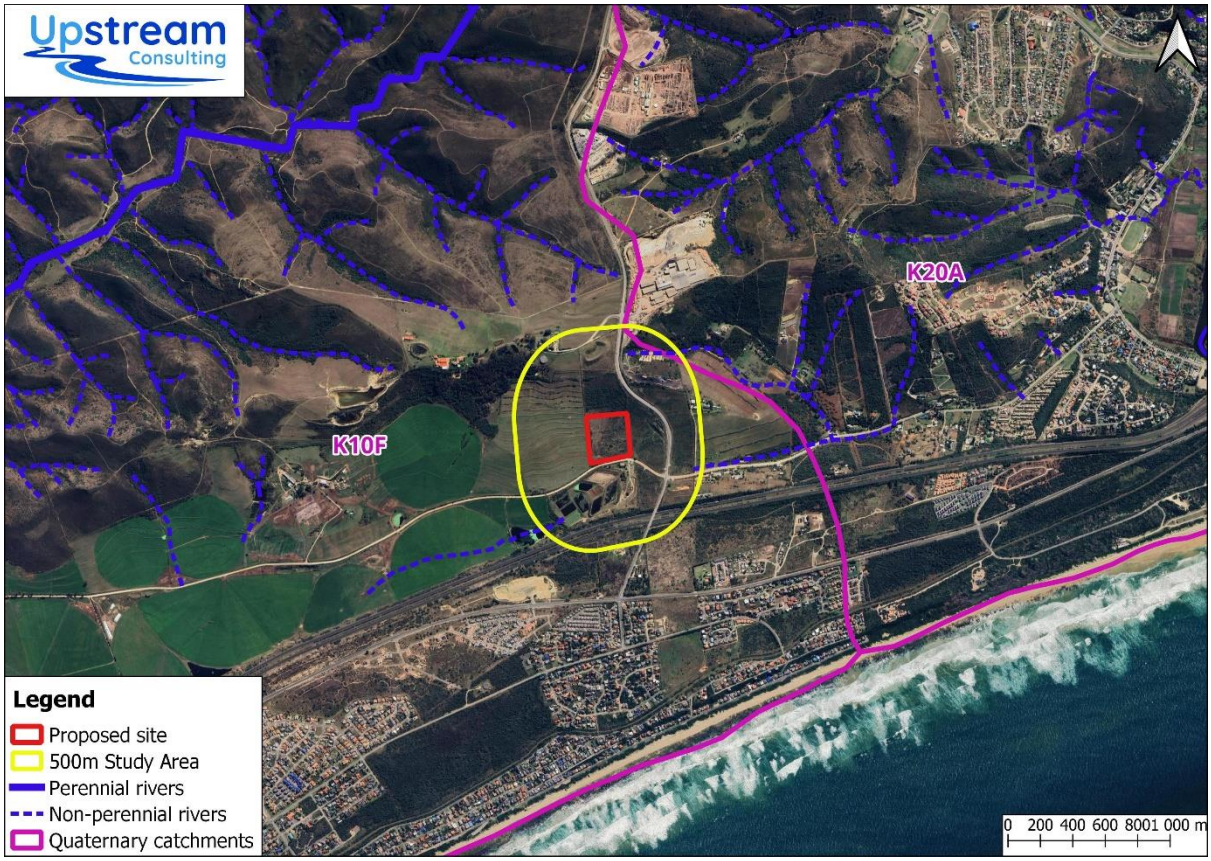

Figure 6: The proposed site in relation to the drainage network

Table 3: Summary of biophysical characteristics

Biophysical characteristics	
Climate	Moderate -All year rainfall region
Mean annual rainfall	512 mm/year
Quaternary Catchment	K10F
Mainstem River	Klein Brak River
Water Management Area	Coastal Gouritz
Ecoregion	Southern Coastal Belt
Natural vegetation composition (Vlok Vegmap 2007)	Fynbos-Renoster-Thicket
Natural Vegetation Type (SANBI Vegmap 2018)	Garden Route Granite Fynbos (Critically Endangered)
Geology	Mainly conglomerate, sandstone, siltstone and mudstone of the Enon Formation, Uitenhage Group.
Strategic Water Source Area	No
NFEPA	No
Conservation priority areas	No CBA or ESA on site
National Wetland Map 5	No wetlands mapped on site
National rivers inventory	No river lines mapped on the site

2.2 South African Inventory of Inland Aquatic Ecosystems

A significant amount of the latest spatial data has been provided through the products of the 2018 National Biodiversity Assessment (NBA). The NBA is the primary tool for monitoring and reporting on the state of biodiversity in South Africa. It is used to inform policies, strategies and actions in a range of sectors for managing and conserving biodiversity more effectively. A South African Inventory of Inland Aquatic Ecosystems (SAIIAE) was established during the 2018 National Biodiversity Assessment (Van Deventer *et al.* 2018). The SAIIAE offers a collection of data layers pertaining to ecosystem types and pressures for both rivers and inland wetlands.

The National Wetland Map 5 (NWM5) includes inland wetlands and estuaries, associated with river line data and many other data sets. The NWM5 shows no wetlands within the proposed site (Figure 7). There are a number of artificial wetlands mapped within the surrounding 500m study area.

The NBA 2018 Rivers Map is a GIS layer which summarises the river condition, river ecosystem types, flagship and free-flowing river information (Van Deventer *et al.* 2019). The river lines data set is associated with the National Wetland Map 5 (NWM5) issued with the SAIIAE. The GIS layer of origin is the 1:500 000 rivers data layer that DWAF coded for geomorphological zonations, with added data from the Chief Directorate Surveys and Mapping's (CDSM) 1:50 000 rivers GIS layer, and information generated during the NFEPA project in 2011. The NBA 2018 Rivers data does not show any rivers within the 500m study area. The river lines depicted in Figure 7 are from the 1:500000 NGI cadastral rivers data. This shows the smaller drainage lines within the study area. These systems are more than 300m away from the site, highly modified, and not connected to the drainage network.

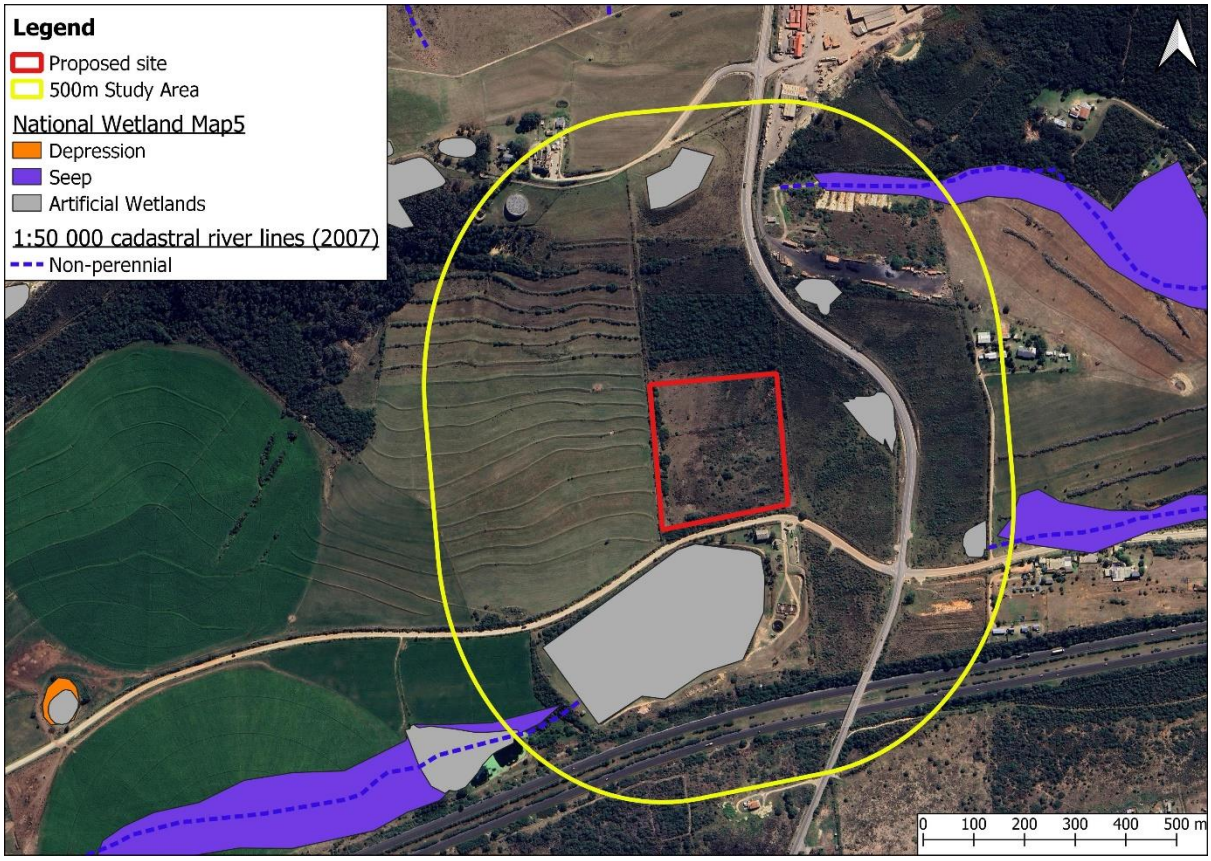

Figure 7: The site in relation to the national river and wetland inventories (CSIR, 2018)

2.3 Conservation Priority Areas

The Western Cape Biodiversity Spatial Plan (WCBSP) identifies biodiversity priority areas, CBAs and Ecological Support Areas (ESAs), which, together with Protected Areas, are important for the persistence of a viable representative sample of all ecosystem types and species, as well as the long-term ecological functioning of the landscape as a whole. The primary purpose of a map of Critical Biodiversity Areas and Ecological Support Areas is to guide decision-making about where best to locate development. Critical Biodiversity Areas (CBA's) are required to meet biodiversity targets. According to the WCBSP, these areas have high biodiversity and ecological value and therefore must be kept in a natural state without further loss of habitat or species.

Figure 8 shows that there are no conservation priority areas mapped within the site by the WCBSP.

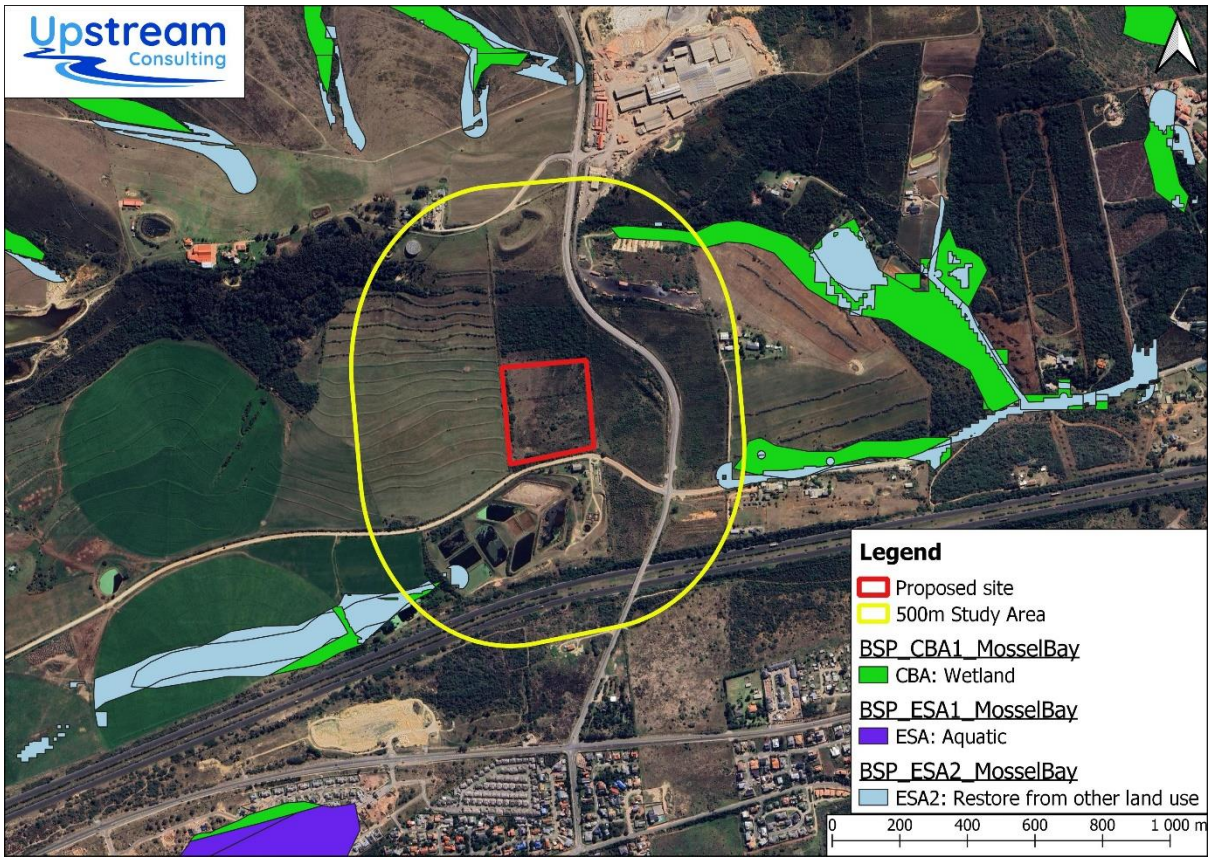

Figure 8: Map of the site in relation to aquatic priority areas identified in the WCBSP (2017)

2.4 Historic Context

Historic Google satellite imagery was found sufficient to provide an understanding of the land use and cover changes for the study area. It shows that the infrastructure (wastewater treatment works, roads, etc.) was established many years ago and there has been little change in land use in the area (Figure 9). The natural vegetation of the site was cleared for grazing pasture many decades ago, but some fynbos and thicket species have returned since the land has been vacant (Figure 10). An artificial wetland visible in the latest imagery (Figure 11) is not evident in the past imagery. The formation of the artificial seep wetland on the site coincides with the upgrading of the road which runs near the eastern and northern border. There is evidence to suggest that the road upgrades included changes to the stormwater network and a channel was dug to direct surface runoff water onto the property. Following the prolonged saturation of the soils, wetland vegetation established, and the small seep was formed.

Figure 9: Historic Google imagery from 2004 of the site showing no evidence of the wetland

Figure 10: Historic Google imagery from 2014 of the site showing no evidence of the wetland

Figure 11: The latest Google imagery of the site showing the presence of the artificial wetland following road upgrades

3 APPROACH AND METHODS

3.1 Desktop Assessment Methods

- The contextualization of the study area was undertaken in terms of important biophysical characteristics and the latest available aquatic conservation planning information in a Geographical Information System (GIS). It is imperative to develop an understanding of the regional drainage setting and longitudinal dynamics of the watercourses. The conservation planning information aids in the determination of importance and sensitivity, management objectives, and the significance of potential impacts.
- Following this, desktop delineation and illustration of all potential watercourses within the study area was undertaken utilising available site-specific data such as aerial photography, contour data and water resource data. Digitization and mapping were undertaken using QGIS 3.28 GIS software (Table 4).
- These results, as well as professional experience, allowed for the identification of specific areas that could potentially be impacted by the activities and therefore required groundtruthing and detailed assessment. The following data sources listed within Table 4 assisted with the assessment.

Table 4: Utilised data and associated source relevant to the proposed project

Data	Source
Google Earth Pro™ Imagery	Google Earth Pro™
DWS Eco-regions (GIS data)	DWS (2005)
South African Vegetation Map (GIS Coverage)	Mucina & Rutherford (2006-2018)
National Biodiversity Assessment Threatened Ecosystems (GIS Coverage)	SANBI (2018)
Geology	Council for Geoscience (2019)
Contours (elevation) - 5m intervals	Surveyor General
NFEPA river and wetland inventories (GIS Coverage)	CSIR (2011)
NEFPA river, wetland and estuarine FEPAs (GIS Coverage)	CSIR (2011)
Western Cape Biodiversity Framework 2017: Critical Biodiversity Areas of the Western Cape.	Pence (2017)
National Wetland Map 5	Van Deventer, et al. (2018)

3.2 Site Assessment Methods

- Infield site assessment was conducted on the 24th of February 2024 for 5 hours to identify if there are any discrepancies with the current use of land and environmental status quo versus the environmental sensitivity as identified on the national web based environmental verification tool (Low), such as new developments, infrastructure, indigenous/pristine vegetation, etc.
- Infield assessment was undertaken with a hand-held GPS, for mapping, in alignment with standard field-based procedures in terms of the Department of Water and Sanitation (DWAF 2008) *Updated Manual for the Identification and Delineation of Wetlands and Riparian Areas,* and a Dutch soil auger.

4 ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations are relevant:

- Aquatic ecosystems vary both temporally and spatially. Once-off surveys such as this are therefore likely to miss certain ecological information due to seasonality, thus limiting accuracy and confidence. That said, the level of confidence in the findings is high.
- Infield soil and vegetation sampling was only undertaken within a specific focal area at the proposed site, while the remaining aquatic features were delineated at a desktop level.

5 INITIAL SITE SENSITIVITY VERIFICATION RESULTS

The site assessment (conducted on the 24th of February 2024) determined that there are no natural aquatic habitats within the proposed site.

It was determined that there are seven aquatic features within the 500m radius study area, with six of these features being artificial in nature. Refer to Figure 12 for a map of all identified aquatic features within the 500m study area. Within the site, there are two artificial wetlands. HGM1 is a small, excavated depression previously used for livestock drinking water. HGM2 is a seep wetland formed by road stormwater runoff and/ or a leaking pipeline. HGM1 and HGM2 artificial wetlands will be impacted by the proposed project. However, these are

artificial features and have very limited biodiversity importance. The other features are at no risk of being impacted by the project.

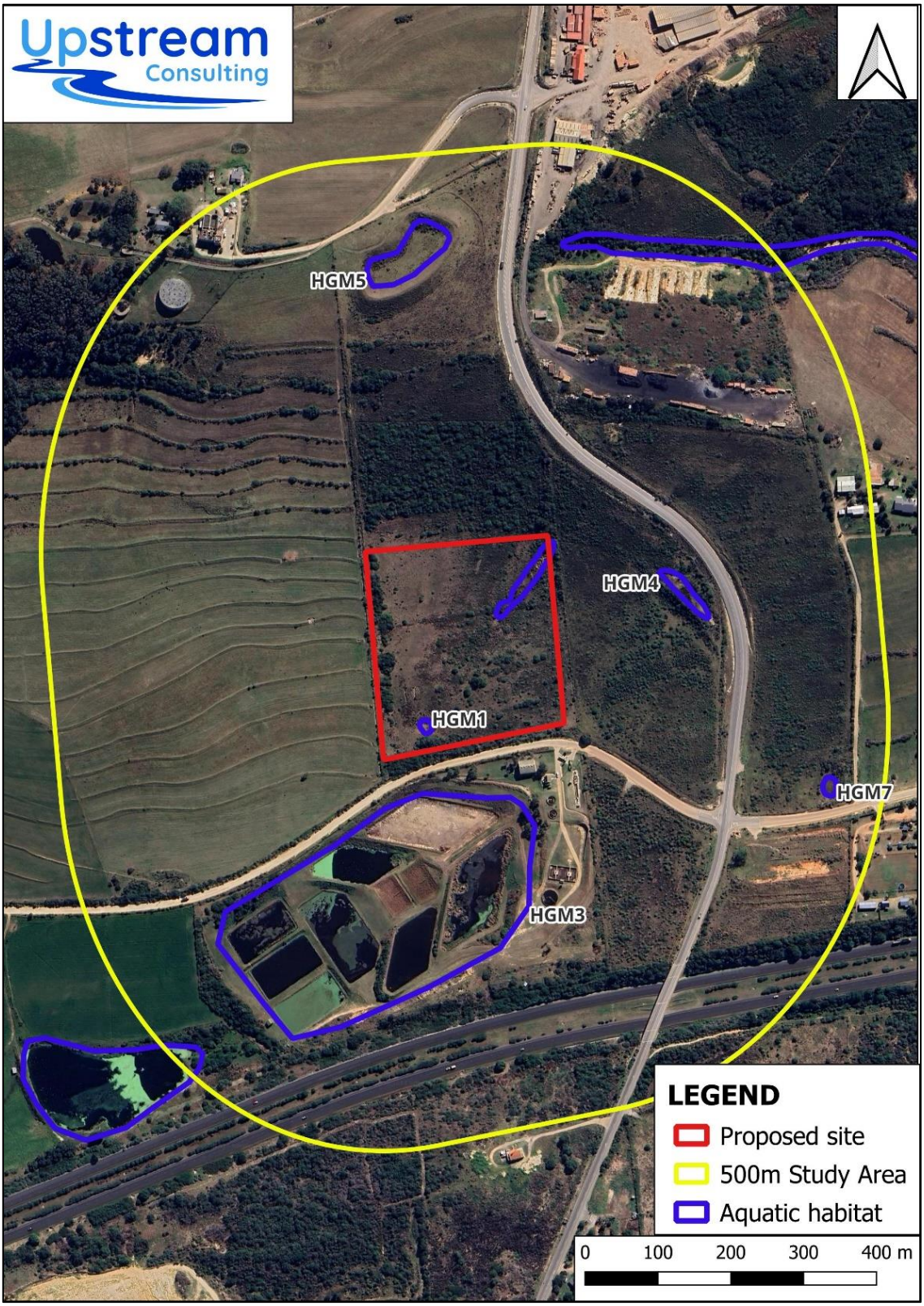

Figure 12: Aquatic habitat identified, and delineated into hydrogeomorphic (HGM) units, within 500m of the proposed site

Historic imagery determined that these wetlands are artificial in nature. Refer to Figure 9 for an image from 2014 where the wetland is not present. Additionally, the hydrology, topography and substrate of the site is not conducive to the formation of natural wetland habitat. The dam was excavated. In 2020 the road was upgraded, and a stormwater trench was dug towards the site, which coincides with the occurrence of the HGM2 artificial seep. It is likely occurring because of a pipe leak or the road infrastructure directing concentrated flow to this location.

Photo Plates 2 and 3 show the two artificial wetlands located within the proposed site: an old excavated livestock dam and a seep from water artificially directed by infrastructure.

Plate 2: Photograph showing the artificial depression wetland formed within an old excavated dam for livestock drinking

Plate 3: Photograph of artificial seep wetland formed on site

6 MITIGATION FOR INCLUSION IN THE EMP

Stormwater management should focus on introducing runoff responsibly into the receiving environment. A stormwater management plan, including appropriately designed and placed erosion control structures, should be compiled.

7 COMPLIANCE STATEMENT

In conclusion, the DFFE Screening Tool resulted in Low aquatic biodiversity sensitivity rating. Following site verification, this Low sensitivity rating for the project is confirmed. There are no natural aquatic features that will be impacted by the project. The two identified artificial wetlands on site are of negligible ecological importance and their loss will not impact aquatic biodiversity.

It is therefore recommended that the site sensitivity be regarded as 'Low' for the aquatic biodiversity theme and that this Compliance Statement be submitted with the EIA application.

8 REFERENCES

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9 SPECIALIST CV

CURRICULUM VITAE

Debra Jane Fordham
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Professional profile

Debbie Fordham is an ecologist and Professional Wetland Scientist, registered with the SWSPCP (No. 3683) and SACNASP (119102, Cert. Nat. Sci. Ecological Science). She has over 10 years of working experience, largely specialising in aquatic ecology. She has authored over 100 reports and applications and she constantly contributes to the scientific and local community. Debbie holds a M.Sc. degree in Environmental Science from Rhodes University, by thesis, entitled: The geomorphic origin and evolution of the Tierkloof Wetland, a peatland dominated by *Prionium serratum* in the Western Cape.

She is a certified Professional Wetland Scientist (PWS certification number 3683) by the Society for Wetland Scientists (SWS) Professional Certification Program, which is internationally accredited by the Council of Engineering and Scientific Specialty Boards (CESB). She is a member of the Society for Wetland Scientists, the South African Wetland Society, the Southern African Association of Geomorphologists, and SACNASP.

Most of her projects involve (as a minimum) in-depth wetland and river field delineation (including soil investigations via augering, vegetation identification, and classifying the hydrological characteristics), laboratory analysis (such as water quality and sediment analysis), classification, characterisation, ecological health and ecosystem functioning assessments (using the latest available tools), as well as impact rating, buffer determinations, mitigation recommendations and detailed rehabilitation plans. She is highly proficient using GIS software to incorporate accurate spatial analysis and visual aids (No Go Area maps etc.) into her reports.

Tertiary Education

- M.Sc. Environmental Science (Rhodes University):

Master of Science thesis entitled: The geomorphic origin, evolution and collapse of a peatland dominated by Prionium serratum: a case study of the Tierkloof Wetland, Western Cape.

- BA Hons. Environmental Science (Rhodes University):

Honours dissertation: The status and use of Aloe ferox. Mill in the Grahamstown commonage, South Africa.

Courses: Wetland Ecology, Environmental Water Quality /Toxicology, Biodiversity, Non-Timber Forest Products (NTFPs) and Rural Livelihoods, Environmental Impact Assessment (EIA), Statistics

- **BA -** Environmental Science and Geography (Rhodes University)

Work Experience:

- Ecological specialist (2022/03/01 – present)
- Sharples Environmental Services cc (2016/08/10 – 2022/03/01)

Position: Aquatic Ecologist and WULA Manager

- KSEMS Environmental Consulting (2015/08/10 - 2016/07/31)

Position: Wetland specialist

- AGES EC (Pty) Ltd (2014/10/01 – 2015/08/10)

Position: Aquatic Ecologist and WULA Manager

- Environmental Impact Management Services (2014/02/04-2014/02/07)

Position: Environmental consultant

- Rhodes University (2009/04/01 – 2010/12/17)

Recent Reports:

- Aquatic biodiversity impact assessment for the proposed residential development on Portion 21 of Kraaibosch 195, George
- Aquatic biodiversity impact assessment for the expansion of Kolkies River Gypsum Mine.
- Aquatic biodiversity impact assessment for the proposed residential development of Portion 7 and 8, Kranshoek
- Aquatic biodiversity impact assessment for the expansion of Maskam Gypsum Mine and the construction of a fine residue tailings dam, Vanrhynsdorp
- Aquatic biodiversity impact assessment for the construction of the Meul River pumpstation rising main sewer pipeline, George
- Aquatic biodiversity impact assessment for the expansion of Kleingeluk Quarry, Hartenbos

- Installation of A Water Pipeline from An Existing Borehole to The Herbertsdale Reservoir, Mossel Bay Municipality
- Unauthorised Clearance of Vegetation and Construction of a Dam on Farm Angeliersbosch Re/157, Prince Albert
- Rehabilitation of The Excavation of a Channel Within the Brandwag River, On the Remainder of Farm Bowerf 161, Brandwacht, Mossel Bay
- Rehabilitation Plan for activities On A Portion of Remainder Portion 104 Of the Farm Modder Rivier No 209, George
- Aquatic Impact Assessment for The Proposed Extension of Walvis Street, Mossel Bay
- Rehabilitation Plan for the transformation of agricultural land to commercial land on Farm Re 109/209, George
- Aquatic assessment for the proposed Dana Bay Access Road, near Mossel Bay
- Invasive Alien Plant Control Plan for New Horizons Mixed-Use Development on Farm Hillview No. 437, Plettenberg Bay
- Cemetery expansion on Erf 566 and 480, Melkhoutfontein
- The expansion of Goue Akker Cemetery in Beaufort West
- Construction of a bulk sewerage pipeline from Green Valley township, Wittedrift, to the Plettenberg Bay WWTW
- Periodic Maintenance of Trunk Road 31- Barrydale To Ladismith (Km 30.89 To Km 76.06), Western Cape Province
- Expansion of the Gansbaai Sand en Klip Quarry
- Seven Oaks Residential Development, Wittedrift, Plettenberg Bay
- Gran Sasso Quarry water abstraction and proposed construction of a road crossing a watercourse, Tygervalley, Cape Town
- Maintenance of Trunk Road 33/4 and Trunk Road 34/2, though Meiringspoort, Western Cape Province
- Proposed Waste Water Treatment Works, Irrigation Activities & Effluent Discharge by Parmalat SA (Pty) Ltd, Bonnievale
- Development of Remainder of Erf 562 Kurland, Plettenberg Bay
- Ladismith Cheese Water Use Application
- Construction of A 22kv Overhead Powerline, near Humansdorp, Eastern Cape
- Development of Herold's Bay Country Estate on A Portion of Portion 7 Of Farm Buffelsfontein No. 204, Herold's Bay
- Groot Witpan and Konga Pan salt mining, Northern Cape

- Gemsbok Horn salt pan mine prospecting

End

10 SPECIALIST DECLARATION

Specialist Company Name:	Upstream Consulting			
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4	Percentage Procurement recognition	NA
Specialist name:	Debbie Fordham			
Specialist Qualifications:	M.Sc. Environmental Science – Rhodes University SACNASP registered Professional Wetland Scientist			
Professional affiliation/registration:	She is a certified Professional Wetland Scientist (PWS certification number 3683) by the Society for Wetland Scientists (SWS) Professional Certification Program, which is internationally accredited by the Council of Engineering and Scientific Specialty Boards (CESB). She is SACNASP registered – no. 119102) and a member of the Society for Wetland Scientists, the South African Wetland Society, and the Southern African Association of Geomorphologists.			
Physical address:	25 Blommekloof Street, George			
Postal address:	25 Blommekloof Street, George			
Postal code:	6530	Cell:	0724448243	
Telephone:		Fax:		
E-mail:	debbie@upstreamconsulting.co.za			

DECLARATION BY THE SPECIALIST

I, __Debbie Fordham_____, declare that –

- I act as the independent specialist in this application;
- 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 in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the Specialist

Name of Company: Upstream Consulting

DATE: 18/03/2024