AQUATIC COMPLIANCE STATEMENT

Erf 56 and 57, Mossdustria, Mossel Bay, Western Cape.

Prepared for Sharple Environmental Services

by

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aquatic consulting & research

DECLARATION OF SPECIALIST INDEPENDANCE

- I consider myself bound to the rules and ethics of the South African Council for Natural Scientific Professions (SACNASP);
- At the time of conducting the study and compiling this report I did not have any interest, hidden or otherwise, in the proposed development that this study has reference to, except for financial compensation for work done in a professional capacity;
- Work performed for this study was done in an objective manner. Even if this study results in views and findings that are not favourable to the client/applicant, I will not be affected in any manner by the outcome of any environmental process of which this report may form a part, other than being members of the general public;
- I declare that there are no circumstances that may compromise my objectivity in performing this specialist investigation. I do not necessarily object to or endorse any proposed developments, but aim to present facts, findings and recommendations based on relevant professional experience and scientific data;
- I do not have any influence over decisions made by the governing authorities;
- I undertake to disclose 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 a competent authority to such a relevant authority and the applicant;
- I have the necessary qualifications and guidance from professional experts in conducting specialist reports relevant to this application, including knowledge of the relevant Act, regulations and any guidelines that have relevance to the proposed activity;
- This document and all information contained herein is and will remain the intellectual property of Confluent Environmental. This document, in its entirety or any portion thereof, may not be altered in any manner or form, for any purpose without the specific and written consent of the specialist investigators.
- All the particulars furnished by me in this document are true and correct.

Specialist: Dr. James Dabrowski (Ph.D., Pr.Sci.Nat. Water Resources)

Date: 13 April 2023

EXECUTIVE SUMMARY

Confluent Environmental was appointed by to undertake a site verification for the proposed filling station and truck stop development located on Erven 56 and 57, Mossdustria, Mossel Bay Local Municipality in the Western Cape. The Environmental Screening Tool classified the site as being of **Very High** aquatic biodiversity due to its location with a Freshwater Ecosystem Priority Area (FEPA). According to the protocol, a site sensitivity verification must be undertaken to confirm the sensitivity of the site as indicated by the screening tool.

Based on the results of the desktop review and a site survey conducted on the 15th of March – and contrary to the screening tool assessment - the sensitivity of aquatic biodiversity on erven 56 and 57 can be regarded as **Low**. The main factors influencing the statement include the following:

- No natural freshwater features were identified within the property boundaries or within close proximity to the site;
- The erven are surrounded by buildings associated with the Mossdustria industrial complex and do not drain towards any natural watercourse that feeds the main FEPA river reach of SQC 9292;
- The topography of the site is flat and no freshwater features will be affected by any drainage or preferential flow paths on or from the site; and
- The construction and operation of the development is not expected to have any impact on any watercourse or on the FEPA status of the catchment or the associated management objectives associated with the FEPA.

In terms of the National Water Act, the proposed development falls outside of the regulated area of a watercourse and, according to GN509, does therefore not require any water use authorisation. Given the isolation of the site from freshwater features, no additional mitigation measures, beyond the adequate management of stormwater generated from the site (during both the construction and operational phases) is required.

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1. INTRODUCTION

Confluent Environmental was appointed by Sharples Environmental Services on behalf of Confuel (Pty) Ltd to undertake a site verification for the proposed filling station and truck stop development located on Erven 56 and 57, Mossdustria, Mossel Bay Local Municipality in the Western Cape.

The total area covered by the erven is 18155 m^2 and the total area reported in the site development plan (SDP; Figure 1) is 1477.28 m^2. This means that the proposed development coverage schedule is ca. 8% of the site. This coverage does not account for the driveways, fences, basic services installation (like water and electricity), or parking areas for cars and trucks. The actual area that will be affected by the development of the site will therefore be substantially larger than the 8% reported in the SDP. A breakdown of the planned development is summarized below. Both erven will require new sewer, electricity (including a mini substation in the south-western corner of Erf 57), and water connections.

The proposed development on Erf 56 will include:

- Guard room,
- Driveway for trucks,
- Sliding gate,
- High wall and “clearvu” fence sections,
- Truck parking areas
- Truck wash bay
- An additional building for future use (this will only be constructed in the future and will provide additional services [such as maintenance services] to the users of the truck stop)

The proposed development on Erf 57 will include:

- A brick boundary wall,
- A “clearvu” fence and gate,
- Main entrance sliding gate,
- Main office and entrance porch with 2 parking bays,
- Driveways,
- Storeroom,
- Ablution block,
- Canteen & storage rooms,
- Dining area, garden, and laundry section,
- Bulk office,
- Diesel locker room,
- Diesel covered patio,
- Diesel office / IT room,

- Filling stations (space for x7 trucks),
- Water reservoirs (370 Kl x2),
- Diesel tanks (86 000 L x8 and 46 000 L x3),
- Parking spaces for truck

Figure 1: The site development plan (SDP) for the proposed development on Erven 56 and 57 in the Mossdustria complex.

2. KEY LEGISLATIVE REQUIREMENTS

2.1 National Environmental Management Act

According to the protocols specified in GN 1540 (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), assessment and reporting requirements for aquatic biodiversity are associated with a level of environmental sensitivity identified by the national web-based environmental screening tool (screening tool). An applicant intending to undertake

an activity identified in the scope of this protocol on a site identified by the screening tool as being of:

- **Very High** sensitivity for aquatic biodiversity, must submit an Aquatic Biodiversity Specialist Assessment; or
- **Low** sensitivity for aquatic biodiversity, must submit an Aquatic Biodiversity Compliance Statement.

The screening tool classified the site as being of **Very High** aquatic biodiversity due to its location with a Freshwater Ecosystem Priority Area (FEPA). According to the protocol, prior to commencing with a specialist assessment a site sensitivity verification must be undertaken to confirm the sensitivity of the site as indicated by the screening tool:

- Where the information gathered from the site sensitivity verification differs from the screening tool designation of **Very High** aquatic biodiversity sensitivity, and it is found to be of a **Low** sensitivity, an Aquatic Biodiversity Compliance Statement must be submitted.
- Similarly, where the information gathered from the site sensitivity verification differs from the screening tool designation of **Low** aquatic biodiversity sensitivity, and it is found to be of a **Very High** sensitivity, an Aquatic Biodiversity Specialist Assessment must be submitted.

2.2 National Water Act

The Department of Water & Sanitation (DWS) is the custodian of South Africa's water resources and therefore assumes public trusteeship of water resources, which includes watercourses, surface water, estuaries, or aquifers. The National Water Act (NWA) (Act No. 36 of 1998) aims to protect water resources, through:

- The maintenance of the quality of the water resource to the extent that the water resources may be used in an ecologically sustainable way;
- The prevention of the degradation of the water resource; and
- The rehabilitation of the water resource.

A watercourse means:

- A river or spring;
- A natural channel in which water flows regularly or intermittently;
- A wetland, lake or dam into which, or from which, water flows; and
- Any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

No activity may take place within a watercourse unless it is authorised by the Department of Water and Sanitation (DWS). According to Section 21 (c) and (i) of the National Water Act, an authorization (Water Use License or General Authorisation) is required for any activities that impede or divert the flow of water in a watercourse or alter the bed, banks, course or characteristics of a watercourse. The regulated area of a watercourse for section 21(c) or (i) of the Act water uses means:

a) The outer edge of the 1 in 100-year flood line and/or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam;

b) In the absence of a determined 1 in 100-year flood line or riparian area the area within 100m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench (subject to compliance to section 144 of the Act); or

c) A 500 m radius from the delineated boundary (extent) of any wetland or pan.

According to Section 21 (c) and (i) of the NWA, any water use activities that do occur within the regulated area of a watercourse must be assessed using the DWS Risk Assessment Matrix (GN 509) to determine the impact of construction and operational activities on the flow, water quality, habitat and biotic characteristics of the watercourse. Low Risk activities require a General Authorisation (GA), while Medium or High Risk activities require a Water Use License (WUL).

2.3 Scope of Work

The objectives of this assessment included the following:

- To undertake a desktop analysis and site inspection to verify the sensitivity of aquatic biodiversity as **Very High** or **Low**; and
- Compile an Aquatic Biodiversity Compliance Statement or Aquatic Biodiversity Specialist Assessment based on the site verification of the sensitivity of the site.

3. APPROACH

The following rationale was adopted to determine the sensitivity of aquatic biodiversity within the footprint of the site:

- The location of the site within a FEPA sub-quaternary catchment (SQC) flags the site as being of a **Very High** sensitivity. This is a precautionary approach and therefore requires that a site visit be undertaken to determine whether any watercourses that may not have been identified by widely available desktop mapping resources may in fact be present on the site;
- In the event that watercourses are confirmed to fall within the development footprint then the site sensitivity is confirmed as **Very High** and a full specialist freshwater assessment is required; and
- In the event that no watercourses are identified within the development footprint the site sensitivity is confirmed as **Low** and an Aquatic Compliance statement is required.

The determination of the site sensitivity relied upon the following approaches:

- Interrogation of available desktop resources including:
    - DWS spatial layers;
    - National Freshwater Ecosystem Priority Areas (NFEPA) spatial layers (Nel et al., 2011);
    - National Wetland Map 5 and Confidence Map (CSIR, 2018)

- Western Cape Biodiversity and Spatial Plan (WCBSP) for Mossel Bay (CapeNature, 2017).

- A site visit was undertaken, during which time the following activities were undertaken:
  - Identification and classification of watercourses within the footprint of the site and within 500m of the site according to methods detailed in Ollis et al. (2013);
  - Soil augering to confirm the presence of soil indicators (DWAF, 2005) that may indicate the presence of a wetland (if applicable); and
  - Identification of hydrophilic plant species that may indicate the presence of wetland plant species (if applicable).

4. PROJECT DESCRIPTION

5. DESKTOP SURVEY

The site falls within Primary Catchment K (Kromme) area and in quaternary catchment K10A, which is a coastal catchment. Numerous, mostly non-perennial, rivers drain the catchment area and terminate at the coastline (Figure 2). No freshwater features are indicated to occur within the footprint of the properties or within close proximity to the properties (Figure 3).

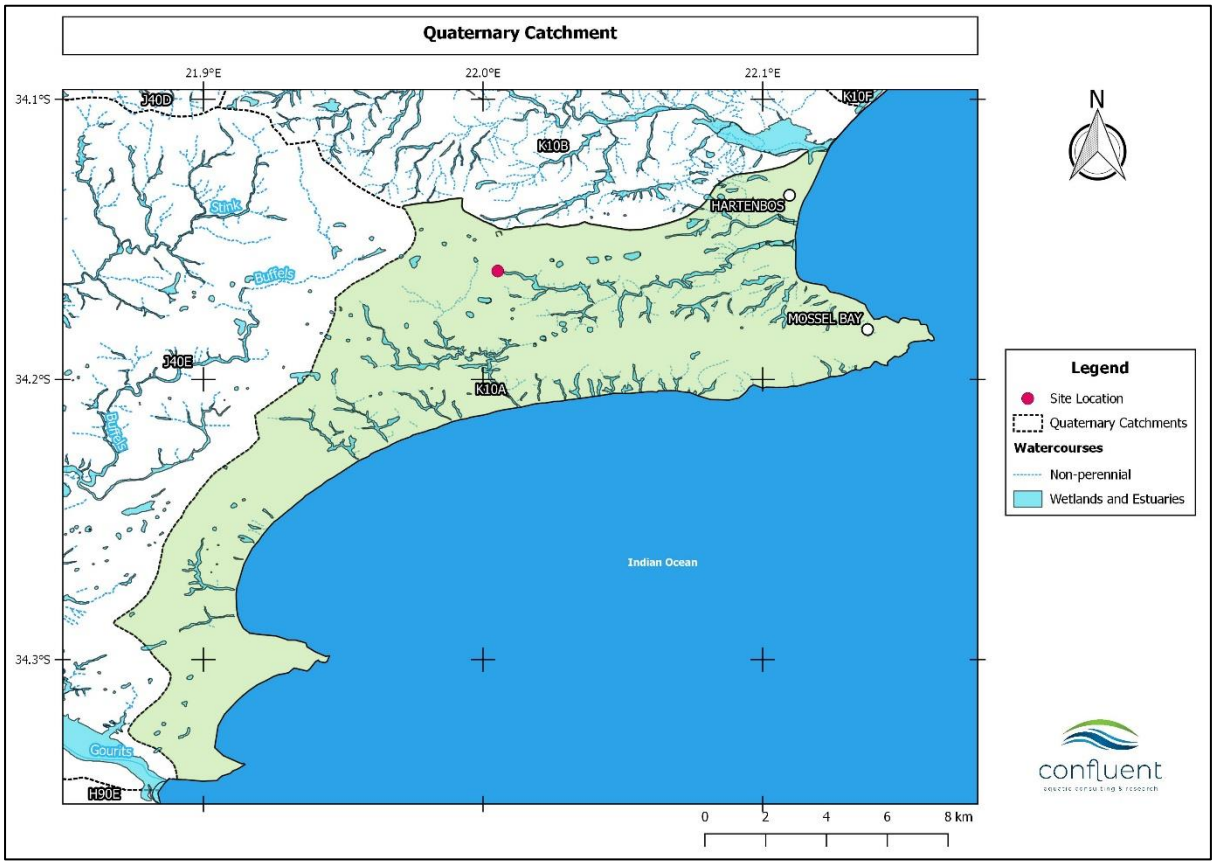

Figure 2: Map indicating the location of the proposed development relative to quaternary catchments.

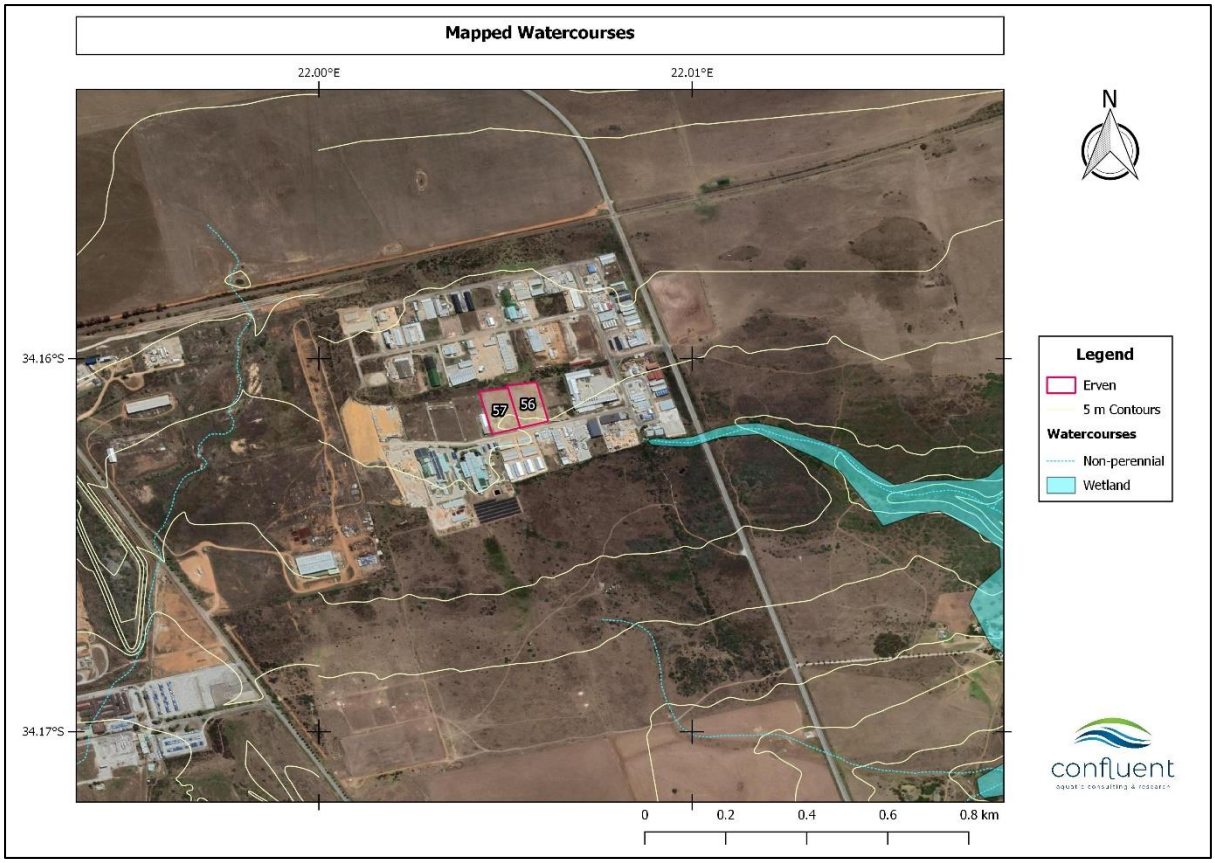

Figure 3: Location of the properties in relation to mapped freshwater features.

5.1 National Freshwater Ecosystem Priority Areas (NFEPA)

Aquatic biodiversity within the site has been identified as **Very High** on the basis that the site falls within a Freshwater Ecosystem Priority Area (FEPA). River FEPAs achieve biodiversity targets for river ecosystems and threatened/near-threatened fish species and were identified in rivers that are currently in a good condition (A or B ecological category). Their FEPA status indicated that they should remain in a good condition in order to contribute to national biodiversity goals and support sustainable use of water resources (Nel et al., 2011).

For river FEPAs, the whole sub-quaternary (or quinary) catchment is identified as a FEPA, although the FEPA status applies to the actual river reach within such a sub-quaternary catchment. The shading of the whole sub-quaternary catchment indicates that the surrounding land and catchment area needs to be managed in a way that maintains the good ecological condition of the river reach.

From the perspective of SQC 9292, the main unnamed river reach for which a FEPA status was assigned runs south of the Petro SA refinery into the Indian Ocean (Figure 4). This river originates from within the refinery and runs south towards the coast and the Indian Ocean.

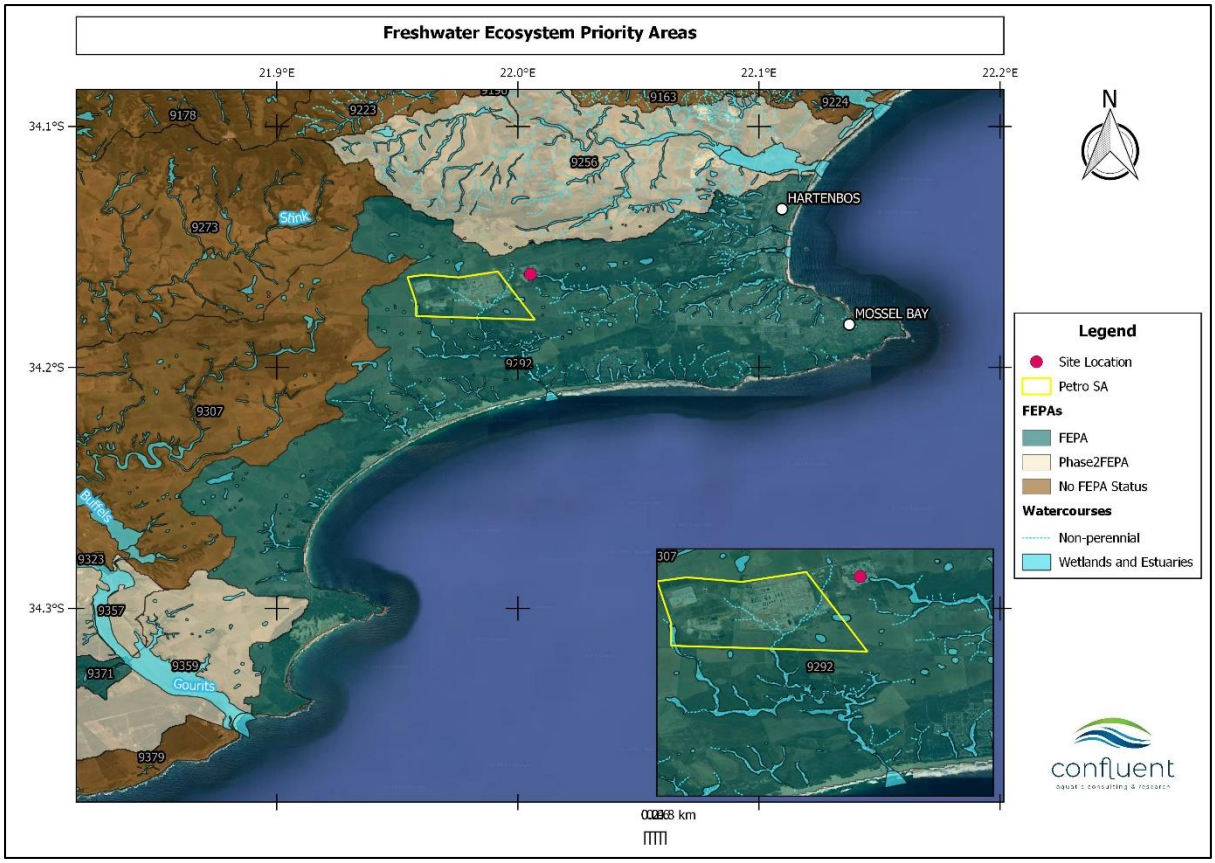

Figure 4: Location of site relative to FEPAs (inset shows the specific river reach for which FEPA status has been assigned).

5.2 Western Cape Biodiversity Spatial Plan

No aquatic biodiversity spatial planning units are indicated to occur within either of the property boundaries (Figure 5). There are therefore no management objectives relevant to aquatic biodiversity associated with either of the properties.

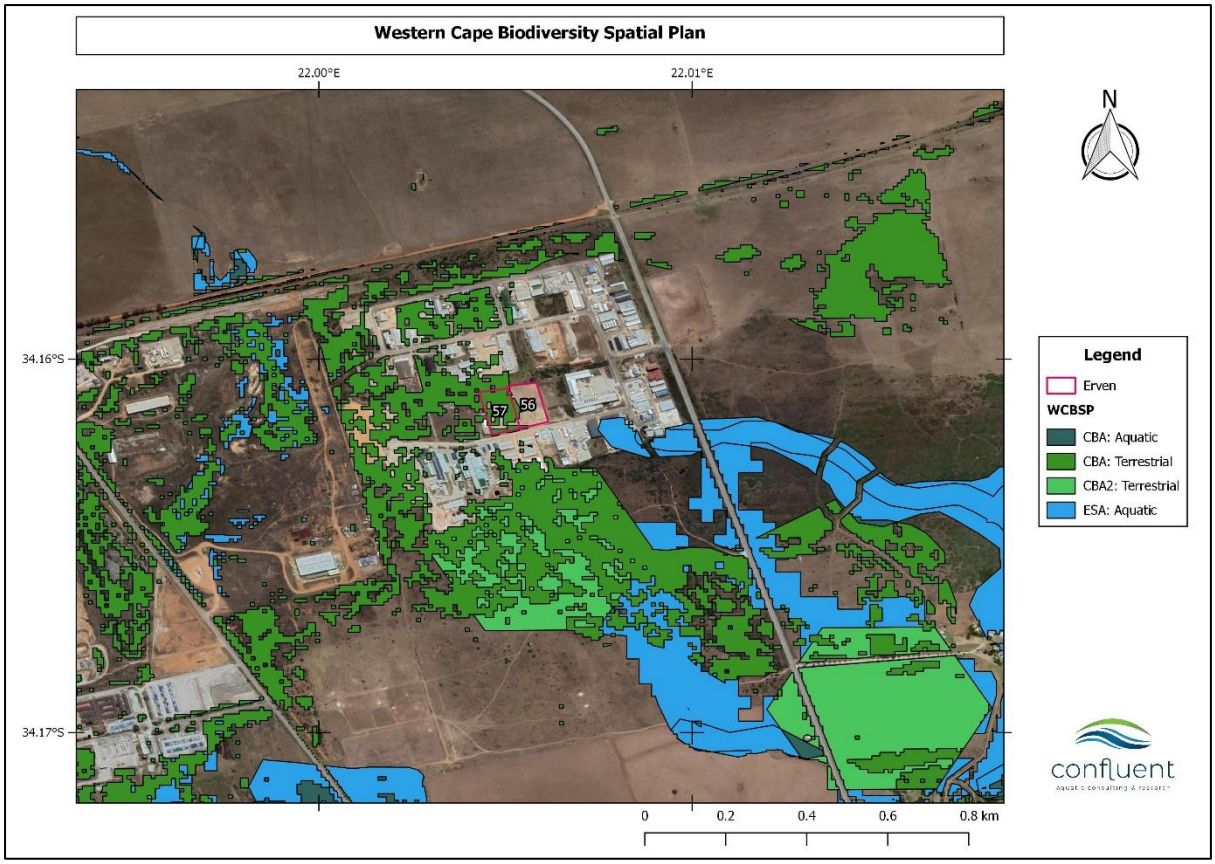

Figure 5: Map of the properties in relation to the Western Cape Biodiversity Spatial Plan (WCBSP)

6. SITE VISIT

A site visit was undertaken on the 15th of March 2023. During the visit, the entire property was traversed by foot. Both properties had been cleared of vegetation and graded to a very flat profile. Currently the entire site represents disturbed vegetation that is just starting to recover following the clearance of vegetation and grading of the site in late 2022. Recent rains had resulted in water pooling in a small, shallow depression on Erf 57. The presence of some isolated *Cyperus sp.* suggests that water may collect here fairly regularly. Formation of this depression is however likely to be associated with the clearing and grading of the site. The small depression was very sparsely vegetated and there was no indication of a well-established hydrophilic plant community indicative of permanent or seasonal water saturation. Soil was heavily compacted (augering of the soil profile was not possible) which presumably results in the periodic accumulation of water in the depression following rainfall. In addition, analysis of historical imagery found no evidence of the presence of any historical wetland features on site. The depression is therefore not considered to be a natural wetland or watercourse. There were no other topographical or vegetation indicators indicating the presence of a watercourse on either of the two properties.

In summary, no natural freshwater features were identified within the footprint of the property. The closest confirmed aquatic feature is mapped as a channelled valley-bottom wetland (located outside of the perimeter of the Mossdustria complex to the south-east), but given the very flat topography of the area (i.e. no associated valley slopes), the wetland area is more consistent with a drainage line that has developed wetland features due to inputs of stormwater derived from the industrial complex. This watercourse (which is not considered a

natural wetland) is located approximately 235 m away from the proposed development. The development is therefore located more than 100 m away from the watercourse and, according to GN509 (See Section 2.2), does not fall within the regulated area of a watercourse.

Figure 6: Photographs showing view of the site to the south (top left) and north (top right), the shallow depression filled with water following a period of heavy rainfall (bottom left and right).

7. AQUATIC BIODIVERSITY COMPLIANCE STATEMENT

Based on the results of the desktop review and the site survey, the sensitivity of aquatic biodiversity on erven 56 and 57 can be regarded as **Low**. The main factors influencing the statement include the following:

- No natural freshwater features were identified within the property boundaries or within close proximity to the site;
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In terms of the NWA, the proposed development falls outside of the regulated area of a watercourse and, according to GN509, does therefore not require any water use authorisation.

Given the isolation of the site from freshwater features, no additional mitigation measures, beyond the adequate management of stormwater generated from the site (during both the construction and operational phases) is required.

8. REFERENCES

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