
Proposed Residential Development on Portion 38 of Farm 136, Tergniet, Mossel Bay, Western Cape.

Aquatic Compliance Statement

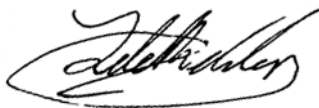


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DECLARATION OF SPECIALIST INDEPENDANCE

- 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: Mr. Franco de Ridder (MSc., Candidate Natural Scientist. (Aquatic Science – 166398)

Date: July 2025

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1. INTRODUCTION

Confluent Environmental was appointed by Digital Soils Africa to undertake a freshwater assessment for a proposed residential development on Portion 36 of Farm 136, Tergniet, Mossel Bay Local Municipality. This property is located approximately 500 m east of the coastal settlement of Tergniet and approximately 660 m south of the N2 highway. The property is divided into two sections by Impala Avenue. The closest perennial water resource is the Great Brak River estuary, approximately 2.4 km east of the property (Figure 1). The scope of work for this report is guided by the legislative requirements of the National Environmental Management Act (NEMA; Act 107 of 1998) and the National Water Act (NWA; Act 36 of 1998).

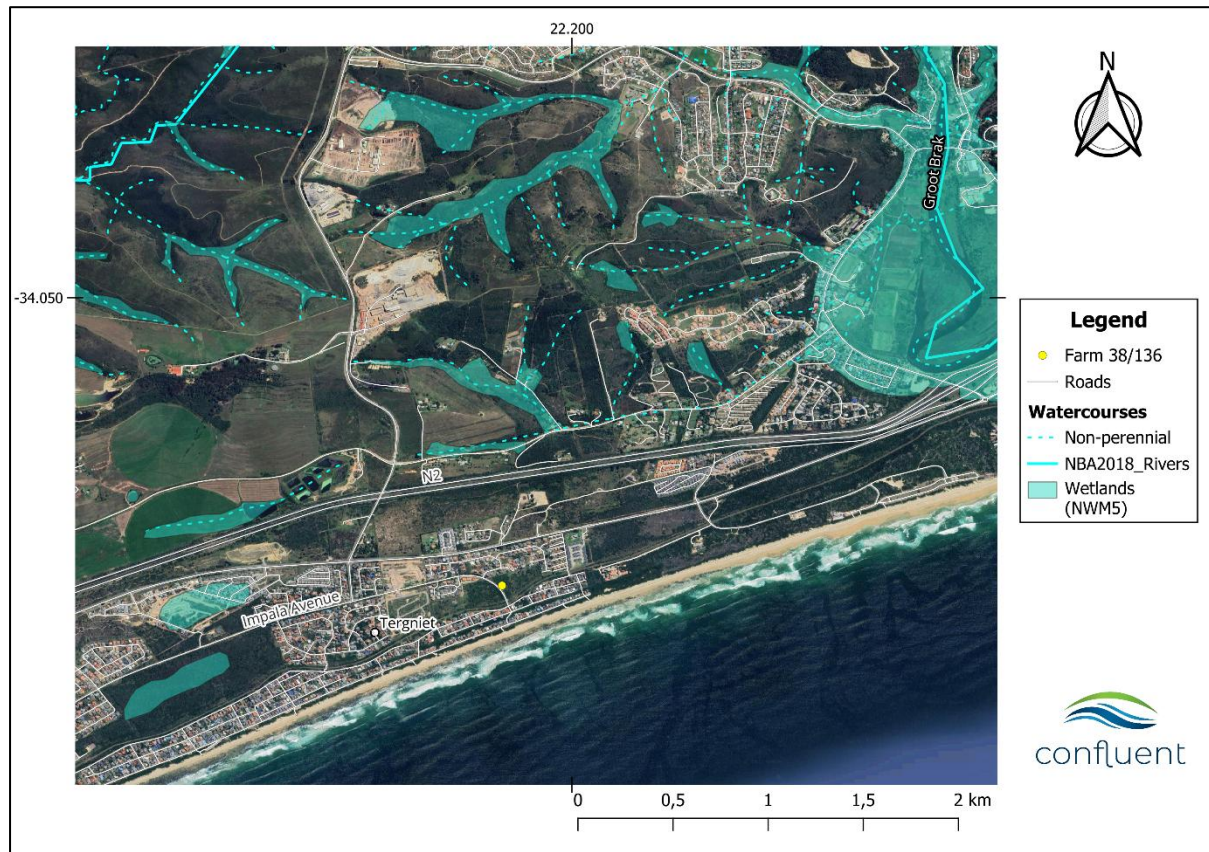


Figure 1: Location of Portion 36 of Farm 136, Tergniet, Mossel Bay, Western Cape.

1.1 National Environmental Management Act (NEMA)

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 **Low** aquatic biodiversity (fig). According to the protocol, a site sensitivity verification must be undertaken to confirm the sensitivity of the site as indicated by the screening tool.



Figure 2: Results of the DFFE Screening Tool, which indicate Low Sensitivity for the Aquatic Biodiversity theme for the Portion 36 of Farm 136

1.2 National Water Act (NWA)

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.

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 watercourse, and
- A reference to a watercourse includes, where relevant, its bed and banks.

For the purposes of this assessment, a wetland area is defined according to the NWA (Act No. 36 of 1998):

"Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which

land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil”.

Wetlands must therefore have one or more of the following attributes to meet the NWA wetland definition (DWAF, 2005):

- A high water table that results in the saturation at or near the surface, leading to anaerobic conditions developing in the top 50 cm of the soil;
- Wetland or hydromorphic soils that display characteristics resulting from prolonged saturation, i.e. mottling or grey soils; and
- The presence of, at least occasionally, hydrophilic plants, i.e. hydrophytes (water loving plants).

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 4167 of 2023) 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).

1.3 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.
- Determine whether any activities fall within the regulated area of a watercourse as defined by the NWA.

2. APPROACH

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

- In the event that watercourses are confirmed present within or adjacent to the development footprint and that these watercourses will be directly or indirectly impacted by the development, 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 or could be potentially affected by the development during any phase, 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) – the latest national wetland inventory map for South Africa;
 - 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 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).

3. ASSUMPTIONS & LIMITATIONS

- The assessment of the site visit represents a brief temporal snapshot of conditions on the site. Changes in season or short-term changes in climatic conditions may possibly result in the formation of aquatic habitats (e.g. temporary or seasonal wetlands) under significantly wetter conditions. Despite this limitation, the sensitivity of aquatic biodiversity on the site was determined with a very high level of confidence.

4. DESKTOP SURVEY

The site falls within quaternary catchment K10F (Figure 3). According to geospatial data sources, no watercourses are present adjacent or within either of the property's boundaries. (Figure 4). No aquatic features have been included in the Western Cape Biodiversity Spatial Plan (WCBSP) covering the property. A terrestrial Critical Biodiversity Area 1 (CBA 1 - terrestrial) is mapped to extend across the entire property (Figure 5). The 1m site contours indicate that the land generally slopes towards a depression on the western side of the

intersecting road which is where any expression of a natural watercourse would be expected to occur on the basis of the desktop assessment only (Figure 4).

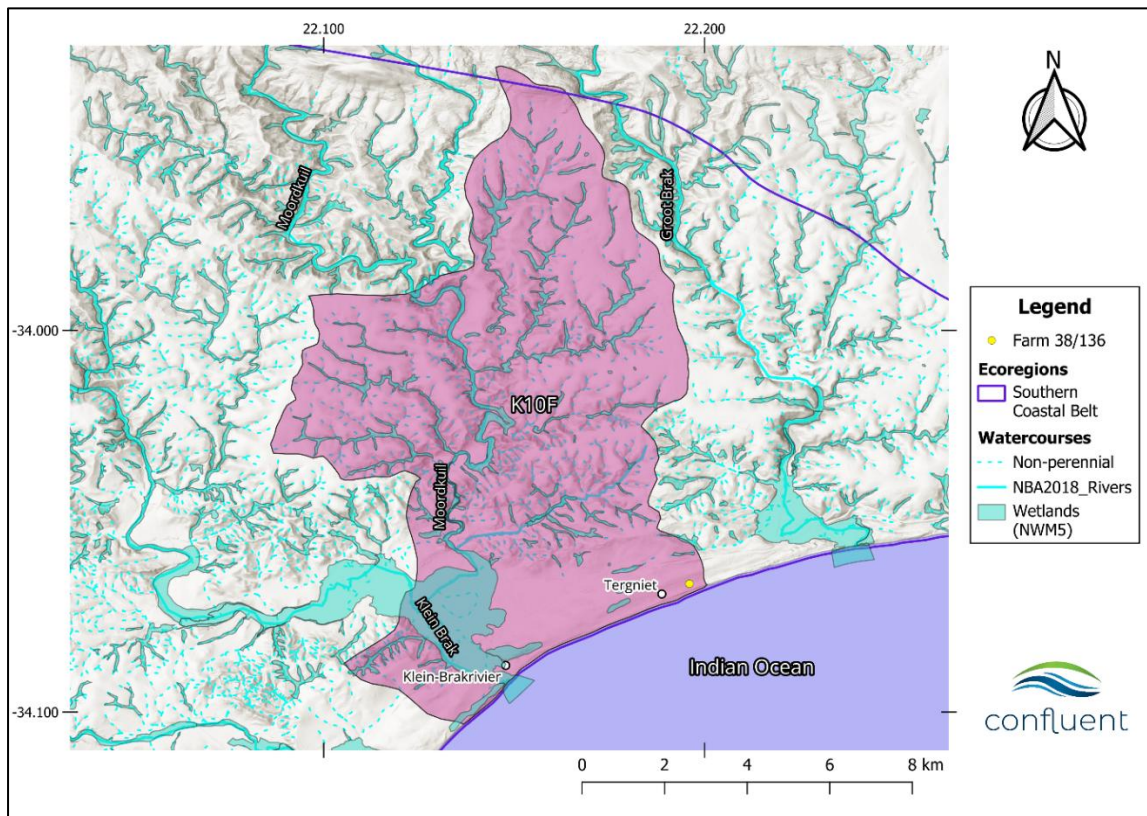




Figure 5: Map of the property relative to the Western Cape Biodiversity Spatial Plan (WCBSP, 2023).

5. SITE DEVELOPMENT PLAN

Two alternative site development plans (SDPs) have been considered for the development of Portion 38 of Farm 136. These include the latest layout (Option A), presented in Figure 6, and an earlier version (Option B), shown in Figure 7. Both SDPs cover the same total site area of approximately 5.96 ha (which excludes the area taken up by Robertson Road and the surrounding road reserve), divided into a western section (ca. 2.83 ha) and an eastern section (ca. 3.13 ha). Both SDPs propose residential development with associated services and infrastructure, but differ in their layout, unit types, and there are slight differences in the total disturbance footprints.



Figure 6: The site development plan (SDP) that has been proposed for Farm 38 / 136 prior to the completion of this report (Option A).

A comparison between the two SDPs indicates that Option A (Figure 6 above) results in a slightly smaller development footprint than Option B (Figure 7 below), particularly in terms of permanent infrastructure. Option A includes approximately 33 242 sqm of permanent structures (ca. 56% of the site), compared to 32,876 m² (55%) in Option B. Option B actually covers marginally less area compared to Option A. The earlier version, Option B, was initially designed before the finalisation of site sensitivity assessments. This layout was amended after a survey was conducted indicating the location of the majority of the protected trees on the Erf. The footprint of the old layout Option B has a slightly higher concentration of certain unit types (particularly Type 3).

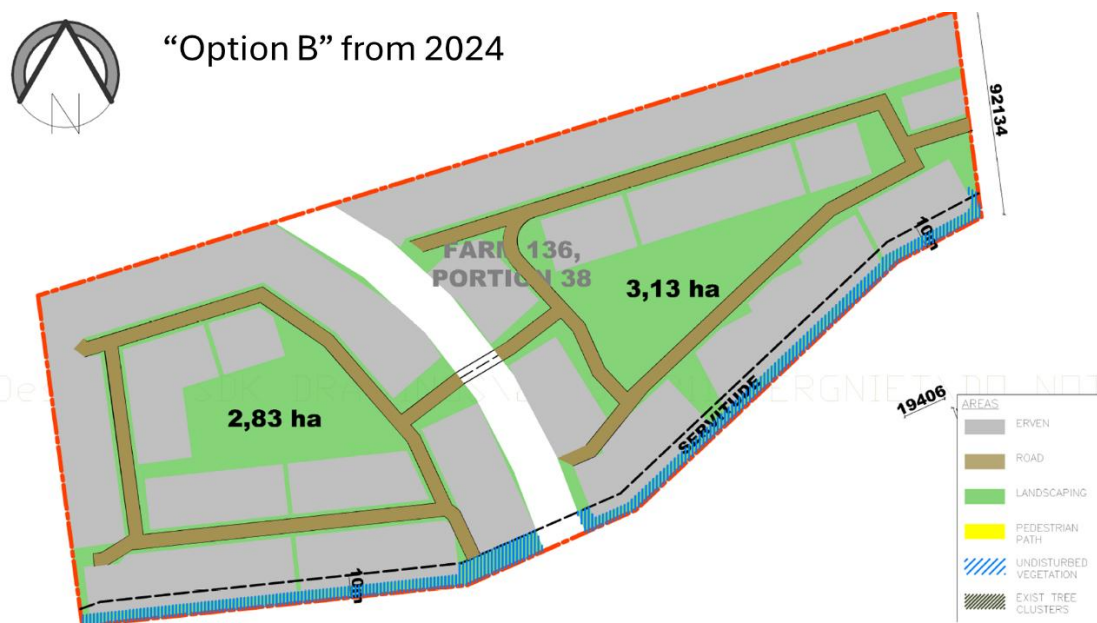


Figure 7: The site development plan (SDP) that has been proposed for Farm 38 / 136 prior to the completion of this report (Option B).

Option A includes a greater range of unit types, with the introduction of Type 4 units (3 792 sqm), which are absent in Option B. Both layouts include equivalent areas for stormwater ponds, pools, clubhouses, roads, and services, but Option A could be viewed as achieving a marginally more compact and spatially efficient design.

Post the submission of the first draft of this report, an additional, third alternative (Option C) has been proposed following recommendations in the terrestrial / botanical and faunal studies (Confluent Environmental). Option C is closely related to Option B; however, the total number of erven has been reduced by 11 units to add up to a total of 133 units instead of 144 units. The purpose of amending this layout was to create pockets of natural open space adjoining the pipeline servitude along the southern boundary (Option C; Figure 8). The intent is that these areas should remain in a natural condition with no landscaping and provide refuge for some of the remaining wildlife (birds, small mammals and invertebrates).

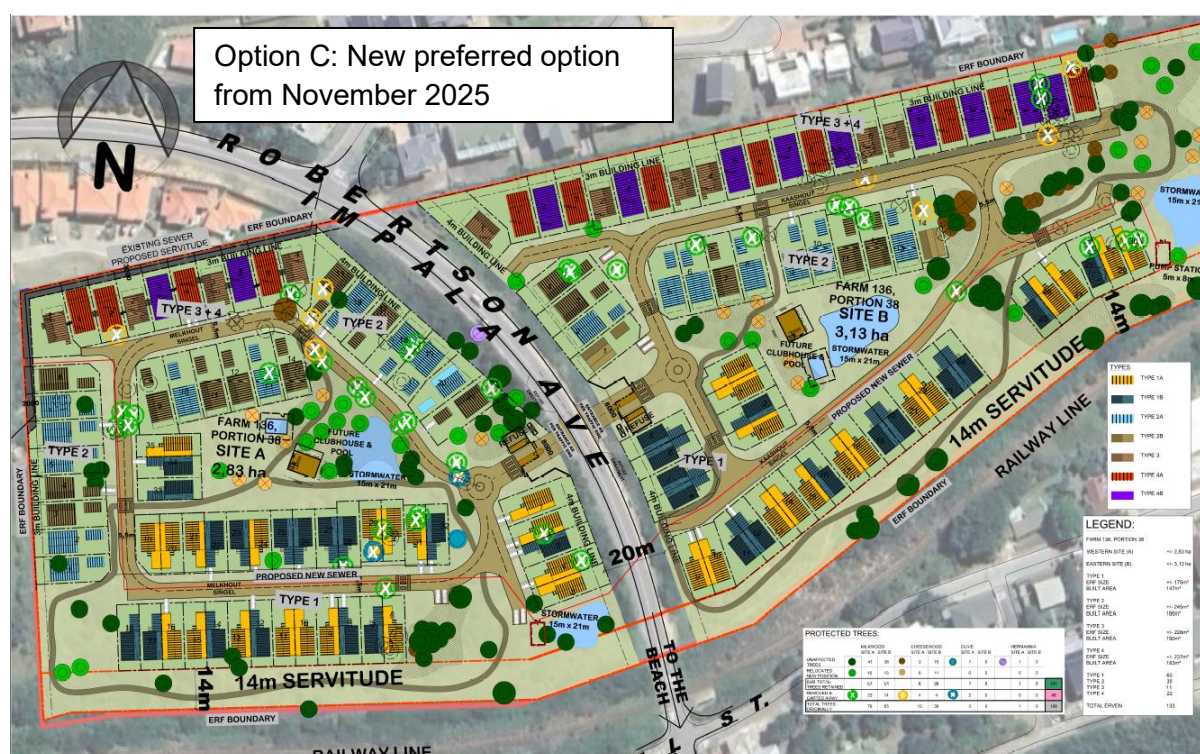


Figure 8: The site development plan (SDP) that has been proposed for Farm 38 / 136 post the completion of this report (Option C).

Note also that while protected and indigenous trees within open space within the development are retained in areas, these areas do not constitute natural habitats, as the site as a whole will be considered transformed under all the development scenarios. Therefore, although the direct physical footprint of hard surfaces, ponds, and related infrastructure accounts for only 55-56% of the property, the overall transformation of the ecosystem (vegetation type) of the site is effectively 100% under SDP Option A and B, while Option C preserves some additional natural habitat along the servitude.

Even so, the fact is that all options incorporate landscaped open areas within the design, which supports “soft landscapes.” These landscaped zones play a valuable role in enhancing water management on site by allowing water to be sequestered and absorbed within the landscape,

thereby contributing positively to the site's ecological functioning despite the overall transformation.

6. SITE VISIT

The site visit was conducted on the 13th of June 2025, during which time the entire extent of the proposed development footprint was traversed by foot (Figure 9). The terrain of the property is relatively flat, with the eastern side being flatter than the western side. The western side is very steep at the northern boundary, and the road embankment sloping down towards the property. Whereas the eastern side is only steep at the road embankment sloping down towards the property. Soil on the site is very sandy (Figure 10 A). The property is largely covered by indigenous vegetation with some invasives that included, but were not limited to Rooikraans (*Acacia cyclops*), Scottish thistle (*Cirsium vulgare*), Castor-oil plant (*Ricinus communis*) and kikuyu grass (*Cenchrus clandestinus*), mostly occurring adjacent to the road and in some areas adjacent to the northern developed areas within the eastern section of the property (Figure 10 B). Dominant plant species on the site include; *Searsia lucida*, *Carpobrotus* sp., *Sideroxylon inerme* (milkwood tree), *Grewia occidentalis*, *Osteospermum moniliferum* (Bietou), and *Diospyros dichrophylla* (Figure 10 C).

No hydro-geomorphological landscape features (depressions, confined valleys, channels etc.) indicating the presence of a watercourse (i.e. stream, river or wetland) are present within or near the property.

Two artificial wetland areas were observed, associated with stormwater and dominated by alien invasive Spanish reed (*Arundo donax*; Figure 10 D). Furthermore, both of these artificial wetlands are geographically separated from the property, as they are situated upslope of the property and will not be impacted by any activities taking place on the property.

It should be noted that stormwater management is an aspect that needs to be carefully considered, as the western section of the property is already receiving stormwater from the adjacent developments, north and west of the western section. Prominent erosion is present at a culvert outlet on the western boundary (Figure 9 and Figure 10 E and F), emphasising the need for a well-planned stormwater management plan for the development.



Figure 9: GPS track and important points in relation to the property.



Figure 10: Photographs of the property, including very sandy soil on the property (A), alien invasive Rooikraans adjacent to the road (B), typical vegetation on the property (C), an Artificial wetland (D), the culvert outlet (E) and erosion associated with the culvert pictured in E (F).

7. AQUATIC BIODIVERSITY COMPLIANCE STATEMENT

Given the information obtained from the desktop study and the observations during the site visit, the aquatic biodiversity sensitivity is verified as **Low** as no watercourse is present on the property. Neither is there any watercourse on adjacent properties that could be affected directly or indirectly by the proposed development, whether Option A or Option B layouts are approved.

In terms of legislation pertaining to the NWA, the development falls outside of the regulated area of any watercourses (Figure 11) and will therefore not require any water use authorisation in terms of **Section 21 (c) and (i)** of the NWA. Verification of Low sensitivity for the aquatic

biodiversity theme on this property means that a compliance statement in terms of NEMA is hereby provided in support of this development application.



Figure 11: Map indicating the 100 m and 500 m regulated areas relative to the property.

8. REFERENCES

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