
FRESHWATER COMPLIANCE STATEMENT

**Proposed housing development and possible road upgrade for Portion 209/220
Vyf-brakke-fontein, Mossel Bay**



Prepared for Cape EAPrac

by

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DECLARATION OF CONSULTANTS INDEPENDANCE

I consider myself bound to the rules and ethics of the South African Council for Natural Scientific Professions (SACNASP);

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- 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;
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- All the particulars furnished by me in this document are true and correct.



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1. INTRODUCTION

Confluent Environmental was appointed by Cape EAPrac to undertake a site verification for the proposed housing development on Portion 209/220 in Vyf-brakke-fontein, Mossel Bay (Figure 1). The Aalwyndal and Vyf-brakke-fontein areas have been identified by the Mossel Bay Municipality for high density residential development. The proposed development would consist of housing and an access road which is currently gravel would need to be upgraded to tar and widened to 8 m should this be required.

The site has been classified as having a **'Very High'** aquatic biodiversity sensitivity by the Department of Environment, Forestry and Fisheries (DFFE) screening tool.

The scope of work for this report is guided by the legislative requirements of the National Environmental Management Act (NEMA) and the National Water Act (NWA).

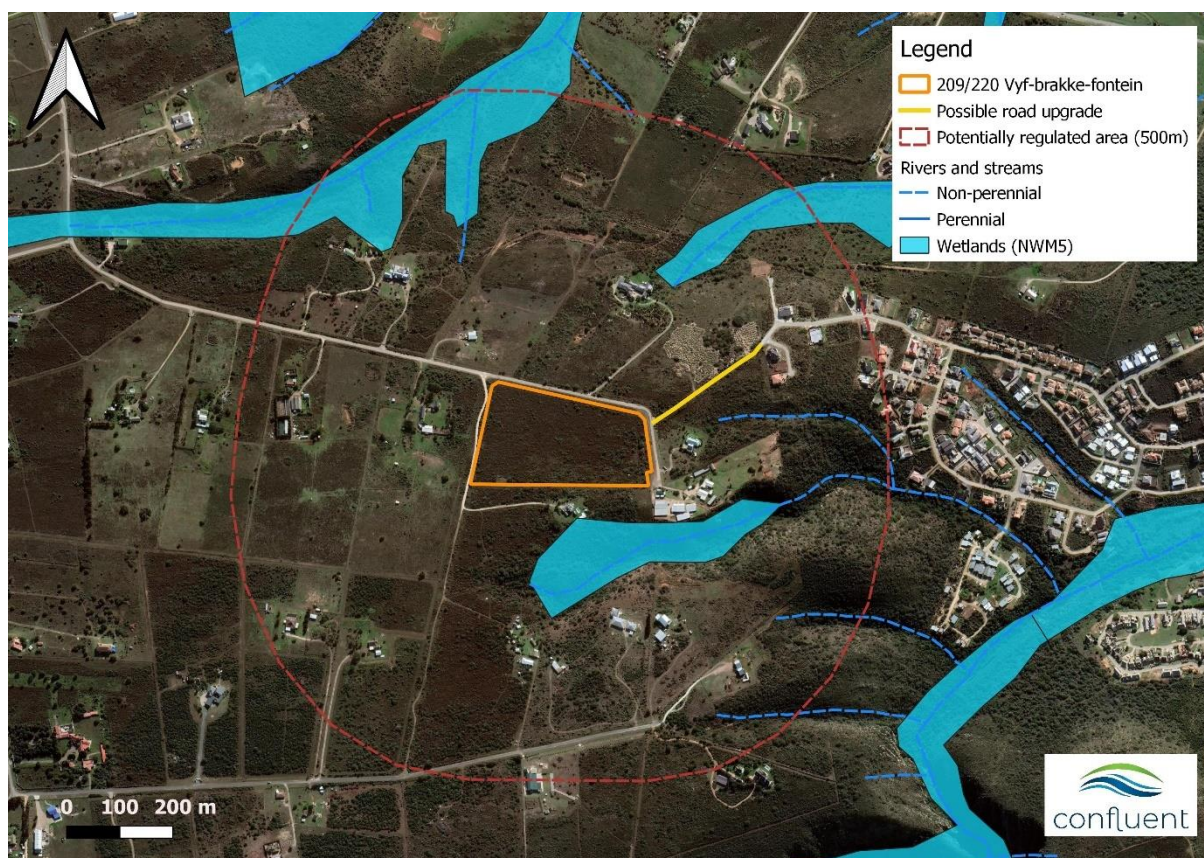


Figure 1: Proposed development site (housing and road upgrade) on 209/220 Vyf-brakke-fontein in relation to mapped watercourses within 500m.

1.1 National Environmental Management Act

According to the protocols specified in GN 320 (Protocol for the specialist assessment and minimum report content requirements for environmental impacts on aquatic biodiversity) of the National Environmental Management Act (NEMA; Act No. 107 of 1998), 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 as it is located in a Freshwater Ecosystem Priority Area (FEPA; Nel *et al.*, 2011). There are no mapped watercourses (wetlands, streams or drainage lines) within the footprint of the proposed development.

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.

1.2 National Water Act

In terms of the National Water Act (Act No. 36 of 1998) and according to Government Notice 509 (GN 509) of 2016, the definition of the regulated area of a watercourse includes the following potentially relevant classifications:

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

Mapped watercourses located within 500 m of the proposed development must therefore be further classified to determine whether the development would be taking place in the regulated area of a watercourse, which would require authorisation (either a General Authorisation or a Water Use License; Figure 1).

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.

1.4 Assumptions and exclusions

- The site was inspected on one occasion only, and therefore sensitive aquatic biodiversity features could have been missed that are seasonal or intermittent in

nature. To account for this, the site was extensively surveyed, and the desktop study included analysis of historical imagery.

- While national spatial layers such as the National Wetlands Map (V5) and the Department of Water and Sanitation 1:50 000 rivers map do not indicate any mapped watercourses at the site, these layers may be incorrect, and it was therefore assumed that watercourses could be present at the site until proven otherwise through the site inspection.

2. APPROACH

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

- In the event that unmapped 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 on 1 March 2022, 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).

3. DESKTOP SURVEY

The site falls within quaternary catchment **K10A**. The property is located on a watershed with watercourses draining north to the Tweekuilen River and estuary, or south to a small unnamed estuary that discharges next to the desalination plant. No freshwater features are mapped within the footprint of the property or within immediate proximity to the property (Figure 1). The closest watercourses are indicated as the valley-bottom wetland to the south of the property and the drainage line to the north-east of the property.

4. SITE VISIT

The site was visited on 1 March 2022 which is considered late summer. The area has experienced good rainfall prior to the site visit, therefore any aquatic features at the site would be expected to be fully evident. The entire site was inspected for evidence of a wetland, drainage line, or any other watercourse. Beginning on one end of the site, the site was systematically covered walking from left to right in zig-zag fashion up to the other end of the sites.

The area is in a natural state, being densely vegetated by a variety of fynbos species (Figure 2). Several Angulate tortoises were observed in fynbos vegetation at the proposed housing site during the site visit. A small culvert to the east of the proposed development site indicates a small volume of water potentially runs off the site at this point, but no channel or flow path could be identified. Watercourses in the vicinity of the development had well defined riparian vegetation in comparison to surrounding terrestrial vegetation.





Figure 2: Photographs showing aspects of the proposed development site, and watercourses that were inspected within the regulated area.

4.1 Watercourse Classification

The site itself is positioned on a plateau with very low topography. As it is almost flat with no catchment, there is little opportunity for significant runoff to accumulate or flow paths to form. Watercourses are in steep valleys draining from the upland areas towards the sea. Vegetation along all the watercourses inspected was typical of riparian vegetation along intermittent drainage lines. There was no water flowing in any of the watercourses inspected at the time of the site visit. All watercourses had typically steep, deeply incised channels making access difficult. Dominant vegetation consists of alien vegetation (primarily Rooikrans, *Acacia cyclops*) along with indigenous species such as *Dodonaea viscosa*, *Buddleja saligna*, *Osteospermum moniliferum*, and various *Searsia* spp. Whilst the streamside vegetation had a more robust growth form than surrounding terrestrial vegetation, it did not contain typical wetland vegetation species.

Therefore, watercourses within 500 m of the proposed development site are classified as drainage lines with intermittent flows (Ollis *et al.*, 2013).

This is in contradiction to the mapped classification of parts of watercourses which were mapped as wetlands in the NWM5 spatial layer but was confirmed during the site visit.

5. AQUATIC BIODIVERSITY COMPLIANCE STATEMENT

Based on the results of the desktop review and the site assessment, the sensitivity of aquatic biodiversity on Portion 209/220 can be regarded as **Low**. The main factors influencing the statement include the following:

- While the development is located in a FEPA, the specific development site has no watercourses within the footprint of the road or housing area;
- Freshwater features identified within 500 m of the site were classified as drainage lines and are unlikely to be impacted by the development in any way.

The proposed housing development and possible road upgrade would take place more than 32 m from the edge of watercourses, and outside of the riparian zone of watercourses. No triggered listed activities or water uses are therefore anticipated in terms of the NEMA or NWA respectively.

6. REFERENCES

Council for Scientific and Industrial Research (CSIR; 2018). National Wetland Map 5 and Confidence Map [Vector] 2018. Available from the Biodiversity GIS website, downloaded on 30 September 2020.

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