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Lornay Environmental Consulting  
Att: Michelle Naylor

## WETLAND DELINEATION, ERF 1486 VERMONT, OVERSTRAND MUNICIPALITY, WESTERN CAPE

### 1. Background

The owner of Erf 1486 Vermont, Mr Craig Saunders, proposes to develop the site for residential purposes (see Figure 1 for Site Location Plan). The owner has appointed Lornay Environmental Consulting ("Lornay") as the Environmental Assessment Practitioner (EAP) to manage the required environmental authorisation process. Historically two delineations of the extent of wetland habitat on the site have been undertaken, one in 2018 and another in 2024. The wetland delineations have been disputed by local environmental interest groups and accordingly Lornay has appointed EnviroSwift Western Cape ("EnviroSwift") to undertake a third delineation. In order to provide this input EnviroSwift conducted a site visit on 3 August 2025. This letter-format report outlines the methods taken to delineate the outer edge of the wetland temporary zone and presents the delineation.



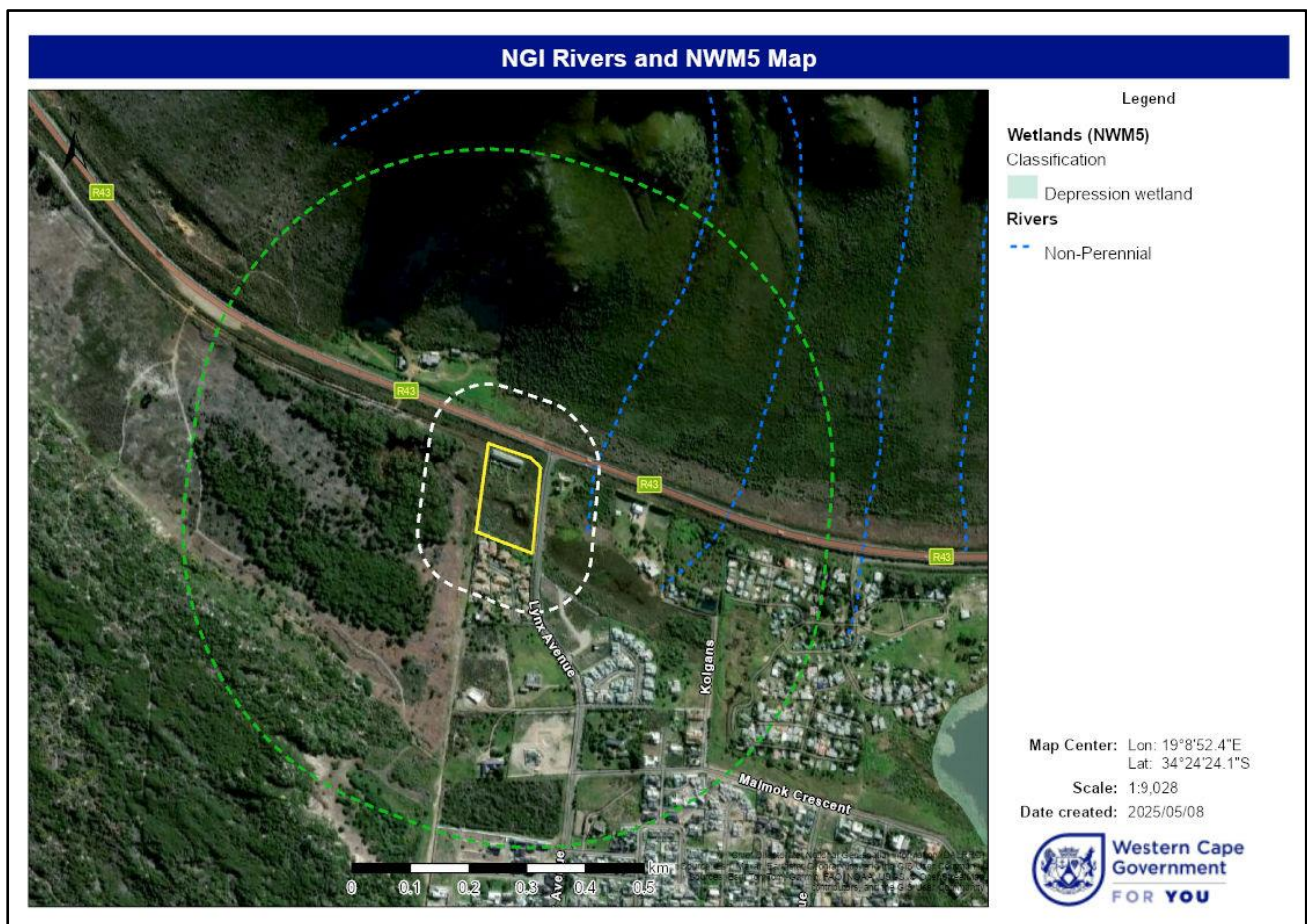
Figure 1: Location of the proposed site indicated as a yellow polygon.

## 2. Description of the proposed development

No details have been made available regarding the nature of the proposed development other than that it comprises the subdivision of the erf into smaller residential erven along the northern and southern boundaries of the site.

## 3. Regional freshwater ecological context and mapped watercourses within 500 m of the site

As background to the study the NGI Rivers database (available on Cape Farm Mapper) and the National Wetlands Map Vers. 5 (CSIR, 2018) were consulted to determine if any watercourses have been mapped within the site and within 500m of the site. Only two non-perennial drainage lines are indicated in the NGI Rivers database as occurring within 500m of the site, one approximately 100m to the west of the site and the other approximately 250m to the west of the site. No wetlands have been mapped to occur within the site or within 500m of the site. The most significant mapped freshwater feature is the Vermont Pan, a depression wetland, located approximately 700m to the west of the site.



**Figure 2: NGI Rivers and NWM5 Map.** The white stippled line indicates 100m from the property boundary and the green stippled line 500m from the property boundary.

## 4. Brief Site Description

The site is located on a coastal flat that lies seawards and to the south of the mountain above R43 which provides the backdrop to the site. The site is bordered by the R43 to the north, Lynx Road to the east, existing residential areas to the south and the Hoek van de Berg Protected Area (PA) to the west. The site contains a warehouse-type building which is mostly intact in the northern part of the site. The building is accessed by a gravel road leading off Lynx Road. Standing water is evident in the central parts of the site and the site is naturally vegetated, mostly by indigenous vegetation. Alien invasive vegetation is present in the form of isolated juvenile *Acacia saligna* (Port Jackson) and *Acacia cyclops* (Rooikrans) as alien clearing is evident and effective, albeit that follow-up clearing would still be required in future. Figure 3 presents a panoramic view across the site.





**Figure 3: Panoramic view of the site as seen from Lynx Road.**

## **5. Wetland Delineation Methodology**

A 'wetland' is 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.

Wetland habitat was identified with the use of the definition of 'wetland' provided above and the delineation took place according to the method supplied by DWAF (2005, updated 2008). Several indicators are prescribed in the watercourse delineation guideline to facilitate the delineation of either the temporary wetland zone or the drainage lines riparian zone.

Indicators used to determine the boundary of the wetland temporary zone include:

1. The position in the landscape;
2. The type of soil form;
3. The presence of wetland vegetation species; and
4. The presence of redoximorphic soil features, which are morphological signatures that appear in soils with prolonged periods of saturation.

A site visit was conducted on 3 August 2025. Wetlands were identified and delineated using the methods defined in the Updated Manual for Identification and Delineation of Wetlands (DWAF, 2008) and the Application of the DWAF 2008 method to wetland soils of Western Cape (Job, 2009). Delineation was undertaken by means of a handheld GPS.

Wetland soils in this region are known not to exhibit typical wetland soil indicators. Mottling is frequently absent due to a lack of iron in the soil. Terrestrial soils in this region tend to be of a low chroma falling within the 'gley' colour group, so 'gleying' cannot be used as a wetland indicator. Job (2009) identifies a high organic soil content (permanent zone), and dark, high carbon surface layers over low chroma sand (temporary zone) as alternative indicators, used in conjunction with the presence of wetland vegetation, as an alternative method for identification of the presence of wetland habitat.



**Figure 4. Soil auger from the terrestrial southern portion of the site showing low chroma sand in the gley colour group.**

Accordingly, the wetland delineation relied heavily on the presence of wetland vegetation and in particular species known to be associated with the wetland seasonal/temporary zones as the outer edge of this vegetation would indicate the outer edge of the wetland seasonal/temporary zones. The indigenous species occurring at the site used to inform the wetland delineation included the following:

- *Senecio halimifolius*, a terrestrial species known to inhabit seasonally wet soils;
- *Orphium frutescens*, a wetland indicator known to inhabit seasonally wet soils;
- *Stenotaphrum secundatum*, a wetland indicator known to be associated with the wetland temporary zone;
- *Elegia nuda*, a wetland indicator known to inhabit seasonally wet soils; and
- *Zantedeschia aethiopica*, a geophyte commonly associated with seasonally wet soils but also known to occur on sand dunes where there is limited soil saturation.





Figure 5: *Senecio halimifolius* seen growing along with *Typha capensis* which is an indicator of permanent levels of soil saturation.



Figure 6: *Orphium frutescens* occurring in the wetland seasonal zone.





**Figure 7: *Zantedeschia aethiopica* growing alongside a partially demolished wall near the existing building on the site.**

*Plecostachys serpyllifolia* was common in the parts of the site outside the wetland permanent zone which was indicated by *Juncus kraussii*, *Typha capensis* and *Phragmites australis*. *P. serpyllifolia* is also known to be associated with seasonally wet areas but also is an indicator of disturbance so the presence of this species on its own is insufficient evidence of wetland conditions.





Figure 9: *Plecostachys serpyllifolia* growing in the terrestrial part of the site, likely as a result of disturbance rather than wetland conditions.



Figure 9: *Juncus kraussii* growing within the wetland permanent zone.



## 6. Wetland Delineation

On the basis of the methodology described above, the outer boundary of the wetland temporary/seasonal zone was delineated. The delineation is presented in Figure 10.



Figure 10. Wetland Delineation (EnviroSwift, 2025).

## 7. Wetland Delineation Comparison

An overlay of the most recent delineation undertaken by Delta Ecologists (Pty) Ltd is shown in Figure 11. As can be seen there is no material difference between the two delineations and therefore EnviroSwift wholly supports the Delta delineation. Any minor discrepancy is due to the drawing tools used by the respective specialists with Delta presumably using GIS software and EnviroSwift using the drawing tool available on Cape Farm Mapper which results in the EnviroSwift delineation being more angular and possibly less accurate at a finer scale. This however is of no material significance as wetland delineation is not a precise science (see Wetland Delineation Methodology – Section 5).





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**References**

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- Department of Water Affairs and Forestry. 2008. Updated Manual for the Identification and Delineation of Wetlands and Riparian Areas, prepared by M. Rountree, A. L. Batchelor, J. MacKenzie and D. Hoare. Stream Flow Reduction Activities, Department of Water Affairs and Forestry, Pretoria, South Africa.
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