



4 November 2022

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South Africa

Dear Ciaran,

Specialist assessment letter for the Bellville site visit conducted on 2<sup>nd</sup> Nov 2022 prepared by J. Ndou and J. Dawson

Nemai Consulting contacted Anchor Environmental Consultants Pty (Ltd) to undertake a brief Wetland Specialist assessment of a the Belcon Terminal site located North East of the Cape Town International Airport, on the corner of Robert Sobukwe Road and Belcon Road, Bellville, Cape Town (Figure 1). The site visit was conducted by our Aquatic Specialist, Julia Ndou, on 2 November 2022. Despite the disturbance of the heavy rain from a thunderstorm, the specialist traversed the majority of the area in question to investigate vegetation types and conducted soil sampling using a sediment auger.



Figure 1. Location of the site within the greater Cape Town region.

We are of the opinion that the area in question is not a true representation of a natural and functional wetland ecosystem because of the following reasons:

### 1. Vegetation

Wetland plants are often referred to as hydrophytes because they are specially adapted to grow in saturated soils. Many bird, insect, and other wildlife species are completely dependent on wetlands for critical stages in their life cycles, while many other species make use of wetlands for feeding, resting, or other life activities. The grasses and plants observed on site are not typical of a wetland. In contrast there were plenty wattle trees (possibly *Vachellia saligna*) with a gall-forming rust fungus (*Uromycladium tepperianum*). These trees are alien invasive species (Figure 3).



Figure 2. Invasive wattle species photographed on site many of which were infected by a gall-forming rust fungus (*Uromycladium tepperianum*).

The reeds (*Phragmites australis*) and slender knotweeds (*Persicaria decipiens*) noted on the property likely grew overtime due to the presence of an underground stormwater system which may have not been maintained to avoid leaks or cracks (Figure 3). Therefore, an artificial wetland has become established. This is supported by the presence of small, isolated patches of greener grasses found elsewhere on site suggesting a point source introduction of water (Figure 4) and by the fact that the area is not marked as a wetland on the South African Inventory of Inland Aquatic Ecosystems (SAIIAE) National Wetland Map 5.2 (Figure 5). No other characteristic wetland vegetation species, such as sedges or cattail reeds (*Typha capensis*). Similarly, no frogs, dragonflies and characteristic wetland species were present.



Figure 3. Images of *Phragmites* beds (top) that has formed surrounding the stormwater drainage system (bottom).



Figure 4. Example of localised point source greening of grasses seen on site, likely due to a leaking pipe.



**Figure 5.** The location of the Belcon terminal site in relation to wetlands recognised wetlands mapped on the SAIIE National wetland map.

## 2. Soil

Hydric soils develop when chemical changes take place in the soil due to the low-oxygen conditions associated with prolonged water saturation. Following sampling with an auger it was seen that the soil was very sandy and dry (Figure 6). Unfortunately, due to the onset of heavy rain, the specialist could not fully complete the auger sampling, however not hydric soil was found in those samples completed. Additionally, the presence of numerous animal burrows seen on site, likely moles and/or snakes, is an indication that the soil is not as wet as a typical wetland, or these animal burrows would be flooded. (Figure 6).

## 3. Water

The amount of water present in a wetland can vary greatly. Some wetlands are permanently flooded, while others are only seasonally flooded but retain saturated soils throughout much of the unflooded period. Still other wetlands may rarely flood, but saturated soil conditions still are present long enough to support wetland-adapted plants and for hydric soil characteristics to develop. There was no presence of surface water, but that from stormwater drainage system.



Figure 6. Sediment samples taken using an Auger (right) and images of the sediment mounds formed by burrowing animals such as moles and/or snakes (left).

In conclusion, artificial wetlands are sometimes spontaneously created by a change in the landscape, for example next to roads due to increased run-off and in this case, possible leak from a stormwater drainage system. It is our opinion that despite the presence of Phragmites reeds, the absence of other characteristic wetland species suggests that this is a poorly functioning, artificial wetland, of low diversity, which has formed as a result of a water leak. It is still important to note that the South African government does take into consideration and does protect artificial wetlands. Therefore, it is important that the competent authority, the city of Cape Town Local Municipality, has the final say/decision about this artificial wetland's status and level of importance.

Yours Faithfully,

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