water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

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Tel: (012) 336-7500 Fax: (012) 323-4472 / (012) 326-2715

DRAFT WATER USE LICENCE APPLICATION SUMMARY

NAME OF APPLICANT:

Elephant Ventures Africa (Pty) Ltd

PROPOSED RESIDENTIAL DEVELOPMENT ON ERF 1486 VERMONT

Compiled by:
LOUISE SANTANA

Signature:

Date: May 2026

1. Applicant details

Name of applicant:
Elephant Ventures Africa cc
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2. Person submitting application:

Louise is the Managing Director of EnviroSwift KZN (Pty) Ltd. She has a BSc Honours degree in Botany from the University of Cape Town. She began working as an environmental specialist in 2012 and has since gained extensive experience in conducting aquatic assessment and in applying for Water Use Licences for the residential, mining and infrastructure development industries. Louise is a registered Professional Natural Scientist (Pr. Sci. Nat.) with the South African Council for Natural Scientific Professions (SACNASP, Reg. no. 114072).

3. Background and purpose

Extracted from: Final Basic Assessment Report, April 2026 (Lornay Environmental Consulting)

The proposed development on Erf 1486, Vermont, entails the establishment of a residential development comprising a total of 12 erven of mixed use. The final preferred design alternative, referred to as Alternative 3, has been refined through specialist input and public participation, resulting in a sustainable layout that balances residential needs with environmental considerations. This alternative involves the subdivision of the property into 9 residential erven, and 2 private roads, while designating a substantial portion of the site (wetland area) as open space for long term conservation.

The mitigation hierarchy has been applied during the impact assessment phase to minimize impacts on environmentally sensitive areas, specifically the wetland area, as informed by freshwater and botanical specialist studies, as well as comments received during the public participation process. The total development footprint will be restricted to 7105 m², with 7964 m² of the property preserved as open space through a conservation servitude.

4. Location of water uses

The proposed development site, Erf 1486, is located within the built-up suburb of Vermont, Hermanus, in the Western Cape. The site falls within the Overstrand Municipality's urban edge and

is adjacent to existing residential infrastructure to the south. The property exhibits a mosaic of both transformed (brownfield) and relatively intact (greenfield) areas, making it best described as a partially transformed site.

The site centroid is located at approximately **33°59'10.63"S; 18°30'6.98"E**, at an altitude of 18.3m above Mean Sea Level.

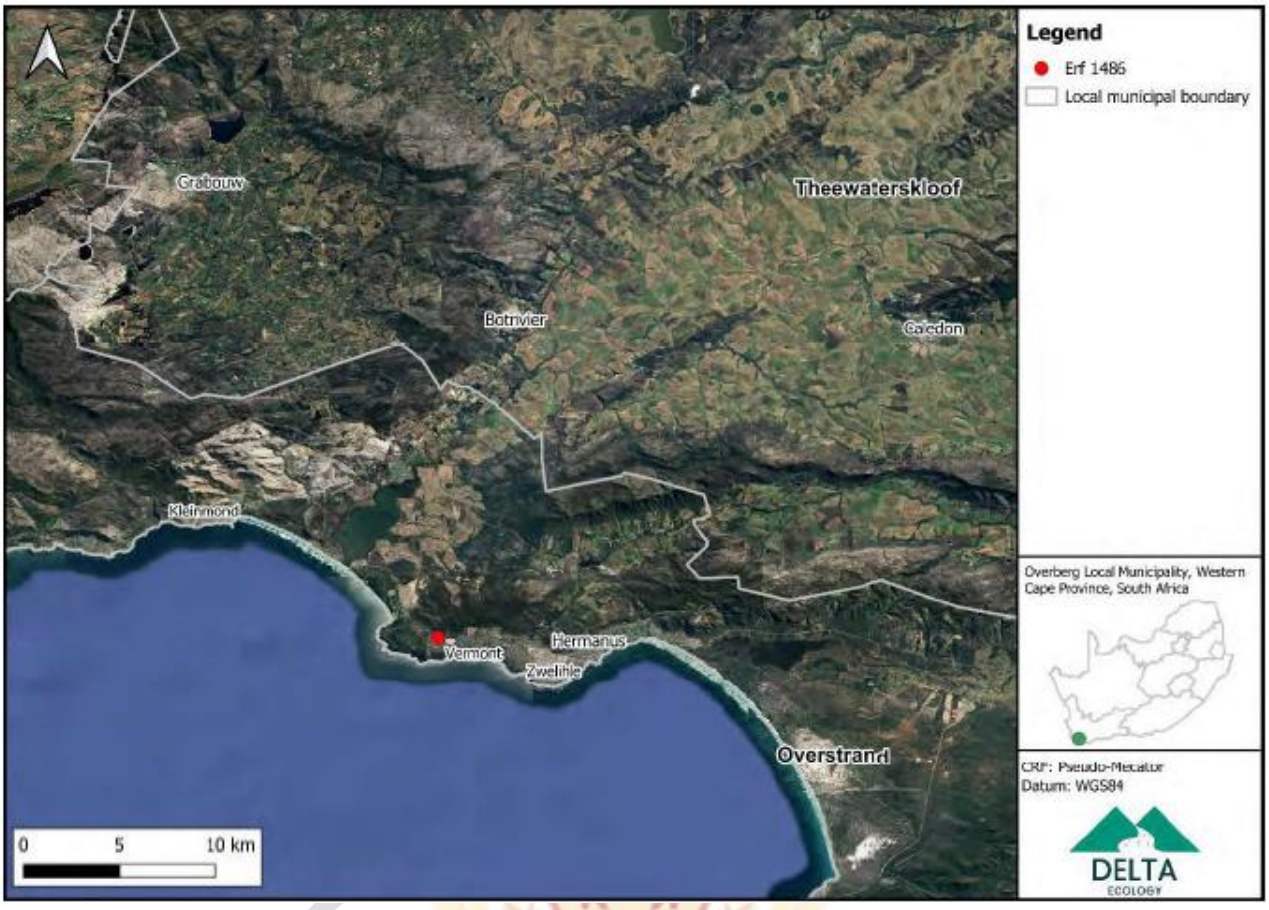

Figure 1: Regional locality map

Figure 2: Location of the proposed site, Erf 1486.

Table 1: Property details

Property description	Title Deed number	Owner
ERF 1486 Vermont	T18277/2017	Elephant Ventures Africa Pty (Ltd)

5. Administrative documents and technical reports submitted by applicants

5.1.1 Documents submitted as part of Phase 1

1. Copy of ID of Applicant
2. Company registration document
3. Title Deed
4. Proof of Payment
5. Delta Ecology Aquatic Biodiversity Impact Assessment (June, 2025)
6. Delta Ecology Wetland Offset, Rehabilitation and Management Plan

5.1.2. Documents submitted as part of Phase 3

1. TBC

6. Project Description:

6.1. General

Extracted from: Final Basic Assessment Report, April 2026 (Lornay Environmental Consulting)

The proposed development on Erf 1486, Vermont, entails the establishment of a residential development comprising a total of 12 erven of mixed use. The final preferred design alternative, referred to as Alternative 3, has been refined through specialist input and public participation, resulting in a sustainable layout that balances residential needs with environmental considerations. This alternative involves the subdivision of the property into 9 residential erven, and 2 private roads, while designating a substantial portion of the site (wetland area) as open space for long term conservation.

The mitigation hierarchy has been applied during the impact assessment phase to minimize impacts on environmentally sensitive areas, specifically the wetland area, as informed by freshwater and botanical specialist studies, as well as comments received during the public participation process. The total development footprint will be restricted to 7105 m², with 7964 m² of the property preserved as open space through a conservation servitude.

Components of the development:

Residential erven

- Consists of 9 residential erven.
- Total Area: ±4984 m²

Private Roads:

- Two internal private roads will provide access to the residential erven and will be connected to Lynx Road.
- Total Area: ±2123 m²
    - Erf 10: ~75m x 8m width including the road reserve (Approximately 607 m2)
    - Erf 11: ~180m x 8m width including the road reserve (Approximately 1373 m2)

Open Space:

- Total Area: ±7964 m²
- The designated open space includes the wetland area and surrounding buffer areas which will be retained to ensure ecological functioning and connectivity.

Associated Infrastructure:

Electricity Supply

Electrical services will be supplied via a connection to the existing municipal electricity network. The installation will be done in line with the requirements and specifications of the Overstrand Municipality.

Water Supply

- The development will connect to the existing Vermont reservoir distribution zone via a 200mm diameter pipeline in Lynx Avenue.

- The existing Vermont reservoir network has sufficient capacity to accommodate the proposed development's water demand, calculated at an Annual Average Daily Demand (AADD) of 5.4 kL/d for 9 single residential units and a fire flow of 15 L/s at 7 m pressure.
- The bulk supply system from the Preekstoel Water Treatment Plant (WTP) to the Vermont reservoirs has sufficient capacity.
- There is adequate reservoir storage capacity in the existing Vermont reservoirs.
- No network upgrades are required for the water reticulation system, confirming that the existing infrastructure can fully support the proposed development.

Sewer and Effluent Management

The proposed development will be connected to the municipal sewer system. Wastewater from all residential erven will be conveyed through:

- A existing sewer pipeline
- A specific section of the outfall sewer in Malmok Crescent and Kolgans street, will be upgraded from 110 mm to 160 mm to accommodate the increased effluent load.
- The Onrus Main PS and the downstream Hermanus Wastewater Treatment Plant (WWTP) have sufficient spare capacity to accommodate the sewage flow from the development.

Stormwater Management

Given the site's proximity to a delineated wetland, a Stormwater Management Plan has been developed to manage surface runoff effectively and mitigate impacts on the downstream wetland system. The site forms part of a larger hydrological catchment where runoff from Catchment Area 1 (CA1), located north of the R43, drains into Catchment Area 2 (CA2), which includes the development site and wetland.

Refer to key stormwater control measures in Section 8.

Table 2: A summary of the development footprint and infrastructure sizes is provided below.

Erf	Zoning	Land Use	% Seasonal Wetland on Residential Erven	Area
1	GR1	Single Residential	30%	600m²
2	GR1	Single Residential	19%	600m²
3	GR1	Single Residential	30%	600m²
4	GR1	Single Residential	30%	600m²
5	GR1	Single Residential	22%	600m²
6	GR1	Single Residential	26%	764m²
7	GR1	Town Housing	30%	450m²
8	GR1	Town Housing	29%	420m²
9	GR1	Town Housing	0%	350m²
10	OS3	Private Road	N/A	607m²
11	OS3	Private Road	N/A	1516m²
12	OS3	Private Open Space	N/A	7964m²
Total			**15%**	**15069m²**

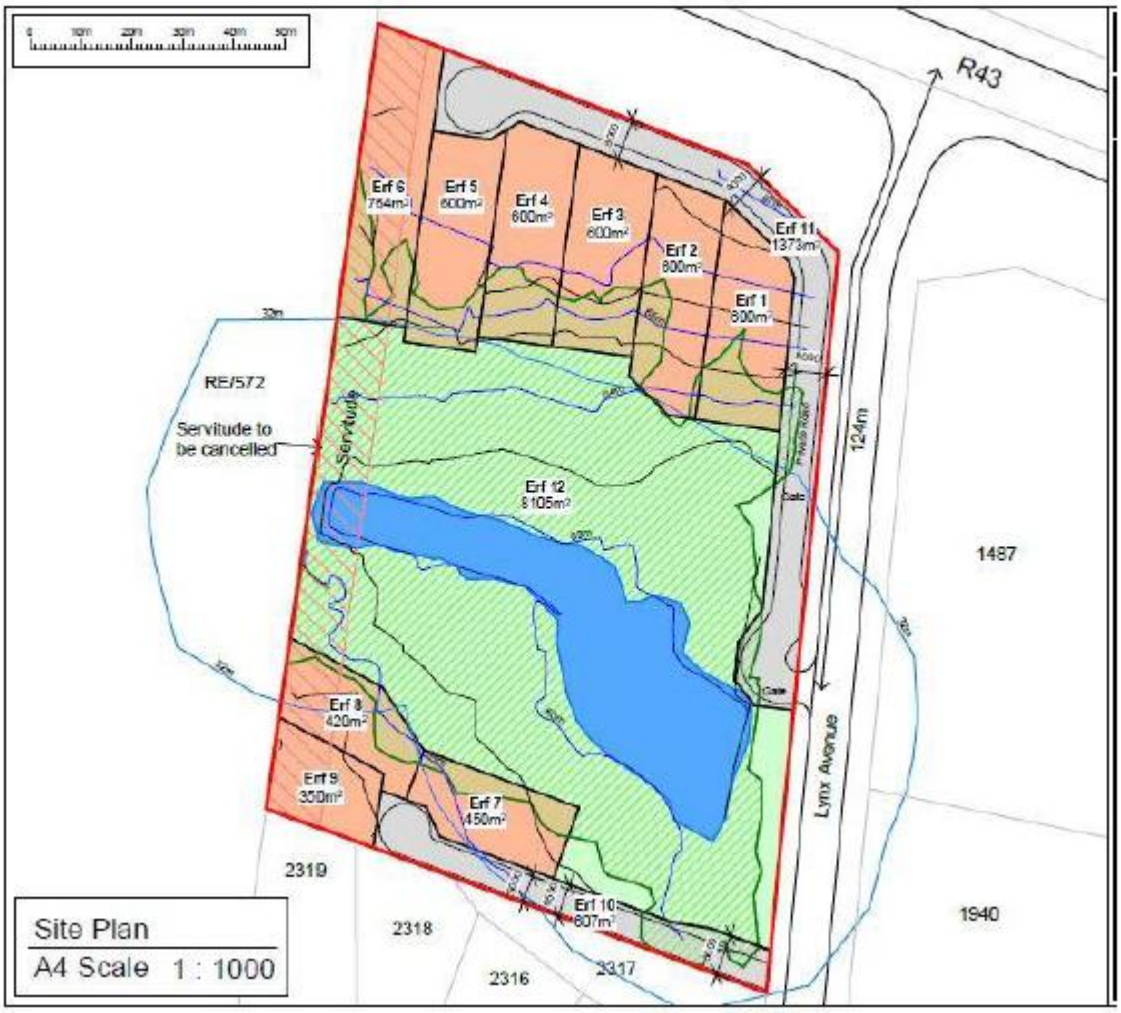

Figure 3: Site development plan

The above is the new preferred alternative (Alternative 3). The preferred layout alternative has been informed through freshwater specialist input and botanical input and the preferred alternative has evolved during the impact assessment phase where the mitigation hierarchy has been applied to avoid sensitive areas.

6.2. Aquatic Biodiversity Assessment

Extracted from: Delta Ecology Aquatic Biodiversity Impact Assessment (June 2025).

Wetland conditions are known to exist within the erf and were previously delineated by Job and Ratcliff (Freshwater Consulting Group, 2006), commissioned by the Overstrand Municipality. In 2018, Joshua Gericke conducted a freshwater screening assessment of the erf, to inform feasibility and layout of the current proposed project (EnviroSwift, 2018). Subsequently, the owner has decided to proceed with the Environmental Authorisation (EA) application process for the proposed project.

Following the aquatic biodiversity screening assessment of the proposed site by Joshua Gericke on the 17th of August 2018, a natural Unchanneled Valley-Bottom (UVB) wetland was confirmed and delineated on the erf (EnviroSwift, 2018). During a follow up site assessment by Gericke and van Zyl (Delta Ecology, 2023) on the 30th of May 2023, an updated delineation of the UVB wetland was determined (Figure i). The wetland had expanded slightly in the south eastern corner of the erf, possibly as a result of increased stormwater input in this area.

The wetland is part of a 1.4 km long wetland system that originates within the study area and ends at the Vermont Pan to the southeast (Figure 4). A depression has been excavated towards the centre of the erf, with an overflow pipe that crosses beneath Lynx Road and flows into the wetland on the far side thereby creating a hydrological link between the wetlands within the site and the greater wetland to the southeast. An additional stormwater outlet is found in the southeast corner of the erf, which discharges runoff from the neighbouring housing development into the wetland. The remainder of the 1.5 ha erf is extensively disturbed and characterised by a mixture of alien and indigenous vegetation.

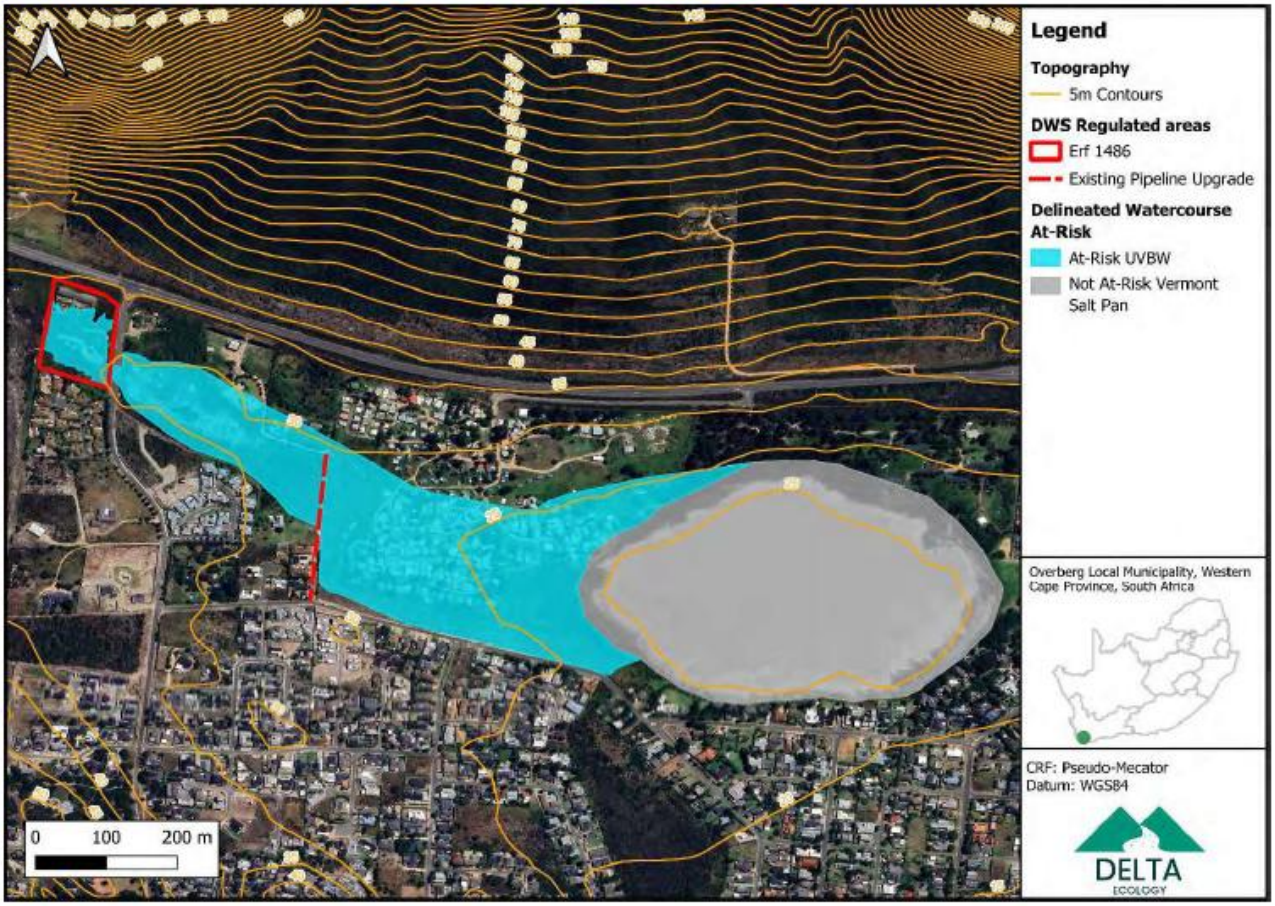

Figure 4: Delineated 'at risk' UVB wetland

In this impact assessment, the delineated at-risk UVB wetland (Figure i) was assessed using current best practice assessment methodologies to determine the Present Ecological State (PES), Ecological Importance and Sensitivity (EIS), Wetland Ecosystem Services (WES), and Recommended Ecological Category (REC) metrics. The results of these assessments are as follows:

Table 3: Results of wetland status quo assessment

	PES	EIS	WES (Highest)	REC
UVB Wetland	D	Moderate	Moderate	D-C

Although the condition of the UVB wetland was largely disturbed, the EIS and WES scores indicates that the wetland is moderately sensitive and important in terms of conservation planning or provision of ecosystem services.

Aquatic biodiversity impacts / risks associated with the development were identified and assessed using both an impact assessment methodology compliant with NEMA requirements and the Risk Assessment Matrix (RAM) prescribed by GN 4167 of 2023.

The potential aquatic biodiversity impacts for all three layout alternatives identified were assessed first without, and then with, the application of mitigation measures.

The potential impacts to the UVBW as a result of the proposed development are listed below:

Construction Phase

1. Areas of the onsite UVBW will be lost (i.e. complete loss in flow regime, water quality, vegetation, and geomorphic structure) as a result of the private road construction (Minor loss of approximately 0,024 ha (3 %) of the 0,90-ha wetland).
2. Habitat disturbance within the UVBW may occur due to the construction of residential housing and the upgrade of the sewer pipeline.
3. Alteration of the flow regime of the UVBW during construction of the residential housing.
4. Water quality impairment due to increased sediment input, potential spillage, or release of potentially contaminated runoff into the UVBW during construction of the residential housing and the upgrade of the sewer pipeline.

Operational Phase

5 Habitat disturbance due to the use of the wetland as a public open space; and any maintenance associated with the sewer pipeline.

6 Alteration of the flow regime of the UVBW once the housing development is complete, due to potential flow diversion / increase in storm flows.Five out of the seven post-mitigation scores fell within the “Low” impact categories for the preferred Alternative Layout 3. Wetland loss (during construction) and alteration of flow (during operational phase) received the highest impact significance score, which fell within the ‘Medium’ category, both prior and after mitigation measures.

7 Water quality impairment due to the release of potentially contaminated stormwater (hydrocarbons) into the UVBW; and potential leakage associated with the sewer pipeline and maintenance thereof.

All the potential impacts to the UVBW were the lowest (both prior and after the implementation of mitigation measures) for Alternative Layout 3. This layout is therefore preferred from an aquatic perspective, as it entails all proposed residential erven to be located outside the delineated permanent wetland area. Additionally, in this preferred layout although some portions of the erven extend slightly into the outer edge of the seasonal and temporary wetland zones, these portions will be designated as no-go areas and will be excluded from any development activities.

The proposed layout has gone through various iterations to ensure that the layout overlapping with the delineated wetland area is minimal. Ordinarily, wetland loss would fall within the ‘high’ category, but the minimal area of wetland to be lost (0,024 Ha) and the degraded nature of the wetland has reduced the impact significance.

The “no go” scenario was assessed and found to be of “Low” impact significance as this scenario would result in continuation of existing impacts to the wetland due to the within wetland disturbances and adjacent land uses. No indirect impacts were noted.

The outcome of the RAM prescribed by GN 4167 of 2023 found that wetland loss and alteration of flow were of a Medium Risk to the UVBW. In terms of the NWA (Act 36 of 1998) and its regulations, a full Water Use License Application (WULA) in terms of c and i water uses will be applicable to the development activities on the site.

It is recommended that an Aquatic Ecologist be consulted during the design of the residential dwellings and Town Housing unit, and an Environmental Control Officer (ECO) should be appointed during the construction of the Town Housing development in the south of the erf.

It is furthermore highlighted that a suitable Wetland Offset, Rehabilitation, and Management Plan will be required for the project in terms of the DWS 'no net loss' policy (Macfarlane et al, 2014). It is the opinion of the specialist that rehabilitating the remnant UVBW onsite will be a feasible and acceptable offset for the proposed development.

6.3. Wetland Offset and Rehabilitation

Extracted from: Delta Ecology Wetland Offset, Rehabilitation and Management Plan (October 2024)

The delineated wetland within the proposed development site covers approximately 0,90 ha of the 1,50-ha site, leaving 0,60 ha of terrestrial ground. Various iterations of the site layout for the proposed housing development have been considered (van Zyl et al. 2023, 2024), resulting in a reduction of the proposed development footprint, with the primary objective of decreasing the amount of wetland loss.

In the current preferred layout, a relatively small portion of the UVB wetland coincides with proposed eastern and southern boundary access roads, resulting in the loss of approximately 0,024 ha (3 %) of the 0,90-ha wetland. However, the total development footprint of the proposed residential development cannot be accommodated within the proposed site without some level of wetland encroachment. It was noted in the van Zyl et al. (2023, 2024) Aquatic Biodiversity Impact Assessment that a reduction in the development footprint could not be viably implemented, and no other form of mitigation is available that could reduce wetland encroachment entirely since the wetland covers much of the site. It was therefore concluded that despite full application of the mitigation hierarchy, some level of wetland loss (which has been reduced as far as practically possible) is unavoidable for this project.

The wetland area that will be lost given the construction of the proposed development was evaluated by application of the Macfarlane et al. (2016) wetland offset guidelines and calculator to determine the functional and habitat value thereof in a currency known as Hectare Equivalents (HE). Maximum wetland offset within the proposed development site was further identified and evaluated to determine the wetland value that could be gained through maximum onsite rehabilitation, and management effort.

The total wetland loss was valued at 0,0139 HE of function and 0,1323 HE of habitat. The maximum potential wetland gain from onsite offset activities was valued at 0,1214 HE of function and 1,3841 HE of habitat. This resulted in a surplus of 0,1075 HE of function and 1,2518 HE of wetland habitat. This will satisfy the habitat offset requirements.

The results of the offset calculations are presented in the table below.

Table 4: Offset balance table indicating net results of the onsite offset feasibility study

Offset Balance Table						
Wetland Name	**Area (ha)**		**Function (HE)**		**Habitat (HE)**	
	Losses	**Gains**	**Losses**	**Gains**	**Losses**	**Gains**
UVB Wetland (portion lost)	-0,0240	0,0000	-0,0139	0,0000	-0,1323	0,0000
UVB Wetland (remaining – rehabilitated)	0,0000	0,8760	0,0000	0,1214	0,0000	1,3841
Subtotal (HE)	-0,0240	0,8760	-0,0139	0,1214	-0,1323	1,3841
Balance (HE)	**0,8520**		**0,1075**		**1,2518**	

During the site assessment it was found that the identified offset wetland on Erf 1486 was in a largely modified state, largely due to the presence of foreign fill material and the presence of alien invasive vegetation. A detailed wetland rehabilitation plan was drafted to address these factors through the removal of foreign fill material, revegetation, and stormwater management, thereby achieving an increase in PES from category D to upper category C for the identified onsite offset wetland. A management plan was drafted thereafter to ensure that the gains achieved through rehabilitation are maintained or slowly increased.

This wetland offset, rehabilitation and management plan is practically implementable and will allow for the maximum onsite wetland offset possible without compromising the feasibility of the proposed development.

It is thus the opinion of the specialist that implementation of this plan would result in substantial biodiversity gains, and offset the loss incurred through construction and operation of the proposed development. It is therefore acceptable from a wetland and general biodiversity perspective to approve the proposed development with implementation of this offset, rehabilitation, and management plan as a condition of approval.

Figure 5: Onsite wetland offset area, relative to the wetland area to be lost / developed.

7. Methods statement (only for c and i activity) and mining method/ industrial process

Will be submitted as part of Phase 3 of the WULA

8. Stormwater Management Plan:

Extracted from: OWS Civils Stormwater Management Plan (February 2025):

Given the site's proximity to a delineated wetland, a Stormwater Management Plan has been developed to manage surface runoff effectively and mitigate impacts on the downstream wetland system. The site forms part of a larger hydrological catchment where runoff from Catchment Area 1 (CA1), located north of the R43, drains into Catchment Area 2 (CA2), which includes the development site and wetland.

The stormwater runoff from CA1 discharge towards CA2 and the wetland area through various stormwater culverts under the R43. One of these culverts discharge towards Erf 1486, Vermont and

should be controlled to protect the properties from flooding. The specific culvert is indicated as follows with a red circle:

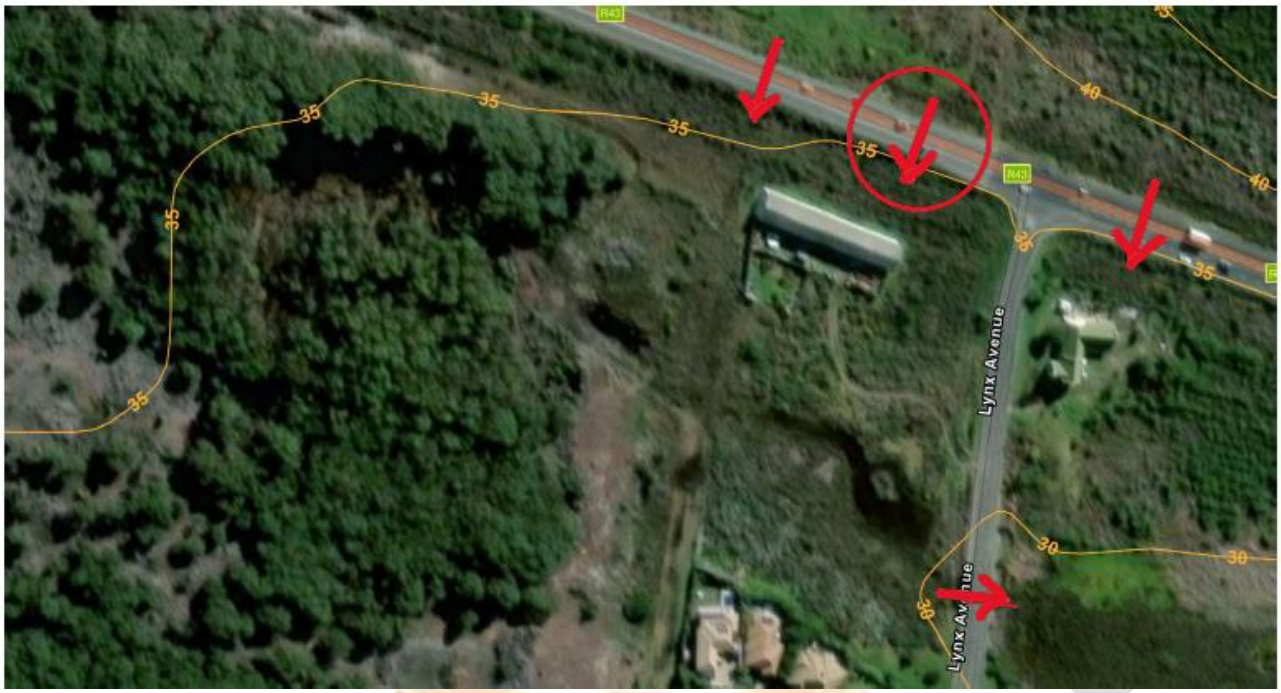

Figure 6: Culvert runoff to Erf 1486.

It is proposed that the stormwater runoff through the above 2 x 600mm dia. Pipe culvert be controlled by the provision of a channel or lined channel through Erf 1486, Vermont at the following position (indicated with red arrow in figure to follow):

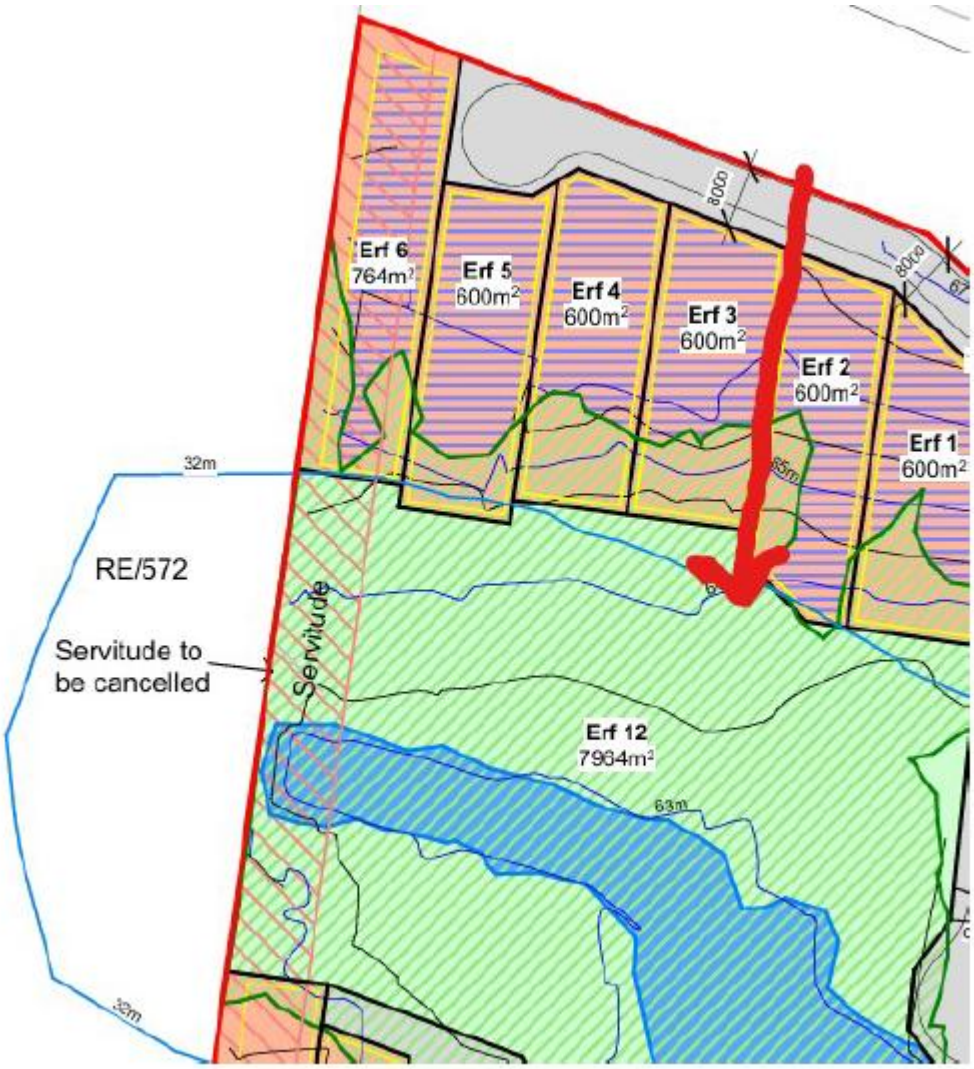

Figure 7: Position of proposed stormwater control through development.

The size of the pipe system or lined channel system is proposed to be as follows:

- 2 x 900mm dia. Pipes, OR
- 1.3m(b) x 0.7m(h) trapezoidal channel with 1:1 side slope

From this point, runoff from R43 culverts or trapezoidal lined channel will be directed through to permeable paving and enhanced swale into the wetland (natural attenuation area of ±10,000 m²). To manage stormwater in the proposed development Low Impact Development (LID) measures will be implemented:

Permeable Paving System (South of Wetland)

Designed to reduce surface runoff and promote infiltration:

- Surface Storage Depth: 50 mm
- Pavement Thickness: 80 mm
- Base Course Height: 400 mm (43% void ratio)
- Permeability (clogged): 360 mm/hr
- Outlet: 160 mm uPVC pipe
- Storage Volume: 140 m³

Enhanced Swale System (North of Wetland)

A vegetated swale to filter pollutants and slow runoff:

- Surface Storage Depth: 400 mm
- Swale Storage Depth: 750 mm
- Surface Slope: 0.5%
- Void Ratio: 0.43
- Vegetative Cover: 75%
- Conductivity: 120 mm/hr
- Storage Volume: 81 m³

9 Rehabilitation Plan:

Extracted from: Delta Ecology Wetland Offset Rehabilitation and Management Plan (April, 2025).

The vision for the identified onsite offset wetland is to improve and reinstate the range of wetland habitat and function to resemble semi-natural conditions and achieve the required increase in PES. Effective rehabilitation of the onsite offset wetland will require achieving the following objectives:

- Removal of dumped rubble and fill material within the wetland. Reshaping of the wetland specifically in the areas where infill has been removed to ensure very slight gradual decline towards the permanent zone.
- Removal of all Alien Invasive vegetation Species (AIS) from this offset wetland area such as Kikuyu grass (*Cenchrus clandestinum*), Pampas grass (*Cortaderia selloana*), Australian myrtle (*Leptospermum laevigatum*), sweet needlebush (*Hakea drupacea*), Port Jackson (*Acacia saligna*) and rooikrans (*Acacia cyclops*), as well as all planted garden species in the southwest corner of the Erf coinciding with the wetland.
- Establishment of a healthy and moderately diverse indigenous vegetation community within any areas that have been cleared (areas historically cleared of indigenous vegetation and cleared of AIS) as well as the areas where infill / rubble has been removed within the offset wetland area. Revegetate with indigenous wetland plant species based on the relevant species list
- Establish 80% total vegetation cover within the wetland system (except for open water as / where present);
- Appropriate stormwater, grey water and sewage management systems;
- Achieve a PES within upper category C.
- The onsite offset area is managed in accordance with this plan, such that the rehabilitated state is maintained in perpetuity.

Removal of fill material

Wetland infilling poses a direct threat to wetland habitat and function. Wetland infilling and the dumping of rubble and fill material buries hydric soils and causes aquatic habitat loss. Sections of the proposed development site has been historically impacted by infilling and currently contains foreign fill material.

To adequately restore wetland habitat and function, and to achieve PES targets, all foreign fill material (building rubble, fil material from dirt road etc.) must be removed from the onsite wetland prior to additional wetland rehabilitation interventions. The removal of infill must occur at the start of

Summer, and not during the Winter rain season to prevent downstream sedimentation or erosion in this area. The substrate in the remnant wetland area should consist only of natural soils.

It is recommended that care must be taken to avoid disturbance of intact natural wetland habitat during the removal of rubble and infill and that removal should be overseen by a suitably qualified contractor. After the removal it is recommended that an aquatic biodiversity specialist should inspect the site to ensure all fill material has been removed.

All foreign fill material must be appropriately disposed of at a designated waste facility offsite. No building rubble/cleared plant material may be dumped within a natural area or within 200 m of any onsite watercourse. Once the fill material is removed from the wetland, reshaping and reprofiling should be done in the disturbed areas to ensure the wetland profile is stable and well-integrated. Once completed all cleared areas must be revegetated with appropriate indigenous species

Appropriate Stormwater Management

Stormwater from the development will drain directly into the wetland, therefore appropriate stormwater management must be incorporated into development planning to ensure that the hydrology and water quality of the offset wetland is not negatively impacted by the proposed development. All stormwater management measures stipulated in the aquatic assessment report as well as the stormwater management plan for the development must be strictly implemented.

The proposed development will likely result in a slight increase in catchment hardening, potentially resulting in increased runoff and storm peak flows into the onsite wetland during both the construction and operational phases. Stormwater runoff may also contain contaminants, and as such, could result in potential water quality impairment.
The following mitigation measures should be incorporated into the stormwater management design and implementation:

- Discharge stormwater from rooftops into rain harvesting tanks. This will limit the volumes of stormwater runoff that will reach the wetland. Where possible, water collected in rain harvesting tanks can be utilised for flushing of toilets, washing etc.
- Vegetated swales must be utilised rather than concrete drains or underground stormwater pipes in order to encourage infiltration, particularly next to roadways.
- Energy dissipaters / erosion protection measures (such as lining with stones, grass, reno-mattresses, or gabions) must be constructed where stormwater is released in order to reduce the runoff velocity and therefore erosion.
- Sheet runoff from hardened surfaces must be intercepted and the treatment and infiltration of runoff must be promoted.
- Sediment traps should be incorporated into stormwater drains / swales upstream of all discharge points into the wetland.
- All stormwater draining into the wetland must receive basic filtering and treatment prior to its release.
- Incorporate measures into the stormwater design to trap solid waste, debris and sediment carried by stormwater. Measures may include the use of curb inlet drain grates and debris baskets/bags.
- Stormwater generated from areas with a higher risk of contamination such as parking areas and roads must receive basic filtering and treatment prior to its release into surrounding areas. Treatment methods may include sand filter traps and oil-water separators which will require maintenance.

- The extent of hardened surfaces must be minimised. E.g. where required permeable paving must be used.
- Homeowners must be encouraged to landscape their gardens with the use of indigenous species to decrease the area of hardened surface and increase infiltration.
- Homeowners should store any potential pollutants in such a way that pollution will not occur to the wetland (such as any fuel, etc.). Potential pollutants should be stored in an adequately bunded area.
- The use of herbicides, pesticides and any other poisons within private gardens must be strictly prohibited. The home owner's association must be responsible for ensuring that residents are compliant with this.
- Backwashing of swimming pools directly into the wetland must be strictly prohibited. Backwash water can be collected in settling tanks where dirt and debris settle to the bottom. The cleaner water can then be reused for non-potable purposes or even filtered back into the pool system. Backwash water can be diverted to greywater tanks.
- Monitor the proposed development and adjacent wetland for erosion and sedimentation after heavy rainfall events. Any erosion noted must be immediately addressed. Rehabilitation measures may include the removal of accumulated sediment by hand, filling of erosion gullies and rills, the stabilisation of gullies with silt fences, riprap, and the revegetation of stabilised areas.
- Stormwater systems will require ongoing maintenance. Any build-up of silt or debris within stormwater drains or swales will need to be cleared to ensure the continued functioning of the systems.
- Any damage to stormwater infrastructure, and any flaws identified in the functionality of stormwater infrastructure, must be rectified immediately.
- Stormwater systems must be monitored and maintained into perpetuity and collections of debris and solid waste removed from grates and baskets. The developer must confirm who will be responsible for this monitoring and maintenance as well as their roles.
- The stormwater system must be designed by a suitably qualified engineer with input from an aquatic specialist.

Removal of AIS

AIS within the offset wetland area include Kikuyu grass (*Cenchrus clandestinum*), Pampas grass (*Cortaderia selloana*), Australian myrtle (*Leptospermum laevigatum*), sweet needlebush (*Hakea drupacea)*, Port Jackson (*Acacia saligna*) and rooikrans (*Acacia cyclops*), as well as planted garden species in the southwest corner of the Erf.

The dominant AIS in the wetland area include Kikuyu grass (*Cenchrus clandestinum*), Pampas grass (*Cortaderia selloana*), Port Jackson (*Acacia saligna*) and rooikrans (*Acacia cyclops*).

Revegetation

Revegetation must be undertaken under the guidance of a suitably qualified landscaper / professional. Vegetation is a key component of the functioning of wetland systems and affects not only habitat quality but also geomorphology, hydrology, and water quality. Revegetation is thus essential for successful wetland rehabilitation.

Vegetation provides numerous functions that facilitate the formation and maintenance of healthy wetland systems:

- Vegetation reduces the risk of erosion and promotes sediment deposition by slowing the flow of water and holding soil together;
- Vegetation assists in improving water quality by increasing the ability of wetlands to assimilate phosphates, nitrates, and toxicants;
- Wetland vegetation provides habitat for wetland biota;
- Vegetation minimizes the impacts of catchment hardening by increasing surface roughness and therefore the capacity of the wetland to attenuate flow; and
- Established indigenous vegetation prevents the regrowth of AIS.

The identified onsite offset wetland is located within Vermont and although the area is surrounded by residential areas; there is connection to natural areas upstream and downstream. Therefore, natural recruitment of indigenous wetland plants into the offset wetland may take place, although slowly. Thus, active revegetation in the form of manual planting should be implemented to ensure that required restoration targets are effectively met. It is highly likely that establishment of natural vegetation at the scale of the proposed offset is economically feasible through planting.

The aim in terms of onsite offset wetland revegetation is to reach 80% total natural wetland vegetation cover within 8-12 months after revegetation interventions have been completed.

Species for Revegetation

The vegetation within the wetland portion located on Erf 1486 was moderately modified at the time of the site assessments. According to the Botanist appointed for the proposed project, at least one plant SoCC (*Disa hallackii*) may be present in low numbers (Nick Helme Botanical Surveys, 2023). Care must be taken to avoid any further indigenous vegetation disturbance during rehabilitation activities.

A list of indigenous wetland plant species which should be used for revegetation of the onsite offset wetland has subsequently been compiled (Table below). This species list was developed based on the wetland plant species identified within the Vermont salt pan which share the same wetland vegetation type as the onsite wetland, along with specialist knowledge of the wetland vegetation type. Additional plant species can be obtained from the appointed landscaper.

A minimum of six species from this species list must be introduced to the wetland. Species selection can be guided by availability provided that species from all hydrological zones are represented. It should further be noted that although *Typha Capensis* occurs naturally in the region, this species can become problematic and should not be used for revegetation purposes.

Wetland species should be planted in the correct hydrological zones (temporary, seasonal, permanent). The remnant UVB wetland within Erf 1486 exhibits permanent zonation in the central depression onsite and seasonal / temporary zonation around the central depression. Rapidly growing species that tend to stabilise soil are best for areas vulnerable to erosion.

Table 5: List of indigenous species that can be introduced to the offset wetland.

Family	Species	Status	General information	Wetland Plant Type	Hydrological Zone
Asteraceae	*Senecio halimifolius*	LC	Indigenous	Facultative wetland	Temporary
Cyperaceae	*Bolboschoenus maritimus*	LC	Indigenous	Obligate wetland	Permanent
Cyperaceae	*Cyperus textilis*	LC	Endemic	Obligate wetland	Permanent/seasonal
Cyperaceae	*Cyperus thunbergii*	LC	Endemic	Obligate wetland	Seasonal/temporary
Cyperaceae	*Hellmuthia membranaceae*	LC	Endemic	Facultative wetland	Permanent/seasonal
Cyperaceae	*Ficinia nodosa*	LC	Indigenous	Obligate wetland	Permanent/seasonal
Poaceae	*Pennisetum macrourum*	LC	Indigenous	Obligate wetland	Permanent/seasonal
Restionaceae	*Elegia capensis*	LC	Endemic	Obligate wetland	Permanent
Rosaceae	*Cliffortia strobilifera*	LC	Indigenous	Obligate wetland	Permanent/seasonal
Dennstaedtiaceae	**Pteridium aquilinum*	LC	Indigenous	Facultative wetland	Seasonal/temporary

*Can be used to stabilise soils. Can invade disturbed areas and therefore should be monitored.

10. Water Uses applied for

Table 6: Water Use Applied for.

Water use(s) activities	Purpose	Capacity/ Volume (m^3, tonnes and/or m^3/annum)/ dimension	Property Description	Co-ordinates (Estimated based on maps provided)
Section 21(a)				
N/A				
Section 21(b)				
N/A				
Section 21 c				
Residential development within 500m of a wetland	Development of 9 residential erven	4984m^2	Erf 1486 Vermont	Corner 1 34°24'21.57"S 19° 8'51.10"E Corner 2 34°24'22.56"S 19° 8'54.78"E Corner 3

Water use(s) activities	Purpose	Capacity/ Volume (m^3, tonnes and/or m^3/annum)/ dimension	Property Description	Co-ordinates (Estimated based on maps provided)
				34°24'26.95"S 19° 8'53.94"E Corner 4 34°24'25.91"S 19° 8'50.31"E
Development of an access road within a wetland	To provide access to the proposed residential erven	Total Area: ±2123 m^2 Erf 10: ~75m x 8m width including the road reserve (Approximately 607 m^2) Erf 11: ~180m x 8m width including the road reserve (Approximately 1373 m^2)	Erf 1486 Vermont	34°24'26.76"S 19° 8'53.33"E 34°24'25.04"S 19° 8'53.92"E 34°24'23.36"S 19° 8'54.26"E
Rehabilitation of UVB wetland	Rehabilitation of onsite wetland as an offset for wetland loss	0.8760 ha	Erf 1486 Vermont	Centre point 34°24'24.67"S 19° 8'52.52"E
Construction of a boundary fence	Security measures	Approx. 2m high	Erf 1486 Vermont	Corner 1 34°24'21.57"S 19° 8'51.10"E Corner 2 34°24'22.56"S 19° 8'54.78"E Corner 3 34°24'26.95"S 19° 8'53.94"E Corner 4 34°24'25.91"S 19° 8'50.31"E
Section 21(f)				
N/A				
Section 21(g)				
N/A				
Section 21(h)				
N/A				
Section 21 i				

Water use(s) activities	Purpose	Capacity/ Volume (m^3, tonnes and/or m^3/annum)/ dimension	Property Description	Co-ordinates (Estimated based on maps provided)
Residential development within 500m of a wetland	Development of 9 residential erven	4984m^2	Erf 1486 Vermont	Corner 1 34°24'21.57"S 19° 8'51.10"E Corner 2 34°24'22.56"S 19° 8'54.78"E Corner 3 34°24'26.95"S 19° 8'53.94"E Corner 4 34°24'25.91"S 19° 8'50.31"E
Development of an access road within a wetland	To provide access to the proposed residential erven	Total Area: ±2123 m² Erf 10: ~75m x 8m width including the road reserve (Approximately 607 m^2) Erf 11: ~180m x 8m width including the road reserve (Approximately 1373 m^2)	Erf 1486 Vermont	34°24'26.76"S 19° 8'53.33"E 34°24'25.04"S 19° 8'53.92"E 34°24'23.36"S 19° 8'54.26"E
Rehabilitation of UVB wetland	Rehabilitation of onsite wetland as an offset for wetland loss	0.8760 ha	Erf 1486 Vermont	Centre point 34°24'24.67"S 19° 8'52.52"E
Construction of a boundary fence	Security measures	Approx. 2m high	Erf 1486 Vermont	Corner 1 34°24'21.57"S 19° 8'51.10"E Corner 2 34°24'22.56"S 19° 8'54.78"E Corner 3 34°24'26.95"S 19° 8'53.94"E Corner 4

Water use(s) activities	Purpose	Capacity/ Volume (m^3, tonnes and/or m^3/annum)/ dimension	Property Description	Co-ordinates (Estimated based on maps provided)
				34°24'25.91"S 19° 8'50.31"E
Section 21(j)				
N/A				

11. Impacts and mitigation measures

The potential impacts and mitigation measures that are expected from the proposed activities are presented in Table 7 as listed within the Aquatic Biodiversity Assessment (Delta Ecology, 2025).

Table 7: Summary of impacts and mitigation measures

Water Use activity	Possible causes of the impacts of the activities Impacts to the water resources	Possible Impacts to the water resource and other water users	Mitigation Measures
Development of an access road within a wetland	Areas of the onsite UVBW will be lost (i.e. complete loss in flow regime, water quality, vegetation, and geomorphic structure) as a result of the private road construction.	Minor loss of approximately 0,024 ha (3 %) of the 0,90-ha wetland	None recommended – Loss cannot be mitigated. Offset is required

Residential development within 500m of a wetland Construction of a boundary fence through a wetland	Vegetation clearing and infilling	Habitat disturbance within the UVBW may occur due to the construction of residential housing and development of the fence	Designate the UVB wetland area as a No Go for construction activities (for both the residential development and the replacement / upgrade of the sewer pipeline). Clearly demarcate the construction footprint (including construction camp, access roads, stockpile areas and working servitudes) with orange hazard tape, fencing or similar prior to the commencement of any activity, and strictly prohibit the movement of construction vehicles and personnel outside of the demarcated areas. Locate site camps, laydown areas, stockpile areas, construction material, equipment storage areas, vehicle parking areas, bunded vehicle servicing areas and re-fuelling areas in designated areas of already hardened surface or disturbed areas located outside of the No Go area. These areas should preferably be located on level ground in a previously disturbed area of vegetation approved by the Environmental Control Officer (ECO). Cut and fill must be avoided where possible during the set-up of the construction site camp. Demarcation of the construction footprint/working servitude must be signed off by an ECO (or similar). Demarcation should not be removed until construction is complete, and rehabilitation (if applicable) has taken place. Limit access into the construction footprint to existing access roads. Prohibit the dumping of excavated material, building materials or removed vegetation within the No Go area. Building material must be stored at the designated storage area located outside of the no-go area. Spoil material must be appropriately disposed of at a registered waste disposal facility. Undisturbed topsoil and subsoils removed from the construction footprint must be stored separately at the designated stockpile area for future rehabilitation. Vegetation clearance should be restricted to the relevant development components and indigenous vegetation cover should be maintained as far as practically possible. Vegetation which is considered suitable for rehabilitation activities after construction (such as indigenous grasses and other herbaceous species) should be carefully removed from the construction footprint and stored at an appropriate facility for use in later rehabilitation activities. Clear and remove any rubble or litter that may have been accidentally deposited into the no-go area because of construction activities and dispose of at an appropriate registered facility. An ECO must inspect the construction footprint on a weekly basis and must take immediate measures to address unforeseen disturbances to the wetland. Any disturbed / compacted areas falling outside of the demarcated construction footprint must be immediately rehabilitated. Depending on the extent of damage the method of rehabilitation may require input from an aquatic specialist / suitably qualified contractor. Once construction has been completed, orange hazard fences as well as all construction waste, rubble, and equipment must be removed from the construction footprint. In line with the NEMBA, all AIPS listed under the amended AIPS Lists (DEFF: GN1003, 2020) must either be removed or controlled on land under the management of the proponent. An Offset, Rehabilitation and Management Plan must be drafted by a suitably qualified specialist. Rehabilitation must take place as soon as possible after construction is completed, and monitoring of rehabilitated areas must be undertaken. A suitably qualified professional must supervise the rehabilitation and monitoring activities.

Residential development within 500m of a wetland Construction of a boundary fence through a wetland	Site clearing, infilling and compaction. Increased stormwater runoff, velocity and increased flood peaks	Altered flow regime, erosion and sedimentation within the UVB wetland	Designate the wetland area as a No Go for construction activities (for both the residential development and the replacement / upgrade of the sewer pipeline). The status quo in terms of hydrological connection from Erf 1486 to the downstream system must be maintained / should not be impacted because of the proposed development. If possible, conduct construction activities of dwellings, associated stormwater infrastructure and any rehabilitation activities during summer months (November to March). Ensure that effective stormwater management measures are implemented during construction. Stormwater management must ensure that no runoff, which will impair the water quality and lead to increased sedimentation, may enter the downstream wetland area. Additionally, clean SW which does enter the downstream wetland system should do so in a manner that ensures no erosion occurs, specifically during storm events, such as through vegetated swales. Appropriately designed raft foundations for residential dwellings may significantly reduce the impact on subsurface flow and therefore reduce this impact / risk. Rainwater harvesting schemes may reduce runoff intensity and thereby mitigate the impact of catchment hardening. The alien invasive vegetation present within the wetland area must be removed and replanted with indigenous wetland vegetation. An Offset, Rehabilitation and Management Plan must be drafted by a suitably qualified specialist.
Residential development within 500m of a wetland Construction of a boundary fence through a wetland	Accidentally spilled cement, construction chemicals, and petrochemicals from construction vehicles may contaminate the UVB wetland. Litter and dumping due to proximity of the development to the wetland	Water quality impairment within the UVB wetland	Designate the wetland area as a No Go for construction activities (for both the residential development and the replacement / upgrade of the sewer pipeline). The site manager / ECO must check the No Go area for pollution/spills, erosion damage and sedimentation weekly and after every heavy rainfall event. Should pollution, erosion or sedimentation be noted, immediate corrective measures must be undertaken. Fuel, chemicals, and other hazardous substances should preferably be stored offsite, or as far away as possible from the no-go area. These substances must be stored in suitable secure weather-proof containers with impermeable and bunded floors to limit pilferage, spillage into the environment, flooding, or storm damage. Inspect all storage facilities, vehicles, and machinery daily for the early detection of deterioration or leaks and strictly prohibit the use of any vehicles or machinery from which leakage has been detected. Mixing and transferring of chemicals or hazardous substances must take place outside of the No Go area, and must take place on drip trays, shutter boards or other impermeable surfaces. Drip trays must be utilised at all fuel dispensing areas; and during the maintenance of existing sewer flow as possible. Vehicles and machinery should preferably be cleaned off site. Should cleaning be required on site it must only take place within designated areas outside of the No Go area and should only occur on bunded areas with a water/oil/grease separator. Dispose of used oils, wash water from cement and other pollutants at an appropriate licensed landfill site. Avoid the use of infill material or construction material with pollution / leaching potential. Where possible, in situ earthen materials must be used during construction to reduce the risk of leachate from imported materials contaminating the wetland area. Concrete should preferably be imported as "ready-mix" concrete from a local supplier. Should onsite concrete mixing be required it must not be done on exposed soils. Concrete must be mixed on an impermeable surface in an area of low environmental sensitivity identified by the ECO outside of the no-go area. Surplus or waste concrete must be sent back to the supplier who will dispose of it. Construct temporary bunds around areas where cement is to be cast in situ.

			Dispose of concrete and cement-related mortars in an environmental sensitive manner (can be toxic to aquatic life). Disposal of any of these waste materials into the No Go area is strictly prohibited. Washout must not be discharged into the no-go area. A washout area should be designated, and wash water should be treated on-site. Clean up any spillages immediately with the use of a chemical spill kit and dispose of contaminated material at an appropriately registered facility. Provide portable toilets where work is being undertaken (1 toilet per 10 workers). These toilets must be located within an area designated by the ECO outside of the no-go area and should preferably be located on level ground. Portable toilets must be regularly serviced and maintained. Provide an adequate number of bins on site and encourage construction personnel to dispose of their waste responsibly. Waste generated by construction personnel must be removed from the site and disposed of at a registered waste disposal facility on a weekly basis.

12. Water demand and water supply:

Extracted from letter received from GLS confirming service capacity (July 2024) (letter is included as a technical document):

Water demand

The original water analysis for the master plan was performed with a total annual average daily demand (AADD) for development on Erf 1468 (future area GH8.6 in the June 2021 master plan) of 22,6 kL/d.

For this re-analysis, the AADD and fire flows for the proposed development were calculated as follows:

- Single Residential units @ 0,6 kL/d/unit (1) = 5,4 kL/d
- Fire flow criteria (Low risk) = 15 L/s @ 7 m

Present situation

Network conveyance

The existing Vermont reservoir network has sufficient capacity to accommodate the proposed development on Erf 1468. The connection to the existing system can be done at the 200 Ø mm diameter pipeline in Lynx Avenue (East of the proposed development).

Bulk supply system

The existing bulk supply system from the Preekstoel Water Treatment Plant (WTP) to the Vermont reservoirs has sufficient capacity to accommodate the proposed development.

Reservoir capacity

There is sufficient reservoir storage capacity in the existing Vermont reservoirs to accommodate the proposed development.

Sewerage

The development on Erf 1486 should be accommodated within the existing Onrus Main pumping station (PS) drainage area. The proposed connection point to the sewer system is to the existing 110 Ø small bore sewer pipe in Lynx Road. The development is inside the sewer priority area.

Sewer flow

In the original sewer master plan, the peak day dry weather flow (PDDWF) for development on Erf 1468 was calculated at 17,3 kL/d.

For this re-analysis, the PDDWF for the proposed development was calculated as 3,8 kL/d.

Present situation

Gravity sewers

The existing 110 mm diameter small bore sewer system from Erf 1486 to Malmok Street, and the small section of 110 mm diameter small bore sewer system (that has not yet been upgraded to a 200 mm) in Malmok Street), have sufficient hydraulic spare capacity to accommodate the peak sewage flow from the proposed development.

Accommodation of the development on Erf 1486 on the existing small bore system is however not supported due to operational problems that are experienced with smaller diameter sewer systems, specifically frequent sewer blockages.

In the sewer master plan upgrading of the existing system in Malmok Street is proposed to accommodate potential future development areas within the upstream drainage area.

It is therefore proposed that the existing 110 mm diameter small bore sewer system from the proposed development to the existing 200 mm diameter outfall sewer in Malmok Street is upgraded to 160 mm diameter and 200 mm diameter outfall sewers, to accommodate the proposed development in the existing sewer system.

The existing Onrus Main PS drainage area in Vermont has sufficient capacity to accommodate the proposed development within the existing sewer system, except for a small section of a 110 mm Ø outfall sewer in Malmok Crescent that has not yet been upgraded to a 200 mm diameter pipe.

Pumping Stations
The proposed development gravitates to the Onrus Main PS from where sewage is pumped to the Hermanus Wastewater Treatment Plant (WWTP). The pump station has sufficient spare capacity to accommodate the proposed development.

13. Public participation:

Table 8: Outcome of the public participation

Person who commented	Comments (support or object)	Applicant's response to the objection
Petro Steere (09/04/2023)	Hi Michelle. My 3 main objections. 1. Properties 1 to 7 lie in the seasonal wetland- not acceptable. 2. I assume the thin blue line on the diagram is the 30m floodline. As I understand it, no building within this line. Only erf 3,4,5,6 and 9 fall outside this line	1. Comment regarding seasonal wetland is noted – the Alternative 3 – the new preferred alternative is now assessed and has been informed by specialist input. This alternative avoids sensitive areas to an acceptable impact level 2. Development within these areas require the applicant to undergo the Environmental Authorisation process, for decision can be taken by the competent authority. Note that the new preferred alternative, Alternative 3, now only contains 9 erven. Previously pref alternative layout 2 has 15 residential erven and the access road crossed the wetland alongside Lynx avenue.
Mary Ann Verster Hermanus Botanical Society (17/04/2023)	Seasonal/temporary Wetland areas The site plan for the preferred development proposal 2 refers to 12 residential units consisting of 7 single residential units and 5 townhouse units. The permanent wetland area is surrounded by 'private open space'. The construction of all residential erven will overlap with 'seasonal/temporary wetland' areas as indicated on the site plan. Erven 1 and 8 appear to overlap 100% with the seasonal wetland, erven 2 and 7 have extensive overlap and erven 3, 4, 5, and 6 have minor overlap.	This is noted

	It is very likely that the margins of the wetland areas on this site will extend beyond the margins currently identified on the site plan. There are two reasons for this. Firstly, the neighbouring private nature reserve, Hoek van die Berg, on the western boundary of the site, has a large infestation of Eucalyptus trees which are in the process of being cleared. These trees are well known as thirsty trees absorbing large quantities of water. With the removal of these trees on the neighbouring property there is likely to be considerable increase in water runoff into the wetland system. Secondly, one of the predicted consequences of climate change is an increase in the strength of storm systems which will result in increased runoff of rainwater from the mountains surrounding Onrus and Vermont. The permanent wetland area is very likely to expand into the areas currently indicated as seasonal. This does not appear to have been adequately anticipated or dealt with in the BAR.. The only mitigation mentioned is rainwater harvesting schemes to reduce intensity of increased runoff (pg 36 2) but there is no indication that this will be sufficient given the environmental context of the site, as indicated above. The consequences for the erven to be constructed on the seasonal wetland areas could be very serious. Management of the Wetland The long term development and management of the wetland as a positive consequence of the implementation of the preferred development proposal 2, is referred to in a number of places in the BAR. No details are given of the proposed plan for managing the wetland or who will be responsible for this so there is no way of determining its' likely effectiveness. On page 32 as an indication of the 'Consequence of impact or Risk' it is stated "Development in close proximity to wetland may pose risks to the wetland, however the status quo is much worse. Opportunity for rehabilitation". There is no explanation of what is meant by this statement, what the status quorepresents or how the rehabilitation is to be undertaken.	Home Owners Associated will be in place and they will be responsible for the long term conservation and management of the Wetland area. This will form part of the condition of approval, should it be granted.
Bernadette Osbourne (20/04/2023)	3.2. Activity description 3.2.1. Page 23 of the draft BAR indicates that rehabilitation of the wetland will be conducted. However, no details of what this will entail has been included in the activity description. 3.3.3. The Freshwater Report is inadequate and does not meet the requirements of the Protocols. The ecological status, the	The residential development will be gated and managed through a Homeowners Association. The Freshwater specialist will provide information relating to the rehabilitation and long-term management of the site. A Freshwater Impact Assessment has now been undertaken in line with the requirements and is attached to the Draft BAR. In addition, a Botanical /

	ecological importance and sensitivity of each watercourse has not been described in the Freshwater Report. Furthermore, the report does not include an assessment of the impacts on the watercourses as a result of the proposed development. 3.3.4. A Freshwater Impact Assessment Report that meets the requirements of the Protocols must be included in the BAR. 3.4. Confirmation is required whether there is peat present in the watercourse and whether peat will be removed as a result of the proposed development. This must be confirmed by the aquatic specialist and included in the BAR. If peat will be removed the relevant activity must be applied for and assessed. 3.8. Page 12 of the draft BAR indicates that the National Water Act is not applicable to the proposed development. However, wetlands are located on the proposed site. This section must be corrected. Furthermore, a comment from the relevant water authority must be included in the BAR. In terms of the Agreement for the One Environmental System (section 50A of the NEMA and sections 41(5) and 163A of the NWA) the processes for a WULA and	Terrestrial Impact Assessment has also been undertaken, this report also speaks to the Animal / Terrestrial theme. The findings of these reports have resulted in the evolution of the new preferred layout being Alternative 3. The Aquatic Biodiversity Impact Assessment Report indicated that peat is not present on the site. 3.8. Amended accordingly, NWA is applicable and the Risk Matrix has been completed along with the Freshwater Impact Assessment. BOCMA has provided comment – see below
Rhett Smart Cape Nature (24/04/2023)	A freshwater screening study was undertaken which included delineation of the wetland on site according to standard Department of Water and Sanitation methodology. A permanent wetland was delineated associated with historical excavations surrounded by a seasonal wetland. The full extent of the delineated wetland is only slightly less than the extent of the wetland delineated according to NFEPA. CapeNature has attended a site visit on two separate occasions (with the freshwater ecologist and land use scientists respectively) and there was confirmation that there is a wetland present on the site. The methodology for the delineation of the wetland undertaken in the freshwater screening study is supported, however we wish to note that the fieldwork was undertaken during a drought period. We wish to note that we have reported the absence of a wetland mapped for the property in the NBA to SANBI. The freshwater screening study functions as a freshwater constraints analysis in order to inform the design of the development proposal. Two development layout alternatives were developed of which Alternative 1 consists of residential erven across the entire site and Alternative 2 which	A Full Wetland / Aquatic Impact Assessment has been undertaken and further refines the preferred alternative. A Freshwater Impact Assessment has been undertaken and has resulted in the evolution of Alternative 3 – the new preferred alternative.

	has open space for the permanent wetland and a small buffer area and residential erven for the remainder of the site. Alternative 2 is an improvement on Alternative 1, however a number of erven still encroach within the delineated seasonal wetland. Neither of the two alternatives are considered acceptable based on the information available.	
	In accordance with the procedures for the assessment and minimum criteria for reporting on identified environmental themes, a freshwater ecology impact assessment must be undertaken following on from the freshwater screening study in order to assess the impact of the development proposal. The proposal should be further refined in order to avoid the delineated wetland and respond to the recommendations of the freshwater specialist. No details are provided regarding the proposed service provision for the development, which needs to be considered in terms of the impacts on biodiversity. Inadequate sewage provision in particular can impact on freshwater ecology. The road network also needs to be considered with regards to water flow. The mitigation hierarchy must be applied when considering mitigation measures.	The new preferred alternative (Alternative 3) removes the access road which cut the link of the wetland between the Lynx Avenue and Erf 1486.
	It is noted that Basic Assessment Report (BAR) indicates that the National Water Act is not applicable to the proposed development. The development is however proposed within a watercourse and therefore would require authorisation in terms of the National Water Act based on our interpretation (wetlands fall within the definition of a watercourse according to the National Water Act). In this regard, it must be ensured that the synchronisation of the NEMA and National Water Act processes takes place as referred to in point 11 of the generic text on page 3 of the BAR.	The new preferred alternative (Alternative 3) removes the access road which cut the link of the wetland between the Lynx Avenue and Erf 1486. Amended – A full Freshwater Impact Assessment has been conducted as well as a Risk Matrix, this will enable the specialist to apply for the appropriate licences and / or General Authorisations in line with the requirements of the National Water Act
Duncan Heard Vermont Ratepayers assoc (24/04/2023)	The Site Development Plan for this 15 078m2 erf, makes provision for the core wetland area to be conserved within a Private Open Space zone of 5 552m2 which is surrounded by 13 residential plots. It is therefore critical that as a condition of the Environmental Authorisation (EA), that the Environmental Management Programme forms part of the constitution of the future Homeowner's Association (HoA).	Noted
	The responsibility must be placed on the HoA to ensure that the conditions of the EA are implemented during the operational phase, and that:	These recommendations have been added to the Basic Assessment Report and EMP

	•the wetland is protected from negative ecological impacts ; •the wetland water quality entering and leaving the development should be monitored on a regular basis to detect any unnatural pollution; •the development has an environmentally friendly stormwater system with vegetated swales and polishing ponds to prevent/minimise pollution of the wetland; •all buildings have raft foundations; •uncovered paved areas must have permeable paving; and •there is strict control over domestic pets that could endanger wildlife in the wetland. The core wetland contains a deep-water area that was the result of an illegal excavation of the wetland many years ago. It may be necessary, as part of future rehabilitation management measures to alter the wetlands alignment, banks etc. to benefit the wetland ecology. For this reason, a Maintenance Management Plan may be advisable to avoid having to undertake further EIAs to implement these measures..	
Giorgio Lombardi (24/04/2023)	Wetlands are regarded as the most threatened ecosystem type in South Africa and therefore should be given the correct protection. Page 13 item 6 of the BAR states that "Only very limited areas on the property will be developed, open space retained". This is misleading as 65% of the area will be developed and only 35% retained. This erf is also being described as "largely transformed and impacted". This is untrue. In the proposed development, no provision is made for any buffering. A 30m buffer zone is mandatory. On the Site Plan, the majority of the erven are within the delineated "seasonal wetlands" zonation. For example (rough percentages): Erf 1 + 80%, Erf 2 +70%, Erf 3 +30%, Erf 4 +20%, Erf 5 +10%, Erf 6 +10%, Erf 7 +50%, Erf 8 a staggering 100%! This is certainly unacceptable given the threatened status of wetlands and associated areas. A wetland specialist must determine the following: present ecological state (PES), ecological importance and sensitivity (EIS) and threats to the wetland health.	A Freshwater Impact Assessment as well as a Botanical Impact Assessment have been undertaken and have resulted in the evolution of a new preferred Alternative – Alternative 3. The alternative sees a reduction in the number of erven, reduced encroachment into the erven, realignment of access roads to avoid the wetland area and sensitive botanical areas on site. A new preferred layout alternative has evolved in line with specialist impact assessment findings. Completed as part of Freshwater Impact Assessment.
Dr Pat Miller Tel: (028) 313-0093 Cell: 082 374-9729 Whale Coast Conservation's (24/04/2023)	On Page 23 of the BAR, Alternative 2 is stated as having been designed "with the wetland system in consideration" and providing an "opportunity to rehabilitate the wetland and provide long term management as well as facilitate connection with the	In response to the specialist impact assessment reports, a further alternative has evolved. The alternative takes into account the findings of both the Freshwater Impact Assessment and Botanical Impact Assessment and sess a reduction in the number of erven proposed, reduction in enrichment

	surrounding freshwater ecosystems." On the negative side, it will impact "a small area of delineated seasonal/temporary wetland area." This is untrue. Although the proposal places the planned housing around the wetland, this is because of the legislation protecting wetlands. The proposal gives no indication of any rehabilitation or management plans other than that they will be drawn up, nor of how it is planned to connect it with the larger wetland system of which it is a part. The impact on the (incorrectly – see below) delineated wetland will be much greater than is stated. In this regard it must be borne in mind that the predicted influence of climate change will be stronger storms, which will markedly increase runoff from the Onrus mountains and thus the area of the seasonal wetland. However, the BAR'streatment of this vital context of our environmental future (page 36) is cursory. It states merely that "The preferred alternative is set away from the delineated permanent wetland on site." All 12 of the residential stands are within the area of the seasonal/temporary wetland as defined in the Freshwater Screening Study (see below) to a greater or lesser extent (two in totality and a further two by at least half). 2. Wetland area delineation Crucial to any consideration of this proposal is an accurate assessment of the extent of the wetland on Erf 1486, as wetlands enjoy legislative protection. 2.1 Freshwater Screening Study (FSS) EnviroSwift prepared a Freshwater Screening Study (FSS) of Erf 1486 for Lornay Consulting in 2018. It refers to a 2006 study by Job and Ratcliff commissioned by the Overstrand Municipality (OM) that delineated wetland conditions known to exist on the erf and notes that this study is outdated and that wetland boundaries "do vary however with time". It does not mention however that wetland boundaries are also affected, sometimes profoundly, by surrounding environmental conditions. 2.1.1 Study area delimitation and implications The study area of the FSS was restricted to "the extent of Erf 1486", which has serious consequences for the accurate delineation of the wetland, as Erf 1486 is bordered "to the west by the Hoek van der (sic) Berg Private Nature Reserve". Inexplicably, it does not mention that this extensive piece of land was heavily infested up to this border by alien invasive vegetation (AIV), in particular large, mature eucalyptus trees, the extent of which is clearly shown on Figure 1	into the wetland area, avoidance of sensitive botanical areas and a realignment of access routes in order to reduce the impact on biodiversity. A full Freshwater Impact Assessment has been undertaken and has resulted in further refinement of the proposal and a new preferred alternative. A Full Freshwater Impact Assessment has been undertaken for the proposal and has resulted in the evolution of a new preferred alternative. This alternative aims to allow for a continued link between the Vermont Salt Pan and Paddvlei but reducing and / or eliminating the number of encroaching erven and access routes

	of the FSS. The owners of this reserve have recently commenced a large-scale programme of clearing all AIV on the property. This will have a profound effect on the extent of the wetland on the erf, particularly once the reserve's western boundary is cleared. It should also be noted that the planned wetland rehabilitation on the Paradise Park land to the south-east, which is part of the greater wetland system (see below) will further increase the size of the wetland on Erf 1468. A mature eucalypt tree is estimated to consume between 200 and 1000 litres of water per day and dense infestations can reduce streamflow between 300 and 500mm. Although these are "broad brush" figures, it is clear that even at the lower estimates, the consequences for this wetland system of removing the AIV from the adjacent property to the erf will be profound. The wetland's boundaries within Erf 1468 on the single day in 2018 when the site visit was undertaken are thus very likely to be understated into the future. Ignoring this is a fatal flaw in the study. 2.1.2 Greater wetland system The study further states that "the wetland within the erf is part of a 1.4km long wetland system that originates within the study area and ends at the Vermont Pan." No reason is given for the assertion that the wetland originates in the erf. The wetland is indeed part of a larger wetland system, originating not in Erf 1468 but in the vicinity of the Paddavlei marsh in Hawston much further to the west. There is anecdotal evidence that seasonal overflows from Paddavlei formed a river that disappeared underground, surfacing at times in various areas to the east of Hawston, depending on weather conditions. A 2020 report by Greenheart projects notes that Paddavlei's open water area had been reduced by some 75% over the past years, in large part due to the unmanaged spread of AIV in (mainly) Hoek van die Berg. Figures 2 and 3 show this clearly, with the western area of the "depression" abutting the boundary between the erf and the neighbouring reserve and the depression carrying water despite the effect of the AIVs that are present. 2.1.3 Definition of study area component parts With regard to the wetland's component areas, the FSS states on page 5 that "a depression has been excavated towards the centre of the study area", presumably because of the presence of an overflow pipe	

	(see Figure 2) that runs under Lynx Road and discharges into the eastern wetland areas. However, the presence of the overflow pipe does not necessarily mean that the central area was excavated. References to the deeper part of the wetland are often prefaced with the adjective "excavated", but no reasoning is given for this. On the contrary, it is stated that the soils sampled "in wetter areas near the depression did not differ markedly from terrestrial soils" and had a higher organic content. This may indicate that the depression is largely natural rather than excavated. Watercourses were identified and delineated using the presence of hydrophytic vegetation and hydromorphic soil features. The study notes that the sandy coastal soils of the Overberg make detection of the latter difficult, but that this notwithstanding, typical wetland soils were present. This would indicate that the wetland has been present for a long time. Stands of Juncus kraussi which grows in saline marshes and Cyperus textilisi which grows in marshes and watercourses below 150m were noticed on site and used as "primary indicators of the outer boundary of the wetland", together with Senecio halimifolius, which grows in coastal sandy soils. As is common in any open area near housing, the AIV Pennisetum clandestinum (kikuyu grass) is rampant. No further examination of the vegetation was made. 2.1.4 Legislative constraints applicable to study area In its consideration of the legislative constraints that would apply to the study area, the FSS noted that the "no net loss" policy on wetlands of the Department of Water and Sanitation means that any wetland loss must be compensated through an offset scheme, which may well be costly. The study also states that the erf in its entirety is within the 500m boundary around the wetland specified in the National Water Act (NWA) and that the "delineated wetland footprint accounts for more than half" of the erf. A risk assessment must therefore be done, and depending on the assessed risk level (low, medium or high) the water use must be approved and regulated. As noted above, this delineated footprint is likely to be understated and - if not currently, certainly in the near future – may well account for much more than half of the erf. In addition, the National Environmental Management Act (NEMA) requires that the impact of any disturbance above a certain volume within 32m of a watercourse must be	A Risk Matrix was undertaken by the Freshwater specialist in conjunction with the Freshwater Impact Assessment. The appropriate applications will be made in line with the requirements of the National Water Act. A full Freshwater Impact Assessment has been undertaken in line with both the NEMA and NWA requirements.

	assessed through an Environmental Authorisation. As the entire erf falls well within this boundary (see Figure 18) this will have to be done. Again, this applies even to the area delineated in the study, which is clearly an under-representation of the true extent of the wetland. The National Water Act requires that risks to water courses are considered in an area defined by the 100-year floodline but this was not done as they are not available. It also requires that risks to wetlands are considered in an area of 500m around the wetland (Figure 7). This indicates two drainage systems from the north; it should be noted that these are only two of many in the vicinity flowing down the Onrus mountains. In this regard as previously noted, climate change predictions are for more frequent and heavy storms which will in turn increase runoff from these mountains. 2.1.5 Study area vegetation types The FSS also notes that with regard to the study area (i.e. the erf) "the Wetland Vegetation type is Southwest Sand Fynbos, within which Channelled Valley-bottom wetland types are listed as Critically Endangered." Figure 8 also indicates an aquatic Ecological Support Area needing rehabilitation, which covers practically the entire erf as do others in the area that form an easterly patchwork ending in the Vermont Pan. The patchwork also indicates that the erf is surrounded and bounded on the north, west and east by critical biodiversity support areas (1 and 2), ecological support areas (1 and 2) and a protected area (the nature reserve). Building a housing estate on this ground cannot fail to severely compromise the ecological functioning of these. Again, Figures 7 and 8 illustrating these ecological areas show clearly that the area to the west will also form part of this larger wetland system; it is inexplicable that the implications of this were not mentioned, let alone given the serious consideration it demands. 2.1.6 FSS conclusions The FSS concludes that despite the extensive disturbance that has taken place on Erf 1486 it is clear that it contains a natural wetland that forms part of a larger wetland system. The size of this wetland means that an EA must be done as well as afreshwater risk assessment – however, this conclusion was dismissed out of hand during the Site Sensitivity study (see below). Factors that would influence the risk rating would include the location of the	A Botanical Impact Assessment and a Freshwater Impact Assessment have been undertaken and have resulted in the evolution of the new preferred alternative, Alternative 3. Rehabilitation and protection of sensitive areas on private land requires funding and management, the Home Owners Association will be tasked with the long term management of the wetland area, guided by specialist input and conditions of the Environmental Authorisation – should it be granted.

	development within the erf and the detailed design of any buildings. An offset scheme may also be required which could involve considerable financial outlay. The BAR states (page 22) that the preferred alternative (2) is "guided by (the delineation of) the seasonal and permanent wetland edges…shaped around these areas and take freshwater sensitivities into consideration…The wetland area will be rehabilitated and managed in perpetuity" and "encourages re-establishing the link between the Vermont Salt Pan and Paddavlei at the Botrivier." In this regard it should be noted: • The delineation of the wetland is likely to be considerably understated • The link referred to contradicts the FSS, which asserts that the wetland originates on the erf in question. There is indeed anecdotal evidence of a link between the wetland on the erf and Paddavlei – but Paddavlei is in Hawston and nowhere near the Botrivier. WCC contends that the FSS – and thus the BAR - is fatally flawed, as the extent of the wetland cannot be defined by only considering the indicators present on the single day of inspection within the boundaries of the erf in question. Constant and current removal of the extensive infestation of AIV on the neighbouring property means that the wetland will inevitably expand and very probably by a considerable amount. The entire erf may well be underwater. This is a natural wetland and part of a larger wetland system. Any development of the type contemplated (i.e. single residential and group housing) would require extensive and invasive drainage that will fall foul of the various applicable legislation. It will also constitute unacceptable interference in a protected natural system. 3. Applicable legislation, policies and protocols With regard to protocols, a nod is given to the presence of the wetland with the statement that the design incorporates a "central open space which will allow for movement of flora and fauna" There is no corridor provision, despite the assurance given in Section 4.4. on page 17. The corridor shown will be under housing. It is also stated that the "development will be outside of the permanent wetland on site and the development will allow for the rehabilitation and management of the	

	wetland". As described above, the delineation of the wetland is inaccurate. Again, it is stated that the "site is highly transformed", which is not true. No plant species assessment was done. Assurances are given in Section 4.1 that the proposal will result in "environmentally aware development"(and the) "management of the remainder for conservation". This is untrue. The proposal will severely impact an important wetland and nullify itsecological function within a larger wetland system. With regard to policies, the BAR stresses the leisure, lifestyle, tourism and economic focus of OM under the Western Cape Provincial Spatial Development Framework (PSDF). The only mention of the environment is in the context of tourism. "This proposal entails a harmonious integration of the natural and built environments and illustrates the (sic) critical role in the further development of the tourism industry in the rural area". Rural areas are stressed throughout the treatment of the OM SDF; however, the confusion is cleared when the BAR states that "The subject property is located within the popular Hemel and Aarde Valley" This is a clear cut and paste from another proposal - which happens to be the wrong one. With regard to legislation, the National Water Act (NWA) is not considered to be applicable, which contradicts the FSS. Indeed, none of the legislative implications stated in the FSS are accepted. The National Environmental Management Biodiversity Act (NEM:BA) is also not considered to be applicable despite the area being within a number of Critical Biodiversity Areas (CBAs). 4. Impact on the wider environment As noted, the erf is at the furthermost north-eastern corner of the suburb of Vermont. The Vermont Pan is a drawcard for birders and a popular site for residents. The Pan is the furthest point to the east of the larger wetland system of which the wetland on the erf in question forms part. The Pan is also beset by environmental problems caused in the main by unregulated and insensitive development that has affected water flows and impacted on the habitat provided by the Pan for numerous bird and animal species. This proposal will compound these problems. In this regard it must be borne in mind that the predicted influence of climate change will be stronger storms, which will markedly increase runoff from the Onrus mountains and thus the area of the seasonal wetland.	

	However, the BAR's treatment of this vital context of our environmental future (page 36) is extremely cursory. It states merely that "The preferred alternative is set away from the delineated permanent wetland on site." 6. Required specialist studies: Site Sensitivity Verification Report (SSVR) The report responds to the predicted high Aquatic Biodiversity impact with the statement that "Wetland delineation has been undertaken, development will be outside of the permanent wetland on site and the development will allow for the rehabilitation and management of the wetland. Mitigation measures have been recommended by the wetland specialist." Again, this is a totally inadequate assessment of the potential impact that contradicts the findings of the FSS. 7. Significance ratings and bias in the Basic Assessment Report (BAR) The significance rating (page 33) of the preferred alternative (2) is summarised as low in the planning, design and development phase, and low to medium-low in the operational phase. These assessments are questionable and consistently worded in such a way as to put the proposal in the best possible light. For example, it is stated that "development in close proximity may pose risks to wetland, however, the status quo is far worse". Development close to a wetland will definitely pose risks to the wetland and these may well be catastrophic. The bias towards the development is clear in the response to the avoidance of the impact, which is stated as "ensure detailed design considers the environment and wetland as far as possible (and) plan for the management of the wetlands on site and include this in the design from the onset." This qualification is worryingly vague and this management plan should have formed part of the proposal. The bias continues with a rating of High impact for the No Go option. WCC is of the opinion that retaining the status quo is to be preferred to a development proposalbased on an inaccurate wetland delineation and a BAR peppered with errors and displaying clear bias. It does not inspire any confidence that the assurances of protection for the wetland will be met. 8. Conclusion and recommendations WCC is of the opinion that:	As per the requirements of NEMA and NWA, a full Freshwater Impact Assessment has been undertaken and is attached in the revised BAR – the findings of this report has resulted in the evolution of a new preferred alternative

	•The wetland parameters that were defined by EnviroSwift as being those that were observed on the erf on the single day in question when it was investigated in 2018 are not accurate, nor are they reliable. This is a fatal flaw in the proposal. Given the presence of very many large eucalypts on its western boundary that are scheduled in the near future for destruction, this is an irresponsible approach. The wetland will be profoundly influenced and will increase in size considerably once these very thirsty trees are removed (which has commenced). •To adjust the layout of the proposed housing on the basis of this inadequate definition of the parameters of the wetland is meaningless and renders the entire proposal void.	The Botanical and Freshwater Impact Assessments have resulted in the evolution of a new preferred alternative – Alternative 3. As above, The BAR has been updated and amended in line with updated specialist input.
Ms Barbara Kahn (24/04/2023)	I wish to oppose this proposed development which would impact heavily on the wetlands and destroy this sensitive and important area for wildlife and the environment.	Noted
Michael Raimondo (24/04/2023)	As the manager of Hoek van de Berg Contract Nature Reserve we have developed a detailed invasive plant management plan - which list the clearing of the gum trees around the wetland a s key priority. Already the extensive clearing above the R43 and below the R43 has seen a the water table and the wetland system has increase on the reserve over the last two years. With the planned role out of our invasive clearing strategy the wetland on Erf 1486 will also increase this has to be taken into account. We are opposed to any further development on Erf 1486 as it will affect the wetland system.	1. Noted.
Denis Brandjes and Samantha Hogg-Brandjes (27/04/2023)	1. Properties 1 to 7 lie in the seasonal wetland. This is not acceptable. 2. Assume the thin blue line on the diagram is the 30m floodline. As we understand it, no building within this line. Only erf 3,4,5,6 and 9 fall outside this line. 3. Erf 9 to 13 are below 600sqm in size. This is not acceptable. 4. I failed to see the biodiversity report – as I believe that there is protected aquatic and other life forms dependant on the salt pan water mass.	The newly conducted Botanical Impact Assessment and Freshwater Impact Assessment Reports have resulted in the evolution of the preferred alternative and the creation of a new preferred alternative being Alternative 3.
Fabion Smith BGCMA (28/04/2023)	With reference to your email dated 22/03/2023 with letter requesting input by BOCMA via electronic link, the follow-up and resending of documents for assessment dated 24/04/2023, which contained a Freshwater screening by Enviro Swift dated 20/08/2018, a layout plan for the preferred Alternative 2 by Interactive Town and Regional Planning dated 14/03/2019, as well	A full Freshwater Impact Assessment and Risk Matrix is now included in the Basic Assessment Report

	as the BAR Pre-App submission to DEA&DP dated 22/03/2023, herewith the following: 1. The Freshwater screening by Enviro Swift does not contain a Risk Matrix. 2. In the absence of a Risk Matrix, the BOCMA cannot provide direction. 3. This is particularly applicable as, after assessing the Pre-App Bar and screening, almost all of the site/study area is within 500m of the regulated area, including the options explained as per preferred Alternative 2. 4. Therefore, it is advised that the Risk Matrix for the proposed development be submitted to BOCMA whereupon concise and precise assessment and feedback could be provided.	
Overberg District Municipality Rulien Volschenk (12/06/2024)	The current applicant falls within Hangklip Sandstone Fynbos which is listed as Critically Endangered. It is however acknowledged that the proposed development footprint is within the urban edge thus earmarked for development. The ODM therefore support alternative 4 as the preferred layout for the development, this layout promotes the protection of the wetland system within the property boundary and allow for the majority of the erf to remain undisturbed, and therefore maintaining its conservation potential.	Noted, no further action required
Paul Slabbert PHS Consulting (13/06/2024)	Wetlands The wetlands on-site and offsite was subjected to various studies in the past. The Freshwater Consulting Group (FCG) conducted a study in August 2006 for the Overstand Municipality whereby the wetland system boundaries and buffers were identified and mapped as per figure 2 below. The study recommended that appropriately vegetated buffers be established to protect the wetlands wherever this is possible. It was recommended that minimum buffer width of 30 m should designate a limit of development, whilst some activities may be allowed within the buffer areas. This report recommended that future development inside the urban edge that is located along the slopes of the mountains	Freshwater specialist response: "The previous studies are noted. It is the specialist's recommendation that the single residential dwellings within the northern subdivided Erven should avoid the delineated wetland as far as possible, as per recommendations in the Aquatic Impact Assessment Report (Delta Ecology, 2023), and implement all listed mitigation measures in the report, including SW management and implementation of a Rehabilitation and Management Plan for the onsite wetland area. Vegetation which needs to be re-planted (if applicable) within each northern Erf (Figure 1) should be planted with indigenous vegetation, which would be considered an adequate buffer during operational phase considering the nature of development (single residential dwellings). The wetland area coinciding with the proposed southern Erven (to be zoned for town housing) (adjacent to current housing along the southern boundary) (Figure 1), will likely encroach on approximately 255 m2 of the seasonal wetland area. This is considered acceptable, considering the Rehabilitation, appropriate Management and Protection of the remnant onsite wetland as an Offset, by the Homeowners Association (HoA or similar)." Freshwater Specialist response: "Agreed, future development inside the urban edge that are located along the slopes of the mountains should include

	should include provisions to ensure a natural delivery of water via natural drainages. This should be supported by specialist investigation, looking at both the impacts within the site as well as the impacts this might have on the identified wetlands in the larger area.	provisions to ensure a natural delivery of water via natural drainages. In the Delta Ecology Report (2023), the onsite wetland was rated to be of Moderate to Moderately High Functionality / Ecological Importance and Sensitivity (EIS) largely due to the hydrological connection to downstream wetland areas of importance (including the Vermont Salt Pan). The historical wetland vegetation type (Southwest Sand Fynbos) is also Critically Endangered (CR) and therefore the specialist supports the Rehabilitation of the wetland to an improved ecological state. In terms of natural drainages, there is an overflow pipe which crosses beneath Lynx Road and flows into the wetland on the far side, creating a hydrological link between the wetlands within the study Erf, and the greater wetland to the southeast. The Delta Ecology Report (2023) has been updated to recommend that the status quo in terms of hydrological connection to the downstream system must be maintained / should not be impacted as a result of the proposed development. During the specialist assessment, it was determined that given the implementation of the recommended mitigation measures, there should not be any impact on the wetland system downstream, as a result of the proposed development. There may potentially be a slight increase of flow due to the hardened surfaces as a result of the housing development. This is seen to be of "Low "significance" to the onsite wetland, given the implementation of mitigation measures such as implementing rainwater harvesting schemes that may reduce runoff intensity, and mitigate the potential impact of catchment hardening. To ensure the implementation of recommendations in the Aquatic Impact Assessment Report (Delta Ecology, 2023), the report has been updated to specify that an Aquatic Ecologist must be consulted during the design of the onsiteResidential Dwellings and Town Housing unit, and an Environmental Control Officer (ECO) should be appointed during the Construction of the Town Housing development in the south."
	During 2008 - 2010 a development application was subjected to a Basic Assessment process, but the file was subsequently closed when the application lapsed. The main reason being the development restrictions due to the extent of the wetlands on Erf 1486 as per figure 3 above. The FCG visited the site during 2008 and based on the wetland boundaries on site advised that the site to be unfit for development expansion beyond the current built footprint. Then in September 2012 the FCG produced a wetland report as part of an EIA process for the now approved Hoek van de Berg development on Re/572. As part of the EIA it was confirmed that the back-dune corridor south of the R43 is associated with	Freshwater specialist response: "Previous studies and outcomes are noted. Flow on Erf 1486 was noted to be in a south easterly direction during the site assessment (Delta Ecology, 2023), flowing through the outlet beneath Lynx Road."

	dispersal of surface and sub-surface flow along the length of the valley floor, either to the north-west, to Paddavlei in Hawston, or in a south-easterly direction, toward the Vermont Pan. The north-eastern corner of the site supports the upper portion of an extensive Juncus cf. krausii valley bottom wetland that extends toward the Vermont Pan. Figure 4 below shows the extent of wetland system considered during the EIA. The origin of the wetland, on the site itself, was heavily infested with alien vegetation, chiefly Acacia saligna and Eucalyptus spp., which has reduced the area of functional wetland due to droughting and shading. Immediately east of RE/572, the wetland has been excavated to the underlying clay layer, and the resulting open waterbody as well as its margins are poorly vegetated. However, remnant vegetation here and other small sedges suggesting a mixed restia / sedge / grass community may have naturally been supported within this portion of the wetland, and this is likely to have extended westwards, into the now invaded seep on RE/572. As part of the 2012 investigation, FCG recommended a groundwater study to provide hydrogeological input regarding the determination of aquifers and groundwater flow, which feed the surface wetlands, and the delineation of sub catchments or watersheds within the site. These were deemed necessary for the identification of appropriate setback areas around the wetlands on site to ensure their protection and to determine potential impacts on groundwater-fed ecosystems associated with the development proposal. The watershed boundaries and direction of sub-surface flows are provided in Figure 5 (from SRK 2012). Important sub-catchments relevant to this case relates to Sub-catchment C1 which feeds the north-eastern wetland. The dune field comprising the southern portion of the sub catchment rises to between 45 and60 m amsl, some 300 m to the south of the Juncus valleybottom seep. The seep probably emerges at about 30 m amsl, although the true extent will be determined only after alien removal allows the natural extent to re-establish. The seep is fed by a combination of surface and subsurface runoff from the northern rocky mountain slopes and subsurface inputs from the dune field to the south. The next freshwater study was conducted in August 2018 by EnviroSwift whereby only the wetland on erf 1486 was delineated. This study acknowledged the 2006 delineated	Freshwater specialist response: "Wetland boundaries may vary with time, and it is noted that the housing development to the south (built 2007 – 2012) may have resulted in additional stormwater input within the Erf 1486. There is a SW outlet located in the southeastern corner of the Erf 1486, which discharges runoff from the southern housing development into the wetland on Erf 1486, as noted in Figure 2 of the EnviroSwift screening study in 2018. This, in combination with varying climate

	wetlands by Municipality. It is stated that wetland boundaries do vary with time and the 2006 delineation is outdated particularly considering the recent housing development to the south." However, it's not clear how the development in the south changed the wetland on Erf 1486, presumably by the additional stormwater feed. The study delineated the wetlands as per figure 6 below, based on the presence of saturated, high carbon soils and isolated instances of mottling within the upper 500mmnof the soil was used in conjunction with the presence of hydrophytic vegetation to delineate the outer boundary of temporary zone of the wetland. The excavated depression represented the permanent zone. The EviroSwift report concluded as follow: Location of the proposed development – - Development within the wetland would most likely result in wetland loss and therefore a high-risk rating which would require a WULA and likely also a wetland offset scheme. - Development immediately adjacent to the wetland would likely result in a medium or high-risk rating which would require a WULA. - Development behind a setback that allows for establishment of a buffer zone would result in a low to medium risk rating which in the former case would require registration of a water use in terms of the General Authorisation, and which in the later case would require a WULA. Detailed design– PHS Consulting - Appropriately designed raft foundations may significantly reduce the impact on subsurface flow and therefore reduce risk. - Rainwater harvesting schemes that may reduce runoff intensity and thereby mitigate the impact of catchment hardening. - Stormwater polishing infrastructure such as artificial wetlands that may mitigate water quality impacts. -	conditions from year to year could account for the slight increase in delineation extent during the 2023 assessment."
	The most recent wetland study by Delta Ecology dated November 2023 forms part of the Basic Assessment we are commenting on. Following the aquatic biodiversity screening assessment of the proposed site by Joshua Gericke in August 2018, a natural Unchanneled Valley-Bottom (UVB) wetland	Freshwater specialist response: "Delta Ecology (2023) reiterated the results of this screening assessment done by EnviroSwift in 2018. Due to the development within the wetland being of minimal extent (encroachment on approximately 255 - 500 m2 of the seasonal wetland area); the Rating was determined to be of Medium Significance and would

	was confirmed and delineated onsite (EnviroSwift, 2018). The wetland was confirmed, and an updated delineation was undertaken during a site assessment by Gericke and van Zyl (Delta Ecology, 2023) on the 30th of May 2023. The Delta Ecology report concluded that the proposed layout has gone through various iterations in order to ensure that the layout overlapping with the delineated wetland area is minimal. Ordinarily, wetland loss would fall within the high category, but the limited area of wetland loss and the degraded nature of the wetland has reduced the impact significance. The No-Go option would result in the continuation of impact to the wetland due to adjacent land uses – and would therefore still result in negative impact to the wetland onsite. The Moderate risk rating confirms that a Water Use Licence will be required for this project due to the encroachment into the onsite wetland. It is furthermore highlighted that a suitable wetland offset and associated Wetland Offset, Rehabilitation, and Management Plan will be required. It is concluded that the opinion of the specialist that rehabilitating the remnant UVBW onsite will be a feasible and acceptable offset for the proposed development. It is therefore the opinion of the specialist that the proposed development should be approved subject to application of the mitigation measures listed in this report, as well as the implementation of a suitable Wetland Offset, Rehabilitation and Management Plan. Changing circumstance The narrative of the studies conducted since 2006 on and next to erf 1486, clearly stipulate as per highlighted section above that erf 1486 form part of a critical ecological link corridor and that impacts on the larger wetland system must be considered when future development is proposed. It's also clear that surface and sub-surface water flow from the west to the east passes through erf 1486 all forming part of an extensive system. It's also confirmed that the true extent of the wetlands will be determined only after alien removal allows the natural extent to re-establish. It's stated that wetland boundaries do vary with time clearly depicted in the change in delimitation over the years, most probably due to manmade intervention like stormwater additions, further infilling after 2006, run-off from the mountains, floods and alien clearance. What we could not establish as part of the resent studies for the proposed development on erf 1486 is how the wetland boundaries are likely be change in future,	require a full WULA and a Wetland Offset, Rehabilitation, and Management Plan." Freshwater specialist response: "The Delta Ecology report (2018) has been updated to specify that an Aquatic Ecologist should be consulted during the design specifications of the Residential Dwellings and Town Housing unit on the site, and an ECO should be appointed during the Construction of the Town Housing development in the south. The stormwater management plan must take into account the recommendations from the aquatic specialist reports, both the EnviroSwift Screening (2018) and the Delta Ecology (2023), specifically relating to the design of SW outlets to minimize erosion and water quality" impairment within the wetland." Freshwater specialist response: "The most recent layout (Figure 1) has been amended to include a larger private open space area (conserved wetland area). The private access road now does not need to cross the wetland, as there will now be two access roads instead of one." Freshwater Specialist response: "The comment is acknowledged, and it is recommended that changes in the wetland boundary should be monitored by the HoA. The recommendation to monitor the potential expansion in the onsite wetland boundary over time will be included in the Wetland Management Plan. However, as per the above comment, the change in flow regime to the wetland due to the proposed development will be minimal, and can be adequately mitigated. The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present state of the onsite wetland to be potentially impacted by the proposed development, and the impacts of the proposed development. Assessing activities, and the potential impacts thereof, undertaken on adjacent land was not the scope or aim of the Aquatic Impact Assessment Report (Delta Ecology, 2023)."

	therefore water feed through the larger systems as a whole and the important link role of erf 1486 was not considered.	
	Hoek van de Berg Nature Reserve has been the subject of an alien vegetation clearance programme over the years and during the last six months clearance of the wetland area in the north eastern corner of the nature reserve took place, directly next to the wetland on erf 1486. Based on the Sept 2012 FCG report, the wetland on erf 1486 is fed from C1 as per figure 5 above, therefore the tempo and volumes of water feed need to be considered after alien removal. It's been observed on RE/572 that the water level in the wetland has drastically increased as per photo evidence below, due to the reduction of alien vegetation.	Freshwater specialist response: "The specialist agrees that there is potential need for a hydrological assessment to determine the impact of clearing AIS on Hoek van de Berg Nature Reserve on the downstream wetland system. It is questioned whether the entity undertaking the AIPS clearing is not responsible for assessing potential impacts that may occur as a result of the clearing, such as increased flow to downstream land. There are many landowners downstream that could be affected if increased flow does occur, not only the property immediately downstream."
	The most recent wetland studies haven't considered the increase in wetland run-off and feed from RE/572 to the Vermont Pan due to the current alien clearing efforts.	
	Neither has the additional run-off from the mountains been considered where additional clearing of alien vegetation is taking place and directly north where landowners will be forced to clear aliens. The Sept 2012 FCG study predicted that the true extent of wetlands will be determined only after alien removal allows the natural extent to re-establish. On the RE/572 site the wetland area already expanded as per photo 3, 4 & 5 below. This extend will have a direct impact on the wetland extent on erf 1486 and it's likely the site will become wetter in future. This coupled with climate change and extreme events occurring more frequently, more surface and sub-surface flow will originate from catchment C1.	Freshwater specialist response: "The comment is acknowledged, and it is recommended that changes in the wetland boundary should be monitored by the HoA. The recommendation to monitor the potential expansion in the onsite wetland boundary over time will be included in the Wetland Management Plan."
	The BAR has not considered the changing circumstances in particular the effect of alien clearance and climate change on the proposed development.	Freshwater specialist response: "However, the scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present state of the onsite wetland determined to be At-Risk of the proposed development, and subsequently the potential impacts of the proposed development on this wetland.
	The likelihood that the extent of the wetland on erf 1486 will increase over time it's not sensible to have seasonal wetlands on private erven as per the proposal. Considering these erven are private individual owners will resort to all sorts of interventions to drain or infill erven as per the current case. We would advise that all private erven be located outside of seasonal wetlands to avoid development impacts on the ecosystem. Climate change is real and more water will flow through the system from west to east with erf 1486 fulfilling the role of a critical link.	The Delta Ecology (2023) report's scope does not include assessing the potential impact of climate change, adjacent changes in land use, or any other potential catchment transformation that may occur in the future; and how (if applicable) the boundary of the wetland will change as a result of such changes. The report has been updated to include this exclusion in the Limitation Section 1.2. of the report (Delta Ecology, 2023)." Freshwater Specialist response: "The comment is acknowledged, and changes in the wetland boundary should be monitored. The recommendation to monitor the potential expansion

		in the onsite wetland boundary over time will be included in the Wetland Management Plan. It is recommended that the HoA ensures that no private landowners' resort to interventions to drain or infill the remnant UVBW. The designs for houses on the residential Erven should take cognisance of the wetland's sensitivity and this should be enforced by the HoA through the Wetland Management Plan. The Delta Ecology (2023) report has been updated as necessary to include this mitigation measure."
	We therefore recommend that a geohydrological/hydrological/hydropedology study in conjunction with a stormwater master plan be conducted to inform the freshwater impact assessment in order to understand what the impacts of the increase in surface and subsurface water flow will have on the system and in specific the wetland on erf 1486. A development alternative should be presented and assessed as part of the process that avoid the CE vegetation and the seasonal wetland areas completely.	Freshwater Specialist response: A SWMP is recommended. However, it is the specialist's opinion that the proposed development will not have a substantial impact on the hydrology or interflow dynamics of the onsite wetland and downstream system given the implementation of mitigation measures. The Delta Ecology (2023) report's scope does not include assessing the potential impact of climate change, adjacent changes in land use, or any other potential catchment transformation that may occur in the future; and how the onsite wetland's surface and subsurface water flow may change as a result thereof. The report has been updated to include this exclusion in the Limitation Section 1.2. of the report (Delta Ecology, 2023). The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present state of the onsite wetland determined to be At-Risk of the proposed development, and subsequently the potential impacts of the proposed development on this wetland. There may potentially be a slight increase of flow due to the hardened surfaces as a result of the housing development. This is seen to be of "Low "significance" to the onsite wetland, given the implementation of mitigation measures such as implementing rainwater harvesting schemes that may reduce runoff intensity, and mitigate the potential impact of catchment hardening. To ensure the implementation of recommendations in the Aquatic Impact Assessment Report (Delta Ecology, 2023), the report has been updated to specify that an Aquatic Ecologist must be consulted during the design of the onsite Residential Dwellings and Town Housing unit, and an Environmental Control Officer (ECO) should be appointed during the Construction of the Town Housing development in the south.
	With the alien clearance extent, the wetland on RE/572 has enlarged up to the fence with the R 43 and erf 1486. The red area in photo 3 below depicts the wetland shape as per recent observation. The building on erf 1486 in picture was elevated when originally constructed in order to be raised out of the wetland, infilling on	Freshwater specialist response: "The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present delineation and state of the onsite wetland determined to be At-Risk of the proposed development, and subsequently the potential impacts of the proposed development on this wetland. The Delta Ecology (2023) report's scope does not include assessing the potential impact of climate change, adjacent changes in land use, or any other

	the site took place over the years to allow for drier disturbed areas and the alien vegetation has increased resulting in much "drier" and less wetland conditions in up to the alien clearance started on RE/572. However now with the alien vegetation removal of approx. 20 ha and climate change predictions the wetlands will increase and it's highly likely that Erf 1486 will be more inundated with water. UVA Prop therefore don't support the development in its current format until the required additional studies are conducted, avoidance of the CE vegetation and seasonal wetlands entirely should be the preferred mitigating measure before offsets are considered, due to the flood risks. We recommend that an alternative beassessed where total avoidance is applied. Further note that UVA Prop can't be held liable for any additional water flow towards the east due to the conservation efforts that can result in flooding or water inundation of the proposed development on erf 1486 Vermont.	potential catchment transformation that may occur in the future; and how the onsite wetland's surface and subsurface water flow may change as a result thereof. The report has been updated to include this exclusion in the Limitation Section 1.2. of the report (Delta Ecology, 2023)." Noted
Paul Pfister (14/06/2024)	Consideration should be given to the fact that since the development application by the previous owner, the wetland area has extended substantially; Any additional dwellings other than that of the above existing foot print, if approved, should thus be elevated with raft foundations; It is also essential that any development and Environmental Authorization (EA) of the proposed nature should form part of a Home-owner's Association (HOA) or Sectional Title constitution. In this way the significance of the wetland and the conservation thereof would be maintained; Such body e.g. HOA must also be held responsible for the control of domestic pets to ensure the safety of wild animals in the wetland area, in particular; and The HOA constitution should make provision for a maintenance plan to be monitored by the respective portfolio managers in accordance with the EA.	Noted
Denis Brandjes & Samantha Hogg-Brandjes (17 June 2024)	As the owners of an adjacent property, we were registered as an I&AP and submitted the following in April 2023: •Properties 1 to 7 are situated in the seasonal wetland, which is deemed unacceptable. •Concerns are raised regarding buildings within the 30m floodline, with only erf 3, 4, 5, 6, and 9 falling outside this line. •Erven 9 to 13 are below 600sqm in size, which is considered unacceptable.	•The final preferred layout (Alternative 3) was specifically designed to avoid development within the permanent wetland area and to minimize intrusion into the seasonal/temporary wetland zones. While portions of Erven 7, 8, and 9 are located near the edge of the mapped seasonal wetland, development within these erven will be strictly confined to areas outside the delineated wetland boundary. Furthermore, these wetland-edge zones have been designated as no-go areas, meaning they will not be disturbed during construction or occupied by any built infrastructure.

	•Request for the inclusion of a biodiversity report, highlighting potential protected aquatic life forms dependent on the salt pan water mass. Our concerns relate specifically to the wetland, and the fact that the wetland on RE/572 through to erf 1486 has and is enlarging, notably since the initial reports of March 2023 and site inspections of mid-2023. In fact, the floods of late 2023 saw the Seasonal Wetland floodline extend to within meters of erven 2317, 2318 & 2319, and was apparent for some time after the floods. This relates specifically to your proposed development of Erf 7,8 & 9 of 'APP B3 Development Proposal Alternative Four Final Preferred'. If developed, these erven will severely impact and be impacted by the enlarging wetland.	In addition, a Wetland Offset and Rehabilitation Management Plan has been developed to guide mitigation efforts, which includes the restoration of degraded wetland areas and measures to ensure long-term protection of the wetland's ecological function and connectivity, including with the Vermont Salt Pan. •Furthermore, a Stormwater Management Plan has been compiled and will be implemented to ensure that post-development runoff is appropriately managed. This plan is designed to mimic the natural hydrological regime, attenuate stormwater flow, and prevent any adverse impacts on the adjacent wetland areas, particularly during extreme rainfall events. The plan aligns with the principles of Low Impact Development (LID) and includes mitigation measures such as placement of Permeable Paving System as well as Enhanced swales, and controlled discharge points to protect downstream watercourses and the Vermont Salt Pan
Bernadette Osborne DEADP	3.7 Confirmation from the Department of Water and Sanitation ("DWS") / Breede-Olifants Catchment Management Agency ("BOCMA") must be obtained as to whether a general authorisation or a water use license application in terms of the National Water Act, 1998 (Act No. 36 of 1998) is required. Comment must also be obtained from BOCMA regarding the development within and within 32m of a watercourse.	A comment was received during public participation phase. A Water Use License is required. Comment was received during the first round of public participation and will be notified during the In process public participation.
Penelope Aplon Overstrand Municipality (18/06/2024)	Site lay-out: The proposed site layout Alternative 4 is supported as it enables the least disturbance to the delineated wetland footprint on the development site. This design also facilitates the creation of a private open space, which is larger than the development area. Mitigation: It is recommended that the mitigation measures proposed in the Aquatic Biodiversity Impact Assessment, table 10 -2 Summary of impact/risk assessment results (with mitigation), should be implemented. The demarcation of the wetland as a "no-go" area during the construction phase is supported. Wetland rehabilitation plan: The applicant should give an indication of when a rehabilitation plan will be drawn up and implemented.	Noted Noted The wetland Offset, rehabilitation and management plan was compiled and is attached.
Rhett Smart Cape Nature (18/06/2024)	Aquatic Biodiversity Impact Assessment The delineation of the wetland in the freshwater screening study was undertaken in August 2018, which as noted by CapeNature was during a drought period, even if seasonally optimal. The wetland delineation has been revised in the aquatic biodiversity impact assessment with a slightly larger extent of wetland delineated, in particular along the western boundary of the site. No explanation is however provided	Freshwater specialist response: "Wetland boundaries may vary with time, and it is noted that the housing development to the south (built 2007 – 2012) may have resulted in additional stormwater input within the Erf 1486. There is a SW outlet located in the southeastern corner of the Erf 1486, which discharges runoff from the southern housing development into the wetland on Erf 1486, as noted in Figure 2 of the EnviroSwift screening study in 2018. This, in combination with varying climate conditions from year to year could account for the

	for the change in the delineation of the extent of the wetland between the screening study and the impact assessment. The updated delineation was undertaken in May 2023 which is at the start of the wet season and hence not seasonally optimal, however it was not within a drought as previously.	slight increase in delineation extent during the 2023 assessment."
	With regards to the above it is important to note that extensive alien clearing has taken place on the adjacent property to the west, Whale Coast Nature Reserve (previously Hoek van de Berg Nature Reserve), with dense, tall infestations of gum (Eucalyptus sp.) trees removed. Gum trees in particular are known to use much higher volumes of water than indigenous fynbos, and therefore it is likely that the increased wetland extent is as a result of the alien clearing undertaken to date. Research has shown that up to 2 ML/ha (2 million litres per hectare) of water per year can potentially be saved though clearing of gum invasions (Dzikiti et al 2015). There is historical evidence that the wetland system originating at Vermont Pan historically extended to the Bot River Estuary. Further clarification is therefore required regarding the revised wetland delineation and should take into account the likely wetland extent once alien clearing on adjacent properties is complete.	Freshwater specialist response: "The Delta Ecology (2023) report's scope does not include assessing the potential impact of climate change, adjacent changes in land use, or any other potential catchment transformation that may occur in the future; and how the boundary of the wetland will change as a result of such, should this occur. The report has been updated to include this exclusion in the Limitation Section 1.2. of the report. The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present delineation and state of the onsite wetland determined to be At-Risk of the proposed development, and subsequently the potential impacts of the proposed development on this wetland."
	Two layout alternatives were presented in the pre-application phase and although the preferred alternative included an open space area to accommodate the wetland, the proposed erven still encroached substantially into the wetland and therefore was not supported. The access road also traversed the full wetland extent. A revised layout has been developed which encroaches less into the wetland however there are still minor infringements, taking into account the revised delineation. The revised layout also reduces the impacts on habitat loss and flow hinderance as a result of the access roads.	Freshwater specialist response: "The Delta Ecology (2023) report's scope does not include assessing the potential impact of climate change, adjacent changes in land use, or any other potential catchment transformation that may occur in the future; and how the boundary of the wetland will change as a result of such, should this occur. The report has been updated to include this exclusion in the Limitation Section 1.2. of the report. The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present delineation and state of the onsite wetland determined to be At-Risk of the proposed development, and subsequently the potential impacts of the proposed development on this wetland."
	Several impacts associated with the proposed development were identified in the aquatic biodiversity impact assessment for which the impact significance was identified as low-medium negative or less except for the loss of wetland habitat for which the impact was rated as medium negative. No mitigation measures were identified for this impact.	Freshwater specialist response: "Comment is noted, and the aquatic specialist report will be updated to include additional mitigation measures."

	We wish to note the following with regards to the Environmental Management Programme: •Construction must take place in summer as far as possible. •Water drainage off-site must not be permitted during the construction phase •No killing of fauna is supported however should add that snakes should be removed by an accredited snake handler. •No open fires should be permitted on site and no fires of any type during red and orange risk days. The Fire Protection Association can be contacted to alert when there are red and orange risk days. •Drip trays must be provided for vehicles in case of fuel leaks. No petrochemicals or other hazardous waste may be permitted to enter the wetland. Contaminated soils must be disposed of at a hazardous waste landfill. •The permanent and seasonal wetland must be a no-go area during construction. •No smoking should be permitted. •Should any buildings encroach into wetlands appropriate foundations or stilts should be used.	Freshwater specialist response: "Comment is noted. Should there be encroachment into the seasonal wetland area as a result of the development, the specialist recommends a Wetland Offset, Rehabilitation and Management Plan."
	Wetland Offset The application must be considered in the context of the best practice guideline for wetland offsets (Mcfarlane et al 2016). As with terrestrial biodiversity offsets, the mitigation hierarchy is a core concept for wetland offsets, hence the investigation of reducing impacts should follow the hierarchy of avoid, minimize, mitigate/rehabilitate and only then should a wetland offset be considered to offset the residual impact. A key principle specific to wetland offsets is "No Net Loss", whereby the loss of wetlands will require a wetland offset to achieve no net loss. Wetland offsets can be implemented as a result of either an authorisation process in terms of the National Water Act or the National Environmental Management Act (NEMA). However, prior to investigating an offset, the mitigation hierarchy must be further interrogated. In this regard, further investigation is required of full avoidance of both the permanent and seasonal/ephemeral wetland for the residential erven. It would appear to be possible to reduce the size of the current proposed erven as proportion of wetland on each of the erven is less than half. We recommend that group housing/townhouse complexes should only be considered on erven which have no encroachment into the wetlands.	Freshwater specialist response: "Comment is noted. Further investigation will be conducted of full avoidance of both the permanent and seasonal/ephemeral wetland for the residential erven; along with the group housing or townhouse complexes only on Erven which would have no encroachment into the wetland area." Note – Final Preferred Alternative 3 avoids all permanent wetland and marks areas on temporary wetland on residential erven as No Development areas.

	Should it not be possible to avoid the loss of wetlands, a motivation will need to be provided why this is not feasible and a wetland offset must be implemented in accordance with the wetland offset best practice guideline. The aquatic biodiversity impact assessment accurately indicates that a wetland offset is required in terms of the no net loss policy. The recommendation for an offset is rehabilitation of the wetland on site. The wetland offset calculator must however be used to determine the wetland offset requirements in accordance with the guideline. The broad actions which can be implemented for wetland offsets are protection, rehabilitation, averted loss, establishment and direct compensation. The risk matrix completed as part of the aquatic biodiversity impact assessment confirms that the risk is rated as moderate and therefore a water use license (WUL) is required. Based on the information provided the process for the WUL has not progressed beyond the risk matrix and should ideally be undertaken concurrently with the NEMA process in order for alignment of the two processes, particularly with regards to the wetland offset requirements. CapeNature recommends that a wetland offset plan is required in accordance with the wetland offset guideline. The wetland offset calculator must be used to determine the offset requirements which may require actions on wetland off-site. In this regard we wish to recommend that the broader wetland system stretching westwards from Vermont Pan to beyond Erf 1486 must be taken into account. Conclusion In conclusion, CapeNature recommends that there is further investigation of the mitigation hierarchy, in particular with regards to the layout, in order to ensure that there is no net loss of wetlands. If this is not possible and is adequately motivated, a wetland offset must be investigated and presented within a wetland offset plan. The wetland offset plan must form part of both the NEMA and NWA processes. Management of the open space must be addressed regardless of whether an offset is implemented or not.	Freshwater specialist response: "Comment is noted. Should the offset calculator show that the onsite offset is not adequate, the broader wetland system must be taken into account." A wetland offset, rehabilitation and management plan was compiled and will be implemented on site. A Specific No Go management plan for the no go areas on the residential erven as well as a MMP for the long-term management of the wetlands on site has been compiled.
Pat Miller Whale Coast Conservation	1. Introduction The applicant proposes to develop a number of dwellings on the erf in question (erf 1486 in Vermont), which houses a natural wetland that is part of a larger wetland system which runs west to east. This system and its	

	component parts are fed by watersheds in the area, as well as by the presence of ground and underground water. The erf in question currently has a derelict building on its (slightly higher) northern boundary, an area has been infilled and a drain was installed some years ago on its eastern side. This is a clear indication of the constant presence of water on the erf over a number of years. 2. History of wetland on erf 1486 A number of studies done over the years prior to those undertaken for the BAR have noted the presence of the wetland and its existence within the context of a larger system. WCC has covered the original BAR studies in its previous comment: those undertaken prior to these include; 2.1 A 2006 study for the Overstrand Municipality (OM) done by the Freshwater Consulting Group (FCG) delineated the wetland boundaries feeding into the Vermont Pan south of the R43 and included erf 1486 in these, noting that the wetland had been forcibly wrapped around the existing building on the site by infilling. The study's recommendations included: • a minimum 30m-wide protective buffer against development around the outer edge of the wetland areas • future development against the mountains to the north of the R43 should protect natural drainages into the wetland system • studies should be done into the impacts of future developments on the larger wetland system. 2.2 Following a development application in 2008, FCG recommended that because of the wetland presence no development should take place beyond the existing footprint; this application duly lapsed. 2.3 In 2012 FCG undertook a wetland report for the Environmental Impact Assessment (EIA) process for the property immediately adjacent to the west of erf 1486. This showed that surface and sub-surface water is dispersed along a wide corridor both towards Paddavlei in Hawston to the west and towards the Vermont Pan in the east. The extent of this dispersal was masked by extensive infestations of alien invasive plans (AIPs). 2.4 A further groundwater study done in 2012 confirmed that the wetland area on the adjacent property is fed by both runoff from the mountains and subsurface seeps. This study noted that the true extent of the wetland area will only be determined when the comprehensive AIP removal programme	

	is completed and the natural systems have re-established themselves. During the years prior to 2006 the wetland on erf 1486 had been badly degraded by such factors as (primarily) the rampant overgrowth of alien invasive plants (IAPs) in the area, particularly on the property adjacent to the west, and infilling and drainage on erf 1486 itself in order to build the now derelict buildings on the property. This took place within a legal context that placed little value on wetlands, and indeed to the concept of conservation and environmental value. 3. Changed environmental context of erf 1486 The environmental context of erf 1486 has now changed. The most important changes are: •wetlands now have legal protection, •the adjacent property on the western boundary which is now a registered private nature reserve is removing all of its very many AIPs. •Climate change is no longer a future probability, but is affecting rainfall patterns in the area and will have a marked impact on the wetland 3.1 Wetland protection With regard to the first contextual change, it is unlikely that the OM would have been able to apportion the land encompassing the wetland system for sale should it have wished to do so now. The fact that it was able to do in the past and accept development that has harmed the wetland system does not mean that this pattern can or should continue. The extent of the wetland system and its manifestation on erf 1486 has naturally been affected by these harmful developments that have included infilling and drainage infrastructure. The OM now is under a legal obligation to ensure that wetlands are protected, which should naturally include rejecting development applications that compromise existing degraded wetlands further and/or interfere with the functioning of larger wetland systems. 3.2`Removal of alien invasive plants to the west and north With regard to the second contextual change, work has continued apace on AIP removal from the property adjacent to the west. AIP removal close to the boundary with erf 1486 has resulted in the predicted re-emergence of a wide wetland area following the course of the larger wetland system. The area correlates with the area determined in the 2006 study, extending on	Freshwater specialist response: "The most recent layout (Figure 1) has been amended to include a larger private open space area (conserved wetland area). The private access road now does not need to cross the wetland, as there will now be two access roads instead of one. It is the specialist's recommendation that the single residential dwellings within the northern subdivided Erven should avoid the delineated wetland as far as possible, as per recommendations in the Aquatic Impact Assessment Report (Delta Ecology, 2023), and implement all listed mitigation measures in the report, including SW management and implementation of a Rehabilitation and Management Plan for the onsite wetland area. Vegetation which needs to be re-planted (if applicable) within each northern Erf (Figure 1) should be planted with indigenous vegetation, which would be considered an adequate buffer during operational phase considering the nature of development (single residential dwellings). The wetland area coinciding with the proposed southern Erven (to be zoned for town housing) (adjacent to current housing along the southern boundary) (Figure 1), will likely encroach on approximately 255 m2 of the seasonal wetland area. Due to the encroachment within the wetland being of minimal extent (approximately 255 - 500 m2 of the seasonal wetland area); the Rating was determined to be of Medium Significance and would require a full WULA and a Wetland Offset, Rehabilitation, and Management Plan.

	the north to the R43 and thus would completely encompass erf 1486. Many AIPs on the adjacent property remain and are targeted for removal, thus this process of wetland re-establishment can be expected to continue. The predicted impact on the wetland on erf 1486 noted in WCC's previous comment has indeed materialised, and an increase in wetland area from the initial BAR comment to the present is already very evident. This can be expected to continue. In this regard, it should also be borne in mind that AIP clearing is also being undertaken on properties north of the R43 which feed the relevant watersheds. Mountain run-off can be expected to increase, particularly within the context of changing weather patterns. 3.3 Climate change impacts With regard to the third contextual change, climate change predictions are that although the area will become drier, it will experience more frequent and more violent storms. The Overstrand is already experiencing the disruptive effects of these changing weather patterns, most recently (September 2023) with disastrous consequences for both public and private infrastructure. In this context, natural systems for dispersing this increased intermittent flow of water (both surface and sub-surface) become vitally important and their protection is essential. All levels of government are now required to put mitigation measures in place to deal with predictable effects of climate change, and ill-advised developments that interfere with these dispersal systems should not find favour. This would certainly apply to erf 1486; its role as a link in a larger wetland system means that more water in unpredictable quantities will flow through it and its dispersal function becomes increasingly important. 4.2 Aquatic biodiversity screening update In May 2023 Delta Ecology confirmed and updated the delineation done during the aquatic biodiversity screening of 2018. The report concluded that the impact of the proposed revised development layout would be minimal and that the limited area of loss of a degraded wetland reduces the significance of this impact. It confirms that a Water Use Licence will be required as well as an offset and is of the opinion that the rehabilitation of the remnant wetland on the site, as well as a rehabilitation and management plan for it, will suffice for this. WCC disagrees with this conclusion. As with the terrestrial ecology study, it gives no consideration to the predictable impact of	This is considered acceptable from our perspective, considering the Rehabilitation, appropriate Management and Protection of the remnant onsite wetland as an Offset, managed by the Homeowners Association (HoA or similar). The wetland will need to be managed in such a way to ensure that it maintains an appropriate Ecological State, ideally an improved condition from its current state." Freshwater specialist response: "The Delta Ecology (2023) report's scope does not include assessing the potential impact of climate change, adjacent changes in land use, or any other potential catchment transformation that may occur in the future; and how the boundary of the wetland will change as a result of such, should this occur. The report has been updated to include this exclusion in the Limitation Section 1.2. of the report. The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present delineation and state of the onsite wetland determined to be At-Risk of the proposed development, and subsequently the potential impacts of the proposed development on this wetland."

	the removal of AIPs from the adjacent property on the wetland on site and its role as part of the larger wetland system, nor to the predictable increase in intermittent water flow into them as part of changing weather patterns. 5. Drainage interferences It is highly probable that if permission is granted the developer will introduce drainage systems that will divert this flow away from the property. The type of drainage that would be required will have a significant impact on the natural dissipation and dispersal systems of the wetland and the larger wetland system and will merely shift the problem elsewhere. By doing so they are likely to exacerbate the problem. The consequences of predicted increased water flow, both regular and intermittent, for the proposed development and its surroundings may well be catastrophic, and if approval is granted the developer would be well advised to consider issues of liability very carefully. 6. Wetland boundaries It must be borne in mind that the currently manifest boundaries of the wetland on site have been drastically affected by past interference in order to construct the now derelict buildings. This interference has naturally also affected and degraded the vegetation markers. The true extent of the wetland on site and the larger wetland system of which it is a part could only be determined were these to be removed and a few seasons allowed to pass for stabilisation before measuring. However, in the context of climate change and its inevitable effect on the water flow through the system, determining the boundaries with any level of accuracy will be challenging. What is certain is that the AIP removal to the west and climate change will lead to more water flowing through the system. Forecasting the extent of this increase with any level of accuracy will need to be informed by a full hydrology, hydropedology and hydroclimatology study. In the absence of such a study it would be sensible to err on the side of caution, and the cautionary principle should prevail. All wetland areas, including those currently described as seasonal, should be avoided in any development. This would restrict any development to the current footprint of the derelict buildings. 7. Conclusions and recommendations Contextual changes have still not been taken into account. These changes will have a profound effect on the site into the future and on the feasibility of the development	A Stormwater Management Plan has been introduced which speaks to the final new preferred layout Alternative 3. Freshwater specialist response: "The Delta Ecology (2023) report's scope does not include assessing the potential impact of climate change, adjacent changes in land use, or any other potential catchment transformation that may occur in the future; and how the boundary of the wetland will change as a result of such, should this occur. The report has been updated to include this exclusion in the Limitation Section 1.2. of the report. The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present delineation and state of the onsite wetland determined to be At-Risk of the proposed development, and subsequently the potential impacts of the proposed development on this wetland." Freshwater Specialist response: "The scope of the Aquatic Impact Assessment deals with the proposed development at hand. Should there be additional Water Use activities proposed at a later stage by the developer, these would need to be

	proposal. The removal of AIPs from the property immediately adjacent to the west and altered rainfall patterns will increase the flow of water into the larger wetland system of which the wetland on erf 1486 forms part, and into the wetland on the property. Climate change will affect – and is already affecting - rainfall patterns in the area; more frequent and more violent storms will occur. This will increase the water entering the larger wetland system and that on the property. The proper natural functioning of these systems will be an important factor in ameliorating the effects of these changed rainfall patterns. The OM is now obliged to consider the impact of climate change on all infrastructure and plan accordingly. Extensive drainage will be needed to cope with the expected increased water into the system and onto the property should the development go ahead. This will interfere further with the natural functioning of the system and can be expected to cause problems in the surrounding area. A full hydrology, hydropedology and hydroclimatology study of the areas – including the mountain catchments - that feed in to the larger wetland system as well as the site itself should be undertaken in order to be able to assess the probable impacts of changing weather patterns on the site. This study should then inform a layout for the development. Unless this is done, no development should take place, and certainly not beyond the existing footprint on the northern boundary.	assessed as and if necessary, by a separate application presumably." Freshwater specialist response: "The scope of the recent studies (specifically EnviroSwift, 2018 and Delta Ecology, 2023), included assessment of the present state - and therefore present delineation of the onsite wetland - to be potentially impacted by the proposed development, and the impacts of the proposed development."

14. Other authorisations applicable to the activity

Basic Assessment as required by the National Environmental Management Act, 1998 (Act no. 107 of 1998) and the Environmental Impact Assessment Regulations.

15. Section 27 (1)

a) Existing lawful water uses

No existing lawful water uses, as defined in Section 32 of the Act, occur on the property. The application relates to Section 21(c) and (i) water uses associated with infrastructure encroachment into and alteration of a delineated wetland.

b) Need to redress the results of past racial and gender discrimination

Although the proposed development is privately initiated, it contributes toward broader transformation objectives through:

- Employment opportunities during construction and operational phases;

- Procurement prioritisation of Historically Disadvantaged Individuals (HDIs);
- Support for women- and youth-owned enterprises in civil works, landscaping, and environmental rehabilitation.

The development contributes to incremental residential supply within the Overstrand municipal area, supporting more inclusive spatial and economic growth.

c) Efficient and beneficial use of water in the public interest

The development will be serviced by the Overstrand Local Municipality through existing municipal potable water and sewer reticulation systems. No direct abstraction from natural water resources is proposed.

Water use is therefore:
- Centrally managed;
- Metered and regulated;
- Treated at an authorised wastewater treatment works;
- Integrated into existing bulk infrastructure planning.

Stormwater will be managed through Sustainable Urban Drainage Systems (SuDS), including vegetated swales directing runoff into the wetland in a controlled manner to prevent erosion and sedimentation.

The proposal further provides public interest benefit through:
- On-site wetland rehabilitation;
- Long-term conservation of the UVB wetland system;
- Formal environmental management commitments;
- Contribution to municipal bulk services upgrades.

d) Socio-economic impact

i) If authorised

Local Economic Stimulus
The development will generate employment during construction (civil works, building, rehabilitation implementation) and operational phases (estate management, landscaping, security, maintenance).

Municipal Revenue Contribution
- Bulk services levy contribution;
- Ongoing property rates;
- Service charges for water and sanitation;
- Capital investment into municipal infrastructure upgrades.

Residential Growth
The development will accommodate additional permanent residents within the urban edge of Vermont, supporting structured growth aligned with municipal planning frameworks.

ii) If not authorised

Failure to authorise the water use would:

- Prevent structured development within the urban edge;
- Delay or forego investment and job creation;
- Allow continued unmanaged degradation of the wetland from adjacent land uses;
- Result in missed opportunity for formal rehabilitation and offset implementation.

e) Applicable Catchment Management Strategy

The property falls within the Breede-Olifants Water Management Area.

The applicable strategy is the Breede-Gouritz Catchment Management Agency Catchment Management Strategy (CMS).

The proposal aligns with CMS objectives by:

- Avoiding unnecessary wetland disturbance;
- Implementing rehabilitation and long-term management;
- Managing stormwater to protect aquatic integrity;
- Supporting sustainable urban growth within planned development nodes.

f) Likely effect on the water resource and other water users

A natural Unchannelled Valley-Bottom (UVB) wetland was confirmed and delineated (EnviroSwift, 2018; Delta Ecology, 2023). The wetland forms part of a 1.4 km system linking to the Vermont Pan to the southeast.

Status quo assessment results:

- **PES:** D
- **EIS:** Moderate
- **WES:** Moderately High
- **REC:** D–C

Although degraded, the wetland retains moderate ecological importance and ecosystem service provision.

Impact Assessment Summary (Post-Mitigation):

- 4 of 5 impacts: Low to Very Low significance
- Wetland loss (0.22 ha): Medium significance (Moderate risk class)

Ordinarily, wetland loss would fall within a high category; however:

- Limited footprint (0.22 ha);
- Degraded condition (PES D);
- Iterative layout refinement;
- Commitment to on-site rehabilitation and offset,

have reduced overall significance.

Mitigation includes:

- Demarcation of wetland as No-Go area during construction;

- Vegetated swales for stormwater management;
- Alien invasive clearing;
- Indigenous wetland revegetation;
- Development of a Wetland Offset, Rehabilitation and Management Plan;
- Long-term ecological monitoring.

Existing lawful users are not expected to be negatively impacted.

g) Class and Resource Quality Objectives

The proposed development is located within the G40G quaternary catchment of the Breede–Gouritz Water Management Area (WMA).

The Catchment Management Strategy applicable to this area is administered by the Breede-Gouritz Catchment Management Agency (BGCMA). The ecological classification and Resource Quality Objectives (RQOs) applicable to the G40G catchment aim to protect and improve the integrity of priority aquatic ecosystems, including wetlands contributing to the coastal systems of the Overstrand region.

While site-specific gazetted RQOs must be confirmed against the most recent Departmental publications, the proposed development aligns with the intent of the applicable resource protection objectives by:

- Avoiding direct abstraction from natural water resources;
- Limiting wetland encroachment to the smallest practicable footprint (0.22 ha);
- Maintaining hydrological connectivity within the 1.4 km wetland system;
- Implementing Sustainable Urban Drainage Systems (SuDS) to manage stormwater quantity and quality;
- Establishing buffer zones and demarcated No-Go areas during construction;
- Committing to wetland rehabilitation and long-term ecological management;
- Implementing a Wetland Offset, Rehabilitation and Management Plan to support the “no net loss” objective.

The affected Unchannelled Valley-Bottom (UVB) wetland is currently in a PES category D (largely modified), with a Recommended Ecological Category (REC) of D–C. The proposed mitigation and offset strategy aims to improve the functional condition of the remaining wetland areas over time, thereby contributing positively toward the desired ecological condition for the catchment.

The development is therefore consistent with the protection, use, development, conservation, management and control of water resources as contemplated in the National Water Act.

h) Investments made and to be made

Investments include:

- Freshwater delineations (2006; 2018; 2023);
- Aquatic Biodiversity Impact Assessment;
- Environmental Authorisation process;
- Engineering and layout redesign iterations;
- Wetland offset and rehabilitation planning;
- Bulk services contributions to municipality;

- Long-term environmental management commitments.

i) Strategic importance of the water use

The proposal supports structured urban development within Vermont, aligned with municipal spatial planning frameworks.

Strategic benefits include:

- Formalised infrastructure within the urban edge;
- Socio-economic upliftment;
- Long-term municipal revenue;
- Ecological rehabilitation and wetland enhancement;
- Contribution toward “no net loss” objectives in accordance with Macfarlane et al. (2014).

j) Water quality and Reserve requirements

The development does not involve direct abstraction from the wetland system.

Municipal supply ensures:

- Compliance with potable water standards;
- Protection of ecological Reserve;
- No reduction in instream flow.

Stormwater and sewage management measures will prevent degradation of downstream water resources, including connectivity to the Vermont Pan system.

k) Probable duration of undertaking

The development is permanent.

The wetland loss (0.22 ha) will be permanent; however, the offset through rehabilitation and long-term protection of the remaining UVB wetland will be implemented in perpetuity.

Long-term environmental management measures will ensure sustained improvement of wetland ecological functioning.

1. **Declaration by the applicant with signature confirming that the information submitted is correct**

2026/05/14

[END OF WATER USE LICENCE APPLICATION SUMMARY]