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PRE – APPLICATION ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

For

PROPOSED DEVELOPMENT ON ERF RE/1627, SEDGEFIELD, KNYSNA, WESTERN CAPE

PREPARED FOR:	Rodney Nel Management Services Proprietary Limited
PREPARED BY:	Eco Route Environmental Practitioners Janet Ebersohn (EAPASA 2019/1286) Justin Brittion (Can. EAPASA 2023/6648)
DOCUMENT REFERENCE:	2025.11.11 - Pre - Application EMPr (version 1)
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DATE:	**2025/11/11**
SUBMITTED TO:	**Department of Forestry, Fisheries, and the Environment (DFFE) – Competent Authority** **I&AP's**

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STATEMENT OF INDEPENDENCE

I, **Janet Ebersohn**, of Eco Route Environmental Consultancy, in terms of section 33 of the NEMA, 1998 (Act No. 107 of 1998), as amended, hereby declare that I provide services as an independent Environmental Assessment Practitioner (**EAPASA Reg: 2019/1286**) and receive remuneration for services rendered for undertaking tasks required in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended). I have no financial or other vested interest in the project.

EAP SIGNATURE

ENVIRONMENTAL MANAGEMENT PROGRAMME REQUIREMENTS:

Appendix 4 of Regulation 982 of the 2014 EIA Regulations contains the required contents of an Environmental Management Programme (EMP). The table below serves as a summary of how these requirements were incorporated into this EMPR:

(1) An EMPr must comply with section 24N of the Act and include:-

Requirement	Description
(a) Details of – (i) The EAP who prepared the EMPr; and (ii) The expertise of the EAP to prepare an EMPr, including a curriculum Vitae;	EMPr prepared by Joclyn Marshall (EAPASA 2022/5006) (Appendix A – Joclyn CV). Assisted by Justin Brittion (Can. EAPASA 2023/6648) (Appendix B – Justin CV)
(b) A detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Section 2
(c) A map at an appropriate scale which superimposes the proposed activity, it associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;	Appendix 4
(d) A description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including – (i) planning and design; (ii) pre-construction activities; (iii) construction activities; (iv) rehabilitation of the environment after construction and where applicable post closure; and (v) where relevant, operation activities;	Section 3, 7, 8, 9, and 10
(f) a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to – (i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; (ii) comply with any prescribed environmental management standards or practises;	Section 3, 7, 8, 9, and 10

(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and (iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;	
(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 6
(h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 6
(i) an indication of the persons who will be responsible for the implementation of the impact management actions;	Section 6
(j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Section 6
(k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Section 6
(l) a program for reporting on compliance, taking into account the requirements as prescribed by Regulations;	The entire report serves as a programme for reporting on compliance
(m) an environmental awareness plan describing the manner in which – (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and	Section 6
(n) any specific information that may be required by the competent authority.	N/A

Glossary of Terms

BAR	**Basic Assessment Report –** A tool used by the EAP to submit to the competent authority if listed activities is triggered in Regulations GNR 327 and GNR 324 as per NEMA to make a decision regarding a proposed development.
DFFE	**Department Forestry Fisheries and Environment**– the national authority for sustainable environmental management and integrated development planning.
DFFE&DP	**Department of Environmental Affairs and Development Planning** – the provincial authority for sustainable environmental management and integrated development planning.
CBA	**CBA Critical Biodiversity Area** – Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.
EAP	**Environmental Assessment Practitioner –** An EAP and a specialist, appointed in terms of regulation 12(1) or 12(2) must – (a) be independent. (b) Have expertise in conducting environmental impact assessments or undertaking specialist work as required, including knowledge of the Act, these regulations and any guidelines that have relevance to the proposed activity. (c) Ensure compliance with these Regulations (d) Perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the application. (e) Take into account, to the extent possible, the matters referred to in regulation 18 when preparing the application and any report, plan or document relating to the application; and (f) Disclose to the proponent or applicant, registered and affected parties and the competent authority all material information in the possession of the EAP and, where applicable, the specialist, that reasonably has or may have the potential of influencing – i. Any decision to be taken with respect to the application by the competent authority in terms of these regulations; or ii. The objectivity of any report, plan or document to be prepared by the EAP or specialist, in terms of these Regulations for submission to the competent authority; unless access to that information is protected by law, in which case it must be indicated that such protected information exists and is only provided to the competent authority. (2) In the event where the EAP or specialist does not comply with sub regulation (1)(a), the proponent or applicant must, prior to conducting public participation as contemplated in chapter 5 of these regulations, appoint another EAP or specialist to externally review all work undertaken by the EAP or specialist, at the applicants cost. (3) An EAP or specialist appointed to externally review the work of an EAP or specialist as contemplated in sub regulation (2), must comply with sub regulation (1).
ECO/ESO	**Environmental Control Officer** – A site agent who needs to ensure that all environmental authorisation and conditions are adhered to during the construction phase of the project

EMPr	**Environmental Management Programme –** can be **defined** as "an **environmental management** tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced".
ESA	**Ecological Support Area –** Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of Pas or CBAs, and are often vital for delivering ecosystem services.
MMP	**Maintenance Management Plan –** means a maintenance management plan for maintenance purposes defined and adopted by the competent authority
NEMA	**National Environmental Management Act (Act 107 of 1998) as amended 2017** – national environmental legislation that provides principles for decision-making on matters that affect the environment.
PA	**Protected Area -** A protected area is an area of land or sea that is formally protected by law and managed mainly for biodiversity conservation. Protected areas recognised in the National Environmental Management: Protected Areas Act (Act 57 of 2003) (hereafter referred to as the Protected Areas Act) are considered formal protected areas in the NPAES. This is a narrower definition of protected areas than the International Union for Conservation of Nature (IUCN) definition.1 The NPAES distinguishes between land-based protected areas, which may protect both terrestrial and freshwater biodiversity features, and marine protected areas.

Table of Contents

1. INTRODUCTION

According to the National Environmental Management Act (Act 107 of 1998) (NEMA), it is specified under Section 24 N that an Environmental Management Programme (EMPr) be prepared and implemented as part of obtaining Environmental Authorisation (EA) for specified activities that may have a significant impact on the environment. It emphasizes that an EMPr must detail the mitigation measures, monitoring, and management actions necessary to ensure that environmental impacts are controlled during all phases of the project.

This EMPr must form an integral part of the contract documents, as it outlines the methodology & duties required so that the project objectives can be achieved in an environmentally sustainable manner; with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with this project.

This EMPr is a dynamic document that may need to evolve during its implementation period so that it recognises any new issues that may arise; or changes in the parameters of identified issues and can address these issues with the required/amended mitigation.

1.1. Purpose of the EMPr

The purpose of this EMPr is to ensure that the negative environmental impacts of the proposed activities are managed, mitigated and kept to a minimum during the planning, construction and operation of the proposed development. The EMPr focuses on avoiding damage or loss on ecosystems and the services they provide, and to enhance positive environmental impacts where possible.

The EMPr is a living document that is flexible and responsive to new and changing circumstances, however, should a change be made within the EMPr permission from the competent authority must first be obtained.

Once the EMPr is approved by the competent authority it is seen as a legal binding document on the following affected parties:

1 Project Applicant.
2 All contractors.
3 Sub-contractors and construction staff.
4 The appointed ECO monitoring the construction phase.

Copies of this EMPr must be kept on site and all senior personnel are expected to familiarise themselves with the content of this EMPr.

It is suggested that the EMPr be reviewed on a 5 yearly basis if required. Should any amendments need to be made during operational phase, written authorisation should be obtained from DEA&DP.

1.2. The Polluter-Pays Principle

This principle provides for "the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment." The Polluter Pays Principle will be rigorously applied throughout the construction phase of this project.

2. PROJECT DETAILS

2.1. Location Description

The property known as Remainder of Erf 1627, Sedgefield is situated on The Island in the coastal town of Sedgefield, within the Knysna Local Municipality, Western Cape. The site is located immediately west of the Sedgefield central area, bordered by the Swartvlei Estuary system to the north and surrounded by a mosaic of residential and natural areas. The site falls within proximity to the Swartvlei, Hoekraal River, and Myoli Beach, with the Protected Natural Dune Fynbos area lying to the south. Access is primarily via local roads that connect to the N2 national route situated to the east of the property.

SG Region:	KNYSNA
Erf Nr:	RE/1627
Area (Ha):	26.51
SG Code:	C03900100000162700000

Figure 1: Locality Map of Portion 104 of Farm 216

Access to the Group Housing site and the Resort will be from Dr. Malan Drive in the south. The townhouses, commercial area, and Agricultural area will gain access from a road over Erf 5008 that is currently zoned for "Business 1" purposes. Erf 5008 will be subdivided and rezoned accordingly as part of a separate town planning application. Erf 5008 belongs to the same owner as Erf 1627.

The following coordinates indicate the boundaries of the property (Google Earth, 2024).

FEATURE	LATITUDE (S)			LONGITUDE (E)		
	DEG	MIN	SEC	DEG	MIN	SEC
Northern Boundary	34°	00'	35.00"	22°	47'	10.75"
Eastern Boundary	34°	00'	34.94"	22°	47'	25.38"
Southern Boundary	34°	00'	51.75"	22°	47'	15.32"
Western Boundary	34°	00'	40.89"	22°	46'	52.99"

3. RECEIVING ENVIRONMENT

This section presents the available environmental data alongside specialist confirmations to assess the current state of the receiving environment. It considers historical classifications and identifications, integrating ground-truthing information to provide context for the present conditions. This approach is necessary because desktop data may not always align with the actual findings on-site.

According to VegMap (SANBI, 2018) the mapped vegetation at the site consists of **Southern Cape Dune Fynbos (FFd11)**. In conservation terms the mapped vegetation type is described as Least Concern. Within the context of the town of Sedgefield however, there are very few areas of this vegetation type that have not been completely transformed by urban development or agriculture. Invasion by alien plants has also severely depleted the vegetation type locally.

In reality, vegetation on the site is complex and comprised of multiple distinct types which are influenced by aquatic features, historical agriculture, and alien invasion. The latter was dominated by Port Jackson (*Acacia saligna*) 40%, Myrtle (*Leptospermum laevigatum*) 30%, Rooikrans (*Acacia cyclops*) 20% and Inkberry (*Cestrum laevigatum*) 10% (Approximate proportions provided by landowner). The site has recently been cleared of extensive stands of alien vegetation and very little remains thanks to the efforts of the landowner. (Confluent 2025)

3.1. Terrestrial Biodiversity Specialist Assessment by Benjamin Wlaton from Cape Vegetation Sensitivity Surveys

Three broad habitats are depicted in Figure 2 below. Heavily degraded Fynbos habitat covered in Pinus pinaster and various other woody plants; Fynbos habitat in the middle and the Perdespruit at the eastern extent of the property with terrestrial and non-terrestrial vegetation within the Estuarine Functional Zone.

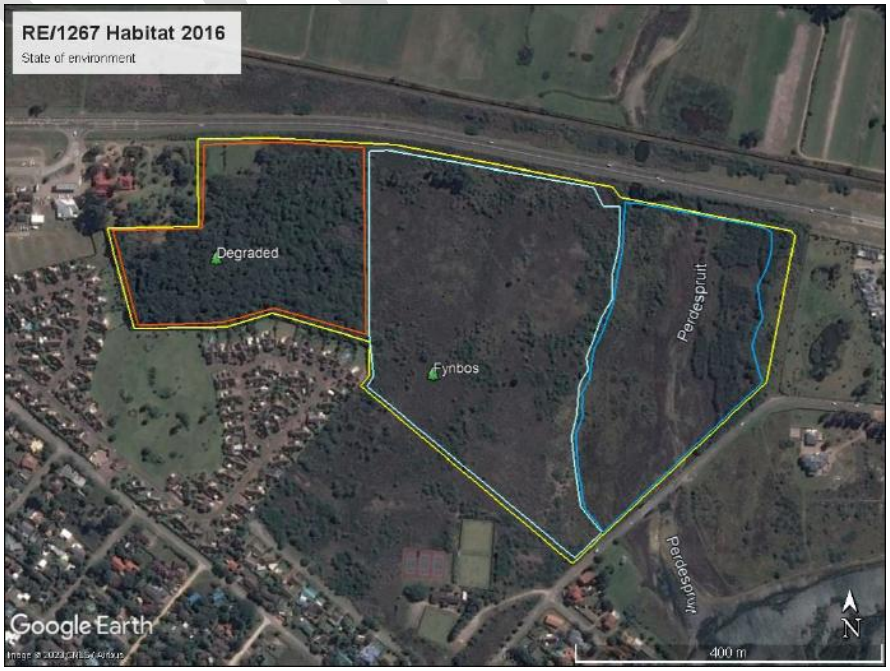


Figure 2: Showing 3 board habitats at the property

Figure 3 below show the three broad habitats during 2023. The heavily degraded Fynbos habitat at west is now transformed from infestations of invasive plants and clearing of woody vegetation. The middle section is still suitable Fynbos habitat but is partly degraded with distinct patches of Fynbos vegetation. The Perdespruit Wetland area at the eastern extent of the property shows flushing of the ecosystem by recent rainfall events.

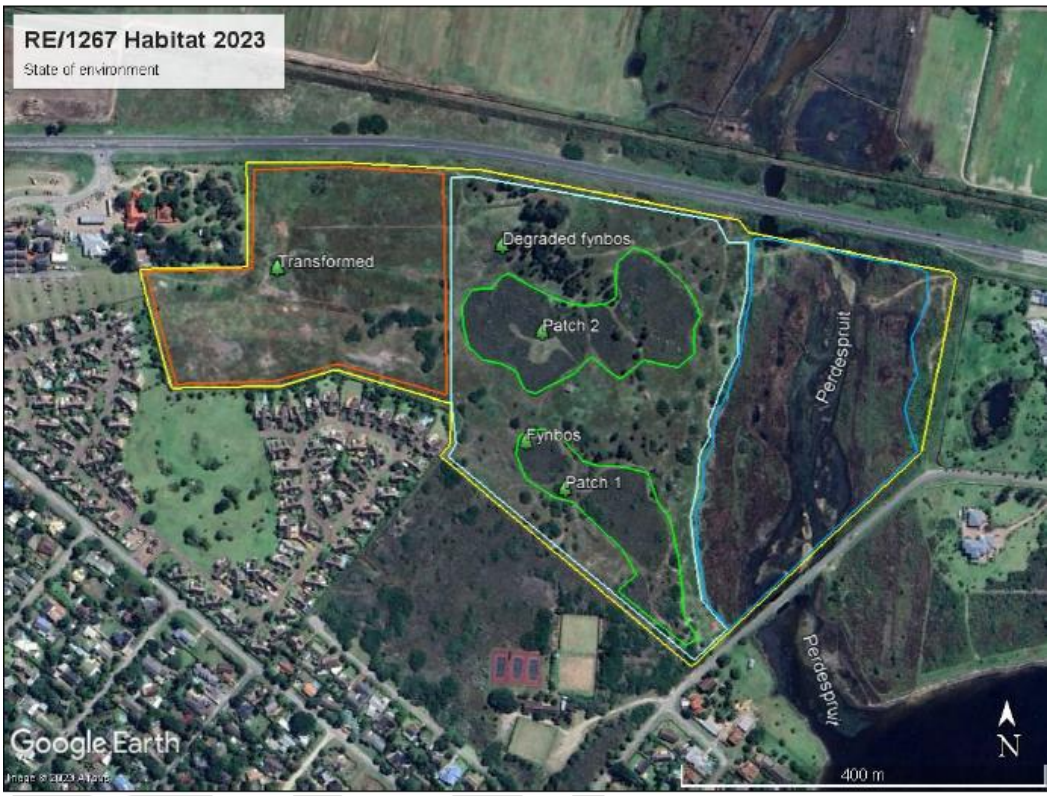


Figure 3: showing three board habitats at the property during 2023

Sensitivity Map and Assessment of impact

Figure 4 indicates the sensitivity map of the property. The proposed development will impact on a section of transformed or disturbed and degraded mosaic of exotic ruderal and invasive species, and Dune Fynbos elements of Low to Medium Terrestrial Biodiversity Environmental Sensitivity. To summarize, the vegetation at the receiving environment is mostly secondary in nature following transformative landuse and successive infestations of invasive plants like Rooikrans. The dominant plants in vegetated areas are common indigenous plants like Anthospermum paniculatum; Dischisma ciliatum; Ehrharta villosa var. villosa; Geranium incanum; Helichrysum spp.; Metalasia muricata; Passerina corymbosa; Pentameris barbata; Salvia aurea; Searsia spp.; Trachyandra ciliata and scattered individual indigenous tree species.

Figure 4: Showing the sensitivity map of the property

3.1.2 Sensitivities related to the identified habitats

The proposed activity will impact on species composition and vegetation structure of vegetation communities of Low to Medium Terrestrial Biodiversity Sensitivity. The activity will not affect the remaining extent of threatened ecosystems or threatened plant species' ranges as the development activity occurs in an already disturbed and degraded area. (Walton):

1. The property in context of the Biodiversity Spatial Plan 2023, showing a primary aquatic Critical Biodiversity Area (CBA 1) overlay at the western and southern extent; with most of the property indicated within a secondary degraded terrestrial CBA.
2. The proposed development activity will impact on secondary degraded CBAs and may be inconsistent with the management objectives thereof.
3. The proposed activity will impact on species composition and vegetation structure of vegetation communities of Low to Medium Terrestrial Biodiversity Sensitivity. The activity will not affect the remaining extent of threatened ecosystems or threatened plant species' ranges as the development activity occurs in an already disturbed and degraded area.
4. The impact will not elevate the ecosystems threat status of the remaining extent of Least Threatened Southern Cape Dune Fynbos.

5. The impact on overall species and ecosystem diversity of the site is of low to medium intensity.
6. There is no foreseen impact on the threat status of species of special concern, as none were observed at the property.
7. Ecological services within and across the site will be affected by the development proposal and may be positively impacted by the clearing and control of IAS and post development rehabilitation.
8. The proposed activity will have a moderate impact on ecological processes and ESA functionality.
9. It is likely that the proposed activity may reduce ecological connectivity for wildlife during the construction and operational phases of the development.
10. The development proposal is not inconsistent with the objectives of Protected Area management within the Garden Route Environmental Framework area.
11. The development proposal will not compromize the local Protected Area Expansion Strategy of SANParks.
12. The property is within a Strategic Water Source Area, where (a) there will be a low impact on the terrestrial component; and (b) there may be a limited impact on water quality and quantity if spillage and contamination occur.
13. The property is within a Strategic Water Source Area (SWSA) and River Freshwater Ecosystem Priority Area of the Moderately Protected Swartvlei Estuary and Wetlands. A moderate impact on species and habitat condition within the FEPA sub-catchment is foreseen.
14. The proposal will have a no impact on the ecological integrity of indigenous Coastal Forest.

3.2 SENSITIVE AREAS (CBA, ESA, and PA)

The Western Cape Biodiversity Spatial Plan (WCBSP, 2017) designated the property as situated within a Critical Biodiversity Area (CBA:1 – To maintain and CBA:2 – To restore), including terrestrial and aquatic features.

CBA1: Terrestrial – Terrestrial

Definition: Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.

Objective: Maintain in a natural or near-natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.

CBA1: Aquatic – Wetland

The definition and objective remain the same.

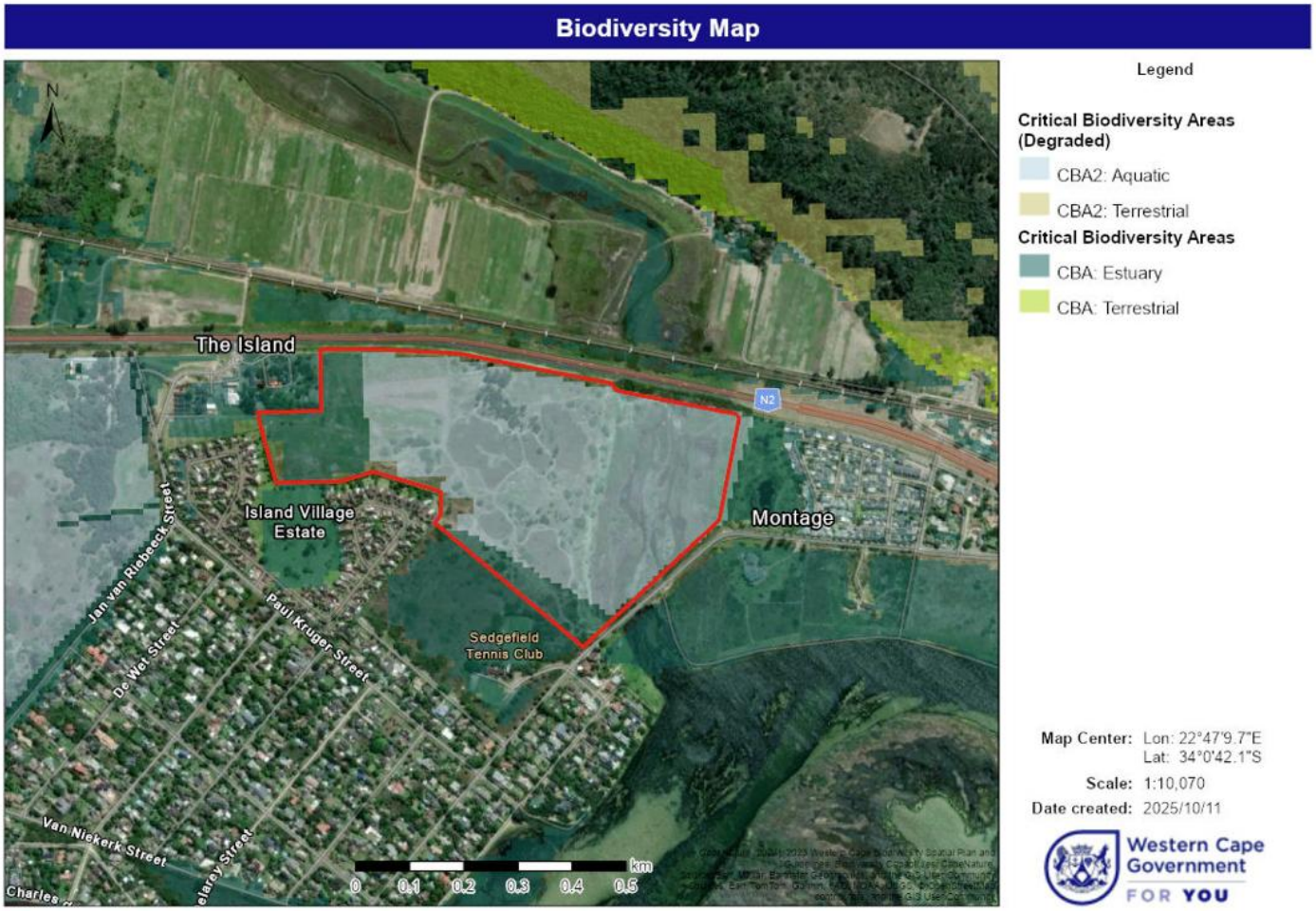


Figure 5: Western Cape Biodiversity Spatial Plan (WCBSP 2023) Sensitive areas

Table 1: Extract from Western Cape Biodiversity Spatial Plan (2023) regarding protected areas

WCBSP category	Desires management objective	General guidelines
Critical Biodiversity Area 1	Maintain in a natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land-uses are appropriate.	• CBA1 areas are considered essential for meeting biodiversity targets because there are insufficient other options for meeting biodiversity targets for features associated with the site. • All operational aspects of managing these areas must be subject to their main purpose, which is to protect and maintain biodiversity and ecological integrity and should be governed by a formally approved management plan including land-use activities that support the

		primary function of these areas as sites for biodiversity conservation. • The management plan must identify allowable activities, which should be consistent at least with the CBA 1 category; the location of these allowable activities should be captured in a zonation plan in the management plan. • Activities relating to the construction of roads, administrative or housing infrastructure and services (such as water reticulation systems, power lines, etc.) that are required to support the primary function of the protected area and its allowable activities, are subject to NEMA authorisation and the protected area management plan.

The reasons given for classification of the site as CBA1 are summarised in the table below (Confluent 2025)

BSP 2017 Reasons	Features
Ecological Processes	Water Source Protection - Swartvlei
Estuary	Swartvlei Core Estuary
SA Vegetation Type	Cape Estuarine Salt Marshes (Least Threatened)
Threatened SA Vegetation Type	Southern Cape Dune Fynbos (Vulnerable)
Water Resource Protection	FEPA River Corridor Watercourse protection – Southeast Coastal Belt

3.3 FRESHWATER SENSITIVITIES

The property is identified as a FEPA, which is a Freshwater Ecosystem Priority Area. FEPAs must remain in a good condition to manage and conserve freshwater ecosystems, and to protect water resources for human use. This does not mean these areas should be fenced off from humans, rather that they be supported by good planning, decision-making and management to ensure they are not degraded. The recommended condition for all estuary FEPAs is an ecological category of A or B (Nel et al., 2011).

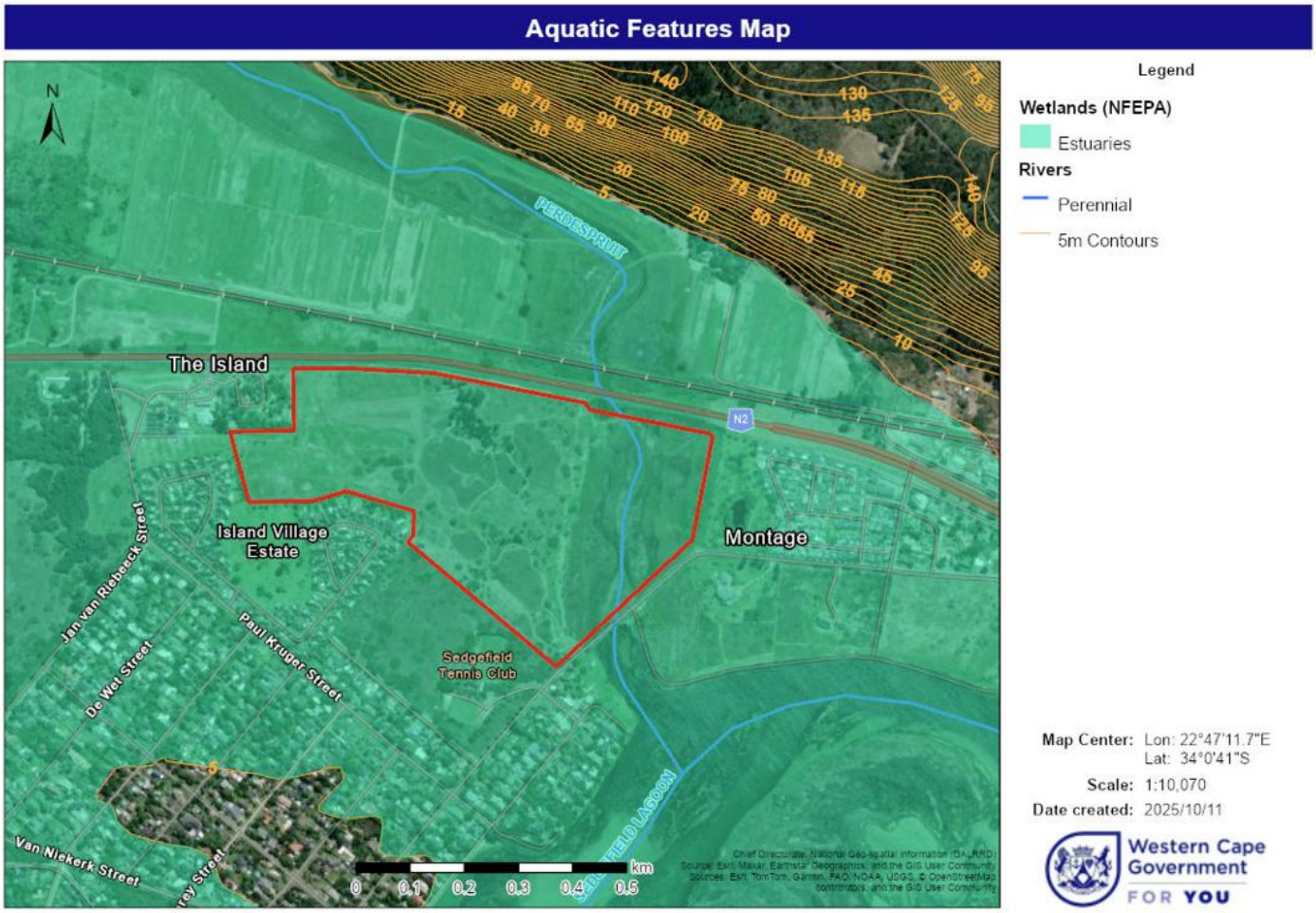


Figure 5: Wetlands NEFPA RE/1627

3.4 FAUNA

Faunal Specialist (Walton 2025) were consulted to provide feedback on the faunal sensitivities relevant to the proposed development property.

No SCC was encountered during the site visit. Based on the iNaturalist observations from Sedgefield Island Conservancy domain, including the property and the Perdespruit, there are approximately 109 bird species potentially occurring at the property. As the property includes the Perdespruit Wetland many bird species observations are based on their occurrence in the Wetland.

Table 2: indicates the list of species of high & medium relative animal species sensitivity List of fauna SCC and their estimated geographic area of occurrence (Walton 2025).

Family	Taxon	Common name	IUCN status	Distribution	Habitat	EOO (km^2)	Occurrence probability
Aves	Circus ranivorus	African Marsh Harrier	Endangered	South Africa - Sudan	Wetland	12615.35	Medium – in vicinity
Aves	Hydroprogne caspia	Caspian Tern	Vulnerable (ZA)	Sub-cosmopolitan	Lakes & Coast		High - at Swartvlei
Aves	Bradypterus sylvaticus	Knysna Warbler	Vulnerable	Cape Town – East London - Durban	Forest - scrub	2519.99	Low – in vicinity
Aves	(Gorsachius leuconotus) *Calherodius leuconotus*	White-backed Night Heron	Vulnerable	Central & Southern Africa	Forest & Wetland	301.73	High- N2 Perdespruit & Erf 4655
Aves	Stephanoaetus coronatus	Crowned Eagle	Vulnerable	Eastern South Africa	Forest	23373.95	Low- Saasveld & Harkerville
Aves	Neotis denhami subsp. stanleyi	Denham's Bustard	Vulnerable	Southern Coast	Shrubland, farmland – Dry marshland	13633.16	Low
Invertebrate	Aneuryphymus montanus	Yellow-winged Agile Grasshopper	Vulnerable	Overberg	Fynbos	55010.12	Very low
Mammalia	Chlorotalpa duthieae	Duthie's Golden Mole	Vulnerable	George - Bitou	Grassland, pastureland, Forest	0.17	Low
Mammalia	Sensitive species 8		Vulnerable			30.37	Very Low

As per Walton 2025 report:
For the bird SSC listed in the screening report only the White-backed Night Heron has been observed in the vicinity at the bridge with the N2 National Route (Fig. 16) and at the eastern neighbouring property in a large Eucalyptus tree.

The Caspian Tern has been observed at Swartvlei's sandbanks in the vicinity of the property but not at Perdespruit itself.

The Knysna Warbler has been observed in the vicinity within dense vegetation near Swartvlei mouth and is unlikely to occur here in the open areas.

The Crowned Eagle has been observed in areas with dense Coastal Forest vegetation and prefers tree perches and may visit the area, but it is unlikely.

Denham's Bustard is highly unlikely to occur in the vicinity pasted on historical disturbances in the area.

The Yellow-winged Agile Grasshopper is unlikely to occur in the Dune Fynbos habitat.
Duthie's Golden Mole is unlikely to occur at the property as it favours forested habitat.

3.4. Flood Management

An assessment to determine flood management zones was undertaken which identified areas of the site that would be subject to flooding under different rainfall intervals including 1:100 and 1:50 year events (Flood Management Study, Fraser 03/22). In Figure 5 pink areas indicate areas above 3.1 m.a.m.s.l. (1:100 year RI) and areas in orange are above 2.8 m.a.m.s.l. (1:50 year RI). Yellow areas are lower lying and most frequently flooded at 2.5 m.a.m.s.l. (1:20 year RI).

To mitigate the flood risk to residential dwellings, the flood management study recommends that floor levels and any power distribution structures be raised to 3.6m amsl as a minimum, as this should accommodate the 100 year RI flood level. All manhole covers to underground services other than stormwater runoff be raised to 3.1m amsl. The report recommends that earthfill is cut to create artificial wetlands as water features and placed between the 3.0 and 3.1m contours.

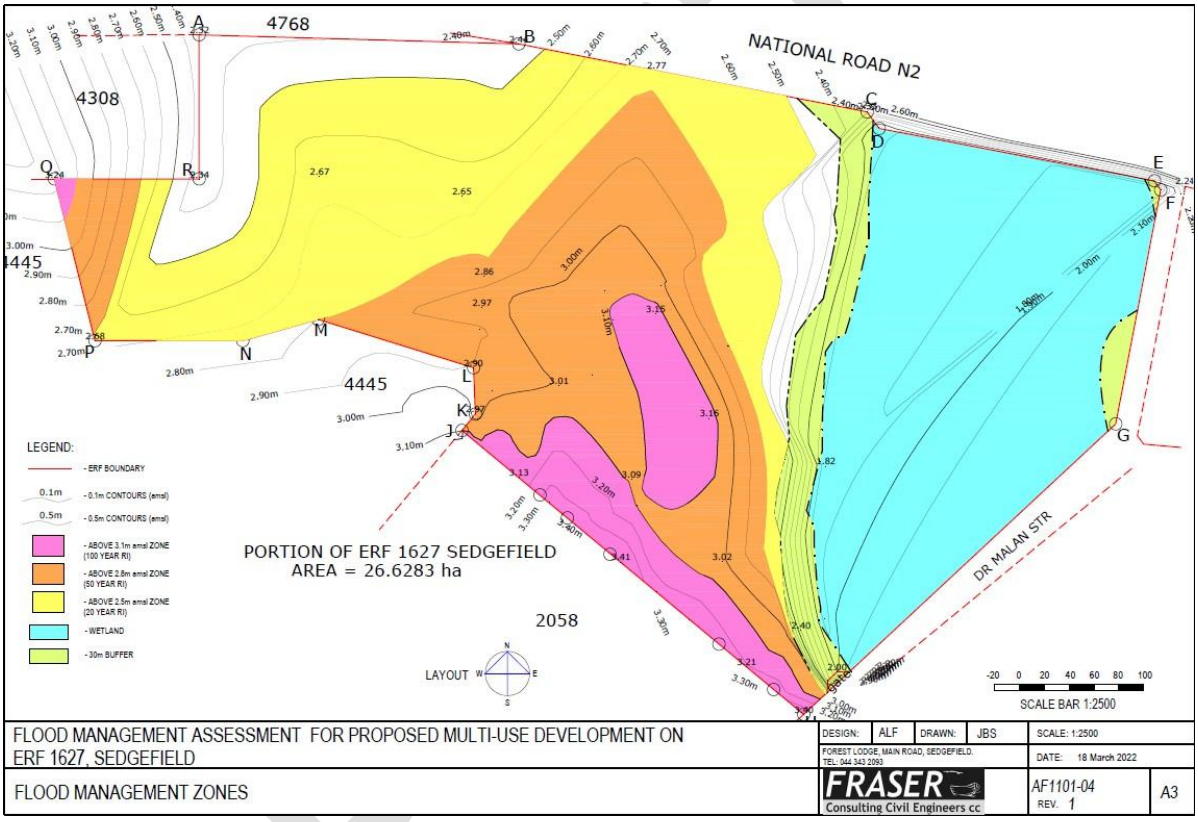


Figure 5. Flood management assessment indicating areas prone to flooding during different rainfall interval periods

As per Confluent 2025:

The site is entirely located below the 5m amsl contour within the EFZ. As previously discussed, it is highly sensitive to flooding and most of the proposed development area is around the 2.5m contour. The following recommendations apply:

- It is recommended that infrastructure below the 2.5 m contour be reserved to roads, walkways, and structures that can withstand being fully inundated and do not impede floodwaters (are porous/permeable).
- The largest area of the property outside of the watercourse is between the 2.5 and 3.0 m contour. It is recommended that any infrastructure in this area be constructed on a raised

foundation to bring it above the 3 m contour. A suitable approach would be to construct buildings on stilts, platforms, or on elevated strip foundations. Buildings above the 3 m contour can take a more conventional approach but should nonetheless consider that rising sea level and increased frequency of severe climatic events due to climate change can increase the frequency and severity of flooding across the entire property.

- No infill should extend beyond the residential area into the buffer. Infill should be kept to a minimum in the housing area only, which is anticipated in any event due to costs.
- The access road to the estate of Dr Malan Street should be moved further west, even if it means clearance of some vegetation. This is to reduce the impact and risk of flooding to the main access point. Infilling to raise the road beyond conventional layering is not recommended as this could increase flooding pressure on the road crossing at Dr Mallan Street.

In all areas, materials should strive to minimise the extent of impervious surfaces (e.g paving and concrete) as this exacerbates the damage during heavy rainfall. Reducing the amount of runoff from impervious surfaces also protects water resources and aquatic biota (e.g. fish and frogs) from pollutants present in runoff from roads etc. A range of suggested products are provided in as an example of methods to improve water infiltration instead of runoff. The use of pervious materials such as bark, gravel or grass pavers is recommended on as many parking areas, roads, and pathways (Figure 5).

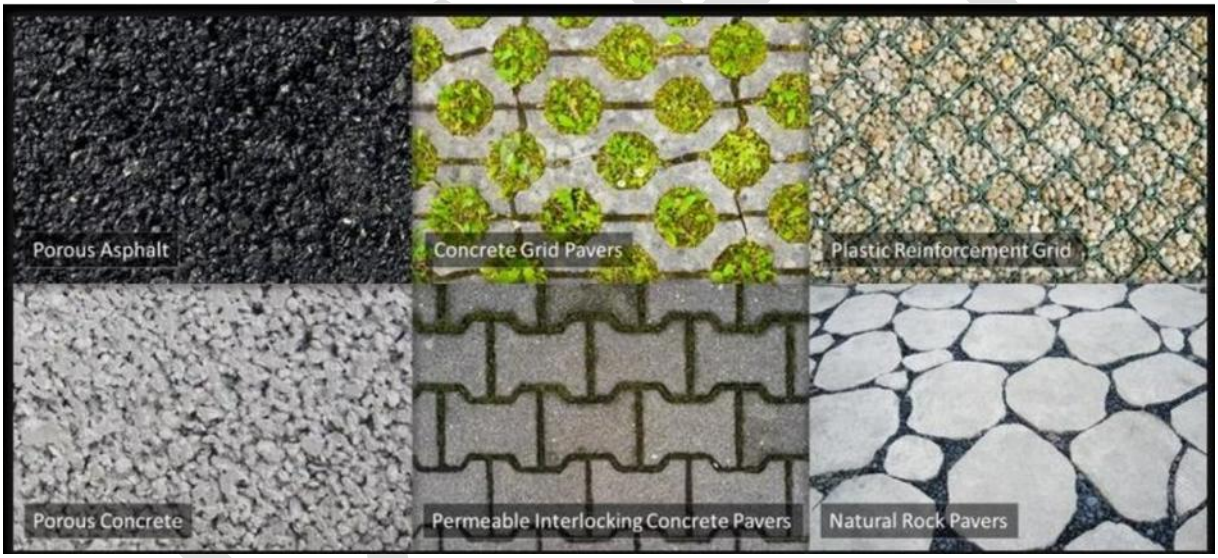


Figure 5: Examples of permeable surface which should be used as an alternative to impermeable paving or road surfaces wherever possible.

3.5. HERITAGE

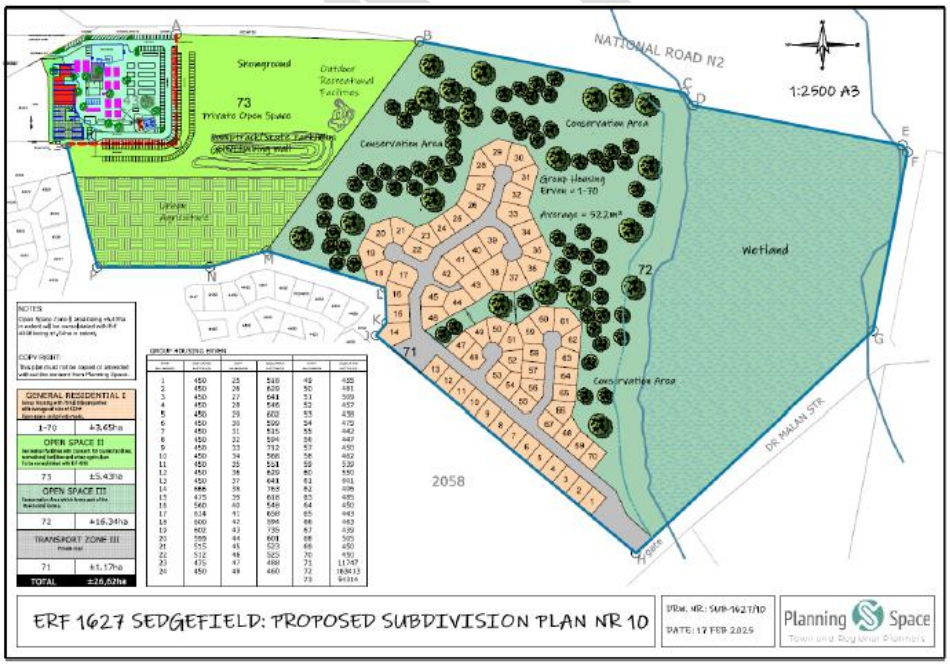
A Notice of Intent to Develop (NID) under Section 38(1) and (8) of the NHR Act will be submitted to Heritage Western Cape. Heritage Western Cape will determine whether the proposed development might have an impact on heritage resources. Comment will be included in this section of the final Basic Assessment Report. Proposed development (Preferred Alternative – Alternative A)

4. PROPOSED DEVELOPMENT (ALTERNATIVE A)

Following feedback from the terrestrial biodiversity specialist regarding the site sensitivities, the original site plan was revised. Three options have been proposed for development at the site and are summarised in Table 3. In each of the three SDPs the Perdespruit is indicated as a wetland area along with a 30m buffer area, both of which were determined and delineated as part of the first version of this aquatic assessment in 2021. For the purposes of this assessment Plan 10 will be assessed as the preferred alternative

DEVELOPMENT ZONE	PLAN 10 - PREFERRED
General Residential Zone 1 Group housing	3.65 ha 70 units
Transport Zone 3 Internal roads and parking	1.17 ha
Private Open Space Zone II Tourist and recreation, restaurants and food market	5.43 ha
Open Space Zone III Conservation area including Perdespruit	16.34 ha

Figure 6: Preferred Layout (Alternative A



4.1. DEVELOPMENT COMPONENTS

The proposed development concept comprises a mixture of land uses that shows that conserving nature while providing, housing, jobs, food, and energy for a growing human population is possible. The layout has been informed by the special site characteristic that has been identified during the initial site assessment phase. The biophysical element that shaped the layout includes the wetland on the eastern portion of the land and the 30m buffer to the west. The low-lying topography of the land was also a consideration. The footprint of the conventional urban development is limited to the 3m height contour where other more flexible land uses are proposed on the rest of the site.

GENERAL RESIDENTIAL I Group Housing with 70 full title properties with average erf size of 522m² Open space and private roads.	
1-70	±3.65ha
OPEN SPACE II Recreation facilities with Consent for tourist facilities, recreational facilities and urban agriculture To be consolidated with Erf 4308	
73	±5.43ha
OPEN SPACE III Conservation Area which forms part of the Residential Estate.	
72	±16.34ha
TRANSPORT ZONE III Private road	
71	±1.17ha
TOTAL	**±26,62ha**

4.1.1. Service considerations

- Access

Access to the Group Housing site and the Resort will be from Dr. Malan Drive in the south. The townhouses, commercial area, and Agricultural area will gain access from a road over Erf 5008 that is currently zoned for "Business 1" purposes. Erf 5008 will be subdivided and rezoned accordingly as part of a separate town planning application. Erf 5008 belongs to the same owner as Erf 1627.

- Water / Sewage / Electrical

Water

The development will be supplied from two sources, viz.:

i) Shallow boreholes or "spikes" which are approximately 1.4m deep below ground; and

ii) Municipal treated water supply

The open space and transport zones will be supplied only by shallow boreholes.

Sewage

The site is extremely flat like the adjacent Island Village. The ground levels vary between 2.5m amsl and
3.1m amsl. Over and above this the water table is fairly high due to the porous soils and the proximity of the Estuary. At times of open river mouth the water table could be as high as 0.7m amsl, and at

the times of closed river mouth, when the Estuary water level rise, the water table could be as high as 1.3m amsl to 2.0m amsl.

Therefore it is necessary to have sewers at shallow depths. The proposed system is an enclosed system where each house has a 1 m3 tank that has a stainless steel sewage cutter pump that pumps the sewage to one central bulk sewage pumping station, PS 1. The proposed pressure mains range from diameter 75mm pipes to diameter 110mm diameter pipes. The proposed pipelines will be HDPE class PE80.

From the bulk sewage pumping station, it is proposed to pump the sewerage from erf 1627 to the rising main connecting Island Village with the Sedgefield Municipal system. The detail of this connection and the capacity of the downstream system will form part of the Service level Agreement Planning.

Electrical

There is an existing municipal 95mm2 x 3c (Cu) 11kV PILC cable which supplies the mini-substation next to the Engen Garage. The cable is terminated on the overhead line on the other side of the N2.

There is also an existing 95mm2 x 3c (Cu) 11kV PILC cable on Dr Malan Drive supplied from the main 66/11kV substation.

It is the Municipality's intention to connect the two cables together to strengthen their network in the area by creating a ring feed.

The Municipality confirmed during our meeting with them as well as by email that there is capacity on this cable to supply the required demand.

4. ENVIRONMENTAL IMPACTS AND GENERAL MITIGATIONS

Based on the updated environmental considerations and the proposed development, the following impacts have been identified. Recommendations from specialists regarding each of the identified environmental sensitivities are provided, ensuring that the proposed activities align with best environmental practices and minimise any potential negative impacts.

3.1. Impact of Proposed Development

The following table (3) will serve as a summary of the impacts of proposed development during the construction phase of the proposed development. It has been determined that the preferred alternative (Alternative A) development proposal would have a slightly lesser impact on SCC than second alternative (Alternative B).

Table 3: Summary of impacts of proposed development associated with alternative A – Construction Phase

Impact	Without Mitigation	With Mitigation
	Significance of Impact	Significance of Impact
Loss of terrestrial biodiversity	**Low – negative (-)**	**Low – negative (-)**
Loss of species of conservation concern	**Low – negative (-)**	**Negligible – negative (-)**
Disturbance / loss of faunal habitat	**Medium - negative (-)**	**Low – negative (-)**
Loss of Fauna	**Low- negative (-)**	**Negligible – negative (-)**
Sedimentation of estuarine habitat	**Low- negative (-)**	**Negligible – negative (-)**
Waste Pollution	**Low- negative (-)**	**Negligible – negative (-)**
Construction Vehicles Pollution	**Low- negative (-)**	**Negligible – negative (-)**
Noise Pollution	**Low- negative (-)**	**Negligible – negative (-)**
Visual Impact	**Low – negative (-)**	**Negligible – negative (-)**
Employment	**Low – negative (-)**	**Negligible – positive (+)**

3.2. Summary of Recommendations from Specialist Input

At the current pre-application phase, it is expected that some of the specialist findings will have to be updated depending on the feedback received during the Pre-Application Public Participaction (12/11/2025 to 12/12/2025). The Draft Environmental Management Programme will be updated with final recommendations from relevant specialists.

3.3. NO – GO Areas

The 30 meter buffer (figure 6) from the Perdespruit will be regarded as a no- go area including the areas earmarked for Opens Space III.

Figure 6: Delineated wetland area and associated 30 m buffer for RE/1627 Sedgefield

4. LEGISLATIVE REQUIREMENTS

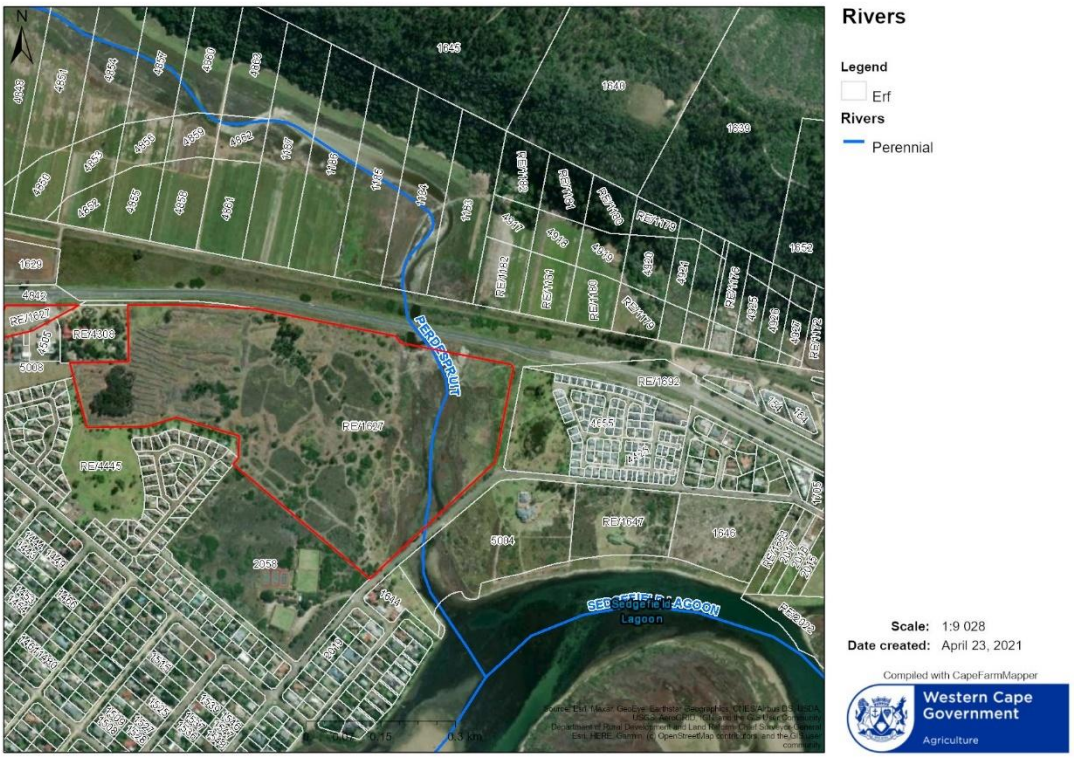
All legislative requirements have been assessed during compilation of the Basic Assessment Process prior to the start of the proposed development. This section provides a concise overview of the most relevant legal requirements.

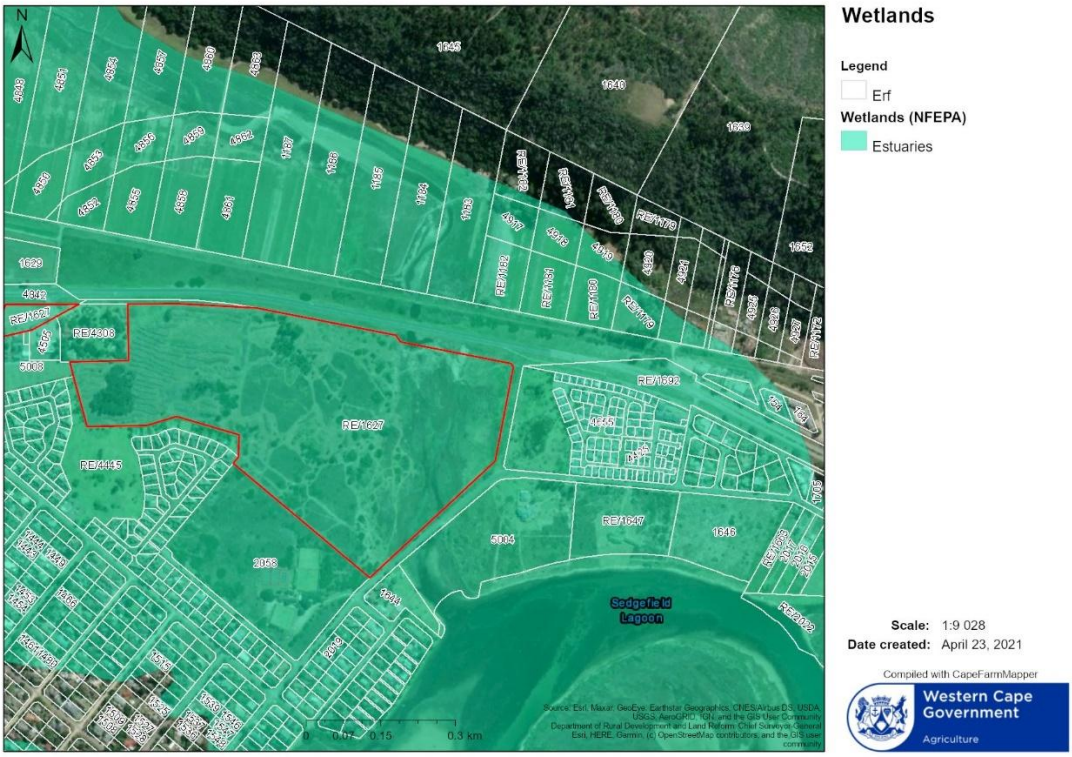
3.1. The National Environmental Management Act (Act 107 of 1998) (NEMA)

The proposed development was assessed in accordance with the National Environmental Management Act (NEMA) (Act 107 of 1998) and the relevant listed activities outlined in the Environmental Impact Assessment (EIA) Regulations, Listing Notice 1 and 3 of 2014 (amended in 2017) (GN. 327 and 324). Based on this review, the proposed development requires Environmental Authorisation for the following listed activities -

Table 5: Relevant listed activities that require environmental authorisation

Listing Notice	Activity Number	Description
Listing Notice 1: GN R327	**12**	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or **(ii) infrastructure or structures with a physical footprint of 100 square metres or more;**

		where such development occurs— **a) within a watercourse;** b) in front of a development setback; or c) **if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse**; — excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.
		



Definition of a watercourse as per NEMA:
"watercourse" means –

(a) a river or spring;

(b) a natural channel in which water flows regularly or intermittently;

(c) a wetland, pan, lake or dam into which, or from which, water flows; and

any collection of water which the Minister may, by notice in the *Gazette*, declare to be a watercourse as defined in the National Water Act, 1998 (Act No. 36 of 1998); and a reference to a watercourse includes, where relevant, its bed and banks; and

"wetland" means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

CapeFarmMapper (CFM) is a product of the Western Cape Department of Agriculture. This online Mapping tool is designed to assist with spatial information queries and decision making in the fields of agriculture and environmental management. The data presented on this site originates from various sources and custodians and its correctness cannot be guaranteed.

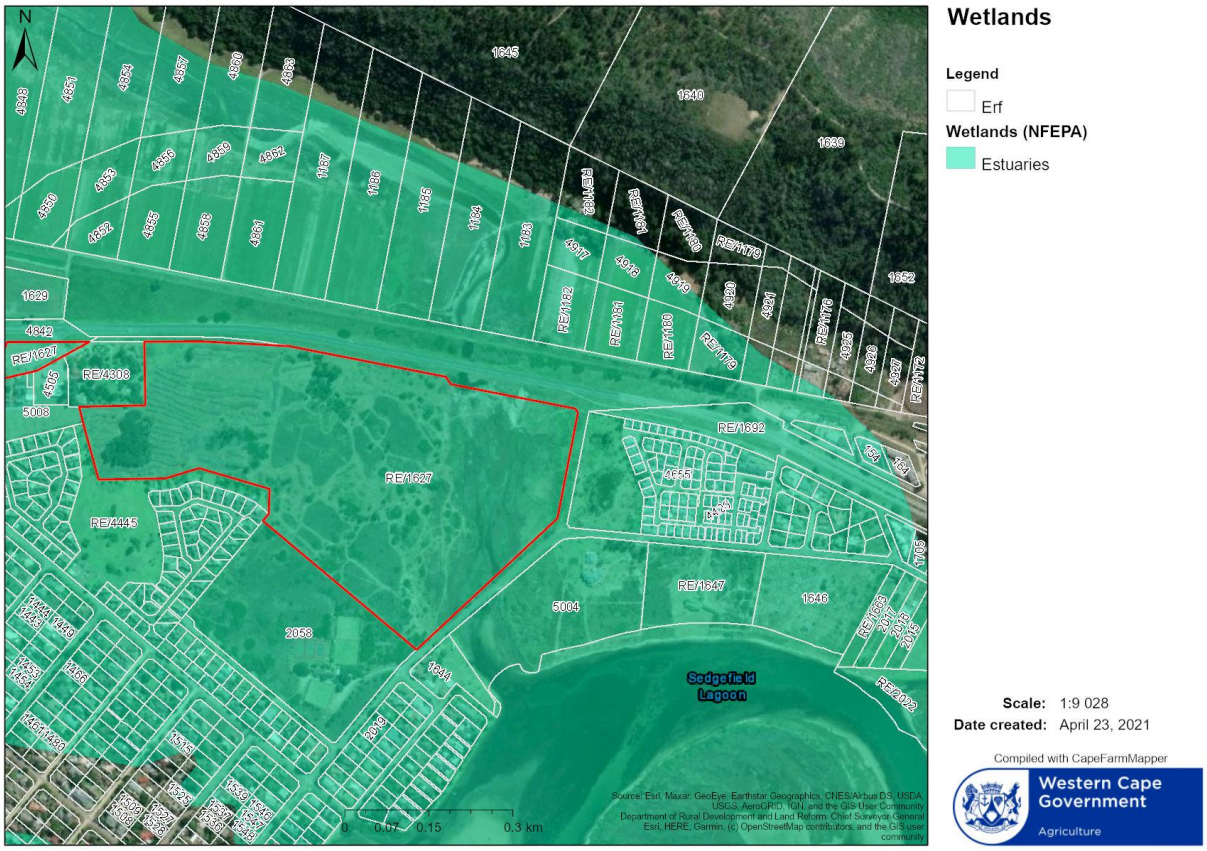
As per the Aquatic Specialist Report:
The wetland area was delineated using methods prescribed by DWAF (2005). The delineation relied heavily on the presence of hydrophytic plants because sandy soil present at the site does not reliably show typical indicators of saturation such as mottling. The buffer area was determined using the detailed site-based model developed by Macfarlane & Bredin (2017) which is the more detailed of the two available models. The buffers are then mapped from the edge of the delineated wetland area

(DWAF, 2005). The recommended buffer is 30 m from the delineated edge of the wetland / estuarine area which is indicated in Figure 9. This buffer is applicable in both the construction and operational phase development.

Figure 9. Delineated wetland area and associated 30 m buffer for RE/1627 Sedgefield

This Listed activity is included as a result of the proposed bird hide and boardwalks abutting the area within 32 meters of a watercourse.

Listing Notice 1: GN R327	**19**	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving— a) will occur behind a development setback; b) is for maintenance purposes undertaken in accordance with a maintenance management plan; c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.



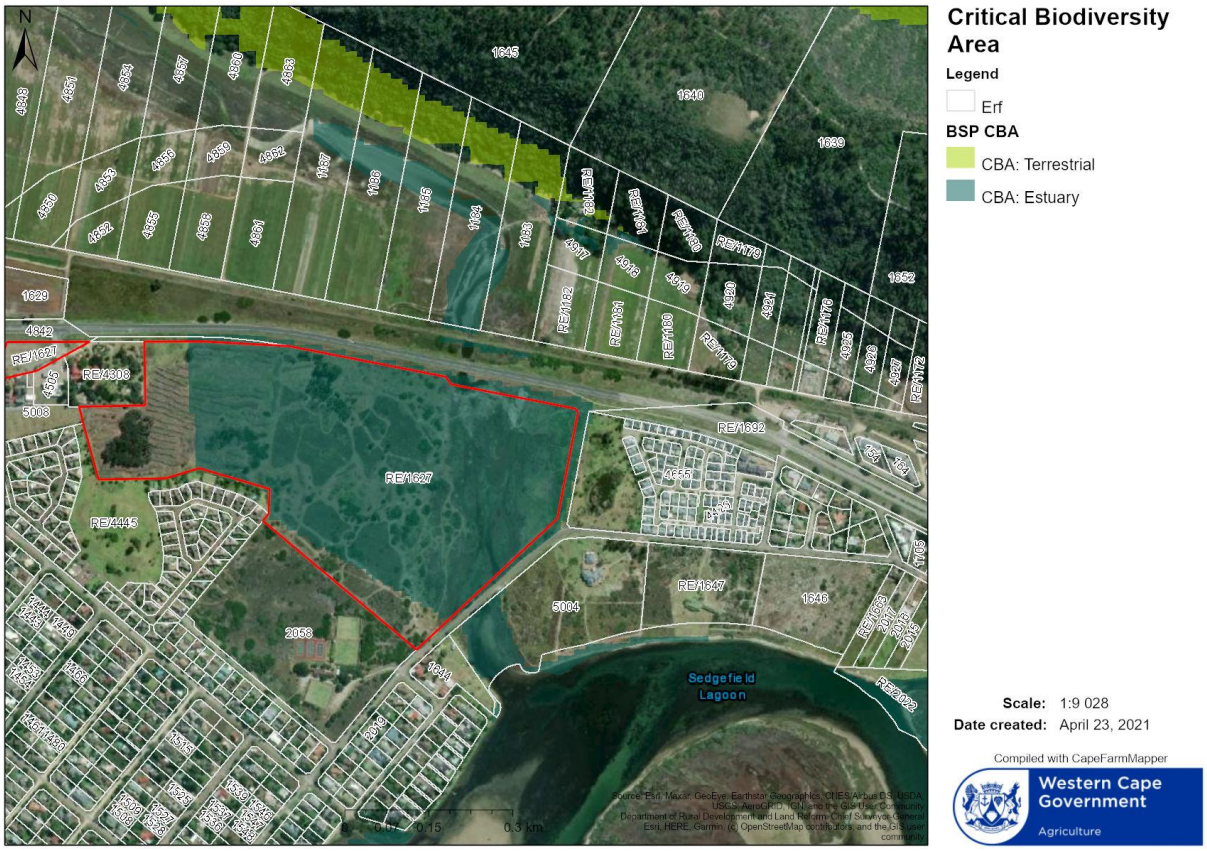
As a result of previous floods in Sedgefield an application for Environmental Authorisation was submitted obtained in 2009, for SANParks to artificially breach the estuary mouth in anticipation of peak estuary flood flow rates. This provides a safeguard against similar extreme rainfalls resulting in high flood levels. The flood risks have been significantly reduced by the early mouth breaching policy.

The wetland was delineated by the aquatic specialist and a 30 meter buffer was established where no development will take place, however as a result of previous floods experienced in 2006 and 2007 and the area was periodically covered by shallow water as per the NEMA wetland definition, this listed activity is included.

The flood line specialist recommends that a number of stormwater detention ponds is established on site and that the excavated material is used as infill to localised low areas within the erf to raise ground levels to approximately 3.1m to 3.2 asml to safe guard against climate change and possible 1:50 & 1:100 year floods.

Listing Notice 1: GN R327	**27**	The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for- (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.
As per the proposed SDP approximately 14.05 hectares of vegetation will be disturbed.		
Listing Notice 3: GN R324	**4**	The development of a road wider than 4 metres with a reserve less than 13,5 metres. **a. Western Cape**

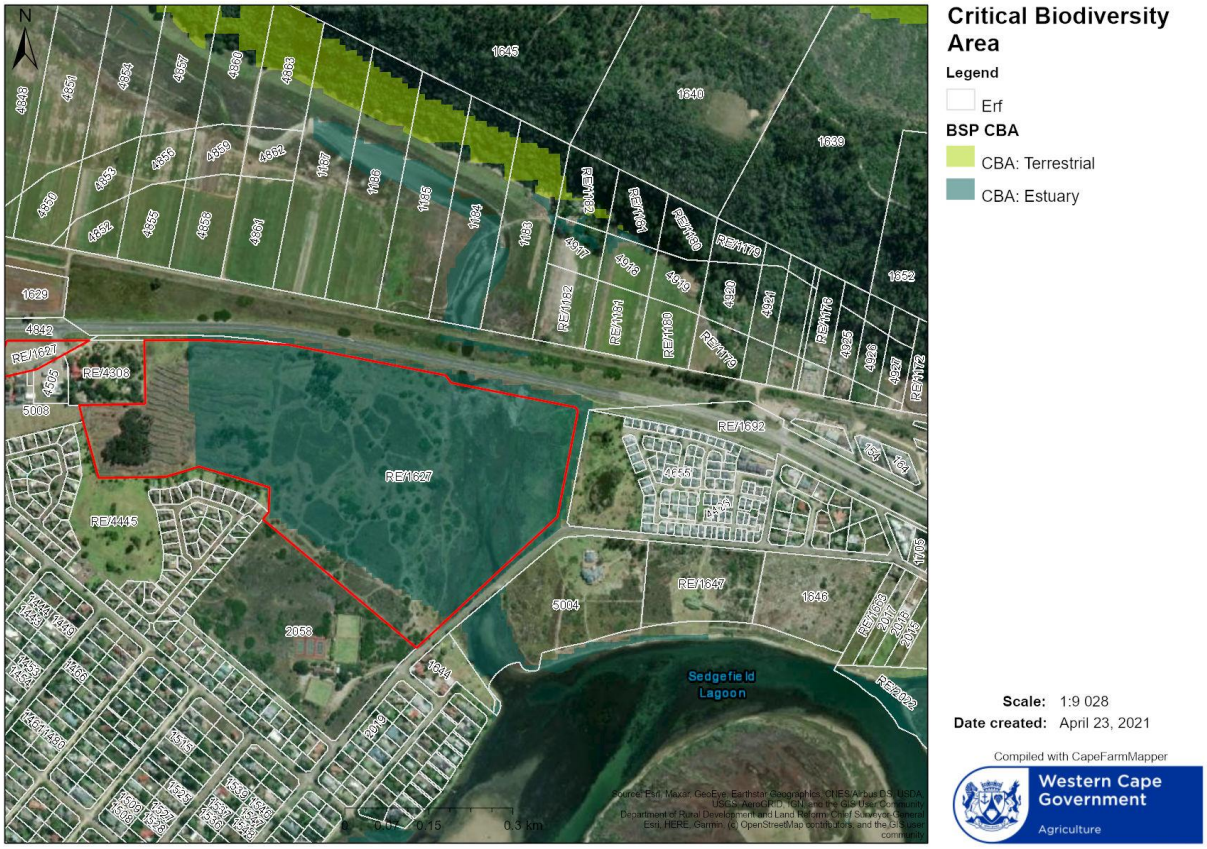
		i. Areas zoned for use as public open space or equivalent zoning; **ii. Areas outside urban areas;** (aa) **Areas containing indigenous vegetation;** (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or i. Inside urban areas: (aa) Areas zoned for conservation use; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.
The property is Zoned undetermined as per the town planning report: *The objective of this zone is to enable the Municipality to defer a decision regarding a specific land use and development management provisions until the circumstances affecting the land unit have been properly investigated; or until the owner of the land makes an application for rezoning; or a zoning determination is made by the Municipality.* As per NEMA an Urban Area is defined as follow: ***"urban areas"*** *means areas situated within the urban edge (as defined or adopted by the competent authorit or in instances where no urban edge or boundary has been defined or adopted, it refers to areas situated with the edge of built-up areas*; The property is outside the urban edge of Sedgefield, please refer to the town planning report 3 to 4. The internal roads for the proposed development will be wider than 4 meters with a reserve less than 13 meters		
Listing Notice 3: GN R324	**6**	The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more. **a. Western Cape** i. Inside a protected area identified in terms of NEMPAA; **ii. Outside urban areas;** **(aa) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; or** **(bb) Within 5km from national parks, world heritage sites, areas identified in terms of NEMPAA or from the core area of a biosphere reserve; -** excluding the conversion of existing buildings where the development footprint will not be increased.
The proposed tourist accommodation will sleep more than 15 people and the site is situated outside the urban edge.		



The majority of the site is classed as an Estuary CBA area. The site is located within the Garden Route National Park.

Listing Notice 3: GN R324	**12**	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. **i. Western Cape** i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; **ii. Within critical biodiversity areas identified in bioregional plans;** iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the

		prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.



More than 300m² of vegetation will be removed within a CBA area

Listing Notice 3: GN R324	**14**	The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or (ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. **a. Western Cape** i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites;

		(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Sites or areas listed in terms of an international convention; (ff) **Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;** (gg) Core areas in biosphere reserves; or (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.
As a result of previous floods in Sedgefield an application for Environmental Authorisation was submitted obtained in 2009, for SANParks to artificially breach the estuary mouth in anticipation of peak estuary flood flow rates. This provides a safeguard against similar extreme rainfalls resulting in high flood levels. The flood risks have been significantly reduced by the early mouth breaching policy. The wetland was delineated by the aquatic specialist and a 30 meter buffer was established where no development will take place, however as a result of previous floods experienced in 2006 and 2007 and the area was periodically covered by shallow water as per the NEMA wetland definition, this listed activity is included. The bird hide and boardwalk will be more than 10m² in total.		

3.2. National Forest Act (NFA) (Act 84 Of 1998)

The NFA provides for the protection of forests and specific tree species. According to the Act, "no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree, except under a licence or exemption granted by the Minister to an applicant and subject to such period and conditions as may be stipulated." The Department of Forestry, Fisheries, and the Environment (DFFE) is responsible for implementing and enforcing the NFA, including the prohibition of damage to indigenous trees in any natural forest without a licence (Section 7 of the NFA) and the prohibition of cutting, disturbing, damaging, destroying, or removing protected trees without a licence (Section 15 of the NFA). In the case of this application, all protected trees that are proposed to be disturbed must be done in accordance with the mentioned Forest Act.

3.3. National Environmental Management: Biodiversity Act (NEM:BA) (Act 10 Of 2004)

NEM:BA (Act 10 of 2004) governs the management and conservation of South African biodiversity within the framework of NEMA. It addresses the protection of species and ecosystems that require national protection, as well as the sustainable use of indigenous biological resources. Additionally, NEM:BA regulations regarding the control of alien invasive vegetation are set out within the Act and the Alien and Invasive Species Regulations of 2014. According to NEM:BA Regulation 75, landowners are required to manage all listed invasive alien species on their land. However, not all properties require a Control Plan. The Department of Environmental Affairs (DEA) developed criteria to determine when Invasive Alien Species (IAS) Control Plans are necessary.

Property size Hectares (ha) Square meters (m²)	Requirements	Timeframes for clearing
< 0.05 Ha (5000 m²)	Clear and remove plant material to approved Green Garden Waste site	30 days
0.051 – 5 Ha(5001 m² - 50,000 m²)	Clear and remove plant material to approved Green Garden Waste site; or apply for fuel reduction burn (See details below); or chip; or utilize. Or alternatively submit a Control Plan with acceptable timeframes to the Department of Environmental Affairs	90 days (at least by the end of November (start of the fire season)
– 5 Ha10,001 m² to 50,000 m²	Clear or submit Control Plan with timeframes acceptable to the Department of Environmental Affairs	120 days to clear or 30 days to submit a control plan
> 5.1 Ha> 50,001 m²	Submit Control Plan with timeframes acceptable to the Department. Prioritize the urban edge boundaries that are high-risk fire risk. Fire breaks are to be in place. Permits are required to keep category 2 plants except when they are in riparian areas, or where they pose a fire risk, in these cases there are to be treated as category 1b and cleared.	30 days to submit control plan. On approval: Start implementing within reasonable timeframe 5 - 10 years

Figure 2: Criteria for properties requiring IS Control Plans

In the case of this application the applicant is not required to produce a control plan. However, all invasive alien species must be eradicated from the property. This also aligns with the recommendations brought forward by the specialists during the Pre-Application Basic Assessment phase.

3.4. National Heritage Resource Act (act 25 of 1999)

The purpose of the National Heritage Resources Act is to introduce an integrated and interactive system for managing national heritage resources and to promote good governance at all levels. It empowers civil society to nurture and conserve heritage resources for future generations and establishes general principles for heritage resources management across South Africa. The Act introduces a system for identifying, assessing, and managing heritage resources, establishes the South African Heritage Resources Agency and its Council to coordinate national management, and sets norms and standards for protecting heritage resources of national significance. It controls the export of nationally significant heritage objects and the import of illegally exported cultural property, enables provinces to establish heritage authorities with powers to protect and manage heritage resources, and provides for the protection and management of conservation-worthy places and areas by local authorities, along with addressing related matters.

After the submission of a Notice of Intent to Develop (NID) under Section 38(1) and (8) of the NHR Act to Heritage Western Cape, the determination of requests and required mitigation actions will be included in this section of the EMPr.

3.5. National Environmental Management: Waste Amendment Act 2014 (Act 26 of 2014)

The National Environmental Management: Waste Amendment Act 2014 (Act 26 of 2014) in South Africa is a legislative framework aimed at promoting sustainable waste management practices and reducing the environmental impact of waste. It amends the National Environmental Management: Waste Act of 2008, enhancing provisions related to waste management planning, licensing, and compliance monitoring. The Act introduces more stringent measures for waste classification, minimisation, and recycling, and emphasizes the importance of extended producer responsibility. The most important aspect of this Act is its focus on the waste management hierarchy, prioritising waste avoidance and reduction, followed by reuse, recycling,

recovery, and, as a last resort, safe disposal. This approach encourages a shift towards a circular economy, aiming to minimise waste generation and its adverse effects on the environment and human health.

The applicant must adhere to the National Environmental Management: Waste Amendment Act 2014 (Act 26 of 2014) at all times during both the construction and operational phases. Compliance with this Act is essential to ensure sustainable waste management practices and minimize environmental impact.

4. CONDITIONS OF APPROVAL

All conditions of the Environmental Authorisation will be added into this section. If it is not included in this document, then it should be noted that this is not the final approved EMPr.

5. ADMINISTRATION OF THE EMPR

The following section outlines the guidelines that will remain in effect until all components of the proposed development are fully completed, including site rehabilitation and the fulfilment of all contractor responsibilities. As the operational phase of the development has been assessed to have a low environmental impact, the EMPr will conclude once the final operational phase audit report confirms that all requirements have been satisfactorily met.

5.1. Phasing of the EMPr

The following provides clear distinction for the different phases of the proposed development –

Pre – construction phase:
This phase refers to all actions that need to proceed prior to the first physical implementation of activities related to the proposed development. Examples include (but are not limited to) the demarcation of recommended NO-GO areas. During this part of the pre-construction phase, all necessary mitigations must be in place before the physical execution of construction activities.

Construction phase:
This phase involves the physical construction and related activities necessary for development of the establishment of the managers' cottages, conference centre and tourist facilities, garages, and the entertainment facilities.

Operational phase:
This phase refers to the period when the constructed facilities are available for use. Confirmation of the operational phase marks the end of all construction related to all the proposed development structures.

Rehabilitation and Maintenance phase:
Rehabilitation and maintenance should be conducted during all phases of the development to minimize environmental impact and ensure that the post-construction rehabilitation workload does not become a burden on the applicant and contractor. Essentially the idea is to keep the surrounding environment intact. To have the environment represent a better state than before the proposed development of as near as originally assessed.

Decommission phase:
It is not expected that the proposed development will be decommissioned. However, once the operational phase reaches its end, decommissioning will involve removing the operating assets of the development.

5.2. Revisions of the EMPr

The EMPr is an integral part of the environmental application documentation and cannot be significantly amended without applying to the competent authority and undergoing public participation.

It is also recommended that the EMPr be reviewed during external audits, which will serve as the primary mechanism for suggesting amendments. The secondary mechanism will originate from such recommendations from the appointed Environmental Control Officer (ECO).

Any deficiencies identified within the EMPr should be addressed through the preparation of detailed method statements, outlining how tasks will be executed and how environmental impacts will be mitigated.

Clarification on method statements:

The Contractor may be required to provide Method Statements for approval by the ECO to work commencing on aspects of the project which are deemed to be, or identified as being, of greater risk to the environment, and/or which may not be covered in sufficient detail in the EMPr, when called upon to do so by the ECO.

A Method Statement is a "living document" in that modifications are negotiated between the Contractor, the ECO, and the project management team, as dictated by circumstances. All Method Statements will form part of the EMPr documentation and are subject to all terms and conditions contained within the EMPr. Note that a Method Statement is a 'starting point' for understanding the nature of the intended actions to be carried out and allows for all parties to review and understand the procedures to be followed in order to minimise risk of harm to the environment.

Changes to, and adaptations of Method Statements can be implemented with the prior consent of all parties. A Method Statement describes the scope of the intended work in a step-by-step description in order for the ECO and the Principal Agent to understand the Contractor's intentions. This will enable them to assist in devising any mitigation measures, which would minimise environmental impact during these tasks. For each instance where it is requested that the Contractor submit a Method Statement to the satisfaction of the PA and ECO, the format should clearly indicate the following:

The format of method statements should clearly indicate the following:

What	A Brief description of the work to be undertaken
How	A detailed description of the process of work, methods, and materials
Where	A description / sketch map of the locality of work
When	The dates which are due for commencement and completion dates estimates
Who	The person responsible for undertaking the works described in the method statement

Examples of method statements that the ECO may require include (but are not limited to) dust management, storage of hazardous materials (if applicable).

5.3. Monitoring and Compliance

It is clearly defined in the EMPr what is expected in terms of implementation of mitigation recommendations. The effectiveness of implementation of proposed mitigation recommendations and compliance therewith must be monitored.

5.3.1. Frequency

1. It is recommended that the appointed Environmental Control Officer (ECO) visit the proposed development site at least once during the pre-construction phase, unless otherwise determined at the discretion of the ECO, to establish a baseline of site conditions and confirm the implementation of pre-construction recommendations. During the construction phase, the ECO should conduct two (2) site visits per month, and once (1) per month during the operational phase, continuing until the final external audit is completed to monitor and report on rehabilitation compliance.
2. The ultimate authority is hereby given to the ECO to establish the necessity of frequency of site visits. This document only highlights the recommended frequency and must therefore be arranged by the ECO.

5.3.2. Reporting procedure of monitoring and compliance

1. It is stipulated (under roles and responsibilities) that an ECO must be appointed, and that it is the responsibility of the ECO to do regular site inspections to gather evidence of compliance against the EMPr.
2. The ECO should then compile a site inspection report that highlights the findings and serves as documented evidence of compliance with the recommendations and requirements outlined in this report. This report will form part of the ongoing monitoring process, ensuring that all environmental guidelines and best practices are adhered to throughout the development phases.

Reporting procedure of non-compliance:

The non-compliance is defined as, and will be issued for:

- Any deviation by the Applicant from the environmental conditions and requirements as set out in the EMPr, or;
- Any contravention by the Applicant of environmental legislation, or;
- Any unforeseen environmental impact resulting from direct or indirect actions or activities on site that would be considered as a significant impact. Significance will be determined by the ECO but will be informed by geographic extent, duration, lasting effects of the impact and extent of remediation to the impact.

Types of non-compliances issued:

Two types of non-compliances may be issued:

A. Stop Works Non-Compliance

Stop Works Non-Compliance will require that all works as described in the non-compliance will stop immediately and may only continue on a formal written permission from the ECO.

Stop Works Non-Compliance will be issued under the following conditions:

- Total disregard by the Applicant to the environmental conditions and requirements listed in the EMPr;
- An activity that if left unattended will escalate the degree, severity or extent of the environmental impact.

B. General Non-Compliance

A general non-compliance will allow work and activity by the receiving party to continue while the corrective action takes place.

A Non-Conformance Report (NCR) will be issued to the Applicant as a final step towards rectifying a failure in complying with a requirement of the EMPr. This will be issued by the ECO to the Applicant in writing.

Preceding the issuing of a NCR, the Applicant must be given an opportunity to rectify the issue.

Should the ECO assess an incident or issue and find it to be significant (e.g. non-repairable damage to the environment), it will be reported to the relevant authorities and immediately escalated to the level of an NCR.

The following information should be recorded in the NCR:

- Details of non-conformance;
- Any plant or equipment involved;
- Any chemicals or hazardous substances involved;
- Work procedures not followed;
- Any other physical aspects;
- Nature of the risk;
- Actions agreed to by all parties following consultation to adequately address the non-conformance in terms of specific control measures and should take the hierarchy of controls into account;
- Agreed timeframe by which the actions documented in the NCR must be carried out; and
- ECO should verify that the agreed actions have taken place by the agreed completion date, when completed satisfactorily; the ECO and Applicant should sign the Close-Out portion of the Non-Conformance Form and file it with the contract documentation.

If no remediation occurs for the reported non-compliances, the non-compliances will be communicated to the appropriate municipality and competent authority whereby financial implications will be determined.

5.4. Audits

Two construction audits are required prior to handover to the applicant. The first must commence within a year of the start of construction phase. Followed by a second within 30 days of the final construction phase completion activity.

Audits must be completed by an independent party (who is not the ECO or the appointed EAP) and must comply with the requirements of regulation 34 of the EIA regulations, 2014 (as amended). The contents of the environmental audit report must comply with Appendix 7 of the EIA regulations.

5.5. Clarified Roles and Responsibilities

The following section outlines roles and responsibilities to clarify the position of parties relevant to the proposed development. These roles remain fixed, unless otherwise mutually agreed upon by the relevant parties.

5.5.1. The Applicant / Holder of the EA

The holder of the EA / property owner is the overseeing entity responsible for ensuring that all activities undertaken on the property comply with the Environmental Authorisation (EA) and associated Environmental Management Programme (EMPr) (& any other approval / licence / permit).

Actions relate (but are not limited to) –

- Ensure that that all tender documentation include reference to, and the need for compliance with, the EA and EMPr as well as any other legally binding documentation.
- Ensure that all employed Contractors and Engineers are aware of and understand the conditions of the EMPr (Include the EMPr in all tender documents)

- The right to remove any person or appointed contractors or personnel from site if the contravene with the EMPr.
- Appoint an Environmental Control Officer.
- The project Applicant (holder of the Environmental Authorisation of the EMPr) must notify the competent authority of the commencement of maintenance management activities 14 days prior to such commencement taking place.

5.5.2. The ECO

The ECO's duties, inter alia, must be to ensure compliance with the EMPr through monitoring, and through proactive and open communication with the project/

The ECO's responsibility should include (but are not limited to) the following:

- Monitoring and verifying that the EMPr is adhered to at all times and taking action if the specifications are not followed.
- To environmentally educate and raise the awareness of the Contractor and his staff as to the environmental requirements relating to the Site and to facilitate the spread of the correct attitude during works on Site.
- To take immediate action on Site where clearly defined and agreed no-go areas are violated or are in danger of being violated.
- Monitoring and verifying that environmental impacts are kept to a minimum.
- Reviewing and approving construction method statements together with the PA.
- Assisting the Contractor in finding environmentally responsible solutions to problems.
- Keeping records of all activities/ incidents on Site in a Site Diary concerning the environment.
- Inspecting the Site and surrounding areas regularly (minimum monthly) with regard to compliance with the EMP (note that this could be reduced further in consultation with the environmental officer at SPM in the case of low activity on Site but would need to be increased to weekly inspections during high risk/high activity work).
- Keeping a register of complaints and report these first to the PA for action and follow-up.
- Requesting the removal of person(s) and/or equipment not complying with the specifications (done via the PA).
- Recommending the issuing of penalties for transgressions of environmental Site specifications to the PA.
- Completing start-up, monthly, and Site closure checklists and reports.
- Keeping a photographic record of progress on Site from an environmental perspective.
- Undertaking a continual internal review of the EMPr and making recommendations to the PA.

<u>Site Visit Frequency:</u>

- It is recommended that the appointed Environmental Control Officer (ECO) visit the proposed development site at least once during the pre-construction phase, unless otherwise determined at the discretion of the ECO, to establish a baseline of site conditions and confirm the implementation of pre-construction recommendations. During the construction phase, the ECO should conduct two (2) site visits per month, and once (1) per month during the operational phase, continuing until the final external audit is completed to monitor and report on rehabilitation compliance.

<u>Environmental induction and training</u>

- It will be the responsibility of the ECO to provide adequate environmental awareness training of senior site personnel takes place and that all construction workers receive an induction presentation on the importance and implications of the EA and EMPr.

- Where staff turnover is high and with additional appointment of Sub-contractors, it may be necessary to undertake additional induction training sessions. The Contractor must keep records of all environmental training sessions, including names, dates and the information presented.

5.5.3. The Engineers and Contractors

The responsibilities indicated here are also relevant to Sub-Contractors. The responsibilities of the Engineers and Contractors include but are not limited to the following:

- Adhere with the conditions and recommendations of the EMPr or any other legally binding documentation.
- Prevent actions that may cause harm to the environment.
- Be responsible for any remedial activities in response to an environmental incident within their scope of influence.
- Ensure compliance of all site personnel and / or visitors to the EMPR and any other authorisations.

6. PRE - CONSTRUCTION PHASE ENVIRONMENTAL MANAGEMENT PROGRAMME

Activity	Management / Mitigation	Responsibility	Frequency / Timing
6.1. Stormwater Management	• Apply the principles of Low Impact Development (LID) in the design of the drainage systems. Final design of the stormwater system must take place prior to construction to ensure timeous implementation.	Applicant / Architect/Enegineer	Once off
6.2. Water Resource Protection	**Rainwater harvesting**		
	• Rainwater harvesting must be incorporated into the designs. All rainwater tanks must be shown on building plans	Applicant / Architect	Once off
	Efficient water use		
	• Water efficiency must be incorporated into the design of the units (e.g.,) - - Duel flush toilets - Low flow shower head - Low flow taps - Waterwise landscaping - Reuse greywater	Applicant / Architect	Once off
6.3. Development preparation	**Site demarcation / NO-GO areas and site setup**		
	• Clearly identify and demarcate the development area, area of works and spoiling areas. (all areas outside the demarcated workspace will be considered NO-GO areas). • To ensure that the ecological integrity of the surrounding environment is maintained and preserved, the Applicant and contractor must ensure that the construction footprint is limited to the construction area. The extent of the construction must be marked out to satisfaction of the engineer and ECO. • Set up the site camp in a designated, level area away from sensitive environments, ensuring it includes secure storage for materials, sanitary facilities, and clear boundaries. • Install temporary utilities, safety signage, and waste management systems in compliance with environmental and safety regulations.	Applicant / Contractor	Once off (the frequency may be ongoing, depending on the state of demarcation)
	Method statements		
	• Method Statements must be submitted by the Applicant/ Contractor to the ECO and must be adhered to by the Applicant/ Contractor. These relate to:	Applicant/ Contractor	Prior to commencement of construction and during construction (if necessary)

	- water and stormwater management requirements, - dust management - solid waste management requirements, - the storage of hazardous materials (if applicable), and - standard emergency procedures.		
	Appointment of Environmental Control Officer (ECO)		
	• An Independent ECO must be appointed at the Applicant's cost to monitor the implementation of the EMPr. • It will be the responsibility of the ECO to provide adequate environmental awareness training of senior site personnel takes place and that all construction workers receive an induction presentation on the importance and implications of the EA and EMPr. • All contractors, sub-contractors and casual labourers must acknowledge their understanding of the EMPr and environmental responsibilities by signing an induction attendance record.	Applicant / ECO	Once off

7. CONSTRUCTION PHASE ENVIRONMENTAL MANAGEMENT PROGRAMME

	Activity	Management / Mitigation	Responsibility	Timing / Frequency
7.1.	**Soil Erosion and Stormwater Management**	• Stringent mitigation measures must be imposed during construction to minimise runoff, possible silt run-off and contamination of water leaving the site (especially into the adjacent 'natural' areas), with the use of silt-fencing, rows of onion bags, mulch, brushwood, sandbags, and deflection berms (the choice depending on the situation). • Exposure of bare surfaces must be kept to a minimum to restrict stormwater runoff towards the Knysna Estuary. • Any erosion channels developed during construction causing surface runoff must be backfilled, compacted and restored to an acceptable condition. • Ensure that stormwater and runoff generated by hardened surfaces is discharged in retention areas (i.e. swales or retention ponds), to avoid concentrated runoff and associated erosion. • Implement the use of sedimentation traps if and when determined necessary by the ECO. • In areas where construction activities have been completed and where no further disturbance would take place, rehabilitation and re-vegetation should commence as soon as possible. A suitable rehabilitation method statement must be submitted to the ECO for approval. * Take note of all recommendations made by specialist to minimize stormwater runoff towards the Knysna Estuary.	Applicant / Contractor	Ongoing
7.2.	**Dust Control**	• Implement a dust prevention strategy as presented by method statement. • This strategy must include - Speed control to minimise dust on site. - During dry, dusty periods haul roads should be kept dampened to prevent excess dust. No potable water or seawater may be used for damping haul roads. - Exposed stockpile materials must be adequately protected against wind (covered) and should be sited taking into consideration the prevailing wind conditions.	Contractor	Ongoing

		- Trucks bringing in materials must be covered to prevent dust and small particles escaping and potentially causing damage to people and property.		
7.3.	**Noise Control**	• Construction activities must only take place during normal working times between 07:00-17:00 on weekdays. • Machinery may be fitted with silences to dampen noise upon receiving complaints • Staff must be reminded that they are working within a residential area and noise levels must be kept low.	Contractor	Ongoing
7.4.	**Traffic Control**	• No vehicles may drive onto the adjacent properties and any other NO-GO areas. • No vehicles are to park or operate within "no-go" areas	Contractor	Ongoing
7.5.	**Waste Management**	• Provide refuse bins around site designated for the different types of generated waste (e.g., general waste, refuge, construction material). • Refuse bins will be responsibly emptied and secured. • Temporary storage of domestic waste shall be in covered and secured waste skips. • Dangerous waste such as metal wires and glass must be safely stored before being moved off site as soon as possible. • Under no circumstances may domestic waste be burned on site or buried on open pits. • Separation and recycling of different waste materials should be supported. • Littering on the site is forbidden and the site shall be cleared of litter at the end of each working day.	Contractor	Ongoing
7.6.	**Stockpile Management**	• Keep stockpiles on site to a minimum. • Keep topsoil and underburned stockpiles separate. • Locate stockpiles away from drainage lines, at least 10 metres away from natural waterways and where they will be least susceptible to wind erosion. • Ensure that stockpiles and batters are designed with slopes no greater than 2:1 (horizontal/vertical). • Stabilise stockpiles and batters that will remain bare for more than 28 days by covering with mulch or anchored fabrics or seeding with sterile grass.	Contractor	Ongoing

7.7. Storing fuels and chemicals	• Though unavoidable, fuels and chemicals stored on site must be kept to a minimum. • Refuelling and fuel storage areas, and areas used for the servicing or parking of vehicles and machinery, must be located on impervious bases and should have bunds around them (sized to contain 110 % of the tank capacity) to contain any possible spills. These areas must not be located within any natural drainage areas or preferential flow paths and must be located outside of buffer zones.	Contractor	Ongoing
7.8. Cement Batching	• The mixing of cement must be done on Rhino board. • All concrete batching must take place on an area that is to be hard surfaced as part of the development. • Concrete mixing areas must have bund walls or a settling pond in order to prevent cement run off. Once the settling ponds dry out, the concrete must be removed and dispatched to a suitable disposal site. • When using Readymix concrete, care must be taken to prevent spills from the trucks while offloading. This form of batching is preferable for large constructions as no on-site batching is required and there is a lesser likelihood of accidental spills and run off. Trucks may not be washed out on site.	Contractor	Ongoing
7.9. Fauna and Flora management	• Mark off the areas that are not going to be developed prior to undertaking any works and ensure that no unnecessary loss of adjacent vegetation occurs. • In situations fauna species are located at the site and need to be removed, the relevant specialists must be contacted to advise on how the species can be relocated. • No trapping, killing, or poisoning of any wildlife is to be allowed and Signs must be put up to enforce this. Monitoring must take place in this regard.	Contractor / ECO	Ongoing

7.10. Ablution facilities	• Toilets at the recommended Health and Safety standards must be provided. Portable toilets must be emptied regularly to prevent overflow. Once no longer required, they must be pumped dry to prevent leakage into the surrounding environment and removed from site. • Toilets facilities must comply with local authority regulations, shall be maintained in a clean and hygienic condition. Their use shall be strictly enforced. They must be positioned in an appropriate place, also taking into consideration, gradient of the land. • The Contractor must ensure that toilets are cleaned weekly or more regularly, if found to be necessary. • Unauthorised spilling of waste from the septic tank into the environment and burying of waste are strictly prohibited. • Ablution facilities must not cause any pollution to any water resource, and it must not be a health hazard to the general public.	Contractor	Ongoing
7.11. Social Requirements	• It is strongly recommended that the Contractor make use of local labour as far as possible for the construction phase of the project. • Theft and other crime associated with construction site are not allowed • A complaints register must be kept of all received complaints and delt with immediately.	Contractor	Ongoing
7.12. Heritage Requirements	• If any archaeological sites/materials are exposed, mitigation regarding the finds must be conducted with the Heritage Western Cape regarding the destiny of the material. Examples of heritage resources are as follow: - Human remains - Coins/Gold/Silver - Fossils - Fossils shell middens/ marine shell heaps - Pottery/ceramics	Applicant / Contractor	

	• If Heritage Western Cape agrees to the removal of the material, an archaeologist must apply for a permit to scientifically excavate/collect the material.		
7.13. Visual Mitigation	• Minimise exposure of working area by limiting the visibility of construction sites from sensitive receptors by using temporary barriers or screens, such as fencing or shade cloth. • Schedule construction activities during times when visual impacts are less critical (e.g., outside of tourist seasons or high-traffic periods) to reduce the visual impact on surrounding areas. • Store and organize construction materials in less visible areas to reduce the clutter and visual disturbance of scattered materials and equipment.		

8. OPERATIONAL PHASE ENVIRONMENTAL MANAGEMENT PROGRAMME

Activity	Management / Mitigation	Responsibility	Timing / Frequency
8.1. Stormwater management	• A sustainable stormwater design must be implemented to prevent excessive run-off that will lead to erosion of the surrounding landscape. • Runoff from the roof of the new buildings should be fed into an existing formal stormwater drainage system (if present) or directly infiltrate into soft landscaped areas surrounding the building . • Erosion prevention and control measures must be implemented by use of organic mulch or sandbags to contain all sediment and prevent erosion during rehabilitation.	Applicant / Architect / Contractor	Once off
8.2. Waste Management	• No waste may be disposed of anywhere else if not designated as a waste disposal area (disturbance zone). All waste must be disposed of in appropriate municipal or other authorised dumping sites. • NO Dumping of garden refuse on any part of the property or neighbouring areas is permitted.	Applicant	Ongoing
8.3. Alien Invasive Plants	• All invasive alien plants should be completely cleared from the property, and where a tree or bush cover is desired, replaced with suitable indigenous species. • Minimise disturbance to the natural vegetation using low impact manual labour techniques. • Reduce fire hazard on site.	Applicant	Ongoing
8.4. Visual Mitigation	• Use natural elements to minimise the visual impact. These may include but are not limited to form, colour, texture etc. • Plant and maintain indigenous vegetation around structures and exposed areas to blend the development into the surrounding landscape. • Install low-glare, downward-facing lights to minimize light pollution and visual impact at night.		

9. REHABILITATION AND MAINTENANCE PHASE ENVIRONMENTAL MANAGEMENT PROGRAMME

Activity	Management / Mitigation	Responsibility	Frequency / Timing
9.1. Vegetation Rehabilitation	**Vegetation**		
	• All disturbed areas, or areas which have been disturbed for the purpose of the development, are to be re-vegetated. This will aid in preventing erosion within the site. A 100% indigenous planting plan must be adhered to in terms of all planting carried out on the site. Consultation must be made with a Botanical Specialist for a site-specific vegetation list.	Applicant	
		Applicant & ECO	Project completion
	• Erosion prevention and control measures must be fully implemented (if necessary).	Applicant & ECO	On-going site maintenance
	• All rehabilitated areas must be maintained through weekly inspections until the 80% success rate has been achieved (if applicable).		
	• Encroachment of invasive alien plants in this regard will need to be monitored on a regular basis to prevent re-infestation.		
9.2. Stormwater Management	**Stormwater**		
	• Any negative stormwater effects, related to the operational phase, must be remediated.	Applicant	On-going site maintenance
	• On-going monitoring and assessing of stormwater drainage must occur on site during the operational phase of the proposed project.		
9.3. Land Rehabilitation	**Land**		
	• Rehabilitation must be executed in such a manner that surface runoff will not cause erosion of disturbed areas during and after rehabilitation.	Applicant / Contractor	Project completion
	• Any rubble is to be removed from site to an appropriate disposal site. Burying of rubble on site is prohibited.		
	• The site is to be cleared of all litter.		
	• The surface of all disturbed areas must be left rough to facilitate binding of topsoil and vegetation.		
	• Areas that are disturbed through building activities (such as the excavations for sewerage pipelines) should be suitably rehabilitated without delay. Failure to do so will have a knock-on effect on biodiversity in the form of an increase in wind erosion, soil exposure and a loss of the soil micro-organisms that are essential		

Activity	Management / Mitigation	Responsibility	Frequency / Timing
	for plant growth. Use complete cover of locally chipped woody material (for example Acacia cyclops stems and branches but not the seed pods).		

ACKNOWLEDGEMENT FORM

Record of signatures providing acknowledgment of being aware of and committed to complying with the contents of this Environmental Management Programme (EMPr), which relates to the environmental mitigation measures for the project outlined below, and the environmental conditions contained in all other contract documents.

PROJECT NAME:

PROPOSED DEVELOPMENT OF ASSISTED CAMPING FACILITIES FOR THE LOVEMORE FAMILY - PORTION 104 OF FARM 216, UITZICHT, KNYSNA, WESTERN CAPE.

DFFE Reference: TBC

APPLICANT:

Signed: …….. Date: …….....

CONTRACTOR:

Signed: …….. Date: …….....

ENVIRONMENTAL CONTROL OFFICER

Signed: …….. Date: …….....