



SITE SENSITIVITY VERIFICATION REPORT

For

**PROPOSED RESIDENTIAL HOUSING DEVELOPMENT ON ERF
2924, WELBEDAGHT KNYSNA, WESTERN CAPE.**



PREPARED FOR:

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STATEMENT OF INDEPENDENCE

I, **Joclyn Marshall**, 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: 2022/5006**) 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: _____

A handwritten signature in black ink, appearing to read 'Joclyn Marshall', is written over a horizontal line. The signature is stylized and cursive.

1. INTRODUCTION

Eco Route Environmental Consultancy has been appointed by the applicant **Mr. van Niekerk** to ensure compliance with regulations contained in the National Environmental Management Act (NEMA Act No. 107 of 1998) and the Environmental Impact Assessment Regulations (2014), as amended, for the proposed construction of a primary dwelling on Erf 2924, Welbedaght, Knysna (hereafter referred to as "the property").

1.1. Location Information

Erf 2924, Welbedacht, Knysna (referred to as "the property"), borders the N2 Highway, which separates it from the Knysna Estuary. The property extends approximately 2.5 hectares (as per title deed).

SG Region:	KNYSNA
Erf Nr:	2924
Area (Sqm):	24586.5
SG Code:	C03900050000292400000



Figure 1: Locality plan of Erf 2924, Welbedaght, Knysna

The property is bordered by Erf 2924 to the north and Erf 2925 to the south. Its eastern boundary ends at Cherry Lane, while its western boundary meets the N2 Highway. Currently, access to the property is via a dirt road extending from Cherry Lane through Erf 7594, which is also owned by the Van Niekerk family.

FEATURE	LATITUDE (S)			LONGITUDE (E)		
	DEG	MIN	SEC	DEG	MIN	SEC
Western Boundary	34°	02'	08.22"	23°	00'	39.74"

Southern Boundary	34°	02'	07.07"	23°	00'	43.81"
Eastern Boundary	34°	02'	05.64"	23°	00'	47.44"
Northern Boundary	34°	02'	03.81"	23°	00'	42.55"

2. ENVIRONMENTAL CONSIDERATIONS

VEGETATION

According to the spatial data layer Vegetation Type (Vegmap 2018) from SANBI, the entire property was mapped as Garden Route Shale Fynbos.

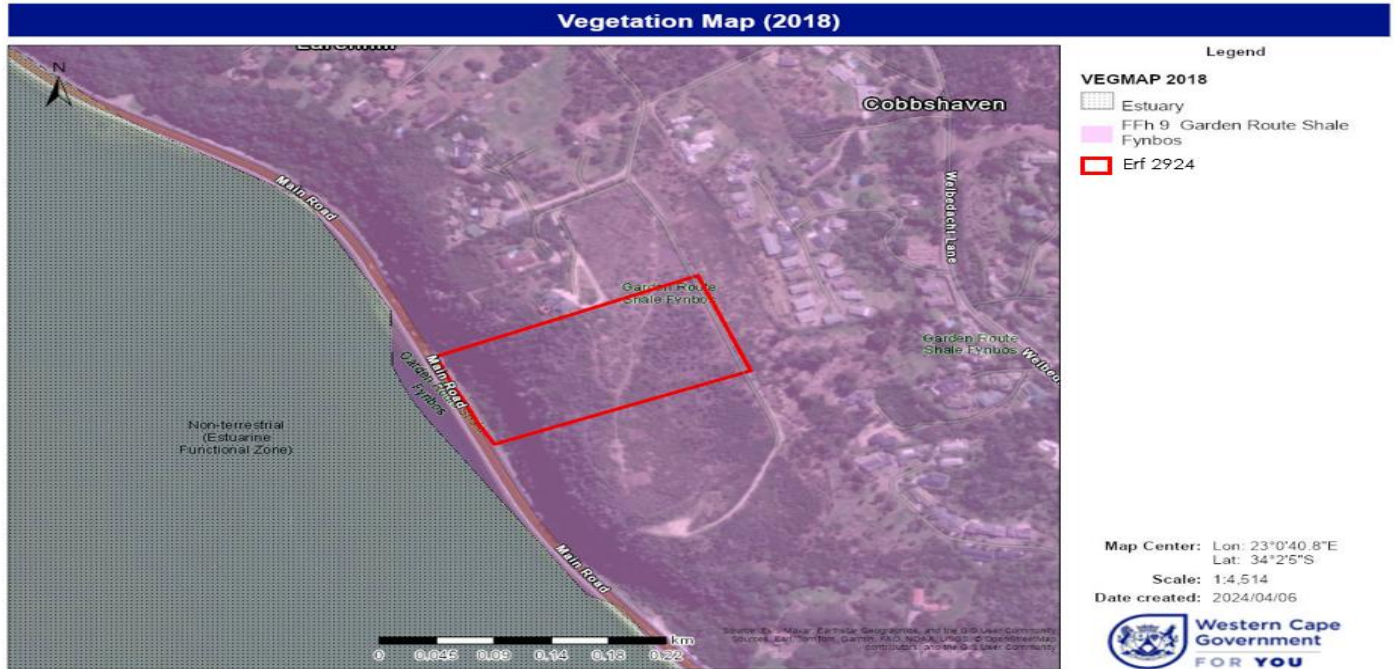


Figure 2: Vegetation Types on Erf 2924 as represented by SANBI (2018)

According to SANBI red list of ecosystem status, the Garden Route Shale Fynbos was originally mapped to be **ENDANGERED (EN)**.



Figure 3: SANBI Original Ecosystem Status indicating Garden Route Shale Fynbos

Although the available desktop data identifies the entire property as Garden Route Shale Fynbos, verified specialists from Capensis have ground-truthed the persisting vegetation and found that fynbos does not cover the entire property. Fynbos is present on the upper ridge, northern slope, and southwest-facing cliffs, while the southern part of the property includes Southern Cape Afrotemperate Forest. A habitat map (Figure 4) was also included as part of their findings to understand the division and state of the vegetation conditions.

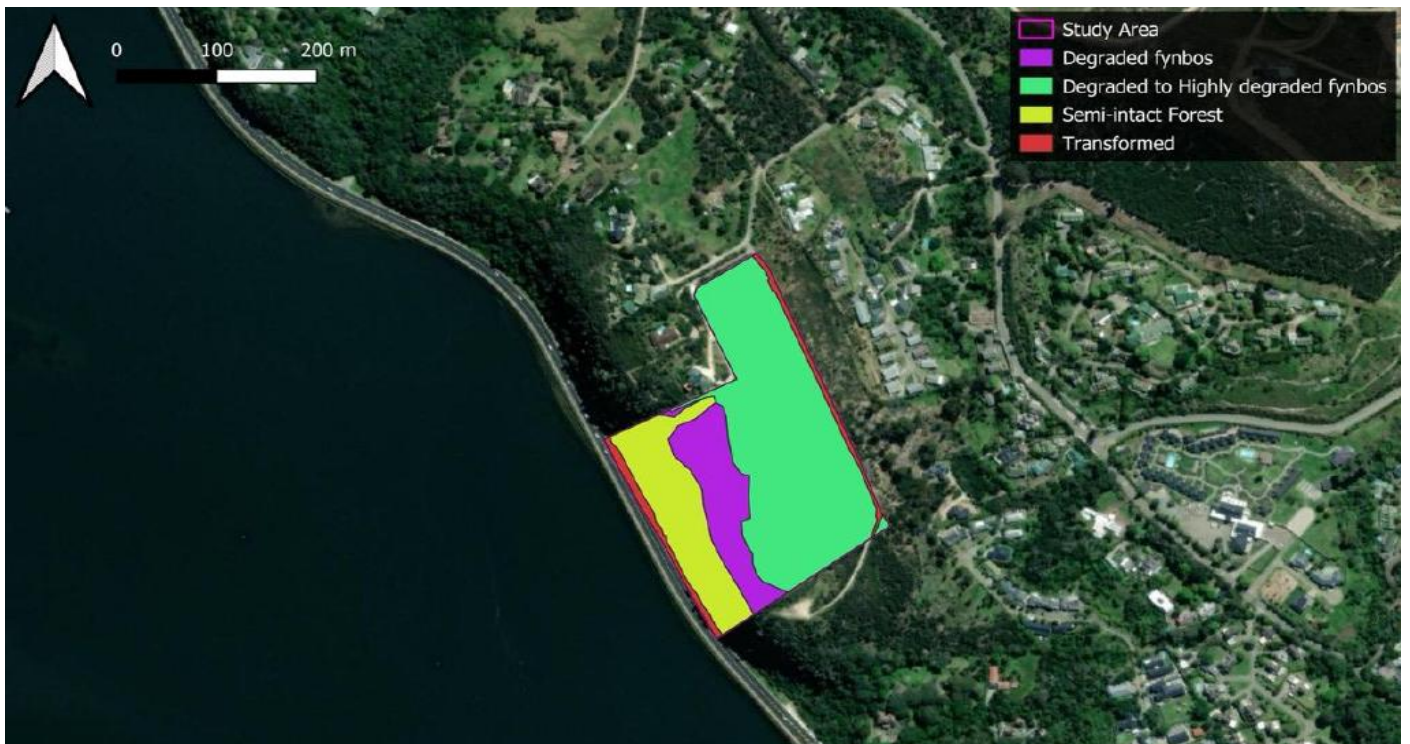


Figure 4: Habitat Map - The habitats identified in the screened areas, overlaid on a Google™ aerial image (Capensis, 2024)

SENSITIVE AREAS

The Western Cape Biodiversity Spatial Plan (WCBSP, 2017) designates the property as situated within a Critical Biodiversity Area (CBA:1 – to maintain), divided between aquatic and terrestrial features.



Figure 5: Western Cape Biodiversity Spatial Plan (WCBSP 2017) Sensitive areas

The specialists (Capensis, 2024) confirmed that the proposed development was indicated to occur within CBA 1, however, stated that this classification is questionable as the sites are not intact. It was specified that it would be more accurate to classify the property as CBA 2 or ESA 2 due to the poor condition.

It is important to note that the Knysna Estuary, located across the N2 highway on the property's western boundary, is part of the Garden Route National Park, a designated protected area. Although a portion of the protected area layer shown on the Cape Farm Mapper overlaps with the property, no development is planned within this protected area. However, obtaining comments from SANParks remains a priority to ensure compliance with environmental regulations and address any potential concerns.



Figure 6: Western Cape Biodiversity Spatial Plan (WCBS 2017) Protected Areas

FAUNA

Faunal Specialists (Confluent, 2024) were consulted to provide feedback on the faunal sensitivities relevant to the proposed development property. The GPS tracking gives indication to the extent of a site visit done in April 2024.

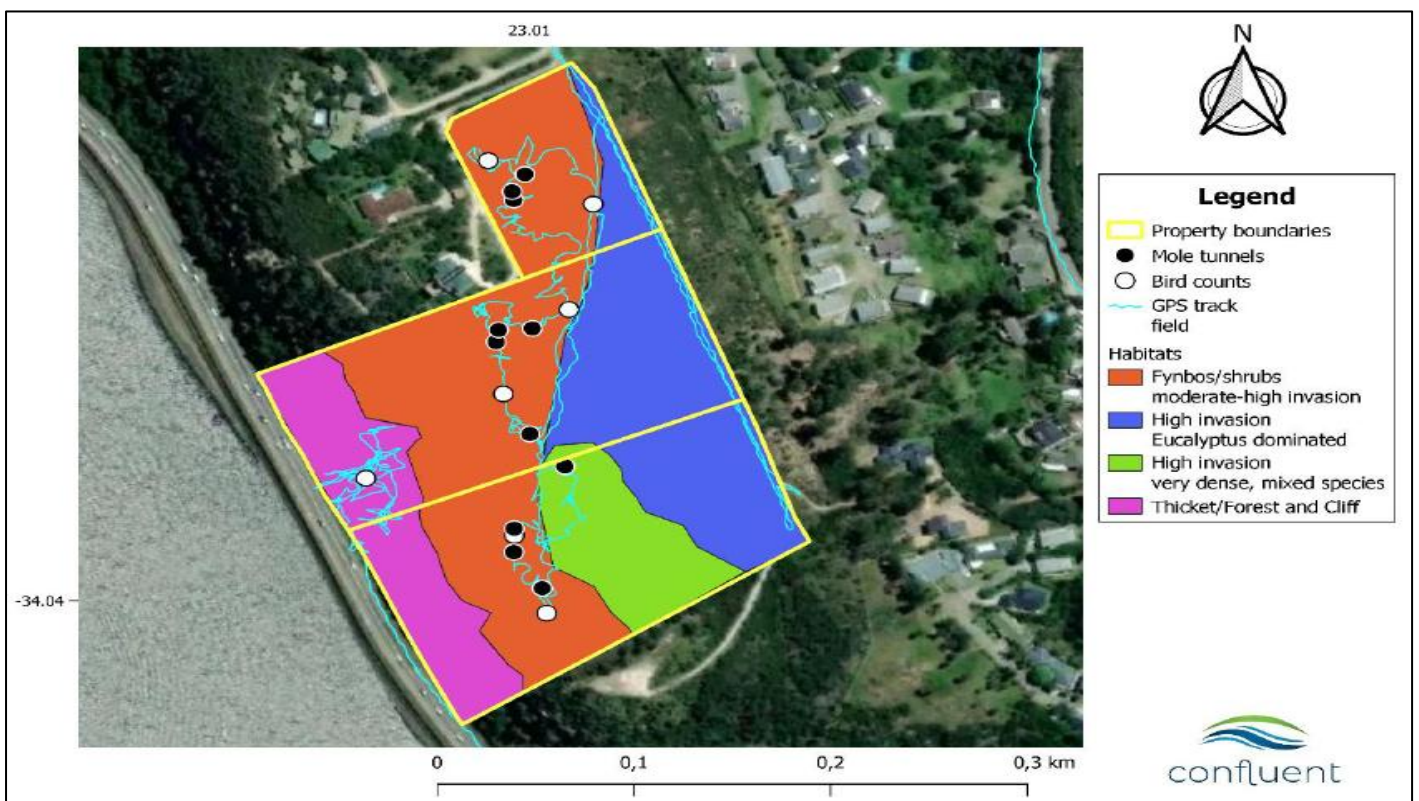


Figure 7: Habitats, GPS track and field work (Confluent, 2024)

- Avifauna

No SCC were encountered during the site visit. Seven bird counts were conducted across the properties, in addition to opportunistic sightings noted throughout the meander and searching for nests/roosting sites in suspected habitat. A total of 10 bird species (Table 1) were identified during the site visit.

Table 1: Avifauna species observed during site visit

Common name	Scientific name
African Firefinch	<i>Lagonosticta rubricata</i>
Cape Robin-Chat	<i>Cossypha caffra</i>
Hadada Ibis	<i>Bostrychia hagedash</i>
Karoo Prinia	<i>Prinia maculosa</i>
Kelp Gull	<i>Larus dominicanus</i>
Red-winged Starling	<i>Onychognathus morio</i>
Sombre Greenbul	<i>Andropadus importunus</i>
Southern Double-collared Sunbird	<i>Cinnyris chalybeus</i>
Southern Grey-headed Sparrow	<i>Passer diffusus</i>
Speckled Mousebird	<i>Colius striatus</i>

- Mammals

Subterranean tunnels typical for the Golden Mole SCC were found on the hilltop areas of the property during the site visit. While not possible to identify the species present based on the tunnels alone, the habitat suggests the more likely occurrence of the Fynbos Golden Mole (*A. corriae*) rather than Duthie's Golden Mole (*C. duthieae*, Vulnerable) which is typically associated with more forested habitat. However, the DFFE Screening Tool predicted suitable habitat for Duthie's Golden Mole on all three properties and therefore the precautionary approach is followed for this SCC as well. Mole tunnels were found in all vegetation/habitats in the hilltop and northern sections of the properties regardless of the level of alien plant invasion. One mole tunnel was also observed to cross beneath the fence of the north-western neighbouring property, indicating their movement across the entire hilltop landscape (Figure 8).

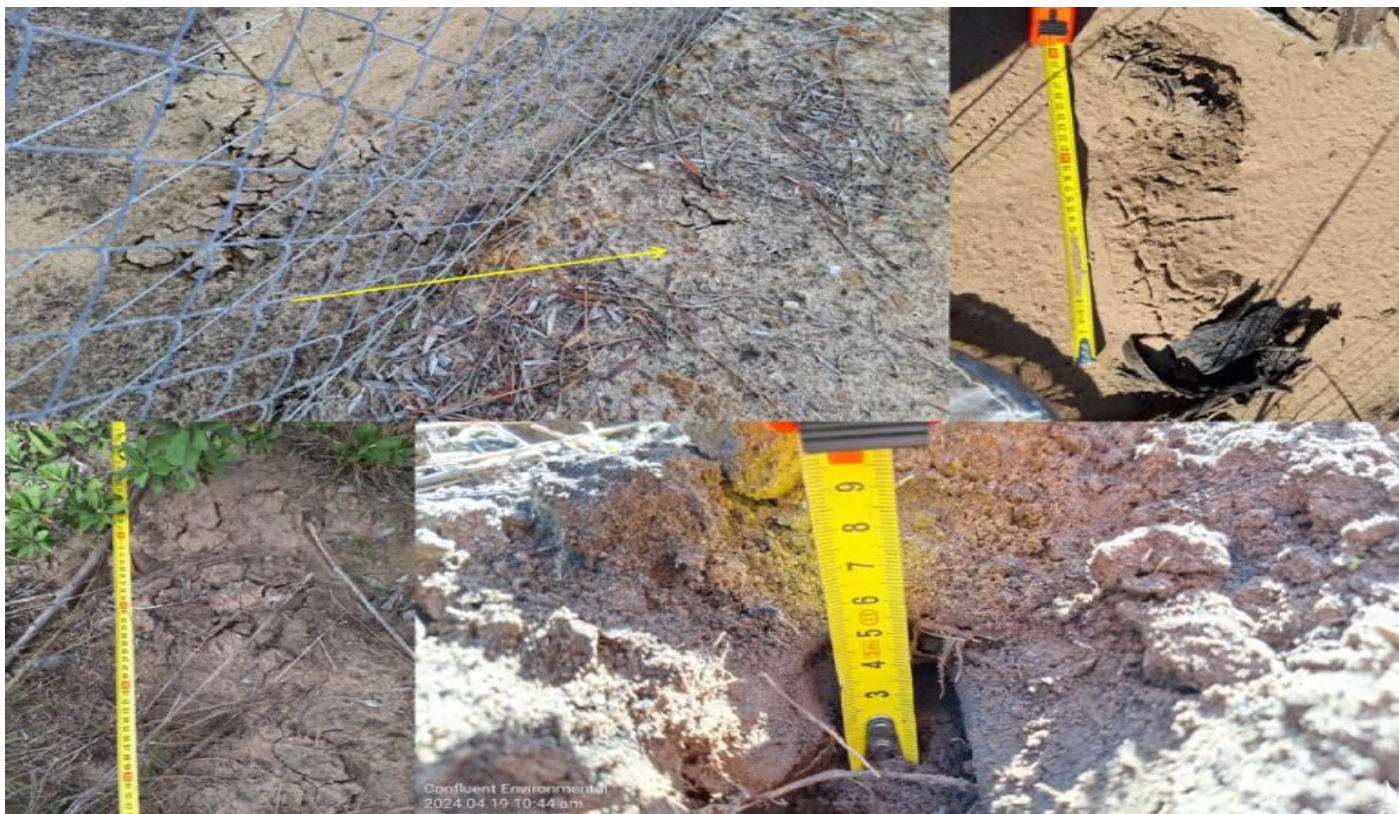


Figure 8: Golden mole tunnels seen on Erven 7594, 2924 and 2925. Top left image shows tunnel crossing a fence line (yellow arrow shows the crossing). Lengths of the tunnels seen are indicated by tape measure, as is the height (size) of one excavated tunnel in the bottom right image.

Antelope dung was found in the thicket section near the N2 highway and Bushbuck are suspected to be using this as a corridor. Some Mole-rat activity was also seen adjacent to the N2 highway along the mowed edges of the roads. Table 2 provides a summary of all mammals observed during the specialist's site visit.

Table 2: Mammal species observed during site visits to erven 7594, 2924, 2925 Knysna

Order	Family	Common Name	Scientific Name	Notes
Afrosoricida	Chrysochloridae	Golden mole	<i>Amblysomus corriae</i> OR <i>Chlorotalpa duthieae</i>	Typical subterranean tunnels seen on all three properties
Artiodactyla	Bovidae	Cape Bushbuck	<i>Tragelaphus sylvaticus</i>	Suspected from dung

- Terrestrial invertebrates

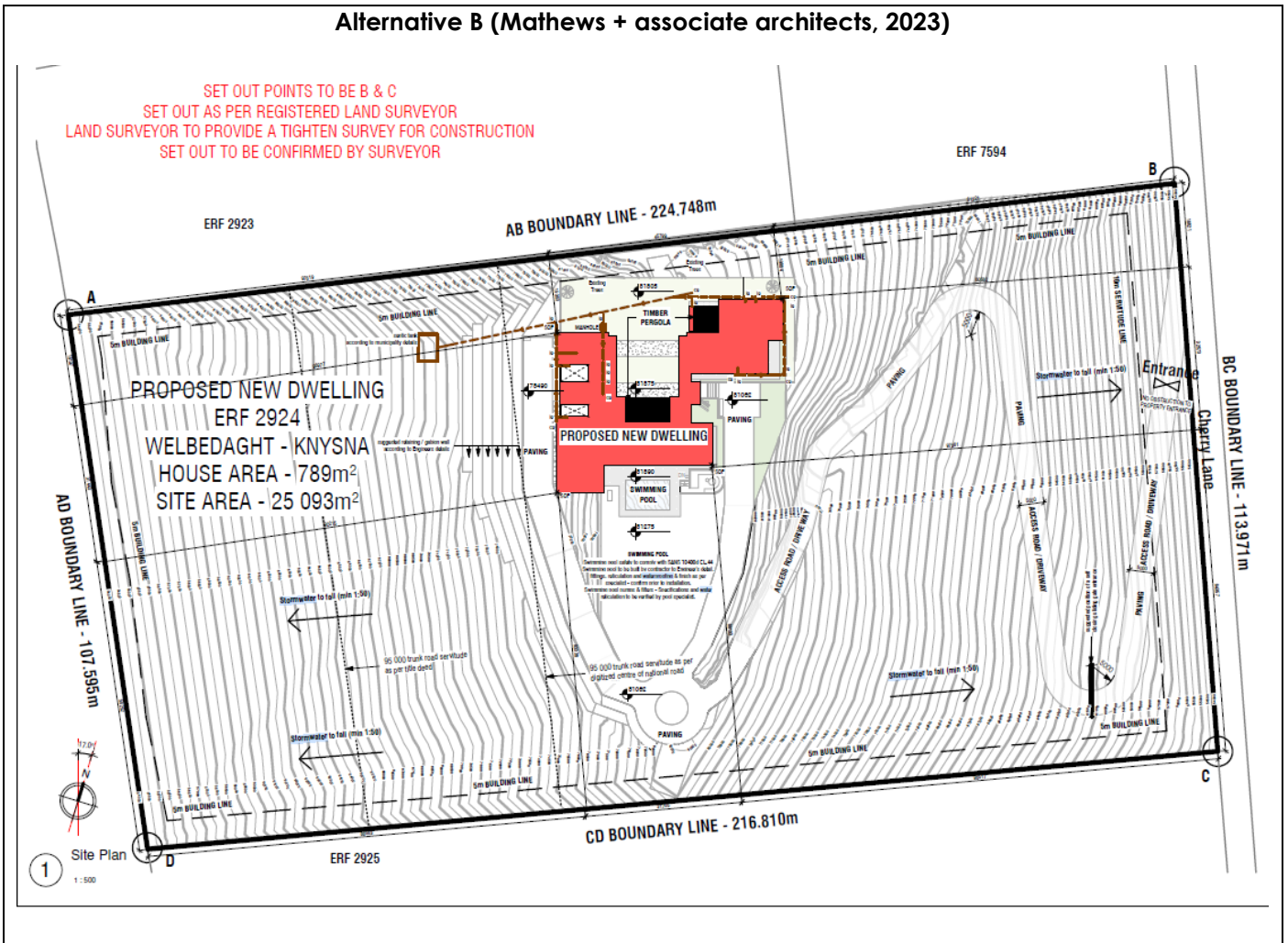
No Species of Conservation Concern (SCC) were found during the site inspection. The limited fynbos elements combined with moderate to high levels of alien plant invasion generally reduce the habitat quality and suitability for most invertebrate SCC. However, the site did contain plants in the genus *Aspalathus*, which is the host plant genus for the Near Threatened butterfly, *Aloeides pallida littoralis*. In total, invertebrates from 6 Families were photographed and identified from site (Table 3).

Table 3: Invertebrate species observed during site visits

Order	Family	Common name	Scientific name
Araneae	Salticidae	Jumping Spider	-
Coleoptera	Lampyridae	Fireflies & Glowworms	-
Hymenoptera	Formicidae	Big-headed Ants	<i>Pheidole sp.</i>

Hymenoptera	Formicidae	Sugar Ants	<i>Camponotus sp.</i>
Lepidoptera	Nymphalidae	Cape Autumn Widow	<i>Dira clytus</i>
Orthoptera	Acrididae	Short-horned Grasshoppers	-
Orthoptera	Acrididae	Bandwing grasshoppers	<i>Acrotylus subfamily</i>
Stylommatophora	Achatinidae	Zebra Agate Snail	<i>Cochlitoma zebra</i>

Alternative B (Mathews + associate architects, 2023)



Ultimately it will not be possible to move the location of the primary dwelling (Section E), however, based on the recommendations from specialist the footprint was reduced by limiting the construction of a meandering access road.

Impact of proposed development:

The following table will serve as a summary of the impacts of proposed development during the construction phase of alternative A.

Table 5: Summary of impacts of proposed development associated with alternative A - proposed development

Impact	Without Mitigation	With Mitigation
	Significance of Impact	Significance of Impact
Loss of terrestrial biodiversity	Low – negative (-)	Negligible – negative (-)
Loss of species of conservation concern	Low – negative (-)	Negligible – positive (+)
Disturbance / loss of faunal habitat	Medium – negative (-)	Low – negative (-)

Fatality to faunal species	Low – negative (-)	Negligible – negative (-)
Disturbance / removal of topsoil and subsoil	Medium - negative (-)	Low – negative (-)
Stormwater runoff and erosion	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 (+)

The DFFE Environmental Screening Tool Report indicates certain recommended specialist assessments to be done regarding selected classifications (Transformation of land | Indigenous vegetation) and (Infrastructure / Localised infrastructure / Infrastructure in the Sea-Estuary-Littoral Active Zone-Development Setback_100M Inland or coastal public property) with respect to the correlating listed activities.

Site sensitivity verification was done to explain why Terrestrial Biodiversity Impact Assessments, Plant Species Compliance Statement, Aquatic Compliance Statement, Animal Species Assessment, and a Geotechnical Report should be provided. Each report mentions certain mitigation measures to mitigate the impact of certain activities throughout the construction and operational phase.

Summary of Terrestrial Biodiversity Impact mitigations:

- The vegetation from the fynbos habitat that is not developed must be rehabilitated to a state where it is at least partially representative of the original fynbos ecosystem and supports ecological functioning to a moderate or high level.
- The rehabilitation must be undertaken in a phased approach, according to a rehabilitation plan and undertaken by a qualified botanist or restoration ecologist.
- The initial step will require the removal and control of all IAPs on the property and erosion control if necessary. Passive rehabilitation on the parts of the site where no earthworks have taken place can be allowed for one winter season following the removal of IAPs. Thereafter the site must be assessed by the restoration contractor to determine the level of active rehabilitation input. Active rehabilitation will be required for areas where topsoil has been removed.
- Follow-up clearing of all exotic and listed IAPs is required every 6 months for the first three years, and annually thereafter to ensure that the IAPs do not dominate the fynbos.

Best practise mitigation

- 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.
- Sites for building material stocks, vehicles, toilets etc must be clearly marked and restricted to the building footprint, existing roads or existing disturbed areas.

Summary of Aquatic Biodiversity Impact mitigations

- Implement measures to control erosion, with particular focus on the southwestern cliffs.
- Adhere to the principles for best management practice of stormwater management.
- Strategically place rainwater harvesting tanks.
- Use swales and detention ponds to manage stormwater runoff.

Summary of Animal Species Impact mitigations

- **Phased Construction:** Conduct construction in phases, confining activities to one area at a time. Communicate the construction phase plan to all staff.
- **Pre-Construction Checks:** Before earthworks, an ECO should walk through the demarcated footprint to check for and remove animals with limited mobility.
- **Erosion Control Measures:** Implement erosion control measures downslope where vegetation will be cleared.
- **Topsoil Management:** Treat and store topsoil removed during construction for future rehabilitation purposes.
- **Staff Orientation:** Regularly conduct staff orientation and information sessions.
- **Vehicle Checks:** Check construction vehicles daily for leaks and faults.
- **Waste Management:** Implement proper waste management, storage, and disposal to minimize pollution.
- **Ablution Facilities:** Provide, clean, and maintain adequate ablution facilities on-site.
- **Pollution Prevention:** Manage activities involving concrete, cement, plastering, and painting to prevent contamination of the environment.
- **Material Storage:** Cover stockpiles of building materials and soils with geotextiles or plastic coverings when not in use, and store small items and building materials in containers or designated areas to prevent animal interference.
- **Food Waste Disposal:** Dispose of food waste in designated bins and remove it from the site daily.
- **Construction Hours:** Restrict construction to daylight hours to ensure adequate monitoring for fauna and to prevent the use of artificial lighting.
- **Speed Limits:** Implement and enforce speed limits on all roads, with signs to warn drivers of wildlife.

Site Cleanup: Regularly clear the site of waste material, rubble, and debris during and at the conclusion of the construction phase.

4. ENVIRONMENTAL SCREENING RESULTS AND ASSESSMENT OUTCOMES

A national web-based screening tool was generated to review the environmental sensitivities. The screening report lists a variety of specialist studies to be undertaken based on the data informants of the tool at the study area. This site sensitivity verification report, following ground-truthing of the site, motivates why certain specialist studies will / and will not be required or conducted for the proposed development application.

The following sections contain a summary of any development incentives, restrictions, exclusions, or prohibitions that apply to the proposed development footprint as well as the most environmental sensitive features on the footprint based on the footprint sensitivity screening results for the application classifications that were selected. The application classifications selected for the screening reports are

- Transformation of land | Indigenous vegetation
- Infrastructure / Localised – infrastructure / Infrastructure in the Sea/ Estuary / Littoral Active Zone / Development Setback_100M Inland or coastal public property

4.1. Relevant Development Incentives, Restrictions, Exclusions or Prohibitions

The proposed site is within a South African Conservation Area (SACAD), as well as South African Protected Area (SAPAD).

4.2. Proposed Development Area Environmental Sensitivity:

The following summary of the development site environmental sensitivities is identified by the Screening Tool Reports. Only the highest environmental sensitivity is indicated. The environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Table 6: Identified Environmental Sensitivities.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture			X	
Animal Species		X		
Aquatic Biodiversity	X			
Archaeological & Cultural Heritage	X			
Civil Aviation			X	
Defence				X
Palaeontology	X			
Plant Species			X	
Terrestrial Biodiversity	X			

4.3. Identified Specialist assessments

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

Table 7: Combined identified specialist assessments for (Transformation of land | Indigenous vegetation) as well as (Infrastructure / Localised infrastructure / Infrastructure in the Sea-Estuary-Littoral Active Zone-Development Setback_100M Inland or coastal public property).

No:	Specialist Assessment	Assessment Protocol
1	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Marine Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
7	Avian Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Avifauna_Assessment_Protocols.pdf
8	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
9	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
10	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
11	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

5. SITE SENSITIVITY VERIFICATION METHODOLOGY

According to the protocols, the Site Sensitivity Verification must be conducted by the Environmental Assessment Practitioner (EAP), or in some cases, by a specialist. This verification process includes:

- Desktop analysis
- Site inspection

In this instance, satellite imagery from sources such as Google Earth Pro, Google Maps, Cape Farm Mapper, and QGIS was utilised to develop a clear understanding of the site's conditions prior to the proposal for the development. Additionally, site inspections were performed to validate and "ground-truth" the data collected through the desktop analysis.

6. SITE SENSITIVITY VERIFICATION

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture			X	
Animal Species		X (incorrectly reported – should be lower)	X	
Aquatic Biodiversity	X			
Archaeological & Cultural Heritage	X			
Civil Aviation			X (incorrectly reported – should be lower)	X
Defence				X
Palaeontology	X			
Plant Species			X	
Terrestrial Biodiversity	X			

- Landscape / Visual

The site is positioned atop a hill, flanked by the N2 road leading towards Knysna on the west and Cherry Lane on the east. Surrounding properties feature houses of comparable size, which are not visible from either adjacent road. Steep terrain along the N2 side and dense vegetation on the opposite side obscure sightlines, ensuring the proposed development remains in context with its surroundings. The proposed development will be visible from Erf 2923 (the direct neighbour to the north). However, it remains the primary right of the owner to develop a primary dwelling on this property. Given that the character of the area will not be influenced, the need for an external visual assessment is disputed.

Disputed

- Agriculture

According to the Protocols for Agricultural Assessments, a compliance statement is required when the agricultural theme is rated as either medium or low sensitivity. In this case, following the verification of the agricultural theme, theoretically, such a statement is necessary. However, based on previous experiences where an agricultural assessment was required, the primary objective was to address the following key question:

Will the proposed development cause a significant reduction in agricultural production potential, and most importantly, will it result in a loss of arable land?

The assessment of the agricultural production potential for the proposed development site concluded that the property is too small to support economically viable agricultural activities. Additionally, the property is zoned for development of a Single Residential Property.

Based on this understanding, an agricultural specialist was not consulted for an assessment of the property.

Disputed

- Animal Species

According to the specialist Animal Species impact assessment the natural faunal habitat has been degraded by the infestation of alien invasive plant species since the Knysna veld fire 2017. However, three fauna SCC were likely to occur on all three properties (Golden Moles and a Butterfly), and a medium SEI rating was applied to all. As per the guidelines for developing in medium SEI areas, minimizing footprints and restoring natural habitat should be a priority.

After receiving this recommendation the applicant decided to revise the site development plan and provide access to all the properties with one access road, thereby minimizing the footprint.

Provided the mitigation measures are adhered to, the proposed developments are considered favourable by the specialist in terms of fauna. By mitigating the current negative impacts caused by the high levels of alien plant invasions on the properties, the habitat quality will be improved (ultimately increasing indigenous biodiversity) and fire-risk will be minimized on the erven and the greater surrounding areas.

Commenced (May 2024)

- Aquatic Biodiversity

The generated screening report indicated that the aquatic biodiversity of Erf 2924 has a very high sensitivity rating. Therefore, Confluent Environmental Pty (Ltd) has been engaged by Eco Route to provide aquatic specialist inputs for proposed residential developments on Erf 2924.

In summary of the aquatic Biodiversity Site Sensitivity Verification and Compliance Statement –

While challenges exist due to the site's proximity to vertical cliffs above the estuary, following the recommended management strategies in the report can reduce the risk to aquatic biodiversity and water resources. By implementing the proposed measures, the sensitivity of aquatic biodiversity on the property can be regarded as **low**, ensuring sustainable development within the Knysna region while preserving the integrity of the local ecosystem. The assessment therefore serves as a **Compliance Statement** that Aquatic Biodiversity at all three erven is rated as Low in contrast to the Screening Tool.

Commenced (April 2024)

- Archaeological & Cultural Heritage

The screening report indicates that the receiving environment has a VERY HIGH Relative Archaeological & Cultural Heritage Sensitivity

A Notice of Intent to Develop (NID) under Section 38(1) and (8) of the National Heritage Resources Act was submitted to Heritage Western Cape on 29 October 2024. Heritage Western Cape will assess whether the proposed residential development on Erf 2924, Knysna, has potential impacts on heritage resources. Based on this submission, they will determine the need for an external Archaeological and Cultural Heritage assessment.

Commenced 29 October 2024

- Civil Aviation

The DFFE screening tool's medium sensitivity rating for the civil aviation theme, based on the presence of an aerodrome between 8 and 15 km from Erf 2924, may be overly cautious considering the specifics of the proposed development. Given the significant distance between the aerodrome and the project site, there is minimal likelihood of interference with civil aviation operations. The proposed development is unlikely to involve structures or activities that could impact aviation safety or navigation. Therefore, a low sensitivity rating is more appropriate, as the civil aviation theme would remain unaffected by the nature and scale of the development at this distance.

Disputed

- Geotechnical Assessment

A geotechnical assessment was done by Outeniqua Geotechnical Services (May 2022) to identify potential challenges and mitigate risks before they escalate, ultimately saving time and resources. The following information was brought forward during their assessment of the property –

Site description:

The general terrain of the area was characterised by gentle to moderate slopes along the crest of the hill, becoming steep to the northeast and southwest. The site was accessible via an existing gravel track leading off the main estate road and entering the site on the northern boundary. The natural vegetation consisted of thick fynbos bush and alien saplings. The surface conditions were

found to be dry and there were no signs of any significant surface drainage issues, such as springs or marshes, or any major stability problems.

Geology & Soil profile:

The site was underlain by aeolian (windblown) deposits, known as the Knysna coversands, which were deposited between the Miocene and early Pleistocene epochs (circa 2-20Ma). The coversands consisted of silty fine-grained sands with significant but sporadic alteration of silt particles to clay and the formation of sporadic laterite lenses. The coversands were known to be highly variable in terms of texture and consistency. The coversands were known to be underlain by siltstone, sandstone and conglomerate of the Enon Formation, which occurred at a depth of several meters below the site.

The soil profile exposed in test pits on the site consisted of the following general horizons:

- 0-700mm (ave): Moist, dark reddish brown, loose, silty fine sand with roots (topsoil)
- 700-2800mm: moist, light reddish brown-dark yellow orange, medium to dense, silty fine sand, or clayey fine sand, aeolian coversands

The sandstone and conglomerate of the underlying Enon Formation was not encountered in the test pits and are not expected for 3-5 meters below surface. No groundwater seepage was encountered in any of the test pits at the time of the investigation, but seepage was expected during or after wet weather periods throughout the profile.

The clay content and PI of the clayey coversands was typically quite variable, but generally not considered expansive. One sample of clayey silty sand was taken from TP1 for Foundation Indicator tests to determine grading and Atterberg limits. The results of the tests indicated that the soil was dominated by fine sand with 100% passing 0.425mm sieve and 24% passing 0.075mm sieve (clay/silt). Plasticity index is slightly plastic. The soil was classified as SM according to the UCS (silty sand with low plasticity, plotting above the A-line). Negligible heave was expected from this or any other soil horizons.

DCP tests and visual observations indicated loose consistency in the upper 0.7m of the profile, improving to medium dense or dense (variable) below that depth. The tests indicated that the soil required compaction/densification to achieve adequate safe bearing capacity, even for light structures. A high risk of differential settlement if foundations was apparent if foundations were not suitably well prepared and compacted during construction.

Conclusions:

The site was considered suitable for the proposed development but there were some moderate geotechnical constraints, including moderate to steep slopes and loose sandy soil which require consideration by the structural engineer.

Commenced

- Socio – Economic

The site is located in the Welbedaght neighbourhood, primarily residential with various tourist accommodations and a few amenities like restaurants and coffee shops. Given the existing socio-economic landscape, the proposed development is unlikely to alter the neighbourhood's socio-economic dynamics, thus a socio-economic study is

DISPUTED.

- Terrestrial Biodiversity and Plant Species Impact Assessment

The generated screening report indicated that the terrestrial biodiversity of Erf 2924 has a high sensitivity rating, and that plant species has a medium sensitivity rating. Therefore, Eco Route Environmental Consultants appointed Greg Nicolson and Adam Labuschagne from Capensis Ecological Consulting (Pty) Ltd to provide specialist **terrestrial biodiversity impact assessment and plant species compliance statement services** for the proposed development on Erf 2924.

It was determined that the area contains different habitat areas. These areas were identified as degraded fynbos, degraded to highly degraded fynbos, semi-intact forest, and transformed land.



Figure 9: Identified habitats according to the specialist input (Capensis, 2024)

According to the VEGMAP, the study area contains only the Endangered Garden Route Shale Fynbos, however, it also supports one Least Concern ecosystem, namely Southern Afrotemperate Forest. According to the Vegetation Map for the Garden Route the site only supports Groenvlei Coastal Forest, an Endangered ecosystem, however, it also supports Knysna Enon Fynbos, a Vulnerable Ecosystem. The mapping of both resources is not completely accurate for the site, however, the threat status of both resources suggest that any remaining natural fynbos habitat is threatened and sensitive.

The WCBSP 2017 assigns parts of the site as Protected Area and CBA 1. The proposed developments occur within CBA 1 sites on Erf 2924. This classification is questionable as the site is not intact. A classification of CBA 2 would have been more appropriate. The part of the site that has been classified as a Protected Area (and NPAES focus area) will not be impacted.

The areas proposed for development are not intact (Degraded, or Degraded to Highly degraded) and only partially representative of the original fynbos ecosystem in some parts of the site. The

sensitivity of the Degraded habitat is Medium and the rest of Degraded to Highly degraded to habitat is rated as Low sensitivity. The high sensitivity Forest habitat that contains one protected tree species, the white milkwood *Sideroxylon inerme* will not be impacted.

The proposed development will result in the permanent loss of habitat which is currently Degraded to Highly degraded. The mitigation of rehabilitation will result in the remaining habitat on the site improving in condition. This will improve the overall ecological functioning of the Erf 2924 by ensuring that the dominant vegetation is locally occurring indigenous vegetation. This will allow for better habitat for faunal species, improving plant animal interactions such as pollination. The connectivity between the upper and lower elevations on the site will allow for better faunal movement between the site and surrounding areas. The occurrence of fires which are an important ecological driver for fynbos ecosystems may be reduced by increasing density of urban developments. Fire suppression will be practised in the urban environment, however, as evident in 2017 fires may still occur in the urban environment.

The proposed developments will have a Low negative cumulative impact, and no change to the ecosystem threat status will occur as a result of the proposed development. This is seen as acceptable in the context of the areas that will remain undeveloped and rehabilitated on the subject properties. The application is thus supported from a Terrestrial Biodiversity perspective, provided that the mitigation measures are adhered to (Nicolson and Labuschagne, 2024).

No plants listed as Species of Conservation Concern (SCC) have been identified at the site or within close proximity to the Study area and therefore a **Plant Species Compliance Statement** is included in as Appendix B.

In summary of the plant species compliance statement –

The impact on SCC of the proposed development is rated as Very Low negative and no SCC are likely to be impacted (Nicolson and Labuschagne, 2024)

Commenced March 2024

7. CONCLUSION

After consideration of the identified environmental sensitivities and the identified specialist that need to provide input according to the generated screening tool report. This report supplements reason for inclusion and exclusion of studies that support the Pre-Application Basic Assessment Report.

The following table is a summary of specialist input gained during the Pre-Application Basic Assessment –

No:	Specialist Assessment	Assessment Protocol
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Terrestrial Biodiversity Assessment Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Aquatic Biodiversity Assessment Protocols.pdf
8	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
10	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf
11	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf