PROPOSED EXTENSION OF MOSSDUSTRIA AND THE ESTABLISHMENT OF A RACEWAY ON THE REMAINDER OF PORTION 8 OF THE FARM RIETVALLEY 225, MOSSEL BAY, WESTERN CAPE PROVINCE

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

FINAL

WC DEADP REFERENCE NO: *16/3/3/2/D6/29/0001/26*

OCTOBER 2026

PREPARED FOR:

MOSSEL BAY LOCAL MUNICIPALITY



Title and Approval Page

Project Name:	Proposed Extension of Mossdustria and the Establishment of a Raceway on the Remainder of Portion 8 of the Farm Rietvalley 225, Mossel Bay, Western Cape Province
Report Title:	Environmental Impact Assessment Report
Authority Reference:	16/3/3/2/D6/29/0001/26
Report Status:	Final

Applicant:	Mossel Bay Local Municipality

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Report Reference:	GE39111-20261012-Mossdustria EIA Report Final			R-PRO-REP|20170216

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Amendments Page

Date:	Nature of Amendment	Amendment Number:
2026/08/17	Draft EIA Report for Client Review	00
2026/07/27	Draft EIA Report for Authorities and I&APs Review	01
2026/10/12	Final EIA Report for Authorities and I&APs Review	02

Executive Summary

A. PURPOSE OF THIS DOCUMENT

GIBB Environmental (Pty) Ltd (GIBB), now part of Nemai Consulting (Pty) Ltd, has been appointed as the independent Environmental Assessment Practitioner by the Mossel Bay Local Municipality to undertake the Environmental Authorisation application process, subject to a Scoping and Environmental Impact Reporting (S&EIR) process. The S&EIR process is being undertaken for the proposed extension of the Mossdustria industrial area, establishment of an alternative energy facility (solar photovoltaic facility) and development of a motorsport facility on the Remainder Portion 8 of Farm Rietvalley 225, Mossel Bay, Western Cape Province, South Africa (the "Project").

An S&EIR Reporting process will be conducted for this Project, based on the triggering of activities listed in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the Environmental Impact Assessment Regulations (EIA) of 2014 (as amended) (EIA Regulations). This application is subject to a Scoping and Environmental Impact Reporting process based on the triggering of listed activities within Government Notice (GN) R983 (Listing Notice 1), GN R984 (Listing Notice 2) and GN R985 (Listing Notice 3) of the EIA Regulations.

This document serves as the final EIA Report for the proposed Project.

B. PROJECT BACKGROUND AND MOTIVATION

The Mossel Bay Local Municipality (MBLM) is proposing the extension of the Mossdustria industrial area, together with the establishment of a motorsport arena, a solar photovoltaic (PV) facility, and associated infrastructure to support economic growth, investment, and employment creation within the municipality. The Project is driven by the need to expand the existing industrial area, attract local and foreign investment, and maximise the economic potential of Mossel Bay through the development of a dedicated economic zone.

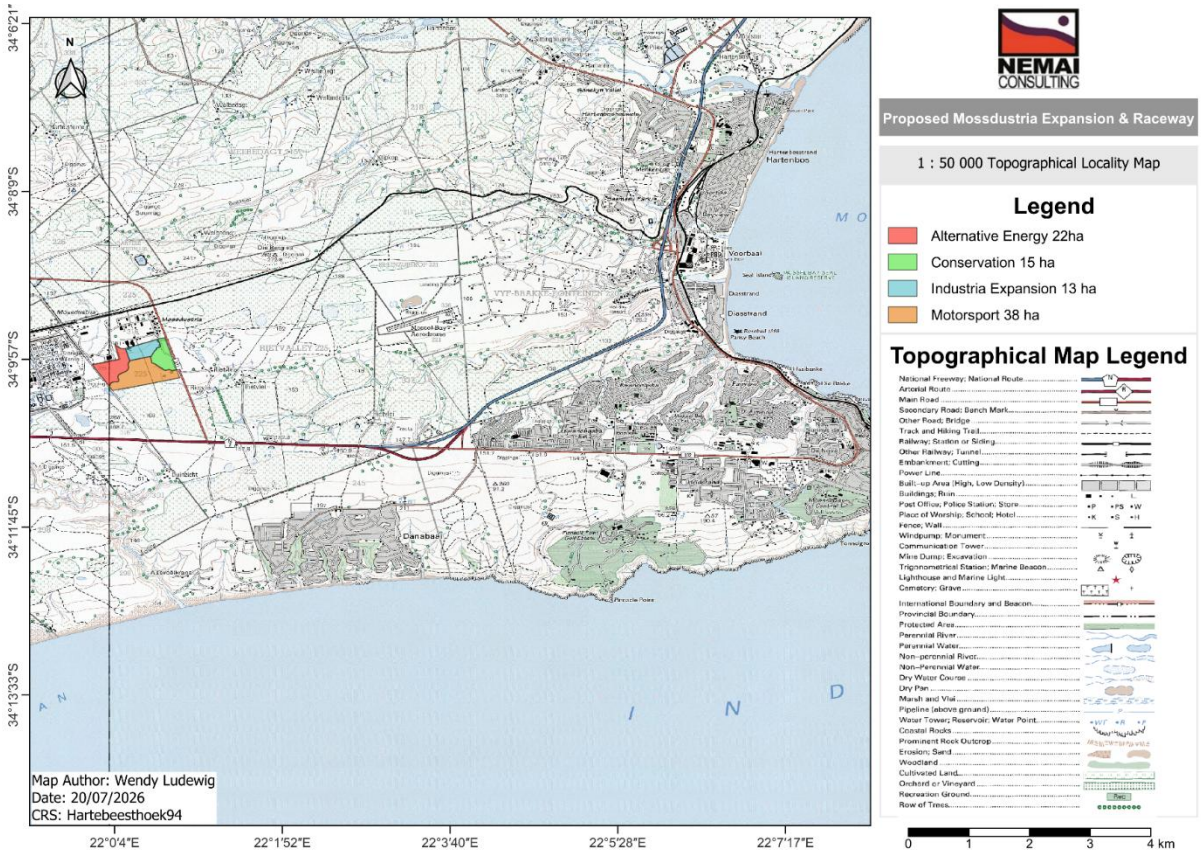
The proposed Project aligns with national, provincial and municipal development objectives, including the promotion of Special Economic Zones (SEZs), inclusive economic growth, job creation, investment attraction and regional economic development. Mossel Bay is considered strategically located due to its harbour, airport, and major transport routes, while the motorsport arena has been identified as a catalytic project within the Municipal Spatial Development Framework (MSDF) expected to support tourism and local business growth. The Project also includes a solar PV facility to promote renewable energy generation and improve energy sustainability.

Overall, the proposed Project seeks to stimulate long-term economic growth, create employment opportunities, support tourism, enhance industrial development and contribute to the municipality's broader vision for sustainable economic development.

C. PROJECT LOCATION

Mossdustria is an existing industrial within the urban edge of MBLM, situated adjacent to and east of the Petroleum Oil & Gas Corporation of South Africa (PetroSA) Refinery, on the outskirts of Mossel Bay. The proposed site is approximately 14 km west of Mossel Bay, along the N2 Freeway.

The proposed development site occurs on the Remainder of Portion 8 of the Farm Rietvalley 225, which measures approximately 90 ha in extent, and is located to the south of the existing Mossdustria Facility.



Regional Locality Map

D. LEGISLATION AND GUIDELINES CONSIDERED

Pertinent legislation that may have a bearing on the proposed Project from an environmental perspective is briefly discussed in this EIA Report.

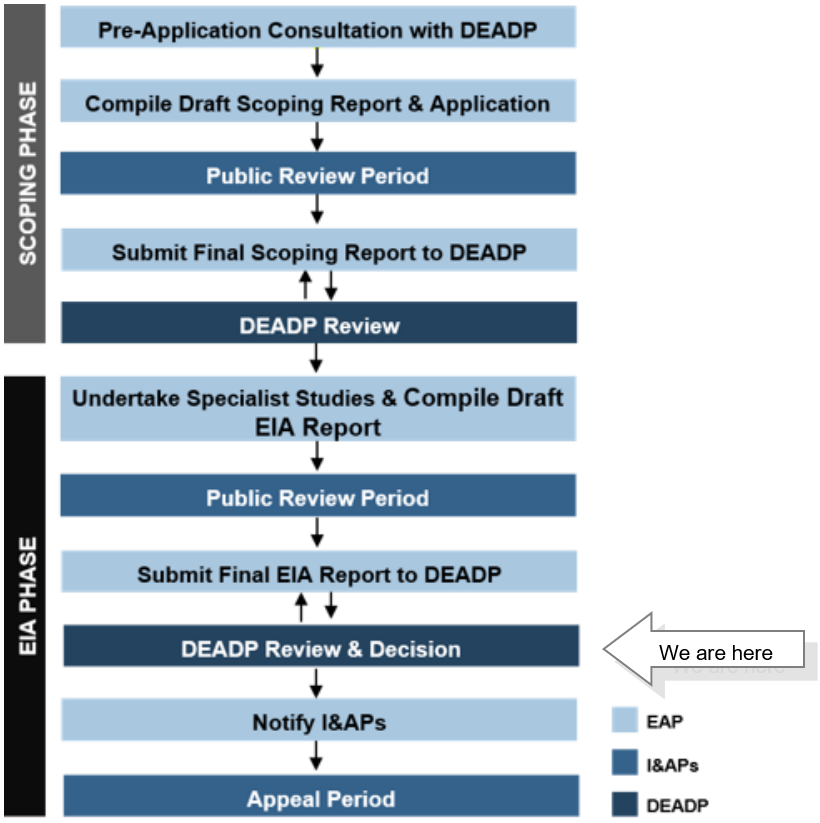
The relationship between the Project and the following key pieces of environmental legislation is also explained:

- NEMA;
- National Water Act (Act No. 36 of 1998);
- National Environmental Management: Waste Act (Act No. 59 of 2008);
- National Environmental Management: Air Quality Act (Act No. 39 of 2004);
- National Environmental Management: Protected Areas Act (Act No. 57 of 2003);
- National Environmental Management: Biodiversity Act (Act No. 10 of 2004); and
- National Heritage Resources Act (Act No. 25 of 1999).

E. SCOPING AND EIA PROCESS

The process for seeking Environmental Authorisation for the Project under NEMA is being undertaken in accordance with the EIA Regulations of 2014 (as amended). In terms of NEMA, the Competent Authority (CA) for this application is the Department of Environmental Affairs and Development Planning (DEADP), Western Cape.

Based on the listed activities triggered, the requisite environmental assessment for the Project is a Scoping and Environmental Impact Reporting (S&EIR) Process. An outline of the process follows.



Outline of S&EIR Process

F. PROJECT DESCRIPTION

The proposed development entails the extension of the Mossdustria industrial area, establishment of a solar photovoltaic (PV) facility and a motorsport facility on the Remainder of Portion 8 of Farm Rietvalley 225 (+/- 90 ha in extent). An existing overhead power line (OHL) will connect the development to an existing municipal substation on Portion 6 of Farm 225 in Mossdustria. The development will include the following, as outlined in the table below.

Overview of Proposed Project Components

Component	Description / Dimension
Industrial expansion with associated infrastructure (+/- 12 ha)	▪ This area is currently zoned as "Agricultural Zone 1", however, it is located in the Urban Edge according to the MBLM SDF and is earmarked for Urban Expansion; ▪ The proposal is to develop 27 new industrial erven ranging from 2000 m^2 to 14000 m^2; ▪ Erven will be fully serviced, and access will be via a newly constructed public street; ▪ The developer/ owner of the erf/ erven will be responsible for installing the top structures.
Alternative Energy Production Area (+/- 22 ha)	▪ Solar PV facility with a capacity of 16 MW; ▪ Intake 16 Mega Volt Ampere (MVA) Municipal Substation; ▪ Eight (8) smaller two (2) MVA internal distribution substation; ▪ Each internal distribution substation has a step-up transformer from 400 volts to 11 000 volts; ▪ 11 kV Cables for internal reticulation; ▪ The intake municipal substation would have sixteen (16) MVA switchgear to be connected to the existing municipal grid; and ▪ Stormwater infrastructure.
Conservation area (+/- 15 ha)	▪ This area contains critically endangered Mossel Bay Shale Renosterveld; ▪ This area is currently zoned as "Agricultural Zone 1" and is located within the urban edge and area identified for future urban expansion in terms of the MBLM SDF; ▪ This section will be rezoned to "Open Space Zone III" to allow the area to be used for nature conservation; ▪ A management plan will be developed to ensure the conservation area is correctly managed
Motorsport arena (+/- 38 ha)	▪ 80 erven for workshops, covering 0.8 ha; ▪ Showrooms/ workshops (11 sites); ▪ Parking area with 1 980 bays; ▪ Parking (grass, 5Ha); ▪ Tar racetrack of 3320 m; ▪ Drag strip of 1 000 m; ▪ Spinning track of 21 000 m^2; ▪ Tar go-carting of 600 m; ▪ Gravel go-carting of 350 m; ▪ Tar pits (8 000 m^2); ▪ Gravel pits (5 000 m^2); ▪ Pavilions large – 300 m in length (2); ▪ Pavilions medium – 150 m in length (5); ▪ Pavilions small – 50 m in length (5); ▪ Ablutions – x 1 (400 m^2); ▪ Ablutions – x 7 (75 m^2); ▪ Vendor stalls/ shops (10 x 25 m^2); ▪ Fuel storage up to 5 000 litres; ▪ Gatehouse – x2 (250 m^2).

Component	Description / Dimension
Area occupied by both permanent and construction laydown areas	▪ Temporary laydown and staging area (approximately 50x50 m) in parking area. ▪ Construction camp laydown of approximately 50x50 m in parking area
Length of internal roads	▪ 25 m roads x 200 m ▪ 20 m roads x 650 m ▪ 12 m roads x 1.8 km
Width of roads	▪ 25 m roads ▪ 20 m roads ▪ 12 m roads
Water Requirements	▪ Potable water will be supplied from the MBLM water reticulation network within the Bartelsfontein Supply Zone via a connection to the existing municipal water infrastructure north of the site. ▪ The total potable water demand for the development is estimated at approximately 688.56 kL/day. ▪ The Motorsport Arena is the largest water user, with an estimated demand of 437.30 kL/day based on an annual event attendance of 5 000 people. ▪ Fire water requirements for the development have been estimated at 100 L/s for a duration of 6 hours, requiring approximately 2.16 ML of fire water storage.
Services Required	▪ Potable water will be supplied via a proposed 3.5 km long, 160 mm diameter water main connecting the development to the existing municipal water reticulation network. ▪ Wastewater generated by the development will be discharged to the existing Mossdustria municipal sewerage system and conveyed to the Mossdustria Sewer Pump Station and subsequently the Pinnacle Point Wastewater Treatment Works. ▪ Approximately 1.9 km of 160 mm diameter sewer pipeline will be required to convey wastewater from the development to the existing municipal sewer infrastructure. ▪ Stormwater generated by the development will be managed through an internal stormwater reticulation network comprising approximately 7 km of 450 mm diameter stormwater pipelines, attenuation ponds, and associated stormwater management infrastructure. ▪ A primary attenuation pond with a storage capacity of approximately 24 000 m^3 and a secondary attenuation pond with a capacity of approximately 200 m^3 will be required for stormwater management. ▪ An oil separation system will be required to treat stormwater runoff from the motorsport facilities prior to discharge to the attenuation pond system. ▪ The development will require connection to the existing road network via a new primary access from the R327 and an emergency route for the motorsports arena and access route for the industrial and alternative energy area via the extension of Barrier Street..

G. PROFILE OF THE RECEIVING ENVIRONMENT

The EIA Report provides a general description of the *status quo* of the receiving environment in the Project area. This serves to provide the context within which the EIA was conducted. It also allows for an appreciation of sensitive environmental features and possible receptors of the effects of the proposed Project.

The following features of the receiving environment are discussed in the EIA Report:

- ❖ Land Use
- ❖ Climate
- ❖ Geology and Soil
- ❖ Visual Quality
- ❖ Noise & Vibration
- ❖ Agriculture

- Geohydrology
- Topography
- Surface Water
- Terrestrial Biodiversity
- Socio-Economic Environment
- Air Quality
- Planning
- Waste
- Transportation
- Heritage and Palaeontology
- Existing Structures and Infrastructures
- Health

H. SPECIALIST STUDIES

The following studies were undertaken for the Project, based on the outcomes of the Scoping exercise and Screening:

- Aquatic Ecology Impact Assessment;
- Geohydrology Impact Assessment;
- Terrestrial Ecology Impact Assessment;
- Noise Impact Assessment;
- Avifaunal Impact Assessment;
- Landscape/Visual Impact Assessment;
- Archaeological/Heritage Walkdown Report;
- Palaeontology Desktop Assessment;
- Socio-Economic Impact Assessment;
- Agricultural Compliance Statement;
- Land Use Planning Risk Assessment; and
- Traffic Study.

The information obtained from the respective specialist studies was incorporated into the EIA Report in the following manner (amongst others):

- The assumptions and limitations identified in each study were included;
- The information was used to complete the description of the receiving environment in a more detailed and site-specific manner;
- A summary of each specialist study is provided, focusing on the approach to each study, key findings and conclusions drawn;
- The specialists' impact assessments and the identified mitigation measures were included in the overall project impact assessment;
- The evaluations performed by the specialists on the alternatives of the Project components were taken into consideration in the identification of the most favourable options; and
- Salient recommendations made by the specialists were taken forward to the conclusions.

I. IMPACT ASSESSMENT

The EIA Report assessed the pertinent environmental impacts that could potentially be caused during the Project's pre-construction, construction and operational phases.

Impacts were identified as follows:

- Impacts associated with listed activities contained in the EIA Regulations' Listing Notices;
- Impacts identified during the Scoping phase;
- An appraisal of the Project's activities and components;
- An assessment of the receiving biophysical, social, economic and built environments;
- Findings from specialist studies;
- Issues highlighted by environmental authorities; and
- Comments received from Interested and Affected Parties (I&APs) during public participation.

The criteria used to assess the potential environmental impacts associated with the Project included the extent, magnitude, duration, probability and significance. Suitable measures were identified to manage the identified environmental risks and impacts according to the mitigation hierarchy. The proposed mitigation of the impacts associated with the Project includes specific measures identified by the environmental specialists, stipulations of environmental authorities and environmental best practices. The impact assessment considered the significance ratings.

Both positive and negative impacts associated with the Project were identified. The principal positive impacts relate to employment creation, local economic development, tourism stimulation, business and investment opportunities, renewable energy generation and the establishment of a formally managed conservation area. The conservation area is expected to provide long-term biodiversity benefits through the protection and management of ecologically important habitat and remnant Mossel Bay Shale Renosterveld.

The principal negative impacts identified during the EIA include the loss and fragmentation of terrestrial habitat, disturbance to avifauna, potential impacts on aquatic features, visual impacts, increased traffic volumes, increased noise associated with motorsport activities, and temporary construction-related impacts. Based on the findings of the specialist studies, the majority of impacts were assessed as being of low to moderate significance following the implementation of mitigation measures. Residual impacts that remain after mitigation are primarily associated with habitat transformation, habitat fragmentation, operational noise associated with motorsport activities, increased traffic volumes and the cumulative transformation of the broader Mossdustria landscape. These residual impacts were not considered by the specialists to constitute fatal flaws to the Project, provided that the mitigation measures outlined in the specialist studies, EIA Report and EMPr are implemented.

The implications of the "no-go option" were also assessed. The "no-go option" was considered in light of the motivation, the need, and the desirability of the overall Project. Should the

proposed Project not proceed, any potentially significant environmental issues associated with the Project would be irrelevant, and the *status quo* of the local receiving environment would not be affected by the Project-related activities. However, the objectives of this Project would not be met. This will, in turn, mean that the Project's intended benefits will not materialise. The "no-go option" is thus not preferred, provided that the management measures outlined in the EIA Report and the Environmental Management Programme (EMPr) are successfully implemented.

Cumulative impacts related to the Project were assessed individually in the EIA Report, and mitigation measures were developed for each impact category. The specialists' findings were incorporated into the assessment of cumulative impacts.

J. ANALYSIS OF ALTERNATIVES

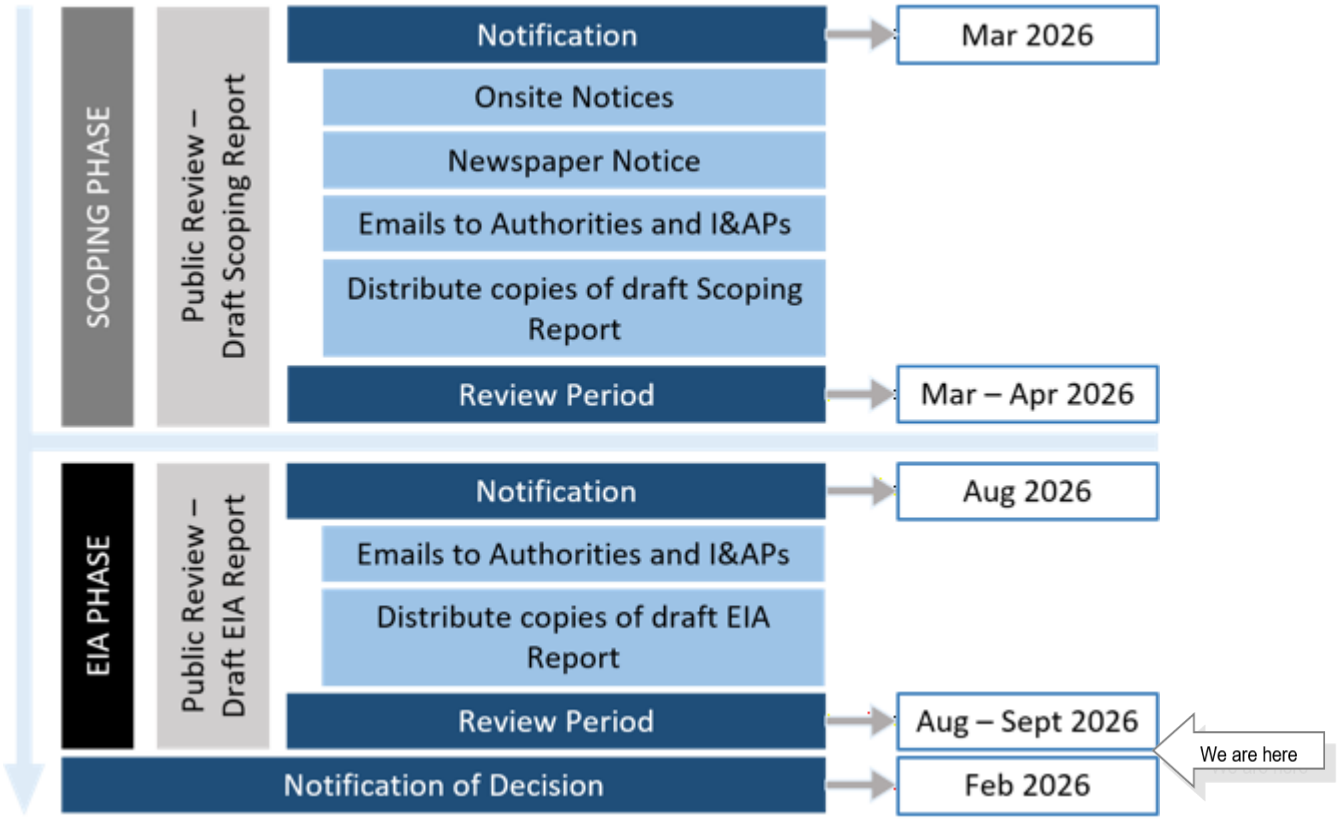
Alternatives were considered during the EIA process, including location, land use, layout, technology and the no-go alternative. No feasible location alternatives were identified, as the Project is intended to expand the existing Mossdustria industrial area and therefore requires a location adjacent to the current industrial footprint. The proposed site is strategically located on municipally owned land, adjacent to the N2 and within an area identified by the Mossel Bay Local Municipality for future industrial expansion. Similarly, no alternative land uses were considered, as the industrial expansion area, motorsport arena, renewable energy facility and conservation area each serve a specific development, economic or environmental purpose within the overall Project concept.

Layout alternatives were, however, assessed and refined through specialist input and consultation with authorities. The preferred layout (Layout 3) was selected as it provides the most appropriate balance between development objectives and environmental protection. The layout avoids the majority of the most sensitive terrestrial biodiversity areas and incorporates a dedicated conservation area of approximately 15 ha to protect and manage remnant Mossel Bay Shale Renosterveld. Layouts 1 and 2 were not preferred due to the greater loss of sensitive habitat and reduced environmental benefits.

The no-go alternative would avoid the environmental impacts associated with the Project but would also forgo the anticipated socio-economic benefits, including industrial expansion, employment creation, investment opportunities, tourism development and renewable energy generation. Furthermore, the formal protection and management of the proposed 15 ha conservation area would not be realised. Consequently, the preferred Project alternative was found to provide the most balanced outcome when considering environmental, social and economic factors.

K. PUBLIC PARTICIPATION

The following diagram outlines the most recent public participation process that is being followed for the Scoping Phase (completed) and EIA Phase (current).



Outline of Public Participation Process

The EIA Report explains the following public participation tasks:

- Public Participation completed during the Scoping Phase.
- Public Participation during the EIA Phase –
  - Maintaining the database of I&APs;
  - Review of draft EIA Report:
  - Period to review the draft EIA Report;
  - Notification of Review of draft EIA Report;
  - Assessing the draft EIA Report; and
  - Comments received on the draft EIA Report.

L. CONCLUSIONS

The following key tasks were undertaken during the EIA phase for the proposed Project:

- The specialist studies identified in the Plan of Study for the EIA were undertaken, and the findings were incorporated into the EIA Report in terms of understanding the

environmental status quo and sensitive features, assessing the potential impacts and establishing concomitant mitigation measures;

- Potentially significant impacts pertaining to the pre-construction, construction and operational phases of the Project were identified and assessed, and mitigation measures were provided; and
- The alternative of the “no-go option” was considered and is not supported when considering the implications of not implementing the Project.

Attention is drawn to specific sensitive environmental features for which mitigation measures are included in the EIA Report and EMPr’s. Combined sensitivity maps for the terrestrial environment, water resources and noise receptors are also shown.

An Environmental Impact Statement is also provided, highlighting key findings from the EIA, which may also influence the conditions of the Environmental Authorisation (if granted).

Based on the findings of the specialist studies and the outcomes of the EIA, it is concluded that Environmental Authorisation may be granted for the Project, provided that all identified environmental management measures are implemented and complied with. It is further the opinion of the Environmental Assessment Practitioner (EAP) and environmental team that the EIA was executed in an objective manner and that the process and EIA Report conform to the requirements stipulated in the EIA Regulations.

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List of Acronyms and Abbreviations

ADWF	Average Dry Weather Flow
amsl	above mean sea level
AQMP	Air Quality Management Plan
BOCMA	Breede-Olifants Catchment Management Agency
CBA	Critical Biodiversity Area
CRR	Comments and Responses Report
DEADP	Department of Environmental Affairs and Development Planning Western Cape
DEL	Department of Employment and Labour
DFFE	Department of Forestry, Fisheries and the Environment
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioners Association of South Africa
ECA	Environment Conservation Act (Act 73 of 1989)
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIA Regulations	Environmental Impact Assessment Regulations, 2014 (as amended)
EIS	Ecological Importance and Sensitivity
EMPr	Environmental Management Programme
EMS	Environmental Management System
ESA	Ecological Support Area
EWULAAS	Electronic Water Use License Application and Authorisation System
FEPA	Freshwater Ecosystem Priority Area
GA	General Authorisation
GDP	Gross Domestic Product
GIBB	GIBB Environmental (Pty) Ltd
GIS	Geographical Information Systems
GN	Government Notice
GRDM	Garden Route District Municipality
Ha	Hectares
HGM	Hydrogeomorphic
HIA	Heritage Impact Assessment
HWC	Heritage Western Cape
I&APs	Interested and Affected Parties
IBAs	Important Bird Areas
IDP	Integrated Development Plan
LCAs	Landscape Character Areas
LMV	Light Motor Vehicle
Mbgl	Meters Below Ground Level
MBLM	Mossel Bay Local Municipality
MSc	Master of Science
MVA	Mega Volt Ampere
NDP	National Development Plan
NEMA	National Environmental Management Act, 1998 (Act 107 of 1998)

NEM:AQA	National Environmental Management Air Quality Act, 2004 (Act 39 of 2004)
NEM:BA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEM:PAA	National Environmental Management Protected Areas Act, 2003 (Act 57 of 2003)
NEM:WA	National Environmental Management Waste Act, 2008 (Act 59 of 2008)
NFEPA	National Freshwater Ecosystem Priority Areas
NGA	National Groundwater Archive
NHRA	National Heritage Resources Act , 1999 (Act 25 of 1999)
NID	Notice of Intent to Develop
NPAES	National Protected Area Expansion Strategy
NSDF	National Spatial Development Framework
NSR	Noise Sensitive Receptors
NVM	National Vegetation Map
NWA	National Water Act, 1998 (Act 36 of 1998)
NWM5	National Wetland Map 5
OHL	Overhead Powerline
OHS	Occupational Health and Safety
PAOI	Project Area of Influence
PetroSA	Petroleum Oil and Gas Corporation of South Africa
PES	Present Ecological State
PHC	Primary Health Care
PSDF	Provincial Spatial Development Framework
PV	Photovoltaic
SABAP2	Southern African Bird Atlas Project
SACNASP	South African Council for Natural Scientific Professions
S&EIR	Scoping and Environmental Impact Reporting
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SANBI	South African National Biodiversity Institute
SANLC	South African National Land Cover
SAPAD	South African Protected Areas Database
SCC	Species of Conservation Concern
SDF	Spatial Development Framework
SEI	Site Ecological Importance
SEZ	Special Economic Zone
SOTER	Soil and Terrain
SSV	Site Sensitivity Verification
WARMS	Water Use Authorisation and Registration Management System
WCBSP	Western Cape Biodiversity Spatial Plan
WUL	Water Use License
WULA	Water Use License Application
ZTV	Zone of Theoretical Visibility

1 PURPOSE OF THIS DOCUMENT

GIBB Environmental (Pty) Ltd (GIBB), now part of Nemai Consulting (Pty) Ltd, has been appointed as the independent Environmental Asessement Practitioner (EAP) by Mossel Bay Local Municipality (MBLM) (the "Applicant") to conduct the Scoping and Environmental Impact Reporting (S&EIR) process for the proposed **Extension of the Mossdustria Industrial Area, Establishment of an Alternative Energy Facility (Solar Photovoltaic (PV) Facility) and Development of a Motorsport Facility on the Remainder Portion 8 of Farm Rietvalley 225, Mossel Bay, Western Cape Province, South Africa** (the "Project").

The S&EIR process is being undertaken according to the process prescribed in the EIA Regulations of 2014, published under Government Notice (GN) No. 982 in Gazette No. 38282 of 4 December 2014 and amended by GN 326 of 7 April 2017 published in Gazette No. 40772 (the "EIA Regulations"). The EIA Regulations were promulgated in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA). This document serves as the **final Environmental Impact Assessment (EIA) Report** for the proposed Project.

To date, the Scoping phase of the overall environmental assessment for the Project has been completed. The final Scoping Report and Plan of Study for the EIA were approved by the Department of Environmental Affairs and Development Planning - Western Cape (DEADP) on 29 June 2026. DEADP is the competent authority to decide on the application regarding Section 24C of NEMA.

According to the EIA Regulations, the objectives of the EIA process are to undertake the following through a consultative process:

- Determine the policy and legislative context within which the activity is located and document how the proposed activity complies with and responds to the policy and legislative context.
- Describe the proposed activity's need and desirability, including the activity's need and desirability in the context of the development footprint on the approved site as contemplated in the accepted Scoping Report.
- Identify the location of the development footprint within the approved site as contemplated in the accepted Scoping Report based on an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects of the environment.
- Determine the -
  - Nature, significance, consequence, extent, duration and probability of the impacts occurring to inform identified preferred alternatives.
  - Degree to which these impacts -
    - Can be reversed;
    - May cause irreplaceable loss of resources; and

- Can be avoided, managed or mitigated.

- Identify the most ideal location for the activity within the development footprint of the approved site as contemplated in the accepted Scoping Report based on the lowest level of environmental sensitivity identified during the assessment.
- Identify, assess, and rank the impacts the activity will impose on the development footprint on the approved site as contemplated in the accepted scoping report through the life of the activity.
- Identify suitable measures to avoid, manage or mitigate identified impacts.
- Identify residual risks that need to be managed and monitored.

The draft EIA Report was made available to Interested and Affected Parties (I&APs) for a 30-day review period from **28 August until 29 September 2026**. All comments received during this review period have been addressed in this final EIA Report and included in the Comments and Responses Report (CRR) (refer to **Appendix L3**). This final EIA Report is submitted to the DEADP for review and decision-making.

2 DOCUMENT ROADMAP

As a minimum, this EIA Report aims to satisfy the requirements stipulated in Appendix 3 of the EIA Regulations. **Table 1** presents the document's composition in terms of the aforementioned regulatory requirements.

Table 1: EIA Report Roadmap

Chapter	Title	Correlation with GN No. R 982, Appendix 3	Description of content of GN No. R 982, Appendix 3
1	Purpose of this Document	–	–
2	Document Roadmap	–	–
3	Project Background and Motivation	-	-
4	Project Location and Existing Onsite Activities	3(1)(b)	The location of the development footprint of the activity on the approved site as contemplated in the accepted Scoping Report, including: (i) the 21-digit Surveyor General code of each cadastral land parcel; (ii) where available, the physical address and farm name; and (iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties.
		3(1)(c)	A plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is - (i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; and (ii) on land where the property has not been defined, the coordinates within which the activity is to be undertaken.
5	Legislation and Guidelines Considered	3(1)(e)	A description of the policy and legislative context within which the development is located and an explanation of how the proposed development complies with and responds to the legislation and policy context.
6	S&EIR Process	3(1)(a)	Details of- (i) the EAP who prepared the report; and (ii) the expertise of the EAP, including a curriculum vitae.
		3(1)(u)	An indication of any deviation from the approved scoping report, including the plan of study, including- (i) any deviation from the methodology used in determining the significance of potential environmental impacts and risks; and (ii) a motivation for the deviation.
		3(1)(v)	Any specific information that may be required by the competent authority.
7	Assumptions and Limitations	3(1)(p)	A description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed.
8	Need and Desirability	3(1)(f)	A motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred development footprint within the approved site as contemplated in the accepted Scoping Report.

Chapter	Title	Correlation with GN No. R 982, Appendix 3	Description of content of GN No. R 982, Appendix 3
9	Project Description	3(1)(d)	A description of the scope of the proposed activity, including- (i) all listed and specified activities triggered and being applied for; and (ii) a description of the associated structures and infrastructure related to the development.
		3(1)(g)	A motivation for the preferred development footprint within the approved site as contemplated in the accepted scoping report.
		3(1)(h)(i)	A full description of the process followed to reach the proposed development footprint within the approved site as contemplated in the accepted scoping report, including- (i) details of the development footprint alternatives considered.
		3(1)(h)(ix)	If no alternative development footprints for the activity were investigated, the motivation for not considering such.
		3(1)(t)	Where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts.
10	Profile of the Receiving Environment	3(1)(h)(iv)	The environmental attributes associated with the development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects.
11	Summary of Specialist Studies	3(1)(k)	Where applicable, a summary of the findings and recommendations of any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final assessment report.
12	Impact Assessment	3(1)(h)(v)	The impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts- (i) can be reversed; (ii) may cause irreplaceable loss of resources; and (iii) can be avoided, managed or mitigated.
		3(1)(h)(vi)	The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks.
		3(1)(h)(vii)	Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects.
		3(1)(h)(viii)	The possible mitigation measures that could be applied and level of residual risk.
		3(1)(i)	A full description of the process undertaken to identify, assess and rank the impacts the activity and associated structures and infrastructure will impose on the preferred development footprint on the approved site as contemplated in the accepted scoping report through the life of the activity, including - (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.
		3(1)(j)	An assessment of each identified potentially significant impact and risk, including-

Chapter	Title	Correlation with GN No. R 982, Appendix 3	Description of content of GN No. R 982, Appendix 3
			(i) cumulative impacts; (ii) the nature, significance and consequences of the impact and risk; (iii) the extent and duration of the impact and risk; (iv) the probability of the impact and risk occurring; (v) the degree to which the impact and risk can be reversed; (vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and (vii) the degree to which the impact and risk can be mitigated.
		3(1)(m)	Based on the assessment, and where applicable, recommendations from specialist reports, the recording of proposed impact management outcomes for the development for inclusion in the Environmental Management Programme (EMPr) as well as for inclusion as conditions of authorisation.
13	Analysis of Alternatives	3(1)(h)(i)	Details of the development footprint alternatives considered.
		3(1)(h)(ix)	If no alternative development locations for the activity were investigated, the motivation for not considering such.
		3(1)(h)(x)	A concluding statement indicating the location of the preferred alternative development footprint within the approved site as contemplated in the accepted Scoping Report.
		3(1)(n)	The final proposed alternatives which respond to the impact management measures, avoidance, and mitigation measures identified through the assessment.
14	Public Participation	3(1)(h)(ii)	Details of the public participation process undertaken in terms of Regulation 41 of the Regulations, including copies of the supporting documents and inputs.
15	Conclusions	3(1)(l)	An environmental impact statement which contains- (i) a summary of the key findings of the environmental impact assessment; (ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred development footprint on the approved site as contemplated in the accepted scoping report indicating any areas that should be avoided, including buffers; and (iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives.
		3(1)(o)	Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation.
		3(1)(q)	A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation.
16	References	-	-
Appendix A	Locality Maps	3(1)(c)	A plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale.
Appendix F	Specialist Reports	R23(5)	Specialist Reports containing all information set out in Appendix 6 of GN No. R. 982 of 4 December 2014 (as amended).
Appendix G	EMPr	R23(4)	Environmental Management Programme containing all information set out in Appendix 4 of GN No. R. 982 of 4 December 2014 (as amended).

Chapter	Title	Correlation with GN No. R 982, Appendix 3	Description of content of GN No. R 982, Appendix 3
Appendix L3	Comments and Responses Report	3(1)(h)(ii)	Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs.
		3(1)(h)(iii)	A summary of the issues raised by Interested and Affected Parties (IAPs), and an indication of the manner in which the issues were incorporated, or the reasons for not including them.
Appendix C	Oath of the Environmental Assessment Practitioner	3(1)(s)	An undertaking under oath or affirmation by the EAP in relation to: (i) the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and IAPs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to IAPs and any responses by the EAP to comments or inputs made by IAPs.
N/A		3(1)(r)	Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded and the post construction monitoring requirements finalised.
N/A		3(1)(w)	Any other matters required in terms of section 24(4)(a) and (b) of the Act.

3 PROJECT BACKGROUND AND MOTIVATION

The MBLM is proposing the extension of the existing Mossdustria industrial area, together with the establishment of a motorsport arena, a solar PV facility, and associated infrastructure, on the Remainder of Portion 8 of Farm Rietvalley 225, Mossel Bay, Western Cape Province. The proposed Project forms part of the Municipality's broader economic development strategy aimed at expanding industrial opportunities within the Mossel Bay region and creating an environment that supports investment, employment creation and long-term economic growth.

The primary motivation for the proposed Project is the Municipality's intention to establish a dedicated economic zone that maximises the value and development potential of the existing Mossdustria industrial area while attracting much-needed local and external investment. The Project is further aligned with the Western Cape Government's strategic drive to establish Special Economic Zones (SEZs), which are geographically designated areas intended to stimulate targeted economic activities, promote national economic growth and exports, and attract both domestic and foreign investment. The objectives associated with SEZ development include targeted industrial growth, provision of world-class infrastructure, accelerated economic development, employment creation, resource beneficiation, increased investment, and balanced regional development.

MBLM considers Mossel Bay strategically positioned for future economic expansion due to the presence of key regional infrastructure, including the harbour, airport, and major highway connections. The municipality further notes that there are currently no SEZs located between Cape Town and Gqeberha (Port Elizabeth), creating an opportunity for Mossel Bay to fulfil a strategic regional economic role. The proposed Project is therefore intended to strengthen the municipality's industrial capacity and enhance its competitiveness as an investment destination within the Western Cape and broader South African economy.

The proposed Project is also consistent with the objectives of the National Spatial Development Framework (NSDF) (2019), which identifies the need for inclusive economic growth, sustainable urban development, support for emerging economic nodes and the promotion of investment in regions with growth potential. In this regard, the Project seeks to contribute towards economic diversification, facilitate movement and trade, support employment creation and provide a differentiated response to socio-economic challenges within the municipality, including unemployment and exclusion. The proposed motorsport arena, in particular, is intended to establish a centre of innovation and excellence that can contribute to the regional economy and attract visitors from across the Western Cape and internationally.

The motorsport facility is identified as one of ten catalytic Projects within the Mossel Bay Spatial Development Framework (SDF) and is being pursued in collaboration with the private sector to stimulate economic growth within the municipality. The facility is expected to serve as a tourist attraction that will support existing tourism-related businesses, including

accommodation establishments, restaurants, and other hospitality services. In addition, the expansion of Mossdustria through the provision of new industrial erven is anticipated to encourage industrial investment and contribute to both direct and indirect employment opportunities within the local economy.

The Project also incorporates a renewable energy component in the form of a solar PV facility. The inclusion of the solar PV facility aligns with the 2022 SDF's objective of facilitating opportunities for renewable energy development. The facility is intended to supply electricity to the proposed Project and contribute energy to the national grid, thereby supporting broader energy resilience and sustainability objectives within the municipality.

The Project furthermore aligns with the objectives of the National Development Plan (NDP) 2030, which promotes economic growth, investment, job creation, collaboration between the public and private sectors, and poverty reduction. Through the creation of development opportunities, industrial investment, renewable energy infrastructure and tourism-related activities, the proposed Project aims to contribute to local economic development while supporting broader national development priorities. Once operational, the Project is expected to contribute towards economic growth, job creation and increased investment within the Mossel Bay region.

Overall, the proposed Project is motivated by the need to expand industrial development opportunities, attract investment, create employment, promote tourism, encourage renewable energy generation and support long-term economic growth within the Mossel Bay municipal area. The Project is considered aligned with municipal, provincial, and national development objectives aimed at improving economic resilience and facilitating sustainable development within the region.

4 PROJECT LOCATION

4.1 Location of Project in relation to the Existing Industrial Area

Mossdustria is an existing industrial area within the urban edge of MBLM, situated adjacent to and east of the Petroleum Oil & Gas Corporation of South Africa (PetroSA) Refinery, on the outskirts of Mossel Bay.

The proposed Project site is adjacent to the south of the existing Mossdustria industrial area and is approximately 14 km west of Mossel Bay, along the N2 Freeway (refer to **Figure 1**). **Figure 2** shows the proposed Project site in relation to the existing Mossdustria industrial area.



Figure 1: Location of the existing Mossdustria area (green) and the proposed Project site (blue) in relation to the N2



Figure 2: The proposed Project site (blue) in relation to the existing Mossdustria area (green)

4.2 Geographical Context

The Project is located in Ward Number 7 of the MBLM, Garden Route District Municipality (GRDM), in the Western Cape Province. The Project site is located approximately 1 km to the north of the N2 and approximately 14 km to the west of Mossel Bay along the N2 (**Figure 3**).

The proposed Project occurs on the Remainder of Portion 8 of Farm Rietvalley 225 (C05100000000022500008), which measures approximately 90 ha in extent, and is located to the south of the existing Mossdustria Facility. The Project Footprint in relation to the property boundaries is illustrated in **Figure 4**.

The coordinates of the Project and the various components are provided in **Table 2** and shown in **Figure 5** and **Figure 6**. The coordinates of the approximate centre point of the site are 34˚10'1.96"S 22˚0'18.88"E (Centre Point in **Figure 5**/**Figure 6**).

Table 2: Coordinates of the proposed Project

Feature	Latitude (S)	Longitude (E)
Project Area		
Corner 1 (NW)	34˚10'0.34"S	21˚59'49.25"E
Corner 2 (NE)	34˚9'44.55"S	22˚0'36.7"E
Corner 3 (SE)	34˚10'8.97"S	22˚0'45.81"E
Corner 4 (SW)	34˚10'17.14"S	22˚0'2.45"E
Centre Point	34˚10'1.96"S	22˚0'18.88"E
Alternative Energy Production Area		
Point 1	34˚10'0.34"S	21˚59'49.25"E
Point 2	34˚9'56.92"S	22˚0'6.61"E
Point 3	34˚9'46.98"S	22˚0'3.77"E
Point 4	34˚9'49.97"S	22˚0'10.78"E
Point 5	34˚9'58.24"S	22˚0'13.69"E
Point 6	34˚10'3.77"S	22˚0'12.26"E
Point 7	34˚10'6.8"S	22˚0'6.77"E
Point 8	34˚10'9.13"S	22˚0'6.03"E
Point 9	34˚10'11.14"S	22˚0'6.33"E
Point 10	34˚10'12.04"S	22˚0'1.93"E
Point 11	34˚10'14.18"S	22˚0'0.12"E
Conservation Area		
Point 1	34˚9'45.17"S	22˚0'32.19"E
Point 2	34˚9'44.55"S	22˚0'36.7"E
Point 3	34˚10'3.5"S	22˚0'43.77"E
Point 4	34˚10'3.88"S	22˚0'43.51"E
Point 5	34˚10'4.36"S	22˚0'41.1"E

Feature	Latitude (S)	Longitude (E)
Point 6	34˚10'3.63"S	22˚0'39.06"E
Point 7	34˚10'4.2"S	22˚0'36.45"E
Point 8	34˚10'3.79"S	22˚0'34.97"E
Point 9	34˚10'2.91"S	22˚0'34.68"E
Point 10	34˚9'59.58"S	22˚0'28.98"E
Point 11	34˚9'59.35"S	22˚0'27.92"E
Point 12	34˚9'55.18"S	22˚0'26.81"E
Point 13	34˚9'55.04"S	22˚0'27.47"E
Point 14	34˚9'51.74"S	22˚0'29.44"E
Point 15	34˚9'50.45"S	22˚0'30.94"E
Point 16	34˚9'49.67"S	22˚0'30.65"E
Point 17	34˚9'49.03"S	22˚0'33.23"E
Point 18	34˚9'48.62"S	22˚0'33.49"E
Motorsports Arena		
Point 1	34˚10'8.97"S	22˚0'45.81"E
Point 2	34˚10'17.13"S	22˚0'2.44"E
Point 3	34˚10'14.18"S	22˚0'0.12"E
Point 4	34˚10'12.04"S	22˚0'1.93"E
Point 5	34˚10'11.14"S	22˚0'6.33"E
Point 6	34˚10'7.86"S	22˚0'6.03"E
Point 7	34˚10'3"S	22˚0'12.72"E
Point 8	34˚9'57.86"S	22˚0'13.58"E
Point 9	34˚9'55.18"S	22˚0'26.81"E
Point 10	34˚9'59.35"S	22˚0'27.92"E
Point 11	34˚10'3.84"S	22˚0'34.94"E
Point 12	34˚10'3.63"S	22˚0'39.06"E
Point 13	34˚10'4.37"S	22˚0'41.11"E
Point 14	34˚10'3.5"S	22˚0'43.77"E
Industrial Expansion Area		
Point 1	34˚9'50.07"S	22˚0'10.85"E
Point 2	34˚9'44.31"S	22˚0'31.04"E
Point 3	34˚9'45.63"S	22˚0'31.53"E
Point 4	34˚9'45.52"S	22˚0'32.33"E
Point 5	34˚9'48.62"S	22˚0'33.49"E
Point 6	34˚9'49.03"S	22˚0'33.23"E
Point 7	34˚9'49.67"S	22˚0'30.65"E
Point 8	34˚9'50.45"S	22˚0'30.94"E
Point 9	34˚9'51.74"S	22˚0'29.44"E

Feature	Latitude (S)	Longitude (E)
Point 10	34˚9'55.04"S	22˚0'27.47"E
Point 11	34˚9'57.86"S	22˚0'13.58"E

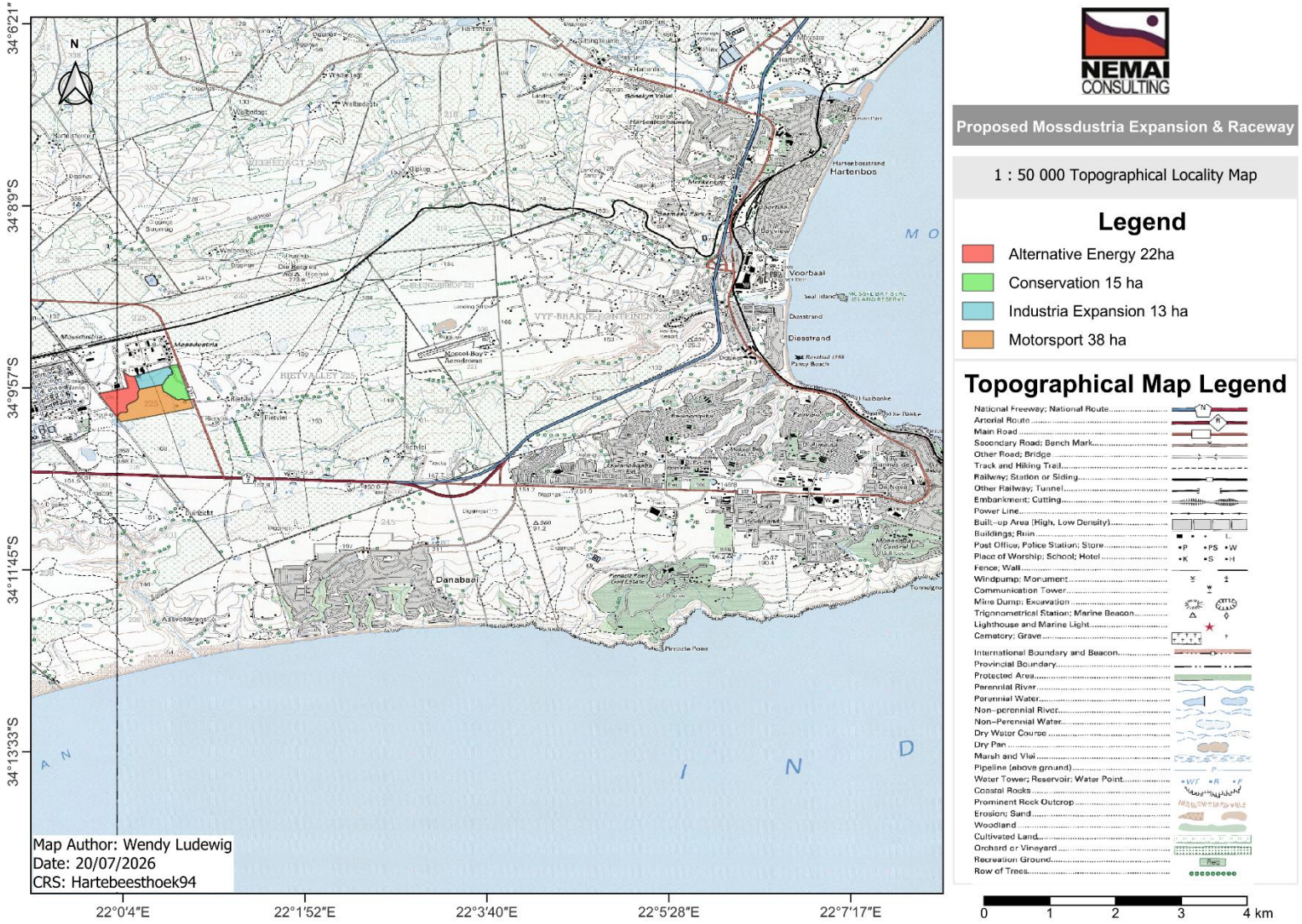

Figure 3: 1:50 000 Topographical Map for Regional Locality

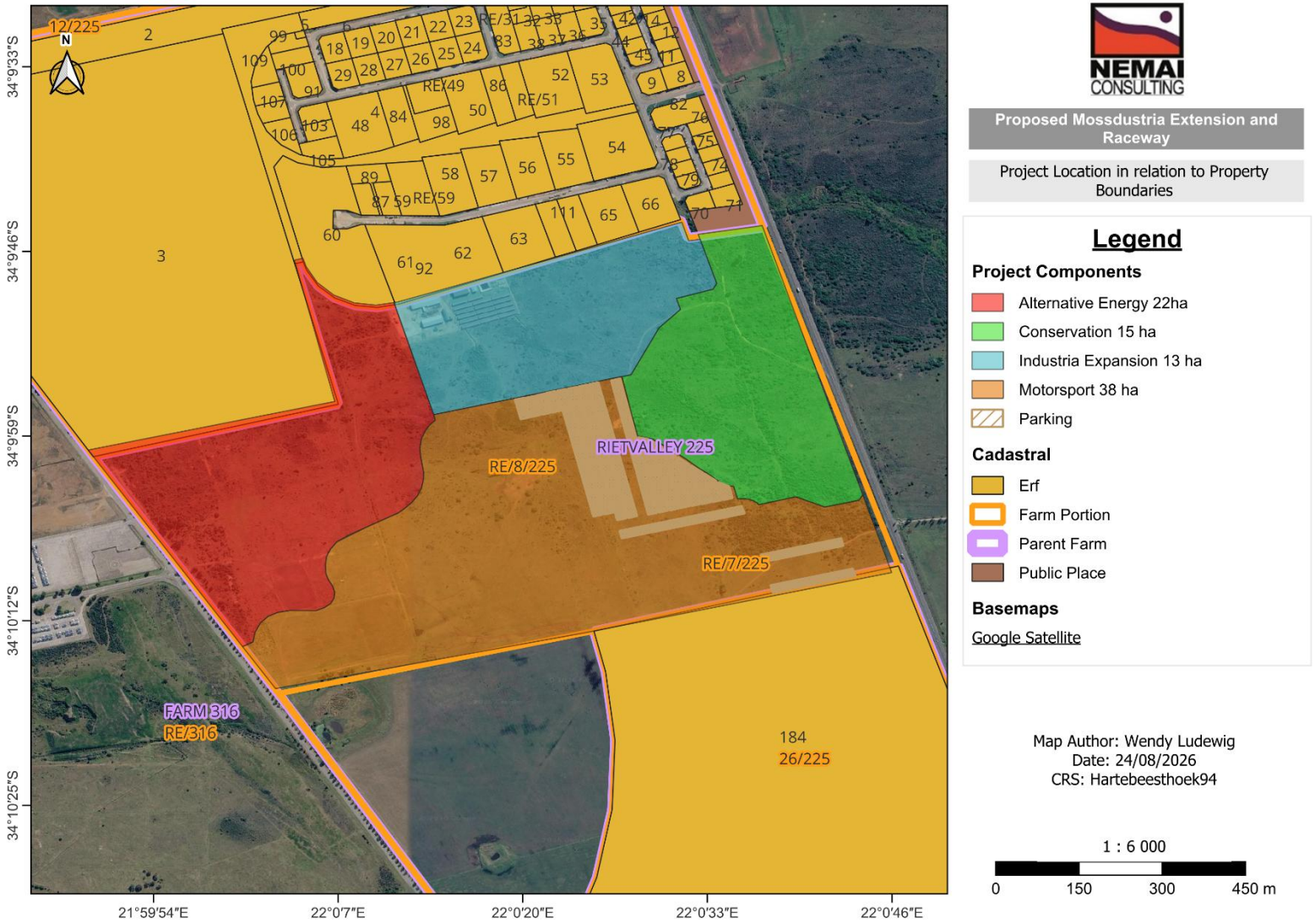

Figure 4: Project Layout in relation in Property Boundaries

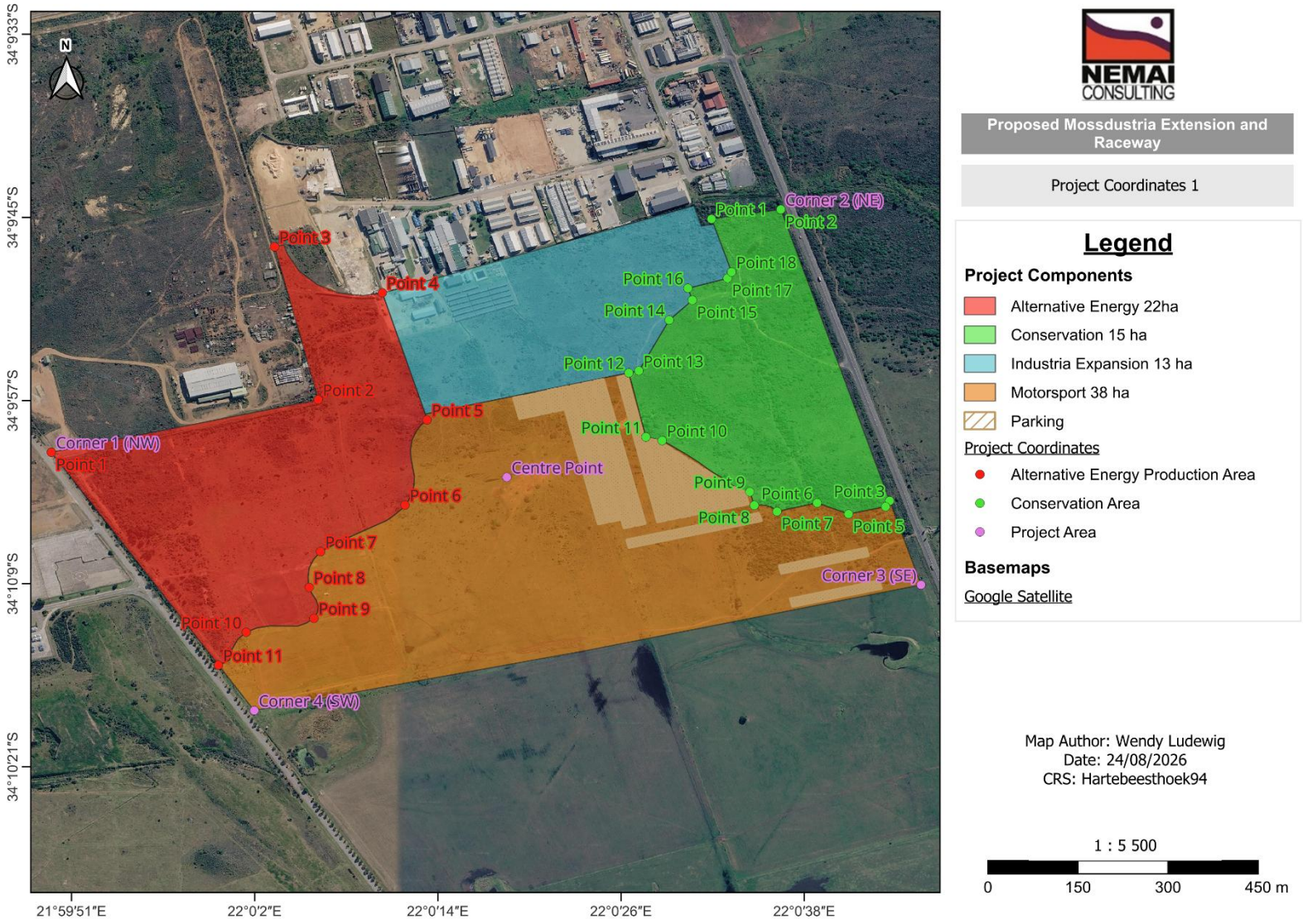

Figure 5: Project Coordinates Points for the Alternative Energy Area, Conservation Area and General Project Area

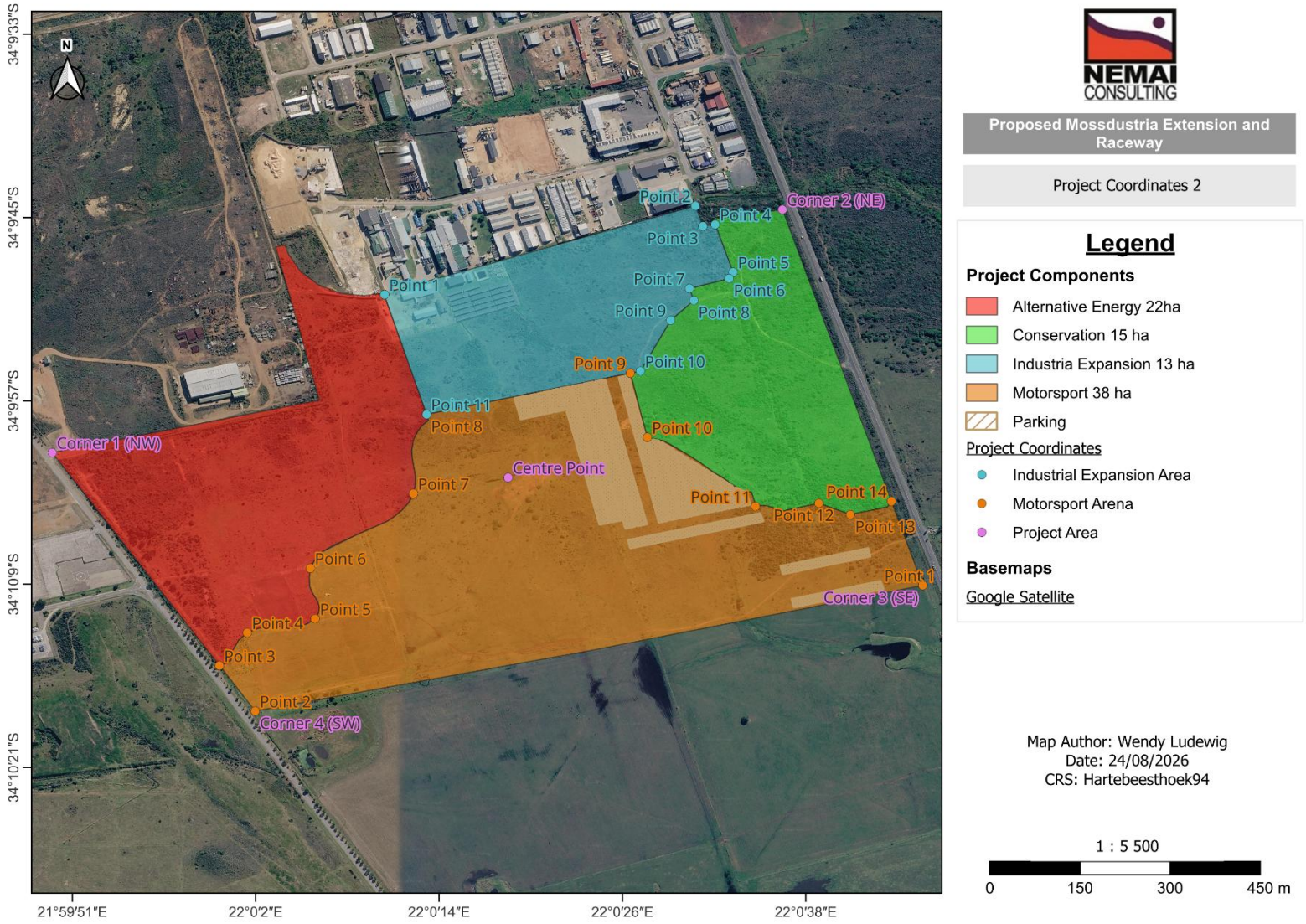

Figure 6: Project Coordinates Points for the Industrial Expansion Area, Motorsports Arena and General Project Area

5 LEGISLATION AND GUIDELINES CONSIDERED

5.1 Legislation

5.1.1 Environmental Statutory Framework

The legislation that has a possible bearing on the proposed Project from an environmental perspective is captured in **Table 3**. *Note: This does not attempt to provide an exhaustive explanation but rather represents an identification of some of the most appropriate sections from pertinent pieces of legislation.*

Table 3: Environmental Statutory Framework

Legislation	Description and Relevance	
Constitution of the Republic of South Africa (No. 108 of 1996)	▪ Chapter 2 – Bill of Rights. ▪ Section 24 – Environmental Rights.	
National Environmental Management Act (Act No. 107 of 1998) (NEMA)	▪ Key sections (amongst others): o Section 2 – Principles. o Section 24 – Environmental Authorisation (EA) (control of activities which may have a detrimental effect on the environment). o Section 28 – Duty of care and remediation of environmental damage. ▪ Authorisation type – EA (*required for the Project*). ▪ Authorities – Department of Forestry, Fisheries and the Environment (DFFE) (national) and DEADP (competent authority for this application).	
GN No. R 982 of 4 December 2014 (as amended)	▪ Purpose - regulate the procedure and criteria as contemplated in Chapter 5 of NEMA relating to the preparation, evaluation, submission, processing and consideration of, and decision on, applications for EA's for the commencement of activities, subject to EIA, to avoid or mitigate detrimental impacts on the environment, and to optimise positive environmental impacts, and for matters pertaining thereto.	
GN No. R. 983 of 4 December 2014 (as amended) (Listing Notice 1)	▪ Purpose - identify activities that would require EAs before the commencement of that activity and identify competent authorities in terms of sections 24(2) and 24D of NEMA. ▪ The investigation, assessment and communication of the potential impact of activities must follow a Basic Assessment process, as prescribed in regulations 19 and 20 of GN No. R 982 of 4 December 2014 (as amended). However, according to Regulation 15(3) of GN No. R 982 (as amended), the S&EIR Process must be applied to an application if the application is for two or more activities as part of the same development for which S&EIR must already be applied in respect to any of the activities. ▪ The following activities under Listing Notice 1 are relevant to this Project:	
	GN No. R. 983 – Activity 1 (i) (as amended): *The development of facilities or infrastructure for the generation of electricity from a renewable resource where-* *(i) the electricity output is more than 10 megawatts but less than 20 megawatts; or* *(ii) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare;*	The proposed development includes a PV facility that will generate 16 MW.

Legislation	Description and Relevance	
	excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs (a) within an urban area; or (b) on existing infrastructure.	
	GN No. R. 983 – Activity 9 (i)(ii) (as amended): *The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water (i) with an internal diameter of 0.36 metres or more; or (ii) with a peak throughput of 120 litres per second or more;* *excluding where - (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban Area.*	Additional infrastructure will be required to cope with the additional water and stormwater requirements and will exceed 1000 m in length. From preliminary designs it is noted that stormwater pipes exceed 0.36 m diameter and throughput will be exceeded during storms. The site is located in the urban edge as defined by the MBLM; however, this urban edge has not been approved by DEADP.
	GN No. R. 983 – Activity 10 (as amended): *The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more;* *excluding where — (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.*	The combined length of infrastructure for bulk transportation of sewage and wastewater is estimated at 1900 m. However, it has been determined by preliminary design that the diameter and throughput will not be exceeded. The site is located in the urban edge as defined by the MBLM; however, this urban edge has not been approved by DEADP.
	GN No. R. 983 – Activity 12 (ii)(a) & (c) (as amended): *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; —*	There are wetlands within the site boundary, which will be infilled to facilitate construction. The footprint of infrastructure, for example, stormwater storage ponds to be constructed within 32 m of a watercourse (wetland), exceeds 100 m^2. It has been estimated during preliminary designs that the pond required for the development, excluding the Motorsport Business Development area, must have a total storage capacity of 24,000 m^3. *Noted that the wetland specialist determined that there are no natural watercourses within the Project footprint, only artificial stormwater infrastructure. A watercourse lies directly south of the*

Legislation	Description and Relevance	
	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.*	*Project site; therefore, development could occur within 32m of this watercourse.*
	GN No. R. 983 – Activity 14 (as amended): *The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.*	During development the storage of and handling of dangerous goods is not expected to exceed 500 cubic meters (e.g. fuel, bitumen, oils, etc.). Two areas of 15 m x 15 m next to the workshops have been identified for the storage of fuel for the race cars during operation. This will not exceed 500 cubic meters.
	GN No. R. 983 – Activity 19 (as amended): *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*	Natural wetlands will be infilled to facilitate construction. More than 10 m^3 of material will be infilled into the wetlands. *Noted that the wetland specialist determined that there are no natural watercourses within the Project footprint, only artificial stormwater infrastructure. A watercourse lies directly south of the Project site; therefore, development could occur within 32m of this watercourse.*

Legislation	Description and Relevance	
	which case activity 26 in Listing Notice 2 of 2014 applies.	
	GN No. R. 983 – Activity 24 (ii) (as amended): *The development of a road -* *(i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or* *(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;* *but excluding a road -* *(a) which is identified and included in activity 27 in Listing Notice 2 of 2014;* *(b) where the entire road falls within an urban area; or* *(c) which is 1 kilometre or shorter.*	The proposed development will include the following road specifications: Entrance road has a width of 10.2 m (3.4m x 3 lanes); 25 m roads x 200 m; 20 m roads x 650 m; and 12 m roads x 1.8 km
	GN No. R. 983 – Activity 28 (i) (as amended): *Residential, mixed, retail, commercial, industrial or institutional developments, where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:* *(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or* *(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;* *excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.*	The development will consist of a mix of retail, commercial and industrial development and will cover an area of approximately 88 ha. The land is currently zoned as Agricultural Zone 1.
	GN No. R. 983 – Activity 35 (as amended): *The expansion of residential, retail, recreational, tourism, commercial or institutional developments on land previously used for mining or heavy industrial purposes, where the increased development footprint will exceed 1 000 square metres;* *excluding -* *(i) where such land has been remediated in terms of part 8 of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or* *(ii) where an environmental authorisation has been obtained for the decommissioning and closure of such an*	The proposed footprint allocated for industrial expansion exceeds 1 ha in size.

Legislation	Description and Relevance	
	industry in terms of this Notice or any previous NEMA notice; or [Item (ii) substituted by GN 517 of 11 June 2021.] *(iii) where a closure certificate has been issued in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) for such land*	
	GN No. R. 983 - Activity 45 (as amended): *The expansion of infrastructure for the bulk transportation of water or storm water, where the existing infrastructure—* *(i) has an internal diameter of 0,36 metres or more; or* *(ii) has a peak throughput of 120 litres per second or more; and* *(a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or* *(b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more;* *excluding where such expansion—* *(aa) relates to transportation of water or storm water within a road reserve or railway line reserve; or* *(bb) will occur within an urban area.*	The existing Mossdustria area is fully serviced. These services will be extended to the industrial development and motorsport arena. Preliminary designs have determined that existing infrastructure will be expanded by more than 1000 m, and the throughput for stormwater will be increased by more than 10 %.
	GN No. R. 983 - Activity 46 (as amended): *The expansion of infrastructure for the bulk transportation of sewage, effluent , process water, waste water, return water, industrial discharge or slimes where the existing infrastructure—* *(i) has an internal diameter of 0,36 metres or more; or* *(ii) has a peak throughput of 120 litres per second or more; and* *(a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or* *(b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more;* *excluding where such expansion—* *(aa) relates to transportation of water or storm water within a road reserve or railway line reserve; or* *(bb) will occur within an urban area.*	The existing Mossdustria area is fully serviced. These services will be extended to the industrial development and motorsport arena. Existing infrastructure will be increased by more than 1000 m, and throughput will be increased by 10 %.
	GN No. R. 983 - Activity 56 (ii) (as amended): *The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre—* *(i) where the existing reserve is wider than 13,5 meters; or*	The existing roads in Mossdustria will be extended to service the proposed industrial expansion. Roads are expected to be lengthened by more than 1 km. Additionally, the existing roads in Mossdustria are in excess of 8 m in width in some areas.

Legislation	Description and Relevance	
	(ii) where no reserve exists, where the existing road is wider than 8 metres; *excluding where widening or lengthening occur inside urban areas.*	
GN No. R. 984 of 4 December 2014 (as amended) (Listing Notice 2)	▪ Purpose - identify activities that would require EAs prior to commencement of that activity and to identify competent authorities in terms of sections 24(2) and 24D of NEMA. ▪ The investigation, assessment and communication of the potential impact of activities must follow an S&EIR Process, as prescribed in regulations 21 - 24 of GN No. R 982 of 4 December 2014 (as amended). ▪ The following activities under Listing Notice 2 are relevant to this Project:	
	GN No. R. 984 – Activity 15 (as amended): *The clearance of an area of 20 hectares or more of indigenous vegetation,* *excluding 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*	The proposed development entails the extension of the Mossdustria industrial area, establishment of a solar PV facility and a motorsport facility on the Remainder of Portion 8 of Farm Rietvalley 225 (+/- 90 ha in extent, of which +/- 70 ha will be cleared).
GN No. R. 985 of 4 December 2014 (as amended) (Listing Notice 3)	▪ Purpose - list activities and identify competent authorities under sections 24(2), 24(5) and 24D of NEMA, where EA is required prior to the commencement of that activity in specific identified geographical areas only. ▪ The investigation, assessment and communication of the potential impact of activities must follow a Basic Assessment process, as prescribed in regulations 19 and 20 of GN No. R 982 of 4 December 2014 (as amended). However, according to Regulation 15(3) of GN No. R 982 (as amended), S&EIR must be applied to an application if the application is for two or more activities as part of the same development for which S&EIR must already be applied in respect of any of the activities. ▪ The following activities under Listing Notice 3 are relevant to this Project:	
	GN No. R. 985 - Activity 1 (i). (as amended): *The development of billboards exceeding 18 square metres in size outside urban areas, mining areas or industrial complexes.* ***(i) Western Cape*** *(i) All areas outside urban areas, mining, areas or industrial complexes.*	Billboards may be used within the development for advertising purposes.
	GN No. R. 985 - Activity 4 (i)(iii). (as amended): *The development of a road wider than 4 metres with a reserve less than 13.5 metres.* ***(i) 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* *(iii) Inside urban areas:* *(aa) Areas zoned for conservation use; or*	Roads will be constructed to provide access to various areas on the site. Roads will exceed 4 m in width.

Legislation	Description and Relevance	
	(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.	
	GN No. R. 985 - Activity 10 (i)(iii). (as amended): *The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres.* ***(i) Western Cape*** *(i) Areas zoned for use as public open space or equivalent zoning;* *(ii) All areas outside urban areas; or* *(iii) Inside urban areas:* *(aa) Areas seawards of the development setback line or within 200 metres from the high* *water mark of the sea if no such development setback line is determined;* *(bb) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined; or* *(cc) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.*	Construction activities and the operation of the motor sports arena will require storage and handling of hazardous substances (e.g. fuel, bitumen, oils, etc.). The combined capacity of such facilities may exceed 30 m^3.
	GN No. R. 985 - Activity 11 (i)(iii). (as amended): *The development of tracks or routes for the testing, recreational use or outdoor racing of motor-powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles.* ***(i) Western Cape*** *(i) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined;* *(ii) Seawards of the development setback line or within 200 metres of the high-water mark of the sea if no such development setback line is determined; or* *(iii) Areas of indigenous vegetation outside urban areas.*	The proposed development includes tracks for outdoor racing of motor-powered vehicles and the site contains indigenous vegetation.
	GN No. R. 985 Activity 12 (i) (ii). (as amended): *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*	The majority of the vegetation on site, with the exception of the 15 ha conservation area will be cleared to facilitate construction. Clearance of vegetation will therefore exceed 300 m^2 in extent.

Legislation	Description and Relevance	
	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 NEM:BA 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.*	The proposed site is situated within the urban edge of MBLM which contains indigenous vegetation. The site is also located within a Critical Biodiversity Area, Ecological Support Area, as well as Other Natural Areas.
	GN No. R. 985 - Activity 14 (ii) (c); (i) (ff). (as amended): *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.* ***(i) 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*	Infrastructure in excess of 10 m^2 in size will be constructed within an artificial watercourse and within 32 m of a natural watercourse, which is located within a critical biodiversity area as identified in The Western Cape Biodiversity Spatial Plan.

Legislation	Description and Relevance	
	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.*	
	GN No. R. 985 - Activity 15 (f) (ii)(cc). (as amended): *The transformation of land bigger than 1 000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, such land was zoned open space, conservation or had an equivalent zoning, on or after 02 August 2010.* ***(f) Western Cape*** *(i) Outside urban areas, or* *(ii) Inside urban areas:* *(aa) Areas zoned for conservation use or equivalent zoning, on or after 02 August 2010;* *(bb) A protected area identified in terms of NEMPAA, excluding conservancies; or* *(cc) Sensitive areas as identified in an environmental management framework as contemplated in Chapter 5 of the Act as adopted by the competent authority.*	The site is currently zoned as Agriculture Zone 1. It would need to be rezoned to industrial. The site covers an area in excess of 1 000 m^2
	GN No. R. 985 - Activity 18 (i) (ii)(iii). (as amended): *The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.* ***(i) Western Cape*** *(i) Areas zoned for use as public open space or equivalent zoning;* *(ii) All 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* *(iii) 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 existing roads in Mossdustria will be extended to service the proposed industrial expansion. These roads may be longer than 1 km in length. The area where the road expansion will occur contains indigenous vegetation.
National Water Act (Act No. 36 of 1998) (NWA)	▪ Key sections (amongst others): o Chapter 3 – Protection of water resources. o Section 19 – Prevention and remedying effects of pollution. o Section 20 – Control of emergency incidents. o Chapter 4 – Water use. ▪ Authorisation type – Water Use License (WUL) / General Authorisation (GA) *(required for this Project).*	

Legislation	Description and Relevance
	▪ Authority – Department of Water and Sanitation (DWS), Breede-Olifants Catchment Management Agency (BOCMA) (responsible authority for this Project)
National Environmental Management Air Quality Act (Act No. 39 of 2004) (NEM:AQA)	▪ Key sections (amongst others): o Chapter 2 – National Framework and National, Provincial and Local Standards. o Chapter 4 – Air Quality Management Measures. o Chapter 5 – Licensing of Listed Activities. ▪ Authorisation type –Atmospheric Emissions License *(not required for this Project)* ▪ Authority – DFFE (national), DEADP (provincial) and municipality
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM:BA)	▪ Management and conservation of the country's biodiversity. ▪ Protection of species and ecosystems. ▪ Authorisation type – Permit *(relevance to this Project to be confirmed).* ▪ Authority – DFFE (national) and DEADP (provincial)
National Environmental Management: Protected Areas Act (Act No. 57 of 2003) (NEM:PAA)	▪ Protection and conservation of ecologically viable areas representative of South Africa's biological diversity and natural landscapes.
National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA)	▪ Key sections (amongst others): o Part 2 – General duty on the holder of waste in respect of waste management. o Part 3 – Reduction, re-use, recycling and recovery of waste. o Part 4 – Regulation of waste management activities. o Part 5 – Storage, collection and transportation of waste. o Part 6 – Treatment, processing and disposal of waste. o Part 8 – Legal mechanism for managing contaminated land. ▪ Authorisation type – Waste Management Licence *(not required for this Project).* ▪ Authority - DFFE (national) and DEADP (provincial).
National Forests Act (Act No. 84 of 1998)	• Key sections (amongst others): o Chapter 3 – Special Measures to Protect Forests and Trees. ▪ Authorisation type – Permit *(relevance to this Project to be confirmed).* ▪ Authority – DFFE.
Minerals and Petroleum Resources Development Act (Act No. 28 of 2002)	▪ Key sections (amongst others): o Section 22 – Application for mining right. o Section 27 – Application for, issuing and duration of mining permit. o Section 53 – Use of land surface rights contrary to objects of the Act. ▪ Authorisation type – Mining Permit / Mining Right *(not required for this Project).* ▪ Authority – Department of Mineral and Petroleum Resources.
Occupational Health & Safety Act (Act No. 85 of 1993)	▪ Provisions for Occupational Health & Safety. ▪ Authority – Department of Employment and Labour (DEL). ▪ Relevant regulations, such as Electrical Installation Regulations, Construction Regulations, etc.
National Heritage Resources Act (Act No. 25 of 1999) (NHRA)	▪ Key sections: o Section 34 – protection of structures older than 60 years. o Section 35 – protection of heritage resources. o Section 36 – protection of graves and burial grounds. o Section 38 – Heritage Impact Assessment for linear development exceeding 300m in length, development exceeding 5 000m^2 in extent, etc. ▪ Authorisation type – Permit *(not required for this Project).* ▪ Authority – South African Heritage Resources Agency (SAHRA) (national) and Heritage Western Cape (HWC) (provincial).
Conservation of Agricultural Resources Act (Act No. 43 of 1983)	▪ Control measures for erosion. ▪ Control measures for alien and invasive plant species. ▪ Authority – Western Cape Department of Agriculture.

The relationship between the Project and certain key pieces of environmental legislation is discussed in the following subsections.

5.1.2 National Environmental Management Act, 1998

5.1.2.1 Overview

NEMA is the framework legislation regulating the environment in South Africa, and it provides for cooperative governance and establishes principles for decision-making on matters affecting the environment, such as:

- People and their needs must be placed at the forefront of environment management;
- Development must be sustainable and therefore requires avoidance of pollution and degradation of the environment, disturbances of landscapes and sites of cultural heritage;
- The integrated nature of the environment and that responsibility for environmental management exists throughout the life cycle of an activity (from cradle to grave);
- Public Participation;
- Transparent decision-making; and
- Intergovernmental co-ordination and harmonisation of policies, legislation and actions.

Some key definitions from NEMA include:

- "Environment" - the surroundings within which humans exist and that are made up of –
  (i) The land, water and atmosphere of the earth;
  (ii) Micro-organisms, plant and animal life;
  (iii) Any part or combination of (i) and (ii) and the interrelationships among and between them; and
  (iv) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.
- "Pollution" - any change in the environment caused by –
  (i) substances;
  (ii) radioactive or other waves; or
  (iii) noise, odours, dust or heat;
  emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future.

Section 2(4)(p) of NEMA requires that costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects are paid for by those responsible for harming the environment.

Section 28(1) of NEMA imposes a duty of care and remediation for environmental damage and requires that "*every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or*

degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment".

Section 24 of NEMA provides for the consideration, investigation, assessment and reporting of the potential consequences for, or impacts on, the environment of listed activities (or specified activities) to the Competent Authority. The EIA Regulations were promulgated to regulate the procedure and criteria as contemplated in Section 24 of NEMA relating to the preparation, evaluation, submission, processing and consideration of, and decision on, applications for environmental authorisations for the commencement of activities, subjected to an EIA, in order to mitigate detrimental impacts on the environment, and to optimise positive environmental impacts. The EIA Regulations were published under GN No. 982 in Gazette No. 38282 of 4 December 2014 and amended by GN 326 of 7 April 2017 published in Gazette No. 40772.

The EIA Regulations consist of the following:

- GN No. 982 of 4 December 2014 (as amended) – EIA procedure;
- GN No. 983 of 4 December 2014 (as amended) (Listing Notice 1) – activities that need to be subjected to a Basic Assessment process, as prescribed in Regulations 19 and 20 of the EIA Regulations;
- GN No. 984 of 4 December 2014 (as amended) (Listing Notice 2) – activities that need to be subjected to an S&EIR Process, as prescribed in Regulations 21 - 24 of the EIA Regulations; and
- GN No. 985 of 4 December 2014 (as amended) (Listing Notice 3) – activities in specific identified geographical areas that need to be subjected to a Basic Assessment process, as prescribed in Regulations 19 and 20 of the EIA Regulations.

5.1.2.2 Relevance to the Project

This Project triggers activities under Listing Notices 1, 2 and 3 and thus needs to be subjected to an S&EIR Process. The listed activities are explained within the context of the Project in **Table 3** above.

Note that the dimensions of the Project's proposed infrastructure and components should be regarded as approximations due to the dynamic nature of the planning and design process. As a conservative approach, all possible activities that could be triggered by the Project were included in the Application Form that was submitted to the DEADP with the draft Scoping Report.

5.1.3 National Environmental Management: Waste Act, 2008

5.1.3.1 Overview

Amongst others, the purpose of the National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM:WA) includes the following:

- To reform the law regulating waste management in the country by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development;
- To provide for institutional arrangements and planning matters;
- To provide for specific waste management measures;
- To provide for the licensing and control of waste management activities;
- To provide for the remediation of contaminated land; and
- To provide for compliance and enforcement.

Some key definitions from this Act include:

- "*Disposal*" – the burial, deposit, discharge, abandoning, dumping, placing or release of any waste into, or onto, any land.
- "*General waste*" means waste that does not pose an immediate hazard or threat to health or to the environment, and includes -
  - domestic waste;
  - building and demolition waste;
  - business waste; and
  - inert waste.
- *"Hazardous waste"* – any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment.
- *"Storage"* – the accumulation of waste in a manner that does not constitute treatment or disposal of that waste.
- *"Waste"* – any substance, whether or not that substance can be reduced, re-used, recycled and recovered -
  - That is surplus, unwanted, rejected, discarded, abandoned or disposed of;
  - Which the generator has no further use of for the purposes of production;
  - That must be treated or disposed of; or
  - That is identified as waste by the Minister by notice in the Gazette, and includes waste generated by the mining, medical or other sector, but -
  - A by-product is not considered waste; and
  - Any portion of waste, once re-used, recycled and recovered, ceases to be waste.

Schedule 3 of the NEM:WA groups waste into two categories, namely hazardous waste and general waste. The classification of waste determines the associated management and licensing requirements.

GN No. R. 921 of 29 November 2013 (as amended) contains a list of waste management activities that have, or are likely to have, a detrimental environmental impact. A Waste Management Licence is required if any waste management activities are triggered in Category A and Category B. Activities listed in Category C must comply with the relevant National Norms and Standards.

5.1.3.2 Relevance to the Project

No authorisation will be required regarding NEM:WA, as the Project will not include any listed waste management activities. The following is noted concerning waste management for the Project:

- Construction Phase –
  - Waste generated during construction will be stockpiled in skips and disposed of by a licensed operator at a licensed landfill. This will be a contractor's responsibility.
- Operational Phase –
  - Domestic waste will be collected in waste bins and removed from the site for disposal at the nearest general waste landfill site;
  - The services of a private hazardous-waste disposal company will be required. The necessary precautions and procedures should be adhered to to avoid fuel spills during storage and while transporting/handling
  - A centralised waste yard may be required for the motorsport arena. The capacity of the storage facility will be confirmed during the detailed engineering design phase.

5.1.4 National Water Act, 1998

5.1.4.1 Overview

The purpose of the National Water Act (Act No. 36 of 1998) (NWA) is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account, amongst other factors:

- Meeting the basic human needs of present and future generations;
- Promoting equitable access to water;
- Redressing the results of past racial and gender discrimination;
- Promoting the efficient, sustainable and beneficial use of water in the public interest;
- Facilitating social and economic development;
- Providing for growing demand for water use; protecting aquatic and associated ecosystems and their biological diversity;
- Reducing and preventing pollution and degradation of water resources;
- Meeting international obligations;
- Promoting dam safety; and
- Managing floods and droughts.

Some key definitions from this Act include:

- "*Pollution*" – the direct or indirect alteration of the physical, chemical or biological properties of a water resource to make it (a) less fit for any beneficial purpose for which it may reasonably be expected to be used; or (b) harmful or potentially harmful;
- "*Waste*" – includes any solid material or material that is suspended, dissolved or transported in water (including sediment) and which is spilled or deposited on land or

into a water resource in such volume, composition or manner as to cause, or to be reasonably likely to cause, the water resource to be polluted;

- "*Water resource*" – includes a watercourse, surface water, estuary, or aquifer;
- "*Watercourse*" - a river or spring, natural channel in which water flows regularly or intermittently, a wetland, lake or dam into which, or from which, water flows; and collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse include, where relevant, its bed and banks; and
- *"Wetland"* - 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.

Section 19 of the NWA deals with pollution prevention, and in particular the situation where pollution of a water resource occurs or might occur as a result of activities on land. The person who owns, controls, occupies or uses the land in question is responsible for taking measures to prevent pollution of water resources.

Section 20 of the NWA deals with pollution of water resources following an emergency incident, such as an accident involving the spilling of a harmful substance that finds or may find its way into a water resource. The responsibility for remedying the situation rests with the person responsible for the incident or the substance involved.

Section 21 of the NWA provides information on what water uses require approval. These include:

a) Taking water from a water resource;
b) Storing water;
c) Impeding or diverting the flow of water in a watercourse;
d) Engaging in a stream flow reduction activity;
e) Engaging in a controlled activity;
f) Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
g) Disposing of waste in a manner which may detrimentally impact on a water resource;
h) Disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
i) Altering the bed, banks, course or characteristics of a watercourse;
j) Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or the safety of people; and
k) Using water for recreational purposes.

5.1.4.2 Relevance to the Project

The Project entails the construction of the Alternative Energy Facility, Motorsports Arena and establishment of the Conservation area within the regulated area of two watercourses

(riverine) and three wetlands (pans). These results are based on the findings of the Aquatic Biodiversity Impact Assessment (contained in **Appendix F1**). Therefore, the following water uses in terms of Section 21 of the NWA are triggered by the proposed Project:

- Section 21 (c) – Impeding or diverting the flow of water in a watercourse; and,
- Section 21 (i) – Altering the bed, banks, course or characteristics of a watercourse.

A profile of the surface water of the receiving environment is discussed in **Section 10.7**, a summary of the Aquatic Biodiversity Impact Assessment is included in **Section 11.4** and the impact assessment is in **Section 12.12**. A WUL Application (WULA) is being undertaken with BOCMA (the responsible authority for the WULA) using the online Electronic Water Use License Application and Authorisation System (EWULAAS) (reference number WU51639).

5.1.5 National Environmental Management: Air Quality Act, 2004

5.1.5.1 Overview

The purpose of the National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM:AQA) is to reform the law regulating air quality by providing measures for preventing pollution and ecological degradation and securing ecologically sustainable development. This Act aims to promote justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government, and for specific air quality measures.

Some key definitions from this Act include:

- *"Air pollution"* – any change in the composition of the air caused by smoke, soot, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, aerosols and odorous substances.
- *"Atmospheric emission"* or *"emission"* – any emission or entrainment process emanating from a point, non-point or mobile source that results in air pollution.
- *"Non-point source"* – a source of atmospheric emissions which cannot be identified as having emanated from a single identifiable source or fixed location and includes veld, forest and open fires, mining activities, agricultural activities and stockpiles.
- *"Point source"* – single identifiable source and fixed location of atmospheric emission, and includes smokestacks and residential chimneys.

Section 21 of the NEM:AQA provides for the listing of activities which result in atmospheric emissions that pose a threat to health or the environment, which are contained in GN 893 of 22 November 2013. No person may, without an Atmospheric Emission Licence, conduct any such listed activity.

National Dust Control Regulations (GN No. R. 827 of 1 November 2013), as amended, were gazetted in terms of NEM:AQA. The purpose of the regulations is to prescribe general measures for the control of dust in all areas. These Regulations prescribe acceptable dust fallout rates.

5.1.5.2 Relevance to the Project

No Atmospheric Emissions License is required for the Project.

Provision will be made in the Environmental Management Programme (EMPr) (contained in **Appendix G**) to manage impacts to air quality that may be caused by the Project.

5.1.6 National Environmental Management: Protected Areas Act, 2003

5.1.6.1 Overview

The aim of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003) (NEM:PAA) is to provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and natural seascapes. The purpose of a Protected Environment is, amongst others, to protect a specific ecosystem outside a special nature reserve, world heritage site or nature reserve and to ensure the use of the natural resources in the area is sustainable.

5.1.6.2 Relevance to the Project

The proposed Project does not occur near any formal Protected Areas according to the South African National Biodiversity Institute (SANBI). However, the proposed Project does occur within a National Protected Area Expansion Strategy (NPAES) Priority Focus Area. Protected Areas in relation to the Project Area are discussed further in **Section 10.8** and in the results of the Terrestrial Ecological Impact Assessment (contained in **Appendix F3**) summarised in **Section 11.5** with the Impact Assessment in **Section 12.13**.

5.1.7 National Environmental Management: Biodiversity Act, 2004

5.1.7.1 Overview

The purpose of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEM:BA) is to provide for the management and conservation of South Africa's biodiversity within the framework of NEMA.

Some key definitions from the NEM:BA include:

- "*Alien species*" –
  - A species that is not an indigenous species; or
  - An indigenous species translocated or intended to be translocated to a place outside its natural distribution range in nature, but not an indigenous species that has extended its natural distribution range by natural means of migration or dispersal without human intervention.
- "*Biological diversity*" or "*biodiversity*" – the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems.

- "*Indigenous species*" – a species that occurs, or has historically occurred, naturally in a free state in nature within the borders of the Republic, but excludes a species that has been introduced in the Republic as a result of human activity.
- "*Invasive species*" – any species whose establishment and spread outside of its natural distribution range -
  - Threaten ecosystems, habitats or other species or have demonstrable potential; and
  - May result in economic or environmental harm or harm to human health.
- "*Species*" – a kind of animal, plant or other organism that does not normally interbreed with individuals of another kind, and includes any sub-species, cultivar, variety, geographic race, strain, hybrid or geographically separate population.

The Act allows for the publication of provincial and national lists of ecosystems that are threatened and in need of protection. The list should include:

- Critically Endangered Ecosystems are ecosystems that have undergone severe ecological degradation due to human activity and are at extremely high risk of irreversible transformation.
- Endangered Ecosystems, which are ecosystems that, although not critically endangered, have nevertheless undergone ecological degradation due to human activity.
- Vulnerable Ecosystems, which are ecosystems that have a high risk of undergoing significant ecological degradation.
- Protected Ecosystems are ecosystems of a high conservation value or contain indigenous species at high risk of extinction in the wild in the near future.

Similarly, the Act allows for the listing of endangered species, including critically endangered species, endangered species, vulnerable species and protected species. A person may not carry out a restricted activity (including trade) involving listed threatened or protected species without a permit.

The Regulations on managing Listed Alien and Invasive Species were promulgated on 1 August 2014. The Listed Invasive Species were also published on this date and were subsequently amended in GN 864 of 29 July 2016 and 2020.

5.1.7.2 Relevance to the Project

The implications of this Act for the Project inter alia include the requirements for managing invasive and alien species, protecting threatened ecosystems and species, as well as for rehabilitation. Based on the results of the Terrestrial Ecological Impact Assessment (**Appendix F2**), it was noted that the proposed Project site has been invaded by alien plants. Mitigation measures are included in the Terrestrial Ecological Impact Assessment and will also be included in the EMPr (**Appendix G**).

5.1.8 National Heritage Resources Act, 1999

5.1.8.1 Overview

The purpose of the National Heritage Resources Act (Act No. 25 of 1999) (NHRA) is to protect and promote good management of South Africa's heritage resources and to encourage and enable communities to nurture and conserve their legacy so it is available to future generations.

Some key definitions from the NHRA include:

- ''*Cultural significance*'' – aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.
- ''*Development*'' – any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including -
  - Construction, alteration, demolition, removal or change of use of a place or a structure at a place;
  - Carrying out any works on or over or under a place;
  - Subdivision or consolidation of land comprising, a place, including the structures or airspace of a place;
  - Constructing or putting up for display signs or hoardings;
  - Any change to the natural or existing condition or topography of land; and
  - Any removal or destruction of trees, or removal of vegetation or topsoil.
- ''*Heritage resource*'' – any place or object of cultural significance.

In terms of Section 38 of the NHRA, certain listed activities require authorisation from provincial agencies, which include the following:

- The construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- The construction of a bridge or similar structure exceeding 50 m in length;
- Any development or other activity which will change the character of a site -
  - Exceeding 5 000 m^2 in extent; or
  - Involving three or more existing erven or subdivisions thereof; and
  - The re-zoning of a site exceeding 10 000 m^2 in extent.

Heritage Western Cape (HWC) is the provincial heritage resources authority.

5.1.8.2 Relevance to the Project

Heritage resources in the study area are discussed further in **Section 10.17**. An Archaeological and Heritage Walkdown Report was compiled in March 2023 (**Appendix F7**). The Notice of Intent to Develop (NID) was submitted to the HWC with the draft Scoping Report. The response from the HWC is included in the CRR (**Appendix L3**). It is noted that no further

action under Section 38 of the NHRA is required. The HWC Chance Finds and Accidental Finds Procedure is included in the EMPr (**Appendix G**).

5.2 Guidelines and Additional Regulations

The following guidelines and additional regulations were considered during the preparation of the EIA Report:

- Mossel Bay Municipality Air Quality Control By-Law (PG 7184 of 4 October 2013);
- Western Cape Noise Control Regulations promulgated under Section 25 of the Environment Conservation Act (Act 73 of 1989) (ECA).
- Guideline on Alternatives, EIA Guideline and Information Document Series (DEA&DP, 2010a);
- Guideline on Need and Desirability (DEA, 2017);
- Integrated Environmental Management Guideline Series 7: Public Participation in the EIA Process (DEA, 2010); and
- Guidelines for Involving Specialists in the EIA Processes Series (Brownlie, 2005).

5.3 National and Regional Plans

The following regional plans were considered during the execution of the EIA Phase (amongst others):

- Western Cape Biodiversity Spatial Plan and Guidelines (WCBSP) (CapeNature, 2024);
- Mossel Bay Integrated Development Plan (IDP), 2025 – 2026;
- Mossel Bay SDF; and
- Relevant national, provincial, district and local policies, strategies, plans and programmes.

6 S&EIR PROCESS

6.1 Competent Authority

In terms of NEMA, the Competent Authority for the environmental assessment is DEADP. Various other authorities with jurisdiction over elements of the receiving environment or project activities (refer to **Section 5.1**) are also being consulted during the course of the EIA. Refer to the database of I&APs contained in **Appendix K** for a list of the government departments.

6.2 Environmental Assessment Practitioner

Nemai Consulting (it is noted that GIBB Environmental was acquired by Nemai Consulting) was appointed as the independent EAP to undertake the S&EIR Process for the proposed Project. In accordance with Appendix 3, Section 3(1)(a) of the EIA Regulations, this section provides an overview of Nemai Consulting and the company's experience with EIA's, as well as the details and experience of the EAP's that form part of the S&EIR Team.

Nemai Consulting is an independent, specialist environmental, social development and Occupational Health and Safety (OHS) consultancy. The company is a 100% black female owned company, with a level 1 BBBEE rating. The company is directed by a team of experienced and capable environmental engineers, scientists, and specialists. The company has offices in Randburg (Gauteng) and Durban (Kwa-Zulu Natal).

The core members of Nemai Consulting that are involved with the S&EIR process for the Project are captured in **Table 4** below. The Curriculum Vitae of the registered EAP is contained in **Appendix B**. The oath of the registered EAP is contained in **Appendix C**.

Table 4: S&EIR Process Core Team Members

Name	Role in Project	Professional Registration	Qualifications	Selected Experience
D. Henning (25 years' experience)	Registered EAP	Environmental Assessment Practitioners Association of South Africa (EAPASA) Reg. no. 2020/1217 South African Council for Natural Scientific Professions (SACNASP) Pr.Sci.Nat Reg no: 400108/17	Master of Science (MSc) (River Ecology)	▪ Matjhabeng 400 MW Solar PV Power Plant with 80 MW (320 MWh) Battery Energy Storage Systems, Free State Province, SA. ▪ Beaufort West 75MW Solar PV Project, Western Cape, SA. ▪ Extraction of Gas and Electric Power Production Plant in the Rubavu District, Rwanda. ▪ Impompomo Hydropower Plant, Mpumalanga, SA. ▪ Hydropower Plant within Hydraulic Network at Rand Water's Zoekfontein Site, Gauteng Province, SA. ▪ uMkhomazi Water Project Phase 1 with hydropower facilities, KwaZulu-Natal, SA.

Name	Role in Project	Professional Registration	Qualifications	Selected Experience
				▪ Neptune-Poseidon Transmission Line, including 200km of 400 kV transmission line, Eastern Cape, SA. ▪ Makalu B (Igesi) Substation and Associated Transmission Loop-In Lines, Free State Province, SA. ▪ Anderson Dinaledi Transmission Line, including 80km of 132 kV transmission line with substations, North-West Province, SA.
W.L. Ludewig (2-3 years' experience)	Candidate EAP	EAPASA Reg. No. 2024/8548 SACNASP Candidate Nat. Sci. Reg. No. 169572	MSc (Geographical Information Systems (GIS) and Remote Sensing)	▪ Proposed Damara I up to 240 MW Solar Energy Facility, up to 960 MWh Battery Energy Storage System and 33/132 kV Independent Power Producer Substation, Northern Cape, South Africa. ▪ Proposed Altina 120 MW Solar PV & 40 MW BESS, Free State Province ▪ Proposed Paradise 100MW Solar PV & 40MW BESS, Free State Province ▪ Proposed Sulphonation Plant in Wadeville, Ekurhuleni Metropolitan Municipality, Gauteng

6.3 Environmental Screening

According to GN 960 of 5 July 2019, an application for EA must be accompanied by the report generated by the National Web-Based Environmental Screening Tool ("Screening Tool"), as contemplated in Regulation 16(1)(b)(v) of the EIA Regulations.

The aims of the Screening Tool include the following:

- To screen a proposed site for any environmental sensitivity;
- To provide site specific S&EIR Process and review information;
- To identify related exclusions and/or specific requirements, including specialist studies applicable to the proposed site and/or development, based on the national sector classification and the environmental sensitivity of the site; and
- To allow for a Screening Report to be generated.

The Screening Report for the proposed Project is appended to the Application Form. The results of the Screening Tool were considered further during the specialist studies that were undertaken for the Project.

6.4 Environmental Assessment Triggers

The process for seeking authorisation under NEMA is undertaken in accordance with the EIA Regulations, promulgated in terms of Chapter 5 of NEMA. Based on the types of activities

involved, the requisite environmental assessment for the Project is an S&EIR Process. Refer to **Section 5** for the Project's legal framework and specifically the activities triggered by the Project in terms of Listing Notices 1, 2 and 3 of the EIA Regulations.

6.5 S&EIR Process

6.5.1 Formal Process

An outline of the S&EIR Process for the proposed Project is provided in **Figure 7**. The objectives of the EIA Process, based on the EIA Regulations, are captured in **Section 1**.

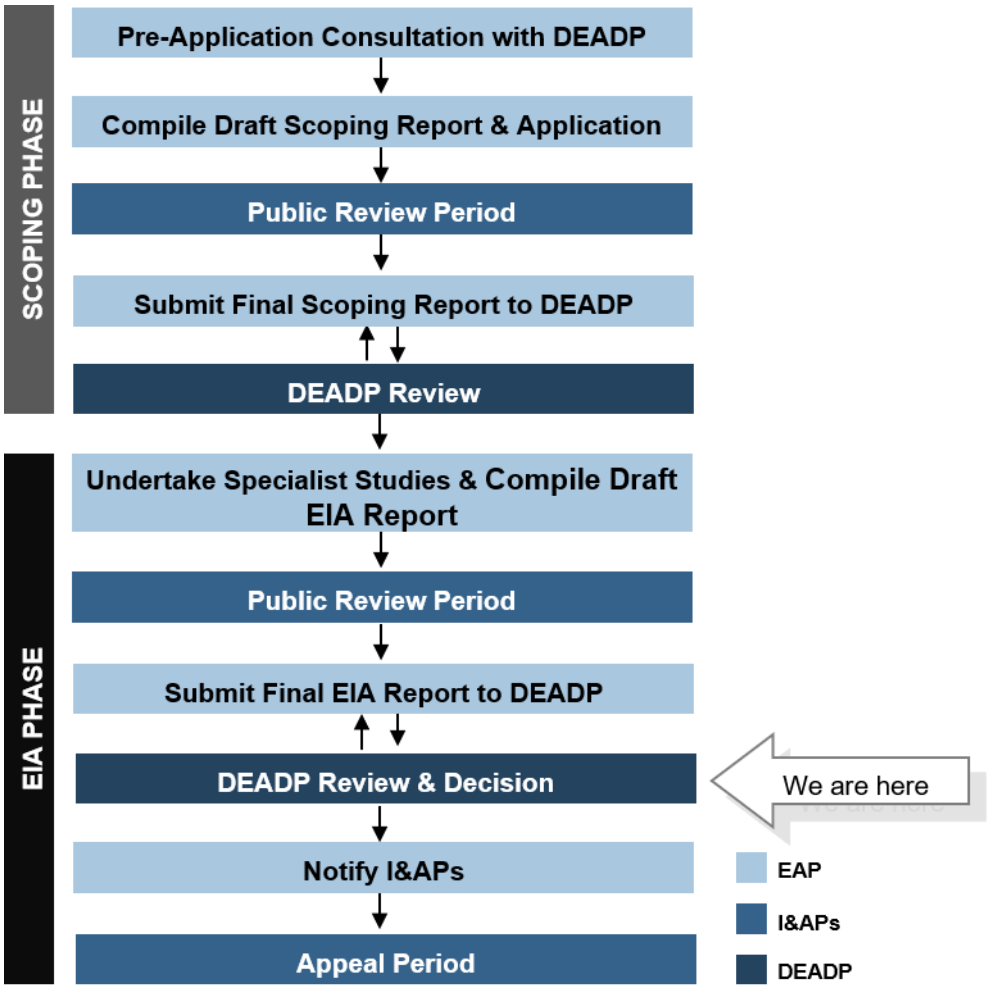

Figure 7: S&EIR Process Outline

6.5.2 The S&EIR Process to Date

The following key milestones have been reached to date as part of the S&EIR process:

1. A Pre-Application Meeting was held with DEADP on 23 November 2020. The Project was then put on hold. Once the Project was active again, another Pre-Application Meeting was held with DEADP on 05 May 2022 (refer to the minutes of the meeting in **Appendix D**).

2. The following additional consultations were then held with DEADP:
    a. Presentation of the different layout alternatives on 12 October 2022; and
    b. Offset discussion with DEADP and Cape Nature on 22 November 2022.
3. The Project was announced with an invitation to the general public to register as I&APs in 2021 and 2023 (including a letter drop to tenants of Mossdustria on 16 October 2023);
4. A draft Scoping Report, which conformed to Appendix 2 of the EIA Regulations, was compiled. This document included the following salient information (amongst others):
    a. A Scoping-level impact assessment to identify potentially significant environmental issues for detailed assessment during the EIA phase;
    b. Screening and investigation of feasible alternatives to the Project for further appraisal during the EIA phase; and
    c. A Plan of Study, which explained the approach to be adopted to conduct the EIA for the proposed Project.
5. The Application for EA and draft Scoping Report were submitted to DEADP on 23 October 2025.
6. The draft Scoping Report was lodged for public review from 24 October 2025 until 24 November 2025.
7. The final Scoping Report was submitted to DEADP on 05 December 2025.
8. A consultation with DEADP was held on 24 February 2026 regarding the submission of the Scoping Report. The outcome of the Meeting was to restart the Scoping Phase.
9. The draft Scoping Report was updated, and the Application for EA and draft Scoping Report were resubmitted to DEADP on 06 March 2026.
10. The draft Scoping Report was lodged for public review from 09 March 2026 to 09 April 2026. A suspension was issued on 12 March 2026 by DEADP and lifted on 25 March 2026. Therefore, the public review period only ended on 21 April 2026 to allow for the full 30-day commenting period outside of the suspension timeframe.
11. The final Scoping Report was submitted to DEADP on 28 April 2026.
12. DEADP accepted the Scoping Report and Plan of Study for the EIA on 29 June 2026 (refer to **Appendix E**), which allowed the commencement of the EIA phase.
13. A draft EIA Report, conforming to Appendix 3 of the EIA Regulations, was compiled. This document included the following salient information (amongst others):
    a. A Summary of Specialist studies conducted to inform the environmentally sensitive features associated with the Project's environment;
    b. An impact assessment evaluating the significance of each impact on the various aspects of the environment;
    c. Consideration of alternatives associated with the Project;
    d. Compilation of an EMPr outlining roles and responsibilities, and mitigation and monitoring measures associated with the Project; and
    e. Summarising, based on the above information, the key findings of the EIA Phase and any recommendations, including conditions to be included in the EA.

14. The draft EIA Report was lodged for public review from 28 August 2026 to 29 September 2026.
15. The final EIA Report will be submitted to DEADP in October 2026.

6.5.3 Alignment with the Plan of Study

The Plan of Study, which was contained in the Scoping Report and was accepted by DEADP, explained the approach to be adopted to conduct the Environmental Impact Reporting phase for the proposed Project. The manner in which the EIA Report addresses the requirements of the Plan of Study is shown in **Table 5**.

Table 5: Alignment of EIA Report with Plan of Study

No.	Plan of Study Requirement	Reference to Section in EIA Report
1.	Assess potentially significant environmental issues identified during Scoping through: 1. Applying an appropriate impact assessment methodology. 2. Conducting specialist studies. 3. Identifying suitable mitigation measures.	▪ **Section 11** ▪ **Section 12** *Note that the approach to assessing impacts included in the Plan of Study was adjusted in this EIA Report. However, it still satisfies the requirements of the EIA Regulations in terms of assessing the extent, magnitude, duration, probability and significance.*
2.	Assessment of feasible alternatives.	▪ **Section 13**
3.	Specialist studies to be completed in accordance with Terms of Reference.	▪ **Section 11** ▪ **Appendix F**
4.	Public participation to include the following: ▪ Update the database of I&APs. ▪ Allow for the review of the draft EIA Report. ▪ Compile and maintain a CRR. ▪ Notification of DEADP's decision.	▪ **Section 14**
5.	EIA Report to satisfy the minimum requirements stipulated in Appendix 3 of the EIA Regulations.	▪ **Section 2**
6.	EMPr to satisfy the minimum requirements stipulated in the EIA Regulations	▪ **Appendix G**
7.	Authority Consultation.	▪ **Section 14**

6.5.4 Addressing DEADP's Requirements

The manner in which DEADP's specific requirements, as listed in the letter received from this Department for the acceptance of the Scoping Report (refer to **Appendix E**), have been attended to and are described in **Table 6**.

Table 6: DEADP's Specific Requirements – Acceptance of the Scoping Report

DEADP's Requirements	Response/Status
1. The above-mentioned document submitted by your appointed Environmental Assessment Practitioner (EAP), Mr. Donavan Henning (EAPASA Registration Number: 2020/1217) and assisted by Candidate EAP, Dr. Marilie Pretorius (EAPASA Registration Number: 2024/8345) from NEMAI Consulting (GIBB Environmental (Pty) Ltd.) to the Directorate: Development Management (Region 3 (hereinafter referred to as "this Directorate") on 28 April 2026 refers.	Noted. No response required.
2. This letter serves to inform you that the abovementioned document has been accepted by this Department subject to the following:	Noted. No response required.
2.1 The terms of reference for the Socio-Economic Assessment include Social and Gender Considerations including what the impact of the proposed development proposal may have on the prevalence of HIV/AIDS, Sexually Transmitted Infections ("STI") and Tuberculosis ("TB"), as well as equity and gender related concerns.	A Socio-Economic Impact Assessment (Appendix F9) was undertaken and included social and gender considerations as well as the impacts on the prevalence of HIV/AIDS, STI and TB. The study is summarised in **Section 11.12** with the impact assessment in **Section 12.25**.
2.2 That a full Noise Impact Assessment instead of a Noise Scoping Assessment is undertaken.	A full Noise Impact Assessment was undertaken and is summarised in **Section 11.7** with the Impact Assessment in **Section 12.20** and contained in **Appendix F4**.
2.3 Engineering services report forms part of the specialist input to be sought during the EIA phase of the assessment.	The Civil Engineering Services Report was used to substantiate the information contained in **Section 9**. It is included in **Appendix I**.
3.*Synchronising applications in terms of other applicable legislation with the EIA process* You are reminded that it is now a requirement for the water use and environmental authorisation processes to be synchronised as to ensure that these processes duly inform one another. Failure to do so may prejudice the success of this application. Failure to adequately synchronise the processes may prejudice the application.	The Applications have been synchronised. The WULA is currently in Phase 3 on EWULAAS, and the draft WULA Technical Report was out for Public Review at the same time as the draft EIA Report. However, as requested by the authority, the WULA Technical Report is out for public review for an additional 30-day period, ending on 28 October 2026.
4. You are hereby reminded that the Environmental Impact Assessment ("EIA") Report must contain all the relevant information as set out in Appendix 3 of the EIA Regulations, 2024 (as amended). The EMPr must also include the floodline information as indicated in the comments and responses table. Omission of any of the said information may result in the application for Environmental Authorisation being refused.	Refer to **Section 2** for the detailed explanation of how the EIA Report complies with Appendix 3 of the EIA Regulations. Refer to Section 6.7 of the Civil Engineering Services Report (contained in **Appendix I**) for the details regarding why floodlines were not required for this development.
5. An Environmental Management Programme ("EMPr") that contains all information set out in Appendix 4 of the EIA Regulations 2014, as amended, must be compiled that addresses the potential environmental impacts of the activity on the environment throughout the project life cycle, i.e. the EMPr must address impacts in respect of the planning and design, pre-construction and construction activities, operation of the activity, rehabilitation of the environment etc. The Department would like to advise that in compiling the EMPr the Department's Guideline for Environmental Management Programmes.	The EMPr is contained in **Appendix G**. Section 2 of the EMPr highlights how the EMPr complies with Appendix 4 of the EIA Regulations. The Department's guidelines were referred to when compiling the EMPr.
6. Note that the specialist report(s) must be appended to the EIA Report. Please ensure that all these specialist reports comply with the protocols and where there is no applicable protocols, with Appendix 6 of the NEMA EIA Regulations, 2014 (as amended 2017).	The Specialist Reports are Appended to this Report. Refer to **Appendix F**.
7. In addition to the above, the Environmental Assessment Practitioner ("EAP") must submit an electronic copy of the draft EIA Report and EMPr to the Department for a 30-day comment period. This draft EIA must be uploaded onto this Directorate's one drive to the folder designated to NEMAI	**Section 14** of this Report outlines the public participation process that was undertaken for the review of the draft EIA Report, including the details of the notification of the review period of the draft EIA Report.

DEADP's Requirements	Response/Status
Consulting and a screenshot as proof of submission must be submitted via DEADP-EIAAdmin George (DEADPEIAAdmin.George@westerncape.gov.za). The draft EIA Report and EMPr must also be made available to all relevant State Departments/Organs of State that administer laws relating to a matter affecting the environment, for a 30-day comment period. The EAP must notify the Department in writing of the date the draft EIA Report and EMPr was submitted to the relevant State Departments/Organs of State and clearly indicate whether or not such State Departments/Organs of State were notified of the 30-day comment period in terms of Section 24O of NEMA. It is imperative that State Departments/Organs of State are in possession of the draft Reports when the EAP issues them with the notice in terms of Section 24O of NEMA. Please note that the EAP is responsible for such consultation. Therefore, it is requested that the EAP include proof of such notification to the relevant State Departments/Organs of State in terms of Section 24O (2) and (3) of NEMA in the draft EIA Report, where appropriate.	**Appendix L** provides proof of notification undertaken for the review of the draft EIA Report. Proof of notification was also uploaded to the submission folder when submitting the draft EIA Report and emailed to DEADPEIAAdmin.George@westerncape.gov.za.
8. The EAP must record and respond to all comments received. The comments and responses must be captured in a Comments and Responses Report and must also include a description of the public participation process followed for the EIA phase. This report must also be included in the public participation information to be attached to the EIA report submitted for a decision. The EAP must ensure that all the documents referred to in the responses which forms part of the comments and responses report is attached to all future submissions.	The CRR is contained in **Appendix L3**. The CRR includes all comments received during the S&EIR Process (i.e. all comments received during the review of the draft Scoping Report and the review of the draft EIA Report).
9. Please ensure that comments from all the relevant Organs of State, including any comments from the Department are also submitted with the EIA Report.	The CRR is contained in **Appendix L3**. The CRR includes all comments received during the S&EIR Process (i.e. all comments received during the review of the draft Scoping Report and the review of the draft EIA Report).
10. You must now proceed with the EIA process in accordance with the tasks outlined in the plan of study for the EIA.	Noted. We have proceeded with the EIA process as guided.
11. The Department awaits the submission of the EIA Report as prescribed by the EIA Regulations 2014, as amended. In accordance with Regulation 23(1) of the NEMA EIA Regulations, 2014 (amended 2017), the EIA Report and EMPr must be submitted to this Department within a period of **106 days** from the date of this letter. If, however, significant changes have been made or significant new information has been added to the EIA Report, the applicant/EAP must notify the Department that an additional 50 days (i.e. 156 days from the date of the acceptance of the Scoping Report by the Department) would be required for the submission of the EIA Report. The additional 50 days must include a minimum 30-day commenting period to allow registered I&APs to comment on the revised report and/or additional information.	Noted. No response required.
12. If the EIA Report and EMPr are not submitted within the prescribed timeframe, the application will lapse in terms of Regulation 45 of NEMA EIA Regulations, 2014 (amended 2017) and your file will be closed. Should you wish to pursue the application again, a new application process would have to be initiated. A new Application Form would have to be submitted, and the prescribed application fee would have to be paid again.	Noted. No response required.
13. Kindly quote the abovementioned reference number in any future correspondence in respect of the application.	Noted. We will include the abovementioned reference number in any future correspondence in respect of the application.

DEADP's Requirements	Response/Status
14. Please note that the activity may not commence, prior to an Environmental Authorisation being granted by the Department. It is an offence in terms of Section 49A of the NEMA for a person to commence with a listed activity unless the Department has granted an environmental authorisation for the undertaking of the activity. Failure to comply with the requirements of Section 24F and 49A of the NEMA will result in the matter being referred to the Environmental Compliance and Enforcement Directorate of this Department for prosecution. A person convicted of an offence in terms of the above is liable to a fine not exceeding R10 million or to imprisonment for a period not exceeding 10 years, or to both such fine and imprisonment.	Noted. No response required
15. This Department reserves the right to revise or withdraw comments or request further information from you based on any information that might be received.	Noted. No response required

7 ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations accompany the EIA Process:

- As the design of the project components is still in feasibility stage, and due to the dynamic nature of the planning environment, the dimensions and layout of the infrastructure may change during the detailed design phase.
- Regardless of the analytical and predictive method employed to determine the potential impacts associated with the Project, the impacts are only predicted on a probability basis. The accuracy of the predictions is largely dependent on the availability of environmental data and the degree of understanding of the environmental features and their related attributes.
- The following assumptions, gaps and limitations were noted as part of the specialist studies:
  - Aquatic Ecology Impact Assessment (Colloty, 2026a) –
    - A comprehensive understanding of flora and fauna communities, including endemic, rare, and threatened species, ideally requires assessments conducted over different seasons and years, with repeated sampling.
    - Due to time and Project constraints, long-term ecological studies are not always feasible and are commonly replaced by instantaneous sampling during impact assessment studies.
    - While this limitation is recognised, the findings are considered sufficient to support decision-making regarding Project acceptability, unless otherwise stated.
    - A long-term investigation of the proposed Project site was not possible within the scope and Terms of Reference of this study.
    - Despite these constraints, a concerted effort was made to:
      - Assess as much of the proposed Project site as possible;
      - Utilise available literature;

- Review species distribution data; and
- Incorporate aerial photography into the assessment.

- The information and findings presented in this report apply only to the study area shown on the accompanying maps.
- The results cannot be extrapolated or applied to other areas without undertaking a detailed site-specific investigation.

o Geohydrology Impact Assessment (Oberholzer *et al.,* 2026) –

- The geological interpretation is based on the available 1:50 000 geological mapping and the information available for the study area. Geological contacts and subsurface conditions may vary locally from those depicted on the regional geological map.
- Available data was sourced from the relevant groundwater databases and sources. The aquifer vulnerability, yield and quality data are predominantly accurate, albeit mapped at a regional scale.
- The presence of dense clay-rich material encountered during augering is interpreted to potentially restrict vertical infiltration and promote shallow runoff, ponding and perched water. However, the extent of the cover across the site is not confirmed.
- The groundwater quality was derived from one set of test results. Seasonal changes may occur in the chemistry of the water from the borehole, and this has not been accounted for.
- It was not possible to collect a rainfall sample as part of the isotope investigation; therefore, site-specific precipitation isotopes were not available for comparison.
- The coordinates of the NGA boreholes are sometimes found to be inaccurate. Hence, it was difficult to incorporate the NGA data accurately into the field hydrocensus.
- Limited water level data could be obtained through the NGA database as well as through the hydrocensus, and assumptions had to be made without this data available.
- The stable isotope dataset comprises a limited number of samples and therefore provides an indication of water sources and potential interaction but cannot conclusively establish groundwater-surface water flow directions or hydraulic connectivity.
- The assessment of potential impacts is based on the proposed development footprint and activities available at the time of the investigation. Changes to the development layout, excavation depths, stormwater infrastructure or below-ground services may require the geohydrological assessment to be revisited.

o Terrestrial Ecology Impact Assessment (Colloty, 2026b) -

- To obtain a comprehensive understanding of flora and fauna communities, as well as endemic, rare and threatened species, ecological assessments should

ideally be undertaken over multiple seasons and years and include repeated surveys.

- Due to practical and time constraints, long-term investigations are not always feasible, and assessments are often based on instantaneous sampling.
- This limitation is common to environmental impact assessment studies and does not generally preclude informed decision-making regarding project acceptability.
- For this assessment, the scope of work allowed for a long-term investigation of the proposed site.
- A concerted effort was made to assess the site comprehensively through field investigations and the use of available literature, species distribution records and aerial photography.
- The findings and conclusions presented in the report are specific to the defined study area shown on the accompanying maps.
- The information contained in the report should not be extrapolated to other areas without further detailed investigation.

- Noise Impact Asessment (De Jager, 2026) -
  - Noise Measurement Limitations:
    - Ambient noise levels vary naturally over time and may be influenced by seasonal conditions, weather, vegetation cover, and faunal activity.
    - Noise measurements provide a snapshot of conditions at the time of monitoring and may not fully represent longer-term ambient noise conditions.
    - Measurement results may be influenced by unidentified or intermittent noise sources in the area, including mechanical equipment, infrastructure, animals, and road traffic.
    - The location of monitoring equipment can affect measured noise levels due to proximity to vegetation, structures, wetlands, roads, and other environmental features.
    - Wind conditions and environmental factors may introduce variability into measured noise levels.
  - Noise Modelling Limitations
    - Noise propagation models simplify complex real-world sound propagation processes and may not account for all acoustic characteristics.
    - Models generally do not fully account for intrusive sound characteristics, amplitude modulation, or all impulsive noise events.
    - Atmospheric conditions, temperature gradients, and acoustic ground properties are simplified within the modelling process.
    - Noise sources are modelled using representative sound power levels and operational assumptions that may differ from actual future operating conditions.

- Operational scenarios are based on a precautionary approach and typically assume high-load or worst-case operating conditions, which may result in overestimation of predicted noise levels.
- Noise modelling does not precisely predict future noise levels at a receptor but rather provides an indication of potential noise impacts and areas of concern.

- Data and Information Assumptions
  - Sound power levels used in the assessment are assumed to be representative of the proposed activities and equipment.
  - Topographic information used in the model is based on available digital elevation data, which may contain inherent inaccuracies and artefacts.
  - Ground conditions were generalised for modelling purposes and assumed to be relatively uniform across the study area.
  - It is assumed that actual operational schedules, equipment utilisation, and race activity may vary from the conservative scenarios assessed.
- Mitigation Assumptions
  - Mitigation measures assessed were limited to those considered practical, feasible, and reasonable for implementation.
  - Additional reductions in noise impacts may be achievable through more extensive engineering or operational controls, but these may not be financially or operationally feasible.

- Avifaunal Impact Assessment (Phillips, 2025) -
  - Habitat boundaries usually consist of subtle transitional zones or ecotones of vegetation, which cannot be captured as distinct lines. Boundaries of habitat types are therefore approximately defined.
  - Habitat types were defined and mapped in the context of use by birds and not in terms of botanical species associations. Similarly, the habitat associated with rivers and wetlands described in this report are defined in terms of broad habitat use by avifauna and do not denote the boundaries of wetlands and watercourses.
  - Potential impacts of the proposed project were evaluated based on the layout provided at the time of writing, and where necessary, recommendations for the most appropriate mitigation measures have been provided.
  - Findings, recommendations, and conclusions provided in this report are based on the author's best scientific and professional knowledge as well as information available at the time of compilation.
  - It is assumed that the report will be read in its entirety and that conclusions cannot be made from single sections.
- Landscape/Visual Impact Assessment (Marshall, 2023) -
  - In the assessment tables the subjective judgement as to whether an impact is negative or positive is based on the assumption that the majority of people are

likely to prefer to view a natural or a rural landscape than an industrial landscape.

- A site visit was undertaken on the 23rd March 2023 to verify the likely difference in the visual impact of the proposed deviations compared with the originally approved power line alignment.
- The site visit was planned to ensure that weather conditions were clear ensuring reasonable visibility.
- The timing of photography was planned to ensure that the sun was as far as possible behind the photographer. This was to ensure that as much detail as possible was recorded in the photographs.
- Visibility of the proposed facility has been assessed using the Global Mapper Viewshed tool.
- The visibility assessment is based on terrain data that has been derived from satellite imagery. This data was originally prepared by NASA and is freely available on the CIAT-CCAFS website (http://www.cgiar-csi.org). This data has been ground truthed using a GPS as well as online mapping.
- Calculation of visibility is based purely on the Digital Elevation Model and does not take into account the screening potential of vegetation or other development.
- It is noted that the Screening Tool indicates that the site is visually sensitive. In terms of Landscape and Visual impact it is not necessarily that the site is sensitive but rather that the surrounding landscape and receptors may be sensitive to the proposed development.

o Archaeological/Heritage Walkdown (Webley, 2023) -

- Since HIA reports from the Western Cape Province that are more recent than 2009, are not on the South African Heritage Resources Information System (SAHRIS) database, the literature on archaeological resources in the general vicinity of the study area is out of date. While it is possible that there is Cultural Resource Management literature more recent than 2009, it is not readily available to heritage practitioners.

o Palaeontology Desktop Assessment (Butler, 2023) -

- Geological maps and accompanying geological sheet explanations are primarily designed for geological purposes and not specifically for palaeontological heritage assessments.
- Many areas of South Africa remain underexplored from a palaeontological perspective, resulting in limited fossil occurrence data for certain regions.
- Available desktop information for remote areas may be based largely on aerial imagery and existing geological records rather than detailed field investigations.
- Fossil locality records and geological information contained within museum and university databases may be incomplete, outdated, or inconsistently documented.

- In areas where site-specific palaeontological data are lacking, information from comparable geological formations and Assemblage Zones is used to infer potential fossil occurrences.
- Desktop assessments generally assume that fossils may be present within geological formations and Assemblage Zones known to contain fossil material elsewhere.
- The fossil sensitivity identified during the desktop study represents an indication of potential fossil occurrence and does not confirm the presence of fossils on site.
- Field verification is necessary to refine desktop findings and provide a more accurate assessment of the palaeontological sensitivity and fossil potential of the study area.
- A site investigation was undertaken as part of this assessment to verify and supplement the desktop-based findings.

o Socio-Economic Impact Assessment (Kempthorne & Sondwana, 2023) -

- Project-related information supplied by the team involved in the project was assumed to be reasonably accurate. Thus, all potential impacts are predicted based on this information.
- The project is still in the conceptual phase and further details still need to be determined. Urban-Econ therefore made assumptions based on available information, stakeholder engagement and key role players. Therefore, there is medium level confidence, and determination is based on common sense and general knowledge.
- The secondary data sources used to compile the economic baseline can be viewed as being indicative of broad trends within the study area.
- Impacts cannot be predicted with complete accuracy, and these predictions are based on research and years of experience, taking the specific set of circumstances into account.

8 NEED AND DESIRABILITY

This section describes the need for and desirability of the proposed Project, in terms of 3(1)(f) of Appendix 3 of the EIA Regulations. The format contained in the Guideline on Need and Desirability (DEA, 2017) was used in **Table 7**.

Table 7: Need for and desirability of the proposed Project

Question No.	Response
1. How will this development (and its separate elements/aspects) impact on the ecological integrity of the area? *1.1. How were the following ecological integrity considerations taken into account?:* *1.1.1. Threatened Ecosystems.* *1.1.2. Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.* *1.1.3. Critical Biodiversity Areas ("CBAs") and Ecological Support Areas ("ESAs").* *1.1.4. Conservation targets.* *1.1.5. Ecological drivers of the ecosystem.* *1.1.6. Environmental Management Framework.* *1.1.7. Spatial Development Framework.* *1.1.8. Global and international responsibilities relating to the environment (e.g. RAMSAR sites, Climate Change, etc.).*	Refer to the following sections of the EIA Report: ▪ **Section 10.7**– Surface Water; and, ▪ **Section 10.8**– Terrestrial Biodiversity. The following Specialist studies were undertaken to assess the impacts of the Project on the ecological integrity of the area: ▪ Aquatic Ecology Impact Assessment; ▪ Terrestrial Ecology Impact Assessment; and ▪ Avifaunal Impact Assessment. The findings of these studies are presented in **Section 11.4, Section 11.5** and **Section 11.8**, respectively. Mitigation measures are included in this report and the EMPr to safeguard the sensitive ecological features.
1.2. How will this development disturb or enhance ecosystems and/or result in the loss or protection of biological diversity? What measures were explored to firstly avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	Potential direct disturbances to ecosystems may include the following (amongst others): ▪ Construction phase – o Loss of natural terrestrial vegetation through site clearing and earthworks. o Loss or disturbance of habitats associated with Critically Endangered vegetation, CBAs, and ESAs. o Loss or disturbance of plant SCCs, protected plant species, and sensitive renosterveld, fynbos and thicket habitats. o Direct disturbance, displacement, injury, or mortality of fauna during vegetation clearing and construction activities. o Reduction in available habitat for fauna through vegetation removal. o Habitat fragmentation caused by construction-related disturbance and the creation of developed areas. o Increased risk of alien invasive plant establishment in disturbed areas. ▪ Operation phase – o Permanent loss of terrestrial habitat within developed portions of the site. o Long-term reduction in the extent of natural vegetation and ecological habitat. o Ongoing habitat fragmentation and reduced ecological connectivity between remaining habitat patches. o Continued degradation of terrestrial habitat through alien invasive plant encroachment if not actively managed.

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	○ Long-term impacts on plant SCC and protected plant species through habitat loss. ○ Reduced habitat availability for fauna associated with renosterveld, fynbos and thicket habitats. ○ Increased faunal disturbance associated with ongoing human activity, traffic, noise and operational activities. The following Specialist studies were undertaken to assess the impacts of the Project on the ecosystem of the area: ▪ Aquatic Ecology Impact Assessment; ▪ Terrestrial Ecology Impact Assessment; and ▪ Avifaunal Impact Assessment. The findings of these studies are presented in **Section 11.4, Section 11.5** and **Section 11.8**, respectively. Mitigation measures are included in this report and the EMPr to minimise disturbances to ecosystems, according to the mitigation hierarchy It is also noted that a Conservation Area of 15 ha was included in the preferred Project layout to preserve the most natural habitat found on the site as determined by the Terrestrial Ecology Impact Assessment, having a positive impact on conservation management in this area.
1.3. How will this development pollute and/or degrade the biophysical environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The Project may cause surface water, groundwater, soil, air, noise and light pollution during the construction and operational phases. The above impacts were assessed during the EIA Phase (refer to **Section 12.9** to **Section 12.28**. Mitigation measures are included in this EIA Report and in the EMPr (**Appendix G**) to manage these impacts.
1.4. What waste will be generated by this development? What measures were explored to firstly avoid waste, and where waste could not be avoided altogether, what measures were explored to minimise, reuse and/or recycle the waste? What measures have been explored to safely treat and/or dispose of unavoidable waste?	The waste to be generated by the Project will be dealt with in the following manner (amongst others): ▪ Construction – ○ Waste generated during construction will be stockpiled in skips and disposed of by a licensed operator at a licensed landfill. This will be a contractor's responsibility. ▪ Operation – ○ Domestic waste will be collected in waste bins and removed from the site for disposal at the nearest general waste landfill site; ○ The services of a private hazardous-waste disposal company will be required. The necessary precautions and procedures should be adhered to to avoid fuel spills during storage and while transporting/handling; and ○ A centralised waste yard may be required for the motorsport arena. The capacity of the storage facility will be confirmed during the detailed design phase. Refer to **Section 12.21** for the impact assessment undertaken for the general and hazardous waste associated with this Project. Mitigation measures to manage all waste and wastewater generated during the construction and operational phases are included in the EMPr.
1.5. How will this development disturb or enhance landscapes and/or sites that constitute the nation's cultural heritage? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were	According to the DFFE Screening Tool Report, the Relative Archaeological and Cultural Heritage Theme Sensitivity is classified as Low.

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explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	A Heritage Specialist conducted an archaeological walkover of the site on 14 and 16 March 2023. Based on the findings of this Site Sensitivity Verification report (SSV), the Specialist recommended that an HIA is not required. A Notice of Intent to Develop along with the SSV was submitted to HWC. They confirmed that no further heritage assessment was required for this Project. Refer to the CRR (**Appendix L3**) for the HWC comments verbatim. Refer to **Section 11.10** for a summary of the Archaeology/Heritage Walkdown Report. Mitigation measures recommended by the specialist and requested by HWC are included in this EIA Report and the EMPr (**Appendix G**).
1.6. How will this development use and/or impact on non-renewable natural resources? What measures were explored to ensure responsible and equitable use of the resources? How have the consequences of the depletion of the non-renewable natural resources been considered? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The proposed Project includes an Alternative Energy Area of approximately 22 ha which will include a 16 MVA Solar PV facility. The proposed Project will be supplied with electricity from the Solar PV facility as well as connected to the existing infrastructure provided by Eskom. For further information regarding the Alternative Energy Area, refer to **Section 9.3**. The capacity generated by the alternative energy plant is sufficient for the project ad surplus energy will be transferred into the grid.
1.7. How will this development use and/or impact on renewable natural resources and the ecosystem of which they are part? Will the use of the resources and/or impact on the ecosystem jeopardise the integrity of the resource and/or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds? What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimise the use of resources? What measures were taken to ensure responsible and equitable use of the resources? What measures were explored to enhance positive impacts? *1.7.1. Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. de-materialised growth)? (note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of waste they generate, without compromising their quest to improve their quality of life).* *1.7.2. Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources this the proposed development alternative?)* *1.7.3. Do the proposed location, type and scale of development promote a reduced dependency on resources?*	The proposed Project includes an Alternative Energy Area of approximately 22 ha which will include a 16 MVA Solar PV facility. The proposed Project will be supplied with electricity from the Solar PV facility as well as connected to the existing infrastructure provided by Eskom. For further information regarding the Alternative Energy Area, refer to **Section 9.3**. Impacts to the receiving environment are assessed in **Section 12** of this Report. The Socio-Economic benefits of this development as determined by the Socio-Economic Impact Assessment are summarised in **Section 11.12**. These benefits will be experienced by a majority of the Mossel Bay local businesses and include (amongst others): ▪ Employment creation during construction and operation. ▪ Increased household income and local spending. ▪ Growth and diversification of the local economy. ▪ Business opportunities for local SMMEs and service providers. ▪ Increased tourism and visitor spending associated with motorsport events. ▪ Improved energy security through the solar energy facility. The proposed Project site within the Mossdustria area has been identified as an urban expansion area within the industrial expansion zone, as described in MBLM's IDP for 2025-2026. This indicates that this area has been determined to be an area in which industrial and urban development are encouraged. Therefore, the proposed Project falls within the correct zoned area for its use.
1.8. How were a risk-averse and cautious approach applied in terms of ecological impacts?	The following Specialist studies were undertaken to assess the ecological impacts of the Project on the area: ▪ Aquatic Ecology Impact Assessment;

Question No.	Response
1.8.1. What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)? *1.8.2. What is the level of risk associated with the limits of current knowledge?* *1.8.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?*	▪ Terrestrial Ecology Impact Assessment; and ▪ Avifaunal Impact Assessment. The findings of these studies are presented in **Section 11.4, Section 11.5** and **Section 11.8**, respectively. Mitigation measures are included in this report and the EMPr to minimise disturbances to ecosystems, according to the mitigation hierarchy. The limitations and gaps in knowledge are summarised in **Section 7** and also contained in the Specialist Reports themselves.
1.9. How will the ecological impacts resulting from this development impact on people's environmental right in terms following: *1.9.1. Negative impacts: e.g. access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?* *1.9.2. Positive impacts: e.g. improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?*	Refer to the response to question no. 1.1. above regarding the ecological integrity of the area. Potential impacts of the Project to the people's environmental right may include the following (amongst others): ▪ Air quality deterioration during construction; ▪ Noise Impact during the construction phase and during the operation phase associated with motorsports racing events; ▪ Construction and earthmoving activities, movement of vehicles and construction equipment may impact on the aesthetic environment during construction, and the permanent change in land use may impact the aesthetic environment during operation; ▪ Impacts on traffic during the construction phase and during the operation phase during motorsports events; and ▪ Establishment of an official conservation area of 15ha to protect the critically endangered vegetation found on site in its more natural state (positive impact). The following related specialist studies were undertaken during the EIA phase: ▪ Noise Impact Assessment (Summarised in **Section 11.7** and contained in **Appendix F4**) ▪ Landscape/Visual Impact Assessment (Summarised in **Section 11.9** and contained in **Appendix F6**) ▪ Traffic Study (Contained in Appendix B of the Civil Engineering Services Report which is contained in **Appendix I**) ▪ Terrestrial Ecology Impact Assessment (Summarised in **Section 11.6** and contained in **Appendix F3**) Mitigation methods and recommendations are included in the EMPr (**Appendix G**).
1.10. Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in question and how the development's ecological impacts will result in socio-economic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)?	Refer to the response to question 1.1, 1.7 and 1.9. above. The proposed Project site within the Mossdustria area has been identified as an urban expansion area within the industrial expansion zone, as described in Mossel Bay's IDP for 2025-2026. The following socio-economic impacts were identified during the Socio-Economic Impact Assessment (amongst others): ▪ Construction Phase – o Positive Impacts ➢ Direct employment creation. ➢ Indirect and induced employment opportunities. ➢ Increased household income and spending. ➢ Skills development and transfer. ➢ Increased expenditure within the local economy.

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	➢ Support for local businesses and suppliers. ○ Negative Impacts ➢ Construction-related noise, dust and disturbance. ➢ Increased traffic volumes and road safety risks. ➢ Increased pressure on local infrastructure and services. ➢ Potential public health and social risks associated with the influx of workers. ▪ Operation Phase – ○ Positive Impacts ➢ Sustained employment opportunities. ➢ Long-term economic growth and investment. ➢ Increased tourism expenditure associated with the motorsport arena. ➢ Growth of local businesses and enterprise development. ➢ Increased municipal revenues and economic activity. ➢ Improved energy resilience through the solar PV facility. ➢ Increased recreational and community opportunities. ○ Negative Impacts ➢ Increased traffic volumes associated with operational activities and events. ➢ Increased demand on local infrastructure and municipal services. ➢ Noise nuisance associated with motorsport activities. Refer to **Section 11.12** for a summary of the Socio-Economic Impact Assessment (contained in **Appendix F9**) and to **Section 12.25** for further details on the Impact Assessment undertaken.
1.11. Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/targets/considerations of the area?	Refer to the response to question 1.1. above regarding the ecological integrity of the area. It is also noted that the proposed Project includes a 15ha Conservation Area to protect sensitive species found in their more natural state on site (positive impact).
1.12. Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the "best practicable environmental option" in terms of ecological considerations?	Project options are presented in **Section 13** below.
1.13. Describe the positive and negative cumulative ecological/biophysical impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and existing and other planned developments in the area?	Cumulative impacts are assessed in **Section 12.28** below. Mitigation measures for these impacts are incorporated into the EMPr (**Appendix G**).
2.1. What is the socio-economic context of the area, based on, amongst other considerations, the following considerations?: *2.1.1. The IDP (and its sector plans' vision, objectives, strategies, indicators and targets) and any other strategic plans, frameworks of policies applicable to the area,* *2.1.2. Spatial priorities and desired spatial patterns (e.g. need for integrated of segregated communities, need to upgrade informal settlements, need for densification, etc.),* *2.1.3. Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.), and*	The socio-economic environment is discussed in **Section 10.9** and the impacts are discussed in **Section 12.25** below. The following is noted from a strategic planning perspective: ▪ The proposed Project site adjacent to the Mossdustria area has been identified as an urban expansion area within the industrial expansion zone, as described in Mossel Bay's IDP for 2025-2026 ▪ The MBLM wants to establish a dedicated economic zone to attract much-needed investment and to maximise the return from the existing Mossdustria area. This project is also motivated by the Western Cape

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2.1.4. Municipal Economic Development Strategy ("LED Strategy").	Government's strategic drive to establish special economic zones (Mossel Bay IDP, 2025-2026); ▪ According to the National Spatial Development Framework (2019), there is a need for inclusive growth within the Mossel Bay area, which MBLM recognises and is striving to achieve through the proposed Project; ▪ The proposed Project seeks to decrease poverty levels within the community by creating job opportunities. Once operational, the development aims to contribute to economic growth and higher investment whilst strengthening the links between economic and social strategies that align with the National Development Plan for 2030; and ▪ The Western Cape Provincial Spatial Development Framework (PSDF) identifies Mossel Bay as a settlement with Very High Growth Potential.
2.2. Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-economic objectives of the area? *2.2.1. Will the development complement the local socio-economic initiatives (such as local economic development (LED) initiatives), or skills development programs?*	The socio-economic environments and impacts are discussed in **Section 10.9** and **Section 12.25**, respectively. The Socio-Economic Impact Assessment is summarised in **Section 11.12** and contained in **Appendix F9**. Also refer to the response to question 1.9, 1.10 and 2.1.
2.3. How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?	
2.4. Will the development result in equitable (intra- and inter-generational) impact distribution, in the short- and long-term? Will the impact be socially and economically sustainable in the short- and long-term?	
2.5. In terms of location, describe how the placement of the proposed development will: *2.5.1. result in the creation of residential and employment opportunities in close proximity to or integrated with each other,* *2.5.2. reduce the need for transport of people and goods,* *2.5.3. result in access to public transport or enable non-motorised and pedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms public transport),* *2.5.4. compliment other uses in the area,* *2.5.5. be in line with the planning for the area,* *2.5.6. for urban related development, make use of underutilised land available with the urban edge,* *2.5.7. optimise the use of existing resources and infrastructure,* *2.5.8. opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g. not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement),* *2.5.9. discourage "urban sprawl" and contribute to compaction/densification,* *2.5.10. contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs,* *2.5.11. encourage environmentally sustainable land development practices and processes,* *2.5.12. take into account special locational factors that might favour the specific location (e.g. the location of*	2.5.1. During the construction phase, more job opportunities will be created for the construction of the Project. During the operation phase, job opportunities will be created for the operations of the various Project components. In addition, the Project will increase tourism to the area, which will increase the opportunities and business for local businesses in the tourism sector. 2.5.2. Not deemed to be relevant, due to the nature of the Project. 2.5.3. The traffic study recommends the upgrading of road infrastructure near the Project site including (amongst others) providing formal public transport stops or embayments to support public transport usage and providing pedestrian walkways, road crossings and appropriate street lighting to improve pedestrian safety, etc. (refer to **Section 12.22** for further details on the traffic impact assessment outcome and recommendations). This will result in a positive impact on the transport network for pedestrians near the Project site, which will be increased due to the operational activities associated with the motorsports area. 2.5.4. The proposed Project site within the Mossdustria area has been identified as an urban expansion area within the industrial expansion zone, as described in Mossel Bay's IDP for 2025-2026. Therefore, the Project site will complement the other industrial infrastructure development in the area. In addition, the development of the motorsports arena will attract tourism to Mossel Bay, resulting in increased business opportunities for local businesses in the tourism industry.

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a strategic mineral resource, access to the port, access to rail, etc.), *2.5.13. the investment in the settlement or area in question will generate the highest socio-economic returns (i.e. an area with high economic potential),* *2.5.14. impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area, and* *2.5.15. in terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?*	2.5.5. The MBLM wants to establish a dedicated economic zone to attract much-needed investment and to maximise the return from the existing Mossdustria area. This project is also motivated by the Western Cape Government's strategic drive to establish special economic zones (Mossel Bay IDP, 2025-2026). The Project is of the correct zoning and components to complement the above-mentioned goals. 2.5.6. The proposed Project site within the Mossdustria area has been identified as an urban expansion area within the industrial expansion zone, as described in Mossel Bay's IDP for 2025-2026. 2.5.7. The proposed Project site includes a 16 MVA Solar PV facility which will provide electricity for the proposed Project and tie in to the existing electricity grid infrastructure. The Project will also connect to the existing infrastructure through water, sewer, stormwater and roads. The overall socio-economic benefits of the Project will be experienced by various sectors, including the local businesses in the tourism sector due to the tourism attraction associated with the motorsports arena. 2.5.8. The proposed Project site within the Mossdustria area has been identified as an urban expansion area within the industrial expansion zone, as described in Mossel Bay's IDP for 2025-2026. Therefore, the Project occurs within an area identified for urban development, and any upgrades required to existing infrastructure (if applicable) would align with current planning. 2.5.9. Not deemed to be relevant, due to the nature of the Project. 2.5.10. Not deemed to be relevant, due to the nature of the Project. 2.5.11. The EMPr contains management and mitigation measures associated with the impacts identified through the S&EIR Process. The Project will be required to comply with the conditions contained in the EMPr. 2.5.12. The proposed Project site within the Mossdustria area has been identified as an urban expansion area within the industrial expansion zone, as described in Mossel Bay's IDP for 2025-2026. Therefore, the Project site is adjacent to the existing Mossdustria Industrial Area to allow for the expansion of this Industrial Area as well as within the urban expansion area as identified in the MBLM IDP. 2.5.13. The socio-economic benefits of the proposed Project are substantial and are outlined and assessed further in the Socio-Economic Impact Assessment (summarised in **Section 11.12** and contained in **Appendix F9**). The mitigation measures and recommendations to enhance these benefits are outlined in **Section 12.25** and included in the EMPr (**Appendix G**). 2.5.14. Refer to the response to question no. 1.5. above. 2.5.15. Refer to the response to question no. 2.1. above regarding planning.
2.6. How were a risk-averse and cautious approach applied in terms of socio-economic impacts? *2.6.1. What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?* *2.6.2. What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic*	A Socio-Economic Impact Assessment was undertaken for the proposed Project. This specialist study is summarised in **Section 11.12** and contained in **Appendix F9**. The impacts on the Social Environment from this specialist study are outlined in **Section 12.25**. Mitigation measures and recommendations for Socio-Economic Impacts are also incorporated into the EMPr (**Appendix G**).

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vulnerability and sustainability) associated with the limits of current knowledge? *2.6.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?*	
2.7. How will the socio-economic impacts resulting from this development impact on people's environmental right in terms following: *2.7.1. Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?* *2.7.2. Positive impacts. What measures were taken to enhance positive impacts?*	Refer to the responses to question 1.9 above. A Socio-Economic Impact Assessment was undertaken for the proposed Project. This specialist study is summarised in **Section 11.12** and contained in **Appendix F9**. The impacts on the Social Environment from this specialist study are outlined in **Section 12.25**. Mitigation measures and recommendations for Socio-Economic Impacts are also incorporated into the EMPr (**Appendix G**).
2.8. Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts (e.g. over utilisation of natural resources, etc.)?	Refer to the responses to questions 1.1, 1.7, 1.9. and 1.10 above.
2.9. What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations?	The Project options are presented in **Section 13** below.
2.10. What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)? *Considering the need for social equity and justice, do the alternatives identified, allow the "best practicable environmental option" to be selected, or is there a need for other alternatives to be considered?*	
2.11. What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?	Refer to responses to questions no. 1.7, 1.9, 1.10 and 2.1 above.
2.12. What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development's life cycle?	Mitigation measures to manage these impacts are included in the EMPr (**Appendix G**). Refer to the responses to question 1.9 above.
2.13. What measures were taken to: *2.13.1. ensure the participation of all interested and affected parties,* *2.13.2. provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation,* *2.13.3. ensure participation by vulnerable and disadvantaged persons,* *2.13.4. promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means,* *2.13.5. ensure openness and transparency, and access to information in terms of the process,* *2.13.6. ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to*	**Section 14** below provides an overview of the public participation process undertaken to date, which includes the following: ▪ Public Participation during the Scoping Phase; ▪ Maintenance of the database of I&APs; ▪ Period to review the draft EIA Report; ▪ Notification of review of the draft EIA Report; ▪ Means of accessing the draft EIA Report; ▪ Supplying copies of the draft EIA Report to authorities; and ▪ Comments received on the draft EIA Report. Proof of Public Participation for the Scoping Phase of the Project is contained in the Appendices of the final Scoping Report. Proof of Public Participation for the EIA Phase of the Project is contained in **Appendix L**. This includes the CRR

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all forms of knowledge, including traditional and ordinary knowledge, and *2.13.7. ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein were be promoted?*	(**Appendix L3**), which has been updated to include comments received from authorities and I&APs during the EIA Phase.
2.14. Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g.. a mixture of low-, middle-, and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)?	The findings of the Socio-Economic Impact Assessment are presented in **Section 11.12** of this Report. Refer to the response to questions no. 1.9., 2.1., and 2.5. above.
2.15. What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?	Health and safety related risks associated with the Project during the construction and operational phases are assessed throughout the EIA Report. The identified risks are addressed through mitigation measures that are included in the EMPr (**Appendix G**). Additional management requirements will be included in the Project's OHS system.
2.16. Describe how the development will impact on job creation in terms of, amongst other aspects: *2.16.1. the number of temporary versus permanent jobs that will be created,* *2.16.2. whether the labour available in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area),* *2.16.3. the distance from where labourers will have to travel,* *2.16.4. the location of jobs opportunities versus the location of impacts (i.e. equitable distribution of costs and benefits), and* *2.16.5. the opportunity costs in terms of job creation (e.g. a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.).*	The Project will have a beneficial impact on local employment during the construction and operational phases. During these phases, the Project will provide employment opportunities to many local skilled, semi-skilled and non-skilled workers in addition to professionals with higher academic qualifications. The proposed Project will increase job opportunities through the temporary creation of jobs for the construction of the Project and the permanent creation of jobs for the operation of the various project components (PV facility, motorsport arena, and industrial expansion).
2.17. What measures were taken to ensure: *2.17.1. that there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment, and* *2.17.2. that actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?*	The relevant legislation and guidelines that were considered are outlined in **Section 5** above. The S&EIR Process and the associated specialist studies strive to consider the various policies, strategies, plans and programmes that have a bearing on the Project. Various organs of state, as listed in the I&AP Database that is contained in **Appendix K**, have been notified of the Project and given the opportunity to comment on the Project during the Public Participation Process Phases of the review of the draft Scoping Report (completed) and the review of the draft EIA Report (completed).
2.18. What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people's common heritage?	Impacts to the receiving environment have been assessed through various specialist studies. The impact assessments are outlined in **Section 12**. The EMPr (**Appendix G**) contains the mitigation measures identified for the Project. The intention is for the mitigation measures included in the EIA Report and EMPr to be realistic and for the residual risks to be managed to an acceptable level. The conditions of the Environmental Authorisation and Water Use Licence, if granted by DEADP and BOCMA, will be imposed on MBLM and will be legally enforceable. The EMPr's management requirements will also need to be adhered to by the MBLM, contractor(s) and project team, as relevant.
2.19. Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?	
2.20. What measures were taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?	

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2.21. Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?	The Project options are presented in **Section 13** below. The preferred option was identified taking into consideration the relevant specialist studies.
2.22. Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area?	A Socio-Economic Impact Assessment was undertaken for the proposed Project. This specialist study is summarised in **Section 11.12** and contained in **Appendix F9**. The cumulative impacts on the Social Environment from this specialist study are summarised in **Section 12.28** below. Mitigation measures for these impacts are incorporated into the EMPr (**Appendix** G).

9 PROJECT DESCRIPTION

The information presented in this section was supplemented with information from the Project's technical team and relevant Engineering Reports (Bezuidenhout, 2026; Godoka and Bezuidenhout, 2026).

9.1 Summary of the Proposed Project Components

The proposed development entails the extension of the Mossdustria industrial area, establishment of a solar PV facility and a motorsport facility on the Remainder of Portion 8 of Farm Rietvalley 225 (+/- 90 ha in extent). An existing overhead powerline (OHL) will connect the development to an existing municipal substation on Portion 6 of Farm 225 within Mossdustria. An overview of the proposed Project is summarised in **Table 8** below. The overall preliminary layout of the proposed Project is illustrated in **Figure 8**.

Table 8: Overview of Proposed Project Components

Component	Description / Dimension
Industrial expansion with associated infrastructure (+/- 12 ha)	▪ This area is currently zoned as "Agricultural Zone 1", however, it is located in the Urban Edge according to the MBLM SDF and is earmarked for Urban Expansion; ▪ The proposal is to develop 27 new industrial erven ranging from 2000 m^2 to 14000 m^2; ▪ Erven will be fully serviced, and access will be via a newly constructed public street; ▪ The developer/ owner of the erf/ erven will be responsible for installing the top structures.
Alternative Energy Production Area (+/- 22 ha)	▪ Solar PV facility with a capacity of 16 MW; ▪ Intake 16 Mega Volt Ampere (MVA) Municipal Substation; ▪ Eight (8) smaller two (2) MVA internal distribution substation; ▪ Each internal distribution substation has a step-up transformer from 400 volts to 11 000 volts; ▪ 11 kV Cables for internal reticulation; ▪ The intake municipal substation would have sixteen (16) MVA switchgear to be connected to the existing municipal grid; and ▪ Stormwater infrastructure.
Conservation area (+/- 15 ha)	▪ This area contains critically endangered Mossel Bay Shale Renosterveld; ▪ This area is currently zoned as "Agricultural Zone 1" and is located within the urban edge and area identified for future urban expansion in terms of the MBLM SDF; ▪ This section will be rezoned to "Open Space Zone III" to allow the area to be used for nature conservation; ▪ A management plan will be developed to ensure the conservation area is correctly managed
Motorsport arena (+/- 38 ha)	▪ 80 erven for workshops, covering 0.8 ha; ▪ Showrooms/ workshops (11 sites); ▪ Parking area with 1 980 bays; ▪ Parking (grass, 5Ha); ▪ Tar racetrack of 3320 m; ▪ Drag strip of 1 000 m; ▪ Spinning track of 21 000 m^2; ▪ Tar go-carting of 600 m; ▪ Gravel go-carting of 350 m; ▪ Tar pits (8 000 m^2); ▪ Gravel pits (5 000 m^2);

Component	Description / Dimension
	▪ Pavilions large – 300 m in length (2); ▪ Pavilions medium – 150 m in length (5); ▪ Pavilions small – 50 m in length (5); ▪ Ablutions – x 1 (400 m^2); ▪ Ablutions – x 7 (75 m^2); ▪ Vendor stalls/ shops (10 x 25 m^2); ▪ Fuel storage up to 5 000 litres; ▪ Gatehouse – x2 (250 m^2).
Area occupied by both permanent and construction laydown areas	▪ Temporary laydown and staging area (approximately 50x50 m) in parking area. ▪ Construction camp laydown of approximately 50x50 m in parking area
Length of internal roads	▪ 25 m roads x 200 m ▪ 20 m roads x 650 m ▪ 12 m roads x 1.8 km
Width of roads	▪ 25 m roads ▪ 20 m roads ▪ 12 m roads
Water Requirements	▪ Potable water will be supplied from the MBLM water reticulation network within the Bartelsfontein Supply Zone via a connection to the existing municipal water infrastructure north of the site. ▪ The total potable water demand for the development is estimated at approximately 688.56 kL/day. ▪ The Motorsport Arena is the largest water user, with an estimated demand of 437.30 kL/day based on an annual event attendance of 5 000 people. ▪ Fire water requirements for the development have been estimated at 100 L/s for a duration of 6 hours, requiring approximately 2.16 ML of fire water storage.
Services Required	▪ Potable water will be supplied via a proposed 3.5 km long, 160 mm diameter water main connecting the development to the existing municipal water reticulation network. ▪ Wastewater generated by the development will be discharged to the existing Mossdustria municipal sewerage system and conveyed to the Mossdustria Sewer Pump Station and subsequently the Pinnacle Point Wastewater Treatment Works. ▪ Approximately 1.9 km of 160 mm diameter sewer pipeline will be required to convey wastewater from the development to the existing municipal sewer infrastructure. ▪ Stormwater generated by the development will be managed through an internal stormwater reticulation network comprising approximately 7 km of 450 mm diameter stormwater pipelines, attenuation ponds, and associated stormwater management infrastructure. ▪ A primary attenuation pond with a storage capacity of approximately 24 000 m^3 and a secondary attenuation pond with a capacity of approximately 200 m^3 will be required for stormwater management. ▪ An oil separation system will be required to treat stormwater runoff from the motorsport facilities prior to discharge to the attenuation pond system. ▪ The development will require connection to the existing road network via a new primary access from the R327 and an emergency route for the motorsports arena and access route for the industrial and alternative energy area via the extension of Barrier Street.

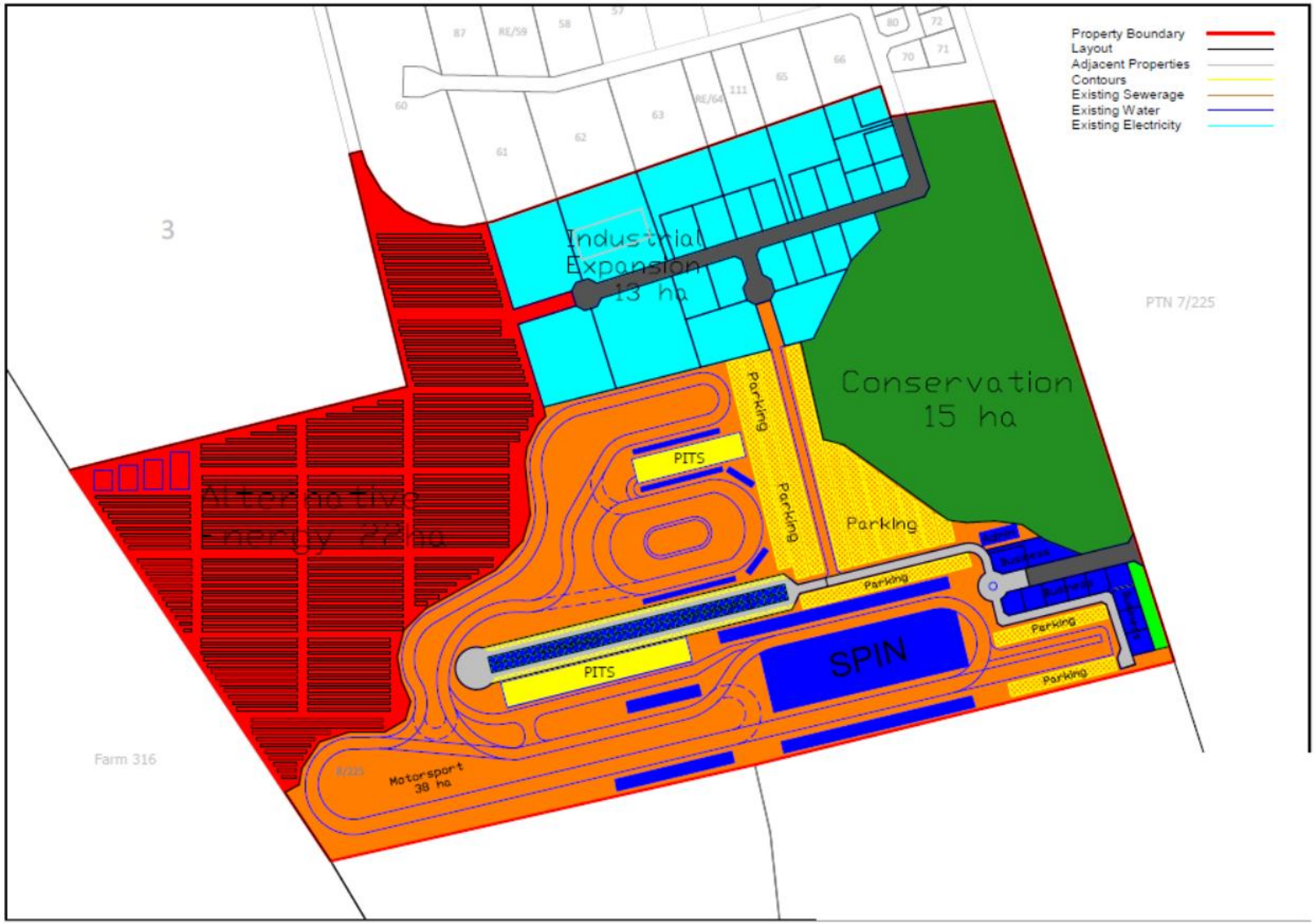

Figure 8: Preliminary layout of the proposed Project

9.2 Industrial Expansion Area

The proposed Industrial Expansion Area forms a key component of the overall Mossdustria development and will occupy approximately 13 ha of the broader development footprint (refer to the blue polygon in **Figure 8**). The expansion area is currently zoned “Agricultural Zone 1”; however, it is located within the MBLM Urban Edge and has been identified within the Municipal SDF as an area earmarked for future urban and industrial expansion. The proposed Project will facilitate the extension of the existing Mossdustria industrial node through the establishment of 27 new industrial erven, ranging in size from approximately 2 000 m² to 14 000 m².

The Industrial Expansion Area is intended to provide additional serviced industrial land to support future economic growth and investment within the Mossel Bay region. The proposed erven will be fully serviced with the necessary municipal engineering infrastructure, including water supply, sewer reticulation, stormwater management systems, electricity distribution infrastructure, and access roads. Access to the industrial erven will be provided via a newly constructed public street that will integrate with the existing Mossdustria road network and surrounding municipal transport infrastructure.

Development within the Industrial Expansion Area will focus on the provision of serviced industrial platforms, with the construction of individual top structures to be undertaken by future erf owners or developers in accordance with applicable land use rights, engineering service requirements, and municipal development controls. As such, the current application seeks authorisation for the establishment and servicing of the industrial expansion area, while the nature and scale of specific industrial activities and buildings will be determined during subsequent development phases.

The Industrial Expansion Area forms part of the broader vision to consolidate and expand the existing Mossdustria industrial precinct, creating opportunities for industrial growth while utilising land that has already been identified for urban expansion within municipal planning frameworks. Its location immediately adjacent to the existing industrial area enables the efficient extension of municipal services and infrastructure networks and supports the continued development of Mossdustria as a strategic industrial node within the MBLM.

9.3 Alternative Energy Production Area

The proposed Alternative Energy Production Area will occupy approximately 22 ha of the overall development footprint and is intended to provide a dedicated renewable energy generation facility to support the electrical requirements of the broader development (refer to the red polygon in **Figure 8**). The facility is proposed as a solar PV installation with a generation capacity of approximately 16 MW and forms part of the integrated development concept for the expansion of Mossdustria. The facility has been strategically located within the

development area to optimise solar energy generation while making use of available land identified for future development within the MBLM.

The solar energy facility will comprise a solar PV array, associated electrical reticulation infrastructure, substations, transformers, switchgear, and supporting infrastructure required for the generation and distribution of electricity. In terms of the preliminary design, the facility will include a 16 MVA intake municipal substation, eight internal 2 MVA distribution substations, step-up transformers increasing voltage from 400 V to 11 kV, and an internal 11 kV reticulation network connecting the various components of the facility. The intake municipal substation will be connected to the existing municipal electricity network to facilitate the distribution and utilisation of generated electricity.

The preliminary layout indicates that the solar PV facility will consist of multiple arrays arranged in rows across the 22 ha development area, together with electrical infrastructure positioned throughout the site to optimise energy collection and distribution. The layout includes the intake substation and a number of internal distribution substations that will collect electricity generated by the solar arrays before transferring power through the internal reticulation network (**Figure 9**).

Electricity generated by the facility will contribute towards the energy requirements of the proposed Project, reducing reliance on conventional grid-supplied electricity while supporting the incorporation of renewable energy infrastructure within the Project. The proposed facility has been designed as an integrated component of the broader development and will include associated stormwater infrastructure and access requirements necessary for its operation and maintenance.

The development of the Alternative Energy Production Area aligns with national, provincial and local objectives aimed at increasing the use of renewable energy technologies, improving energy security, and promoting sustainable development. Furthermore, the incorporation of a renewable energy generation facility within the broader Mossdustria expansion supports long-term infrastructure resilience and contributes towards the diversification of energy supply within the area.

As with the Industrial Expansion Area, the current application seeks authorisation for the establishment of the Alternative Energy Production Area and its associated infrastructure footprint. The detailed engineering design, including the final arrangement of solar panels, electrical equipment, and supporting infrastructure, may be refined during the detailed design phase, provided that such refinements remain within the assessed development footprint and authorised development parameters.

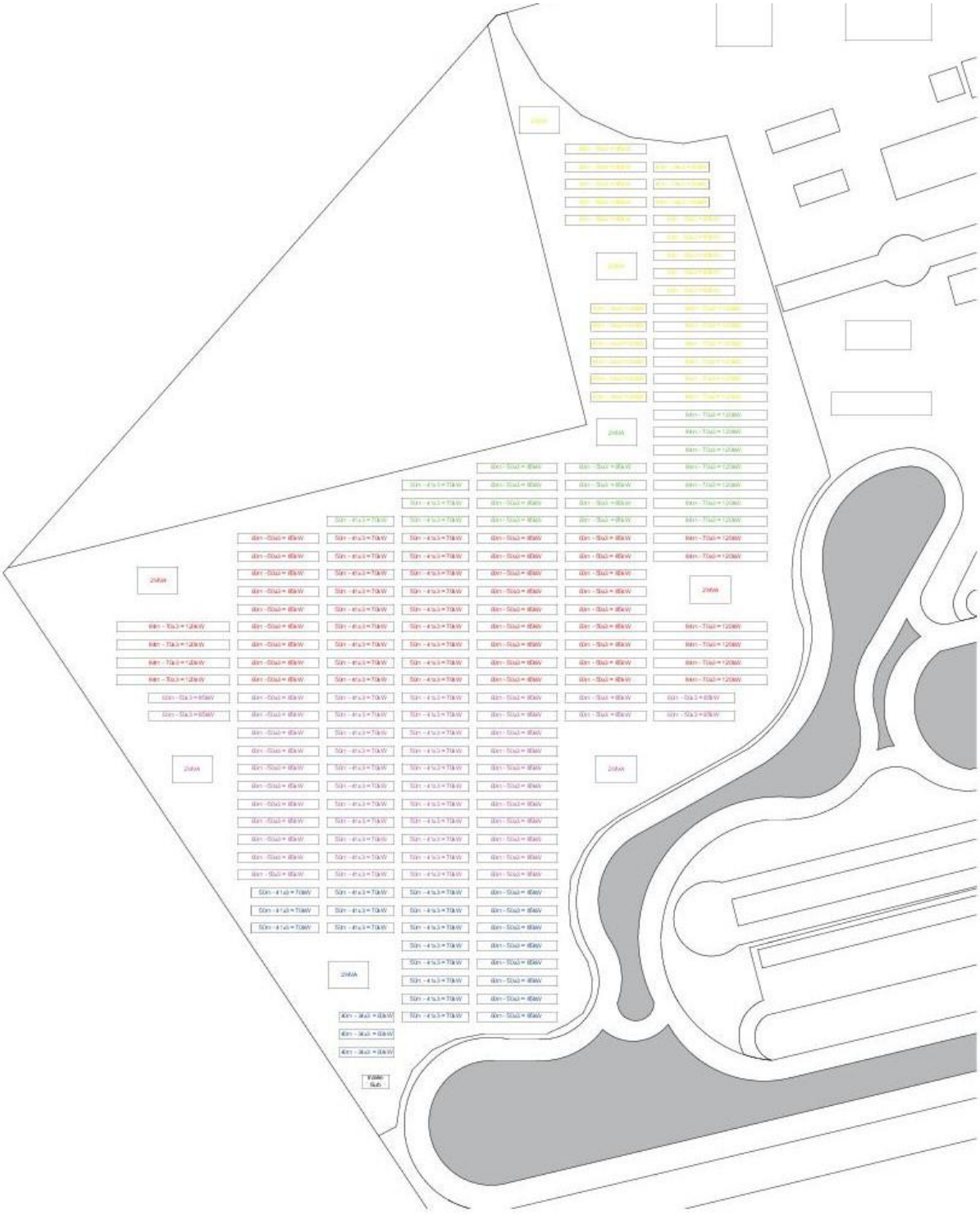

Figure 9: Preliminary Layout of the Alternative Energy Facility

9.4 Conservation Area

The proposed Conservation Area will occupy approximately 15 ha of the overall development footprint and has been incorporated into the Project layout to ensure the long-term protection and management of environmentally sensitive areas within the site (refer to the green polygon

in **Figure 8**). The conservation area contains remnants of Critically Endangered Mossel Bay Shale Renosterveld, a vegetation type of high conservation importance that has experienced significant historical transformation. As such, the conservation area has been specifically identified for biodiversity conservation and ecological management within the broader development.

Although the area is currently zoned Agricultural Zone 1, it falls within the MBLM Urban Edge and is located within an area identified for future urban expansion in terms of the Municipal SDF. Notwithstanding its strategic location, the proposed Project seeks to retain this portion of the site as a dedicated conservation area in recognition of its ecological value and contribution to maintaining biodiversity within the Mossel Bay region.

As part of the proposed development, the conservation area will be rezoned to Open Space Zone III to provide a formal land use mechanism for the long-term protection of the identified sensitive vegetation and associated ecological processes. The establishment of the conservation area represents an important environmental offsetting and avoidance measure within the overall Project design, ensuring that ecological resources of conservation significance are retained and managed into the future.

The conservation area also contributes to the creation of an environmental buffer within the broader development footprint and supports the maintenance of habitat connectivity and ecosystem functioning within the site. By retaining this area in a natural state, the development seeks to balance the expansion of industrial, renewable energy and recreational land uses with the conservation of important environmental resources.

To ensure the long-term protection and effective management of the conservation area, a dedicated management plan will be developed and implemented. The management plan will guide ongoing conservation actions, including the management of invasive alien plant species, ecological monitoring, site access control, fire management where appropriate, and the maintenance of the ecological integrity of the retained Mossel Bay Shale Renosterveld habitat.

9.5 Motorsports Arena

The proposed Motorsport Arena will occupy approximately 38 ha of the overall development footprint and is envisaged as a purpose-designed motorsport and recreation facility that will complement the broader industrial expansion and renewable energy components of the Project (refer to the orange polygon in **Figure 8**). The facility has been incorporated into the development concept to create a regional motorsport destination capable of hosting a variety of racing, recreational, commercial, and support activities within a single integrated precinct. The Motorsport Arena forms a key component of the proposed development and is intended to contribute to tourism growth, economic development, and employment creation within the Mossel Bay area.

The facility will comprise a range of motorsport-related infrastructure designed to accommodate both competitive and recreational activities. The proposed raceway

infrastructure includes a 3 320 m tarred racetrack, a 1 000 m drag strip, a 21 000 m² spinning track, a 600 m tar go-kart track, and a 350 m gravel go-kart track. In addition, the facility will include tarred and gravel pit areas to support racing and vehicle preparation activities.

To support the operational requirements of the arena, a range of permanent structures and associated facilities are proposed. These include 80 workshop erven, 11 showroom and workshop sites, two large pavilions, five medium pavilions, five small pavilions, eight ablution facilities, vendor stalls, gatehouses, fuel storage facilities of up to 5 000 litres, and associated operational infrastructure. The facility has been designed to provide adequate support services for competitors, spectators, event organisers, and commercial operators.

The Motorsport Arena will also provide substantial parking facilities to accommodate event attendance and daily operational requirements. The proposed development includes approximately 1 980 formal parking bays and a 5 ha grass parking area that can be utilised during major events. The parking facilities are intended to accommodate visitor demand while ensuring efficient traffic circulation within the development.

Internal access throughout the Motorsport Arena will be facilitated through the proposed road network and supporting infrastructure planned for the broader development. Associated engineering services, including electricity supply, potable water, sewerage infrastructure, stormwater management systems, and telecommunications infrastructure, will be integrated into the facility as part of the overall development servicing strategy.

The proposed Motorsport Arena has been developed in response to an identified need for dedicated motorsport and recreational facilities within the region. The development is expected to attract local, regional, and potentially national motorsport events, thereby supporting tourism-related expenditure and providing opportunities for associated commercial activities. Through increased visitor numbers and event hosting opportunities, the facility has the potential to contribute to local economic development and strengthen the tourism offering of the Mossel Bay area. Furthermore, the development is anticipated to generate both direct and indirect employment opportunities during the construction and operational phases.

The Motorsport Arena has been located within the broader Project area to maximise compatibility with the adjoining industrial expansion area while allowing for the inclusion of the proposed conservation area and renewable energy facility. Integrating these land uses within a single development footprint supports the creation of a multifunctional development node that aligns with municipal planning objectives and broader economic development initiatives for the MBLM.

The current application therefore seeks environmental authorisation for the establishment and operation of the Motorsport Arena and its associated infrastructure within the defined development footprint. Detailed design elements may be refined during subsequent engineering design phases, provided that such refinements remain within the approved development footprint and assessed environmental parameters.

9.6 Associated Infrastructure

9.6.1 Roads

The proposed Project will utilise both existing and new road infrastructure to provide access to the various land use components. Access to the broader Project area is provided via the existing provincial road network, with the site being accessible from the R327, which connects directly to the N2 approximately 2 km south of the site. Existing access to the Mossdustria industrial area is currently provided via Unicorn Street.

The proposed road network includes the extension of the existing Barrier Street road reserve to provide access to the Industrial Expansion Area and portions of the broader development. Internal roads will be constructed to provide access to the proposed industrial erven, motorsport facilities, parking areas, workshops, business precinct and associated infrastructure. The conceptual road layout is shown in the Roads Layout Plan (**Figure 10**).

Access to the Motorsport Arena will be provided through a primary access point on the R327 opposite the existing Reed Valley Farm access road. The proposed intersection will operate under stop control, with the R327 retaining priority. The access road will comprise one inbound lane and separate outbound left- and right-turn lanes. A secondary access route is proposed through the extension of Barrier Street, which may function as an alternative and emergency access route.

The Traffic Impact Assessment (GPL Consulting, 2023) undertaken for the development assessed the operational performance of the surrounding road network and proposed access arrangements. The assessment identified the need for upgrades to the N2/R327 intersection, including the provision of a left-turn slip lane and a separate right-turn lane on the R327 approach to the N2. These upgrades are intended to accommodate projected future traffic volumes associated with both background traffic growth and the proposed Project.

Internal roads associated with the Motorsport Arena are proposed to provide circulation between the various facilities, parking areas and activity nodes within the development. The road network has been conceptually designed to accommodate passenger vehicles, service vehicles, emergency vehicles and larger vehicles associated with motorsport-related activities.

The Alternative Energy Production Area is anticipated to generate limited vehicle movements during operation. Access to this area may be provided via the internal road network associated with the development or through an access route connected to existing infrastructure in the surrounding area.

The final design and specification of all roads, intersections and associated traffic infrastructure will be finalised during the detailed engineering design phase and will be subject to the requirements and approval of the relevant road authorities.

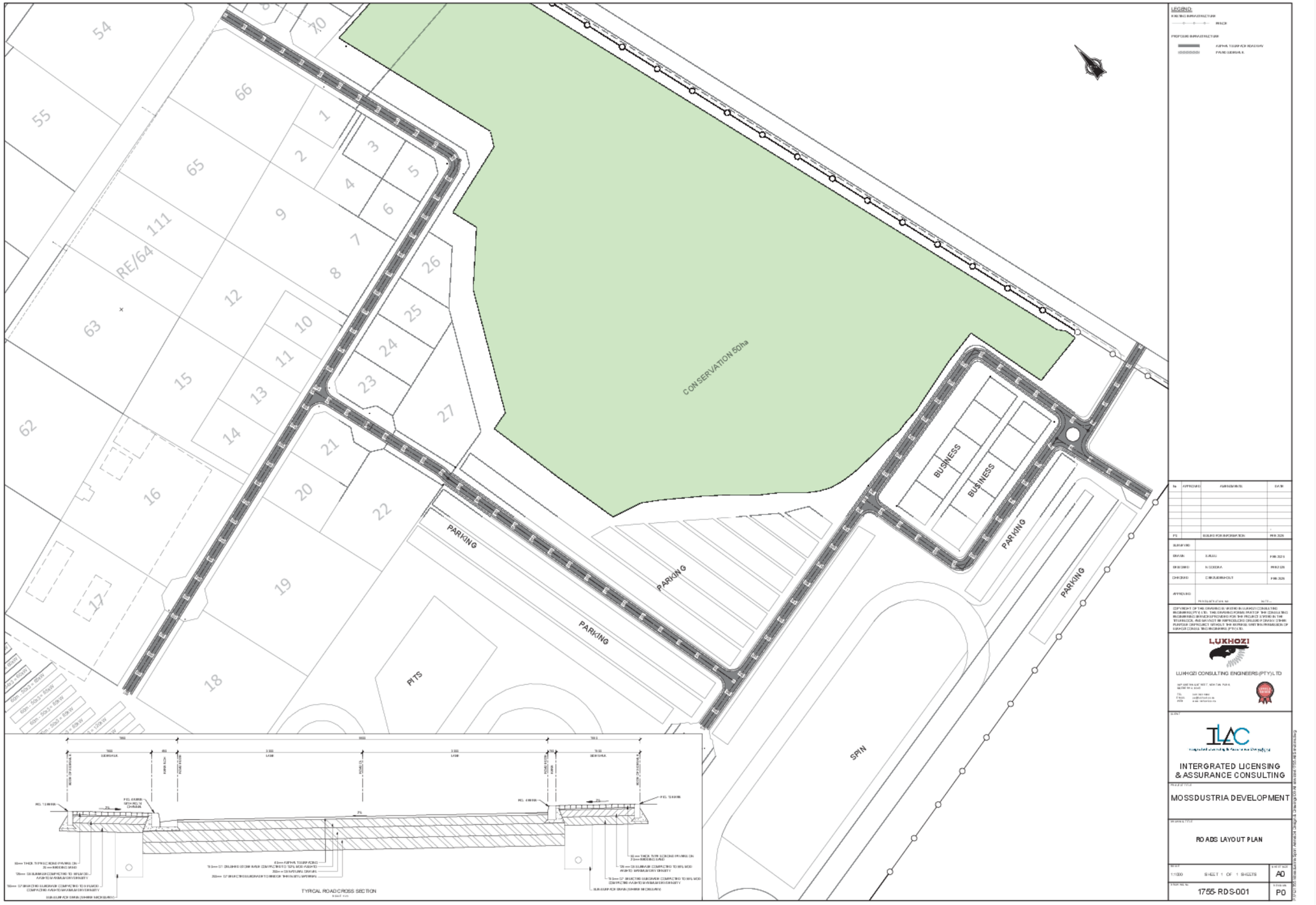

Figure 10: Conceptual Roads Layout Plan (Bezuidenhout, 2026)

9.6.2 Stormwater

Stormwater infrastructure will be developed as part of the proposed Project to collect, convey and manage runoff generated from the Industrial Expansion Area, Motorsport Arena, Alternative Energy Production Area and associated infrastructure. The proposed stormwater system will comprise a network of piped stormwater infrastructure, attenuation ponds, stormwater inlets and associated drainage structures located throughout the Project footprint.

The proposed stormwater reticulation system will consist of approximately 7 km of 450 mm diameter stormwater pipelines which will convey runoff from developed areas to designated attenuation and storage facilities. The stormwater network will be supplemented by overland flow routes located within road reserves and open channels to accommodate major storm events that exceed the capacity of the piped system.

Attenuation infrastructure is proposed within the development to temporarily store stormwater runoff prior to controlled discharge. The main attenuation facility will comprise a stormwater pond with a total storage capacity of approximately 24 000 m³, which will be integrated into portions of the Motorsport Arena layout. A smaller attenuation pond with a storage capacity of approximately 250 m³ is proposed adjacent to the Motorsport Business Development area near the main site entrance.

A further outflow pond is proposed in the south-western portion of the site to facilitate the controlled release of stormwater and to provide opportunities for the storage and reuse of stormwater for non-potable uses. The feasibility of incorporating an existing pond located immediately south of the project boundary into the proposed stormwater system will be assessed during the detailed design phase.

Stormwater associated with the Motorsport Arena and other operational areas will be directed through dedicated treatment infrastructure prior to discharge into the attenuation system. This infrastructure will include an oil separation facility designed to remove hydrocarbons, oils, grease and fuel residues from runoff generated by motorsport-related activities and associated hardstand areas. The conceptual stormwater infrastructure layout is illustrated in the Stormwater Reticulation Layout Plan (**Figure 11**).

The final design, sizing and alignment of the stormwater infrastructure will be confirmed during the detailed engineering design phase and will be informed by detailed topographical, geotechnical and hydraulic investigations.



Figure 11: Conceptual Stormwater Layout Plan (Godoka and Bezuidenhout, 2026)

9.6.3 Sewer / Wastewater

The proposed Project will be serviced by the existing municipal wastewater network within the existing Mossdustria industrial area. The site is currently traversed by a gravity sewer system that conveys wastewater to the Mossdustria Sewer Pump Station, from where sewage is pumped to the Pinnacle Point Wastewater Treatment Works for treatment. The proposed Project has been designed to integrate with this existing municipal sewerage system.

The proposed Project will require the extension of sewer infrastructure to service the Industrial Expansion Area, Motorsport Arena, Alternative Energy Production Area and associated facilities. A sewer reticulation network is proposed throughout the development footprint to collect and convey wastewater generated by the various land use components to the existing municipal sewer network.

The Civil Engineering Services Report (Bezuidenhout, 2026) estimates that the development will generate an Average Dry Weather Flow (ADWF) of approximately 619 kL/day. Based on the preliminary assessment, this will result in an additional hydraulic loading of approximately 7.2 L/s on the Mossdustria Sewer Pump Station.

To accommodate the projected wastewater volumes, approximately 1.9 km of 160 mm diameter sewer pipeline is proposed within the Project area. The proposed sewer reticulation network will collect wastewater from the various development components and convey it to the existing municipal sewer infrastructure for onward transmission to the wastewater treatment works. The conceptual layout of the proposed sewer infrastructure is illustrated in the Sewer Reticulation Layout Plan (**Figure 12**). The final design, sizing and alignment of the sewer infrastructure will be confirmed during the detailed engineering design phase.



Figure 12: Conceptual Sewer Reticulation Layout Plan (Bezuidenhout, 2026)

9.6.4 Water

The proposed Project will obtain potable water from the existing MBLM water supply network within the Bartelsfontein Supply Zone. The area is currently supplied from the Bartelsfontein Reservoir, located approximately 1 km north of the site, which has an existing storage capacity of approximately 5 ML. The 2025 Water Master Plan identifies an approved future upgrade of the reservoir to a capacity of 25 ML, which is intended to support anticipated growth within the area.

The existing municipal water reticulation network, located immediately north of the proposed Project area, will serve as the connection point for the proposed Project. The Civil Engineering Services Report (Bezuidenhout, 2026) notes that verification of the existing water infrastructure, including pipe diameters and available capacity, will be required during the detailed design phase prior to finalising the connection design.

The total potable water demand associated with the proposed Project has been estimated at approximately 688.56 kL/day. This demand comprises the Industrial Expansion Area, Alternative Energy Production Area, Motorsport Workshop Area, Motorsport Business Development Area and Motorsport Arena. The Motorsport Arena represents the largest water demand component, with an estimated requirement of approximately 500 kL/day during major events.

To distribute potable water throughout the development, a proposed 3.5 km long, 160 mm diameter water main will connect the site to the existing municipal water reticulation network north of the development area. The bulk water main will supply the internal water reticulation network servicing the various development components. The conceptual water reticulation network is illustrated in the Water Reticulation Layout Plan (**Figure 13**).

In addition to potable water requirements, provision will be made for firefighting purposes. Based on the proposed land uses, including industrial activities and motorsport facilities, the development has been classified as a high-risk fire area. The preliminary assessment identified a fire flow requirement of 100 L/s for a duration of six hours, resulting in a fire water storage requirement of approximately 2.16 ML. The Civil Engineering Services Report recommends that the provision of dedicated on-site fire water storage be considered during the detailed design phase.

The final design of the water reticulation system, including final pipeline alignments, connection points, storage requirements and any upgrades to existing municipal infrastructure, will be undertaken during the detailed engineering design phase and will be subject to the requirements and approval of Mossel Bay Municipality.



Figure 13: Conceptual Water Layout Plan (Bezuidenhout, 2026)

9.7 Proposed Access to the Proposed Project

Access to the proposed Project area will be provided via the existing regional road network, with the site being accessible from the R327 Provincial Road, which connects directly to the N2 National Road approximately 2 km south of the development area. Access to the existing Mossdustria industrial area is currently provided via Unicorn Street, which links the industrial precinct to the R327.

The proposed Industrial Expansion Area will be accessed through the extension of Barrier Street southwards from the existing Mossdustria industrial area, providing direct access to the proposed industrial erven and associated infrastructure. Access to the Motorsport Arena and associated business precinct will be provided via a new primary access intersection on the R327, located opposite the existing Reed Valley Farm access road. A secondary access route is also proposed via the extension of Barrier Street, which may serve as an alternative and emergency access to the development.

The proposed internal road network will provide circulation between the various development components, including the Industrial Expansion Area, Motorsport Arena, Alternative Energy Production Area and Conservation Area. The conceptual road layout and access arrangements are illustrated in the Roads Layout Plan (**Figure 10**).

9.8 Preliminary Implementation Programme

The preliminary implementation programme is as follows *(please note due to the dynamic nature of the process, dates are subject to change)*:

- Statutory Approvals: May 2027 – June 2027
- Engineering Designs: November 2028
- Services Construction: November 2030 (Budget and phasing dependent)
- Top structure Construction: November 2030 – November 2033 (Budget and phasing depending on the tender processes this could possibly be done in parallel to the services construction).

9.9 Resources and Services Required for Construction and Operation

9.9.1 Water

Construction

Water for construction will be sourced from the existing municipal water reticulation network, located immediately north of the proposed Project area. Should the Applicant consider abstracting groundwater, then the Applicant will be required to comply with the NWA and apply for the relevant authorisation/license. The required water volume will be determined during detailed design and tender award for construction.

Operation

The proposed development will obtain potable water from the existing MBLM water supply network within the Bartelsfontein Supply Zone, supplied from the Bartelsfontein Reservoir located approximately 1 km north of the site.

The total operational potable water demand for the development is estimated at approximately 688.56 kL/day, comprising:

- Industrial Development: 169 kL/day;
- Alternative Energy Area: 0.66 kL/day;
- Motorsport Workshop Area: 16.8 kL/day;
- Motorsport Business Development Area: 2.1 kL/day; and
- Motorsport Arena: 500 kL/day.

To supply this demand, a proposed 3.5 km long, 160 mm diameter bulk water main will connect the development to the existing municipal water reticulation network north of the site.

Fire water is also required for the Project as it is classified as a high-risk fire area due to the industrial and motorsport land uses. The following has been noted to be required:

- A fire flow of 100 L/s;
- A six-hour supply duration; and
- Approximately 2.16 ML of fire water storage.

9.9.2 Sanitation

Construction

The sanitation requirements associated with construction activities have not yet been quantified. Temporary sanitation facilities will be required for the construction workforce, and the final sanitation arrangements and wastewater management measures will be determined during the detailed design and construction planning phase.

Operation

The proposed Project will be serviced by the existing MBLM wastewater network serving the Mossdustria industrial area. Wastewater generated by the Industrial Expansion Area, Motorsport Arena, Alternative Energy Production Area and associated facilities will be collected via an internal sewer reticulation network and conveyed to the existing municipal sewer system. The development is expected to generate an ADWF of approximately 619 kL/day, resulting in an additional hydraulic load on the existing sewer network. To accommodate these flows, approximately 1.9 km of 160 mm diameter sewer pipeline is proposed within the Project footprint. Wastewater will ultimately be conveyed to the Mossdustria Sewer Pump Station and thereafter to the Pinnacle Point Wastewater Treatment Works for treatment. The final design of the sewer reticulation network and final connection arrangements will be confirmed during the detailed engineering design phase.

9.9.3 Waste

Construction

Construction waste will include waste generated from site preparations (e.g. plant material), domestic waste, surplus and used building material, and hazardous waste (e.g. chemicals, oils, soil contaminated by spillages, diesel rags). Solid waste generated during the construction phase will be temporarily stored at suitable locations (e.g. at the construction camp) and will be removed at regular intervals and disposed of at approved waste disposal sites. All the waste disposed of will be recorded.

Construction-related wastewater, which refers to any water adversely affected in quality through construction activities and human influence, will include the following:

- Sewage;
- Water used for washing purposes (e.g., equipment, staff); and
- Drainage over contaminated areas (e.g., cement batching / mixing areas, workshop, equipment storage areas).

Specific measures for the management of construction-related waste and wastewater is provided in the EMPr.

Operation

Operational waste will include waste generated from the motorsport arena, industrial facilities, workshops, showrooms, commercial activities, administration, maintenance activities and visitor-related activities. General waste may include food waste, paper, cardboard, plastics, glass, packaging materials and other domestic-type waste generated by staff, visitors, spectators and tenants. Hazardous waste may include waste oils, lubricants, fuels, oil filters, tyres, batteries, contaminated absorbent materials, solvents, cleaning chemicals and other hydrocarbon-contaminated materials generated through vehicle maintenance, workshop activities, motorsport events and industrial operations. The generation of waste may increase during motorsport events and periods of high visitor attendance. The temporary storage of waste will occur at designated waste storage areas prior to removal by appropriately authorised waste service providers for recycling, treatment or disposal at approved facilities. All waste disposal activities will be recorded.

- Operational wastewater, which refers to water adversely affected in quality through operational activities and human influence, may include the following:
- Sewage generated from ablution and sanitation facilities;
- Wastewater generated from vehicle washing, workshop and maintenance activities;
- Stormwater runoff contaminated with hydrocarbons, oils, fuels and other pollutants associated with motorsport, industrial and parking areas; and
- Drainage from areas used for the storage and handling of fuels, oils, chemicals and other hazardous substances.

The EMPr and Stormwater Management Plan provide specific measures for managing operational waste and wastewater. The Project incorporates attenuation ponds and oil separation systems to assist in the management of potentially contaminated runoff generated during the operational phase.

9.9.4 Roads

Construction

The proposed development site is currently accessible via the existing road network serving the Mossdustria area, including the R327 Provincial Road, the N2 National Road and Unicorn Street, which provides access to the existing industrial area. During construction, access to the site will be obtained via this existing road network and associated access routes within the Mossdustria precinct. To support the proposed Project development, the extension of Barrier Street and the development of new internal roads are required as components of the proposed road infrastructure.

Operation

During operation, access to the proposed Project will be provided through a combination of existing and new road infrastructure. The Industrial Expansion Area will be accessed via the extension of Barrier Street southwards from the existing Mossdustria industrial area. Access to the Motorsport Arena and associated business precinct will be provided via a new primary access intersection on the R327 opposite the existing Reed Valley Farm access, together with a secondary access route via the extension of Barrier Street which may serve as an alternative and emergency access. Internal roads will be developed throughout the site to provide access to the Industrial Expansion Area, Motorsport Arena, Alternative Energy Production Area and Conservation Area.

9.9.5 Stormwater

Construction

Best environmental practices will be implemented during construction to manage stormwater, which will be included in the EMPr.

Operation

Stormwater generated by the proposed development will be managed through a dedicated stormwater reticulation network comprising approximately 7 km of 450 mm diameter stormwater pipelines, stormwater inlets, attenuation ponds and associated drainage infrastructure. Stormwater runoff from the various development components will be conveyed to attenuation facilities designed to temporarily store runoff prior to controlled discharge. The proposed stormwater infrastructure includes a primary attenuation pond with a storage capacity of approximately 24 000 m³ and a smaller attenuation pond of approximately 250 m³ associated with the Motorsport Business Development area. An additional outflow pond is proposed in the south-western portion of the site. Stormwater generated within the Motorsport

Arena will also be directed through an oil separation facility prior to entering the attenuation system. The final design and final configuration of the stormwater infrastructure will be confirmed during the detailed engineering design phase. The Stormwater Management Plan is contained in **Appendix H**.

9.9.6 Electricity

Construction

Electricity will be obtained from diesel generators or temporary electricity connections during the construction phase.

Operation

Electricity supply infrastructure forms part of the proposed Project and includes the development of an Alternative Energy Production Area comprising a 16 MW solar PV facility. The proposed electricity infrastructure includes a 16 MVA municipal intake substation, eight 2 MVA distribution substations, associated transformers and an internal electrical reticulation network. The solar PV facility is intended to generate electricity for use within the broader development and will be supported by the associated electrical distribution infrastructure located within the Alternative Energy Production Area. The electrical infrastructure will be distributed throughout the development to service the Industrial Expansion Area, Motorsport Arena, Alternative Energy Production Area and associated facilities.

9.9.7 Construction Camp & Laydown Area

A temporary laydown and staging area of approximately 50 m × 50 m is proposed within the designated parking area on the site. In addition, a construction camp laydown area of approximately 50 m × 50 m is proposed within the same designated parking area to support the construction phase of the development.

10 PROFILE OF THE RECEIVING ENVIRONMENT

10.1 Introduction

This section provides a general description of the status quo of the receiving environment in the Project area. This serves to provide the context within which the EIA was conducted.

Where necessary, the regional context of the environmental features is also explained, with an ensuing focus on the local surrounding environment. The reader is referred to **Section 11** for more elaborate explanations of the specialist studies and their findings for specific environmental features.

This section allows for an appreciation of sensitive environmental features and possible receptors of the effects of the proposed Project. The potential impacts to the receiving environment are discussed in **Section 12**.

10.2 Land Use

The current land uses within the proposed Project footprint comprise natural veld, grazing land, ostrich farming, and abandoned cultivated areas (Bouwer, 2023). The surrounding land uses are predominantly agricultural and industrial in nature. Photographs illustrating the existing infrastructure, land uses, and vegetation within the Project area are provided in **Figure 14** below.

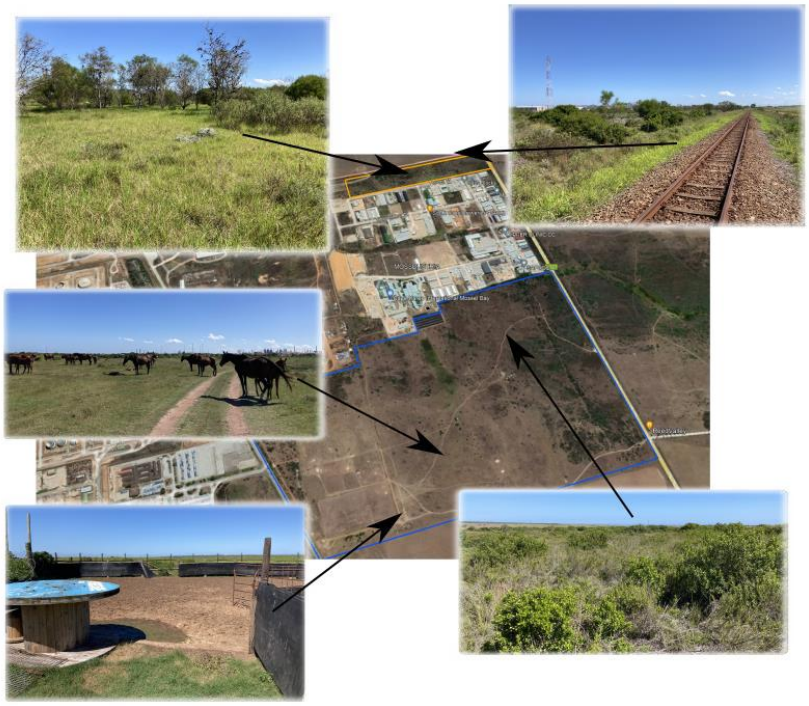

Figure 14: Existing land uses identified on the proposed Project site (Bouwer, 2023)

The proposed Project site, located within the Mossdustria area, has also been identified as an urban expansion area within the Industrial Expansion Zone in the MBLM IDF (2025-2026) (MBLM, 2025) (refer to **Figure 15** below).

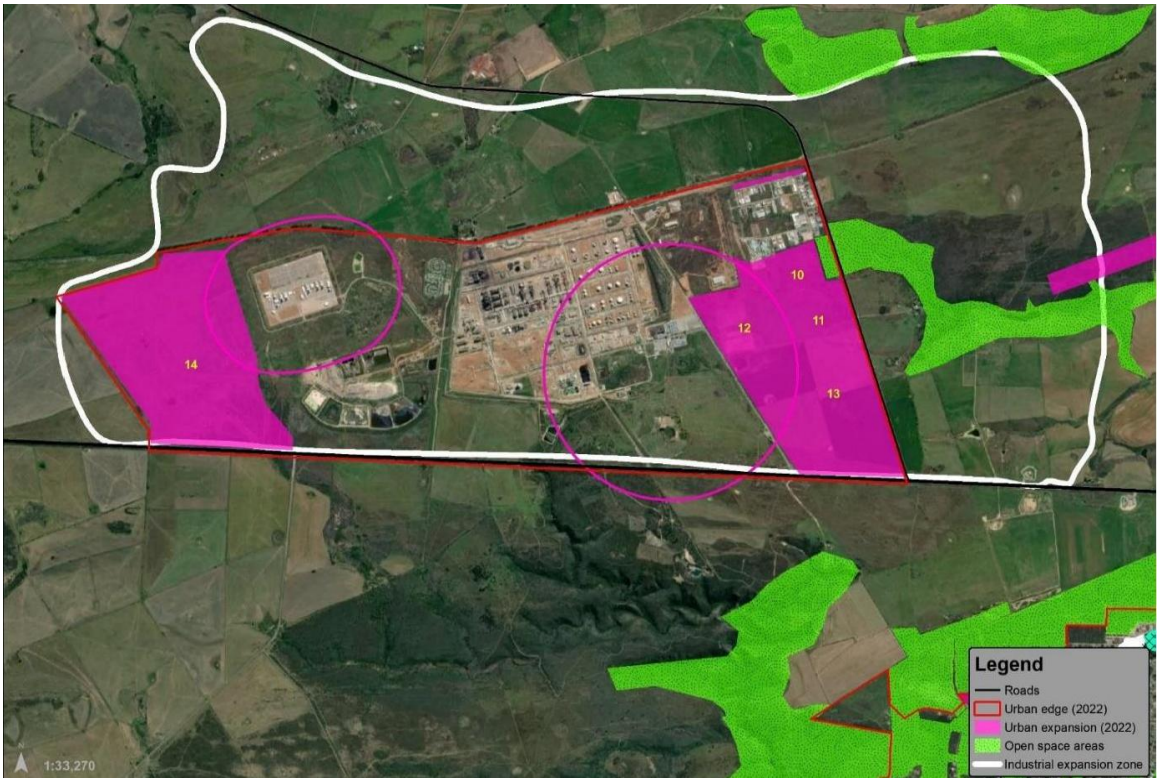

Figure 15: Mossdustria Spatial Proposal including Urban Edge, Urban Expansion and Industrial Expansion Zones (MBLM, 2025)

10.3 Climate

10.3.1 Prevailing Climatic Conditions

The Mossel Bay area is characterised by a warm temperate climate, with a mean annual temperature of approximately 17°C and an average annual rainfall of approximately 534 mm. Average summer temperatures are approximately 21°C, while average winter temperatures are approximately 13°C. Average monthly rainfall is approximately 42 mm during summer and 45 mm during winter, indicating a relatively uniform distribution of rainfall throughout the year. A climatic overview of the area is provided in **Figure 16** below.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	21 °C (69.7) °F	21.1 °C (70) °F	20 °C (68) °F	17.9 °C (64.2) °F	15.8 °C (60.5) °F	13.4 °C (56.2) °F	12.8 °C (55.1) °F	13.4 °C (56.1) °F	14.5 °C (58.2) °F	16.5 °C (61.7) °F	17.8 °C (64.1) °F	19.9 °C (67.8) °F
Min. Temperature °C (°F)	17 °C (62.6) °F	17.2 °C (63) °F	16.1 °C (61) °F	13.7 °C (56.7) °F	11.5 °C (52.7) °F	8.7 °C (47.7) °F	8.1 °C (46.6) °F	8.6 °C (47.5) °F	9.9 °C (49.8) °F	12.1 °C (53.9) °F	13.6 °C (56.5) °F	15.8 °C (60.4) °F
Max. Temperature °C (°F)	25.8 °C (78.4) °F	26 °C (78.8) °F	24.9 °C (76.9) °F	22.9 °C (73.2) °F	21.1 °C (70) °F	18.8 °C (65.9) °F	18.4 °C (65) °F	19 °C (66.1) °F	19.9 °C (67.8) °F	21.6 °C (70.8) °F	22.7 °C (72.9) °F	24.8 °C (76.6) °F
Precipitation / Rainfall mm (in)	42 (1)	36 (1)	47 (1)	50 (1)	43 (1)	41 (1)	42 (1)	51 (2)	37 (1)	48 (1)	56 (2)	41 (1)
Humidity(%)	70%	72%	72%	73%	70%	68%	68%	68%	69%	70%	69%	69%
Rainy days (d)	6	6	6	6	5	5	6	6	6	6	6	6
avg. Sun hours (hours)	8.9	8.3	8.0	7.8	7.8	7.6	7.6	7.9	8.3	8.7	9.4	9.5

Data: 1991 - 2021 Min. Temperature °C (°F), Max. Temperature °C (°F), Precipitation / Rainfall mm (in), Humidity, Rainy days. Data: 1999 - 2019: avg. Sun hours

Figure 16: Climate Overview of Mossel Bay (https://en.climate-data.org/africa/south-africa/western-cape/mossel-bay-914458/)

10.3.2 Climate Change Considerations

The MBLM Area is characterised by a warm temperate coastal climate with moderate rainfall distributed throughout the year. According to the MBLM IDP (MBLM, 2025), climate change is recognised as a key environmental consideration that may influence future development, infrastructure planning and service delivery within the municipality. Anticipated climate-related risks include increasing temperatures, changes in rainfall patterns, prolonged drought periods, increased pressure on water resources, more frequent extreme weather events, and the potential for flooding associated with intense rainfall events.

The municipality's coastal location also creates additional climate-related vulnerabilities, particularly in relation to coastal processes, sea-level rise and the resilience of infrastructure. Climate change may affect the availability of water resources, biodiversity, agriculture, municipal services and economic activities throughout the region. These considerations are particularly relevant given the importance of water security, ecological conservation and infrastructure development within the Mossel Bay area.

The proposed Project area is located within an existing industrial expansion node where future development will need to consider climate resilience, sustainable resource use and the long-term adaptability of infrastructure. The surrounding environment includes natural ecosystems, agricultural land and municipal infrastructure that may be sensitive to changing climatic conditions.

10.4 Geology and Soil

The Project area is situated within the southern Cape Fold Belt and is underlain by a combination of unconsolidated surficial deposits and sedimentary bedrock of the Cape Supergroup. The site is mapped predominantly as Tertiary to Quaternary-aged loam and sandy loam soils (T-Ql), comprising sandy loam with varying clay content that forms a shallow cover over the underlying bedrock.

The underlying bedrock is dominated by the Skurweberg Formation of the Table Mountain Group, consisting of thick-bedded quartzitic sandstone with minor conglomerate. A prominent ridge of this formation traverses the central and eastern portions of the site. The Bokkeveld Group, comprising mudrock, shale and sandstone, occurs in the south-eastern portion of the site and is associated with the development of wetlands due to its relatively low permeability. Additional regional geological units include formations of the Karoo, Uitenhage and Bredasdorp Groups, although these occur outside the Project footprint. **Figure 17** outlines the regional geology of the area in relation to the Project footprint.

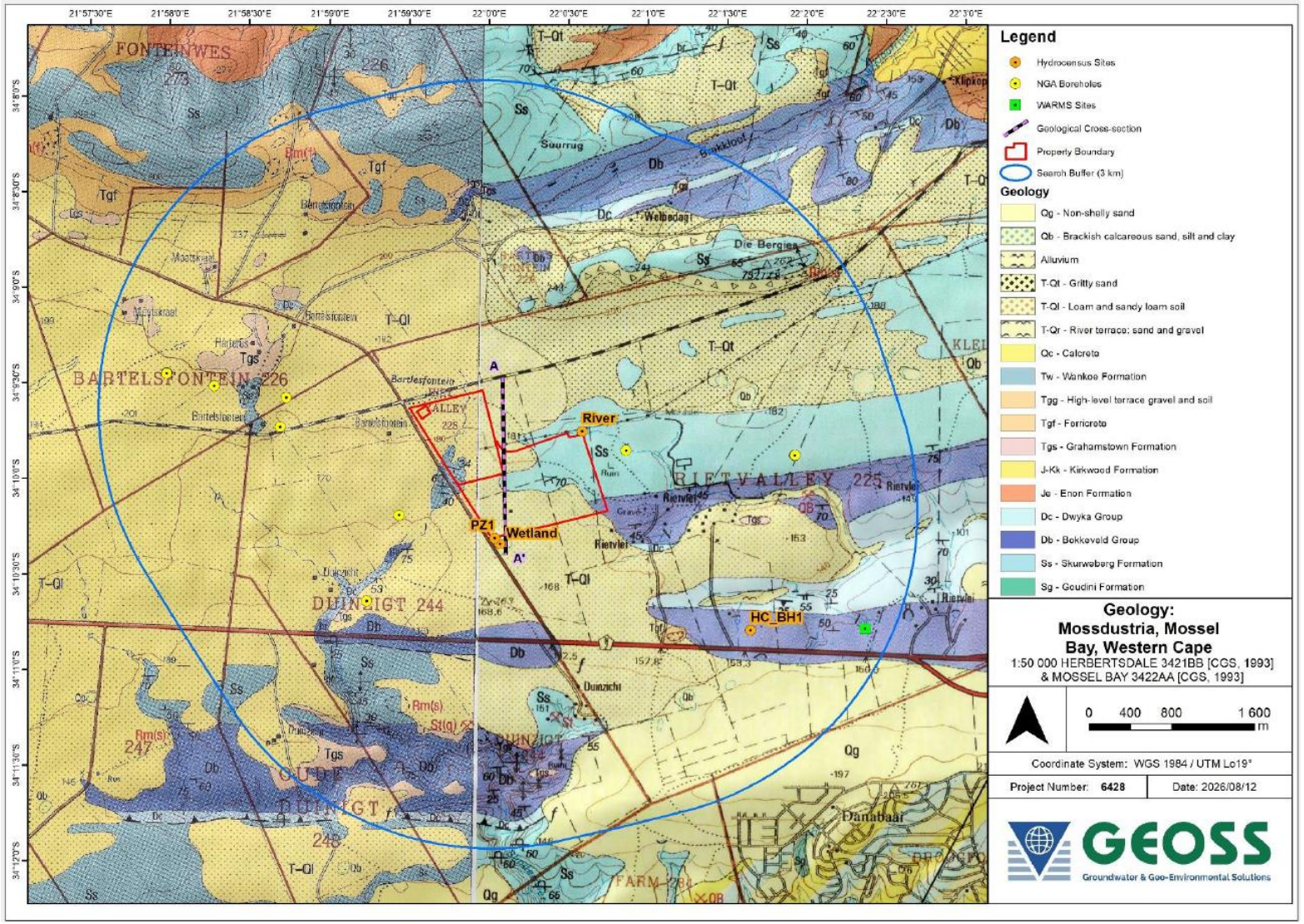

Figure 17: Geological setting of the study site and the production borehole (Oberholzer *et al.*, 2026)

The proposed Project site falls within the North Langeberg Sandstone Fynbos vegetation type. According to Mucina and Rutherford (2006), this vegetation type is typically associated with acidic lithosol soils derived from the Ordovician sandstones of the Table Mountain Group within the Cape Supergroup. These soils are generally shallow and well-drained, reflecting the underlying sandstone geology.

As part of the Agricultural Compliance Statement, the site was identified as occurring predominantly within the Db Land Type (Land Type Survey Staff, 1972-2002), as illustrated in **Figure 18**. Db Land Types comprise more than 50% duplex soils, characterised by a sandy topsoil abruptly overlying a more clay-rich subsoil. Less than 50% of the duplex soils within this land type contain non-red B horizons (Bouwer, 2023).

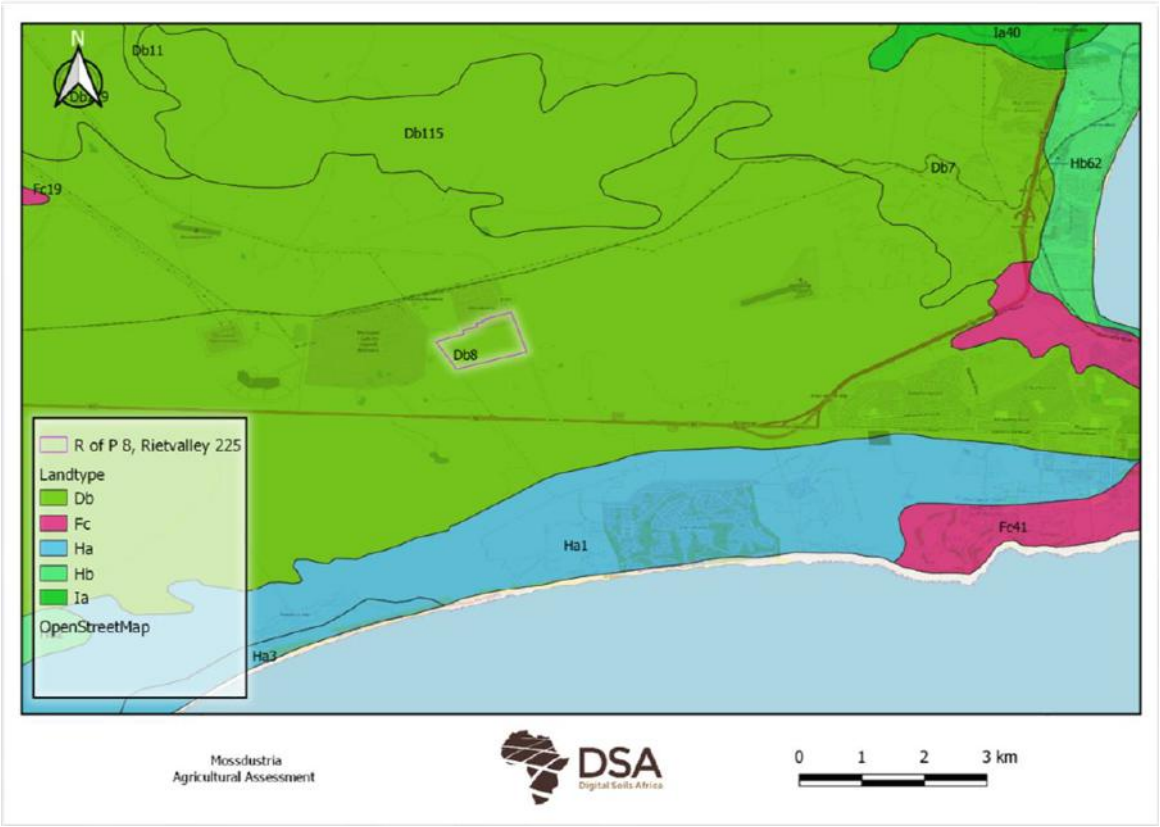

Figure 18: Land types found in the study area and the surrounding area (Land Type Survey Staff, 1972-2002) (Bouwer, 2023)

A site-specific soil investigation undertaken as part of the Agricultural Compliance Statement (refer to **Section 11.13** for more detail regarding the study, also contained in **Appendix F10**) found that the study area is dominated by shallow Mispah soils, with Glenrosa and Westleigh soils occurring in portions of the site (Bouwer, 2023). The Mispah and Glenrosa soils are generally shallow, sandy soils associated with underlying bedrock, while Westleigh soils occur within localised depressions and are characterised by deeper soil profiles and signs of seasonal wetness. Soil depths across the site vary considerably, with the shallow Mispah and Glenrosa soils generally exhibiting low agricultural potential and limitations to root development. The occurrence of Westleigh soils within depressional areas is indicative of wetter conditions. Overall, the site is characterised by soils of generally low agricultural

capability, largely as a result of shallow soil depths, limited water-holding capacity and underlying geological constraints.

10.5 Geohydrology

Some of the information included in the following paragraphs was obtained from the Geohydrological Impact Assessment (Oberholzer *et al.,* 2026) (report contained in **Appendix F2**). Refer to **Section 11.5** and **Section 12.11** below for a synopsis of the study and a related impact assessment, respectively.

10.5.1 Aquifer Yield

The Project area is underlain by a fractured bedrock aquifer associated primarily with the Skurweberg Formation. Groundwater occurrence within this formation is controlled by fractures, joints and weathered zones rather than primary pore spaces within the rock. Regional hydrogeological mapping indicates that the area generally exhibits low to moderate groundwater potential, with average borehole yields ranging between approximately 0.5 and 2.0 L/s (**Figure 19**). Groundwater yields are expected to vary depending on the density and connectivity of fractures within the underlying bedrock. The overlying loam and sandy loam soils may contain localised shallow groundwater following rainfall events but do not constitute a significant groundwater resource.

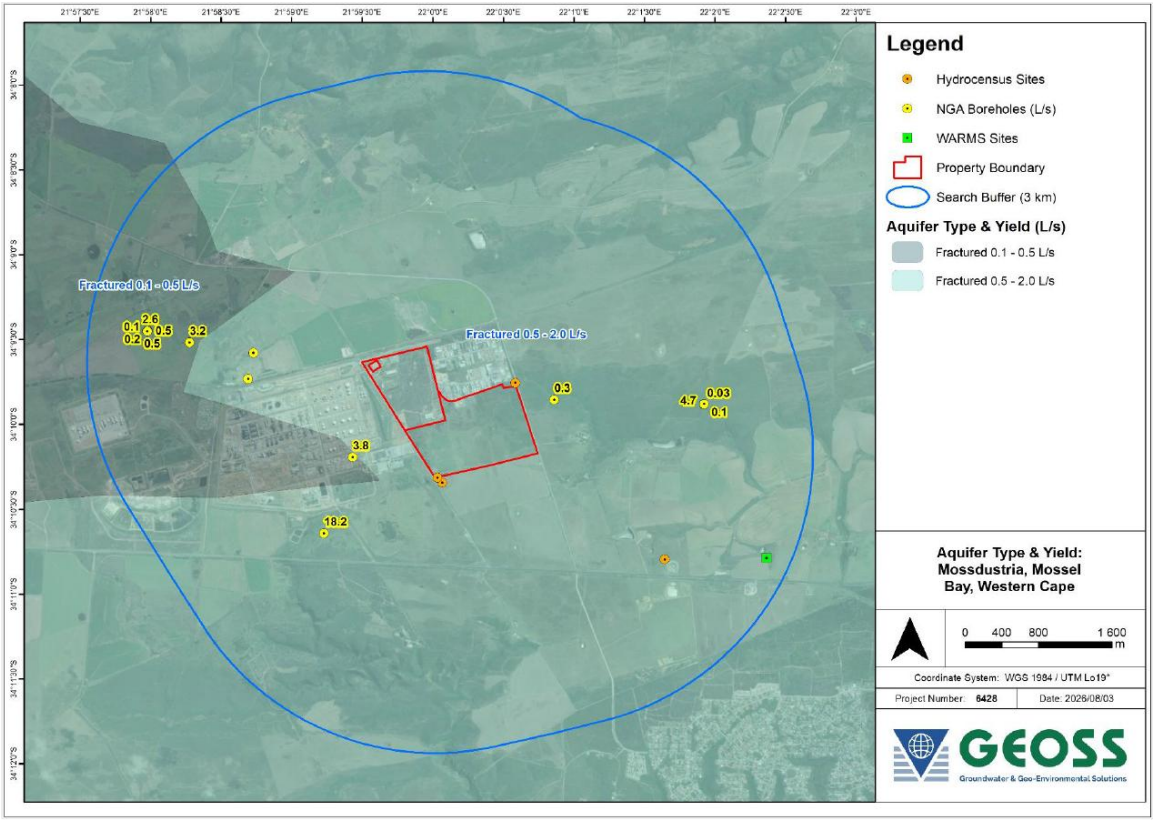

Figure 19: Regional aquifer yield (L/s) (Oberholzer *et al.*, 2026)

10.5.2 Aquifer Quality

Regional groundwater quality within the area ranges from marginal to poor and exhibits considerable spatial variability (**Figure 20**). Historical groundwater records from the surrounding area indicate elevated salinity levels in some boreholes. Field investigations undertaken as part of the geohydrological assessment (Oberholzer *et al.,* 2026) identified relatively fresh shallow groundwater within the near-surface deposits, while groundwater sampled from a deeper borehole was found to be highly mineralised. These findings indicate that groundwater quality differs between the shallow and deeper groundwater systems and is influenced by local geological and hydrogeological conditions. As no groundwater abstraction is proposed as part of the Project, the groundwater quality data provide a baseline against which any future changes can be assessed.

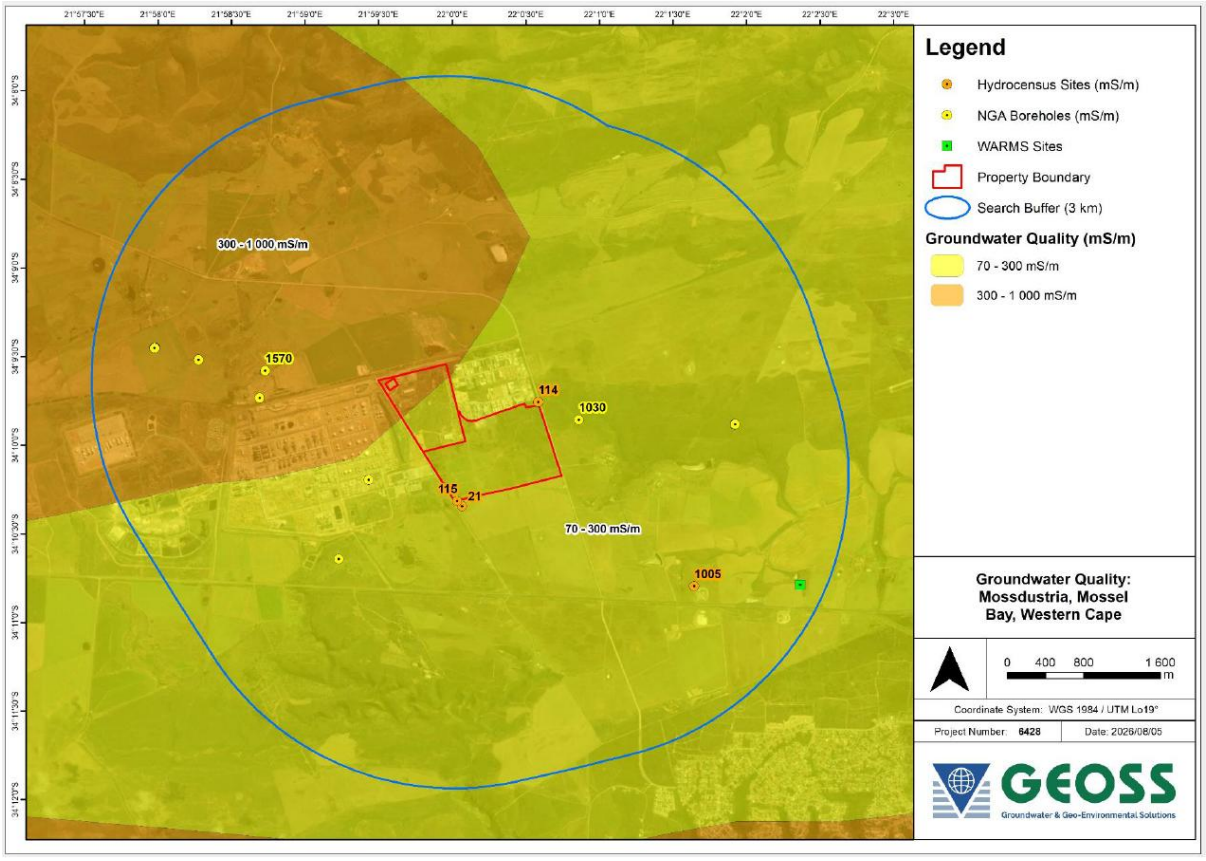

Figure 20: Regional groundwater quality (EC in mS/m) (Oberholzer *et al.*, 2026)

10.5.3 Aquifer Vulnerability Classification

National-scale groundwater vulnerability mapping indicates that most of the Project area falls within a very low groundwater vulnerability zone, with portions of the eastern area classified as having low to medium vulnerability (**Figure 21**). This relatively low vulnerability is attributed to the presence of clay-rich loam and sandy loam soils that overlie the fractured bedrock aquifer and provide a degree of natural protection from surface-derived contaminants. Groundwater vulnerability may be locally elevated where the Skurweberg Formation is exposed at surface or where the protective soil cover is thin. It is further noted that shallow

groundwater and associated wetland systems are inherently more susceptible to contamination than the deeper fractured aquifer and therefore require particular protection from potential pollution sources.

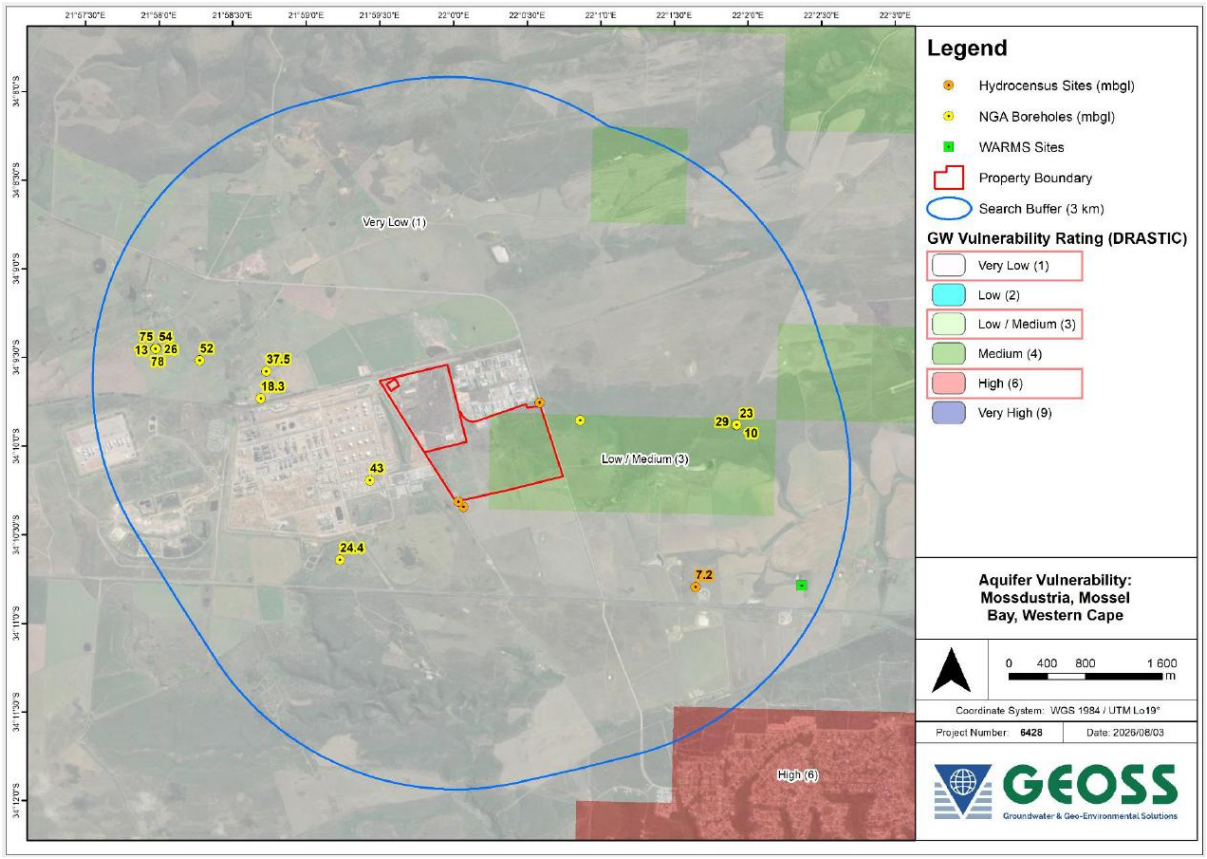

Figure 21: Vulnerability rating and groundwater depths (mbgl) (Oberholzer *et al.*, 2026)

10.6 Topography

The proposed Project site exhibits relatively gentle topographical variation. Elevations across the site range from approximately 168 m above mean sea level (amsl) in the western portion of the site to approximately 171 m amsl in the east, representing an elevation increase of approximately 3 m. In a north-south direction, elevations decrease from approximately 177 m amsl in the north to approximately 165 m amsl in the south, resulting in an overall elevation difference of approximately 12 m across the site. These elevation profiles are illustrated in **Figure 22** and **Figure 23**.

The southern boundary of the site is located approximately 3 km inland from the Indian Ocean coastline. According to the Soil and Terrain (SOTER) Database, the site is classified as a medium-gradient hill, as shown in **Figure 24**.

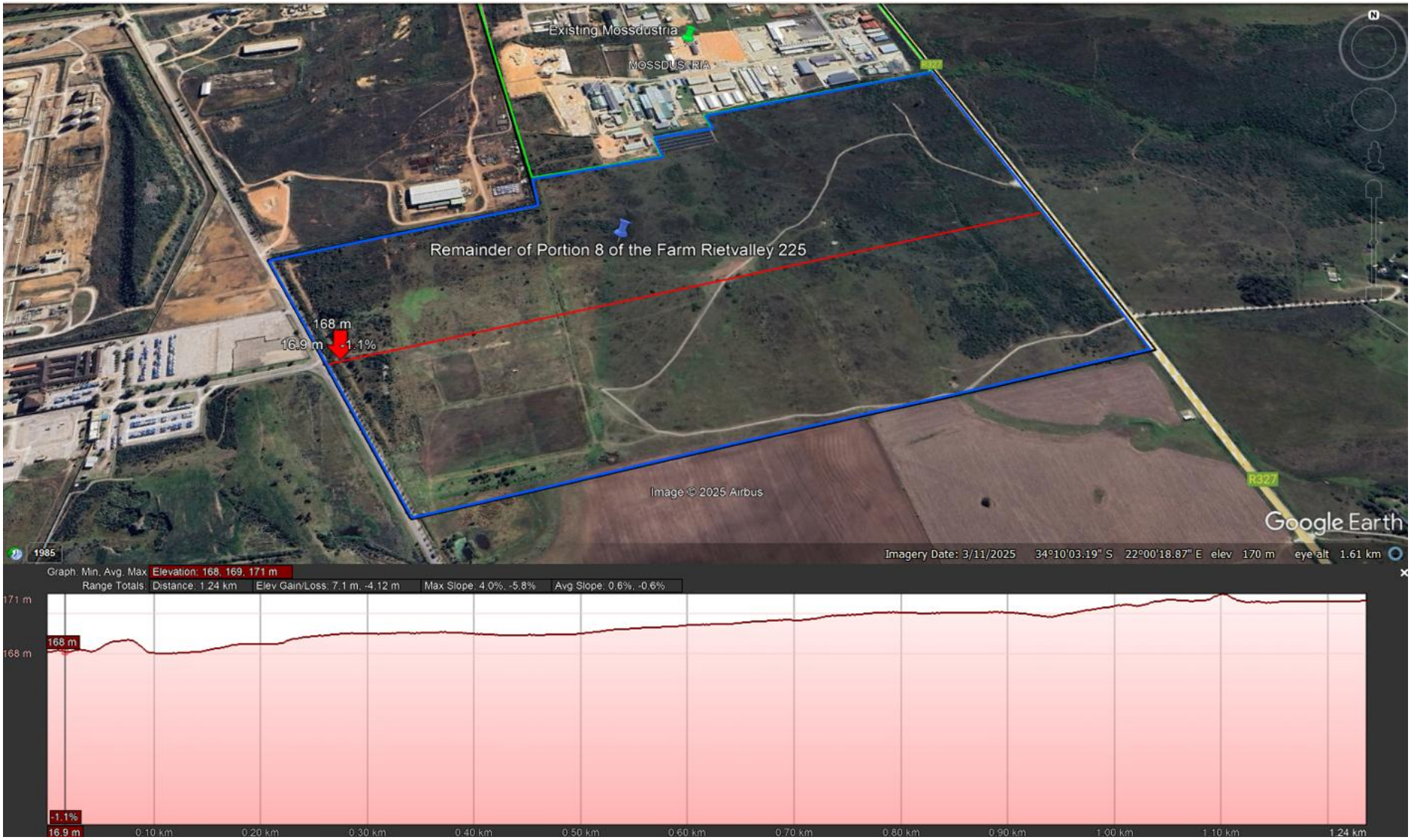

Figure 22: West to East Elevation Profile of the Project site from Google Earth



Figure 23: North to South Elevation Profile of the Project site from Google Earth



Figure 24: Topography of the Project site from the SOTER Landforms Database

10.7 Surface Water

Some of the information included in the following sub-sections was obtained from the Aquatic Ecology Impact Assessment (Colloty, 2026a) (report contained in **Appendix F1**). Refer to **Section 11.4** and **Section 12.12** below for a synopsis of the study and a related impact assessment, respectively.

10.7.1 Hydrological Setting

The Project site falls within the K10A subquaternary catchment located within the BOCMA jurisdiction (**Figure 25**). This catchment is a small localised coastal catchment that drains the region in an easterly direction through the Tweekuilen River, which ends near Dias Beach in Mossel Bay (more than 9km from the Project site) (**Figure 25**).

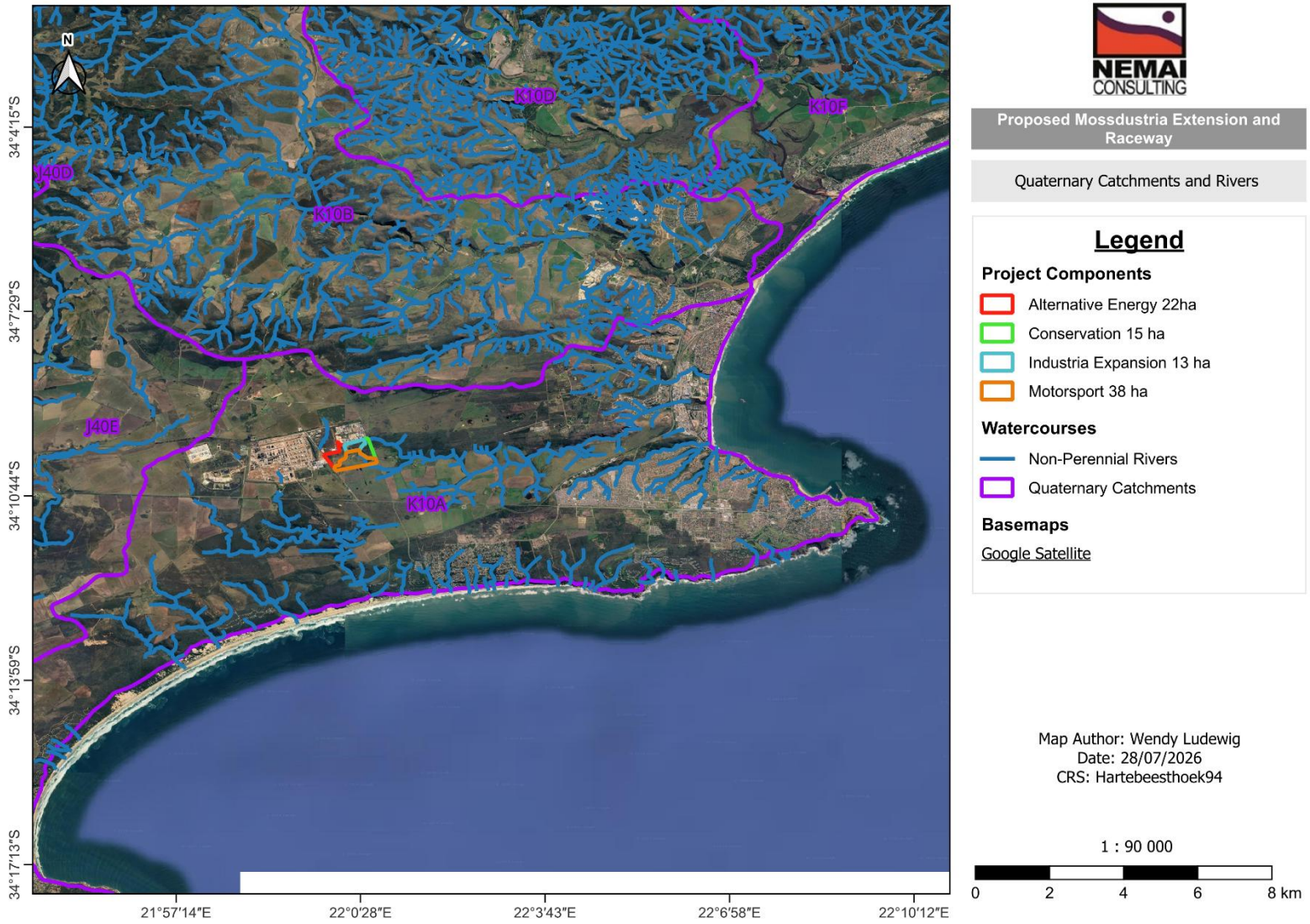

Figure 25: The Quaternary Catchments and Rivers near the Project site

10.7.2 Watercourses

According to the National Wetland Map 5 (NWM5), there is a channel-valley Bottom wetland to the northeast of the Project site, a seep wetland to the southeast and a depression wetland in the southeast corner. According to the National Freshwater Ecosystem Priority Areas (NFEPA) Wetlands, the wetlands are located in the same places as the NWM5-identified wetlands, but they are all classified as seep wetlands. **Figure 26** illustrates the NWM5 and NFEPA wetlands in relation to the Project site.

The Aquatic Ecological Impact Assessment (Colloty, 2026a) delineated 3 depression wetlands, two riverines and two artificial stormwater drainage systems (**Figure 27**). It is noted that all of these watercourses occur outside of the Project footprint. Therefore, the Project does not directly impact any watercourses but rather occurs within the regulated area of the watercourses according to the NWA (within 500m of the depression wetlands and within 100m of the riverines). Although the riverine to the south of the Project site looks like it extends into the Project footprint, it is noted that this small portion is part of the artificial dam embankment and therefore no natural watercourses occur on the Project site (Colloty, 2026a).

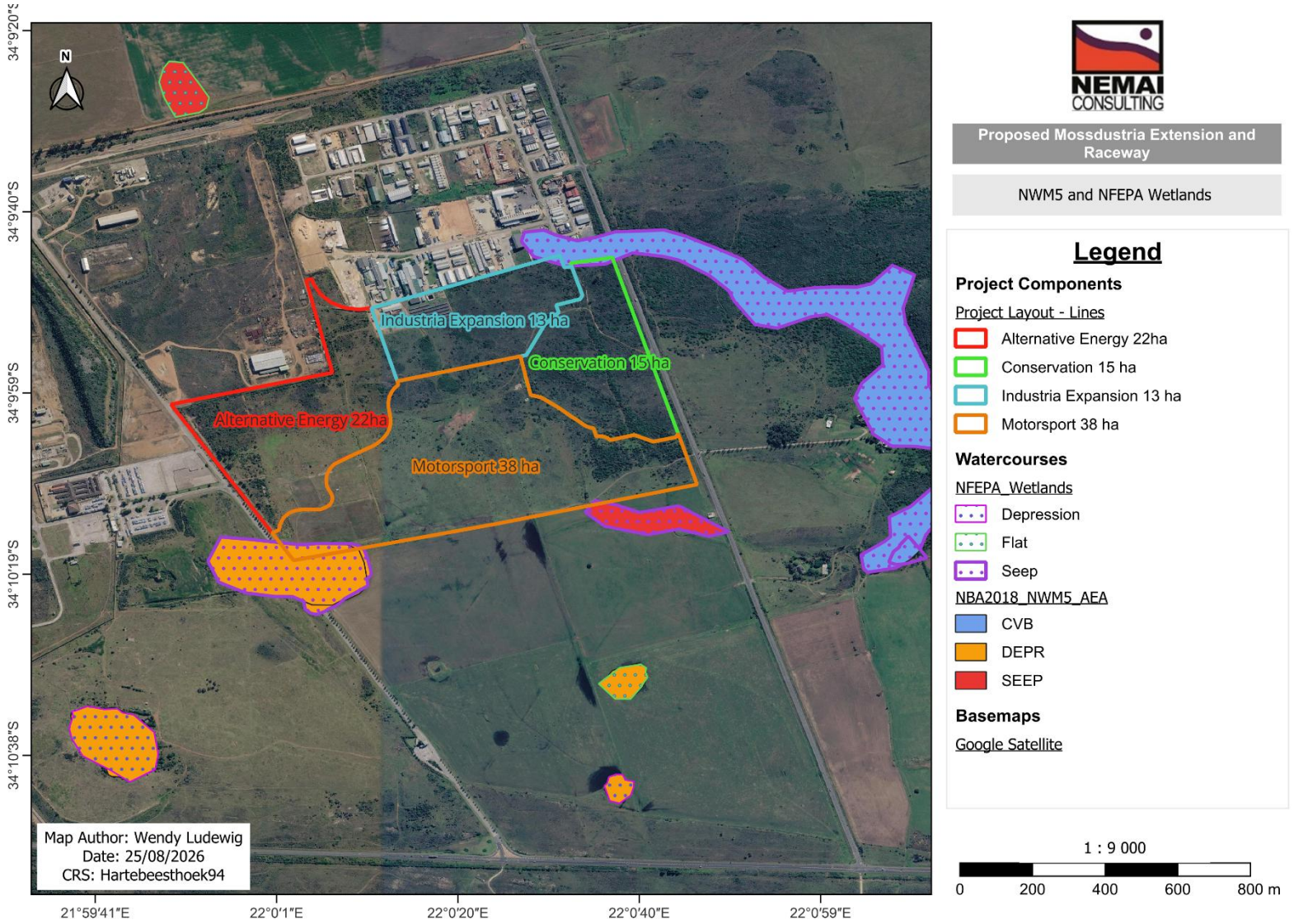

Figure 26: The NWM5 and NFEPA Wetlands near the Project Site

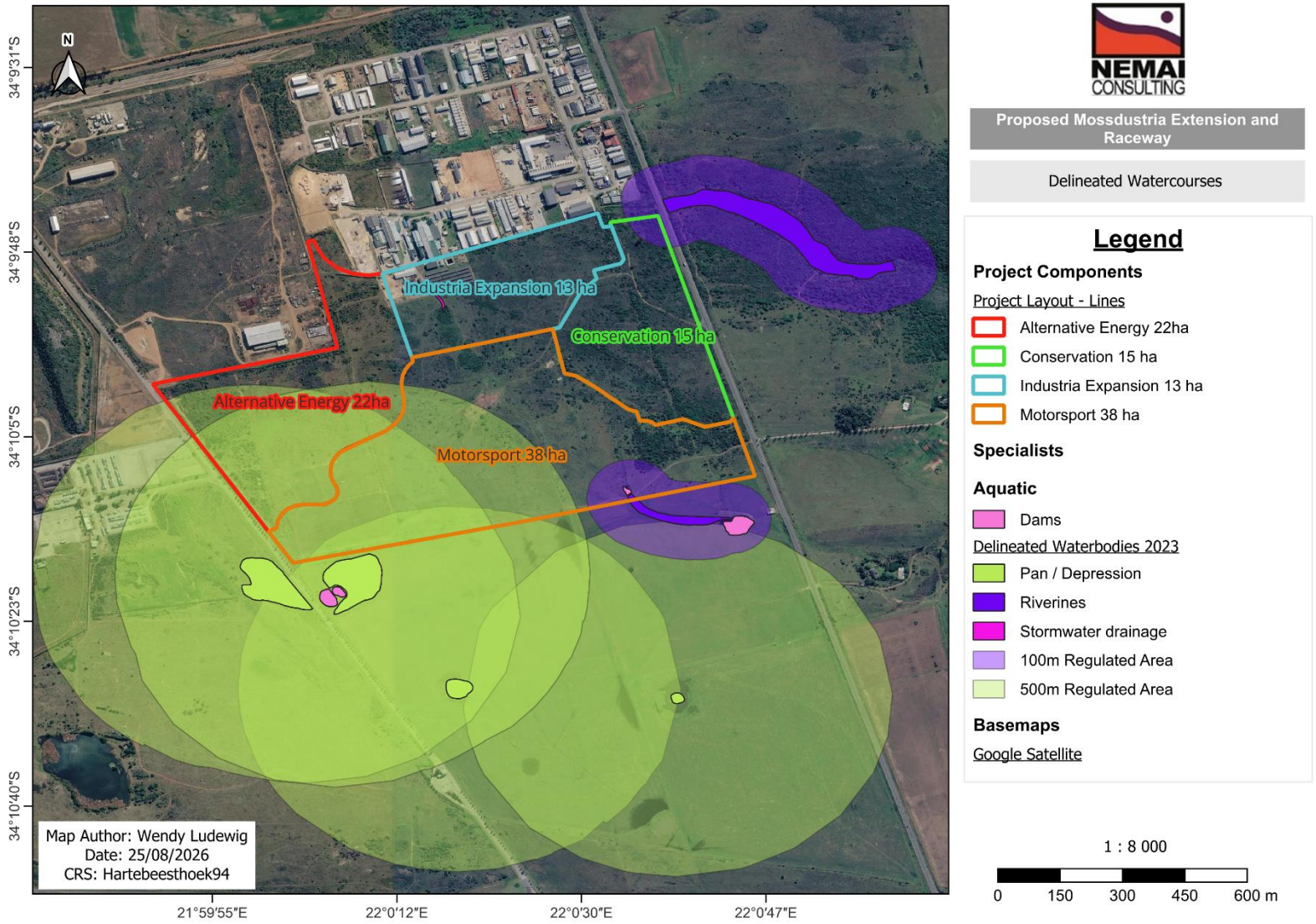

Figure 27: Delineated watercourses in relation to the Project site

10.7.3 The Screening Tool

According to the Screening Tool, the entire site falls within a very high sensitivity in terms of the Aquatic Biodiversity Theme (refer to **Figure 28**). This is due to the presence of Aquatic Critical Biodiversity Areas (CBA), wetlands and estuaries, and being in a Freshwater Ecosystem Priority Area (FEPA) quinary catchments.



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Figure 28: Map of relative Aquatic Biodiversity theme sensitivity (Screening Tool)

Based on the findings of the Aquatic Ecological Impact Assessment (Colloty, 2026a), including site-based investigations, the current state of the receiving aquatic environment was found to be in a poor or degraded state with little to no natural habitat function within the Project site. Therefore, the specialist confirmed the aquatic sensitivity to be low for the proposed Project site.

10.8 Terrestrial Biodiversity

Some of the information included in the following sub-sections was obtained from the Terrestrial Ecology Impact Assessment (Colloty, 2026b) (report contained in **Appendix F3**).

Refer to **Section 11.5** and **Section 12.13** below for a synopsis of the study and a related impact assessment, respectively.

10.8.1 Biomes and Vegetation Types

The proposed Project area is situated within the Southern Fynbos Bioregion, a region recognised for its exceptionally high biodiversity and conservation importance at both a national and global scale. Despite its ecological significance, the area has been subject to extensive historical transformation associated with agriculture, infrastructure development and industrial expansion, resulting in habitat loss and fragmentation. Historical land uses within and surrounding the site have included livestock grazing, cultivation, industrial development and transport infrastructure, all of which have influenced the present ecological condition of the area.

According to the South African National Vegetation Map (NVM) 2018, the Project area is associated primarily with the North Langeberg Sandstone Fynbos and Hartenbos Dune Thicket vegetation types (**Figure 29**). However, the Terrestrial Ecological Impact Assessment (Colloty, 2026b) indicates that the site's vegetation is more accurately classified as Mossel Bay Shale Renosterveld, a threatened vegetation type that occurs within the Southern Cape lowlands. Mossel Bay Shale Renosterveld is listed as an Endangered ecosystem in terms of the national list of Threatened Terrestrial Ecosystems, with approximately 49% of its original extent remaining and no formal protection currently in place. As a result, the vegetation type is considered vulnerable to further transformation and habitat loss.

The specialist further notes that the Fine Scale Vegetation Map for the Riversdale Plain provides a more accurate representation of the vegetation occurring within the study area than the NVM 2018. This mapping identifies the dominant vegetation type as PetroSA Fynbos Renosterveld, with Proteus Fynbos Renoster Thicket occurring within the north-eastern portion of the site, together with localised riparian and pan-associated habitats (**Figure 30**). The vegetation of the site is therefore characterised by a mosaic of fynbos, renosterveld and thicket elements, reflecting the transitional nature of the receiving environment.

Field assessments undertaken as part of the Terrestrial Ecological Impact Assessment (Colloty, 2026b) identified four broad vegetation and habitat units within the study area, namely: Fynbos Renosterveld, Proteoid Renosterveld Thicket, Grassy Fynbos/Disturbed Renosterveld, and Transformed Areas (**Figure 31**). The Fynbos Renosterveld and Proteoid Renosterveld Thicket units represent the most intact vegetation communities on site and support moderate to high species diversity and structural complexity. These areas contain a variety of characteristic renosterveld, fynbos and thicket species, including numerous geophytes, succulents and woody shrub species, and are considered to be of high ecological importance.

Areas of Grassy Fynbos and Disturbed Renosterveld occur primarily where previous agricultural activities, grazing and vegetation clearing have modified the natural vegetation. Although these areas exhibit reduced species richness and structural diversity compared to

the more intact vegetation units, they retain remnants of indigenous species and may contribute to ecological functioning and rehabilitation potential. In contrast, portions of the site have been extensively transformed through historical agricultural activities and livestock farming and are currently characterised by pasture grasses and low botanical diversity.

The ecological assessment (Colloty, 2026b) found that the northern and eastern portions of the property support the most intact natural habitat, comprising a mosaic of thicket, renosterveld and fynbos vegetation. In contrast, the western portions of the site have experienced greater levels of disturbance associated with historic agriculture, ostrich farming and associated infrastructure. Alien invasive plant species, including Acacia saligna, Acacia cyclops and kikuyu grass (Pennisetum clandestinum), were identified within portions of the site and have contributed to habitat degradation in some areas.

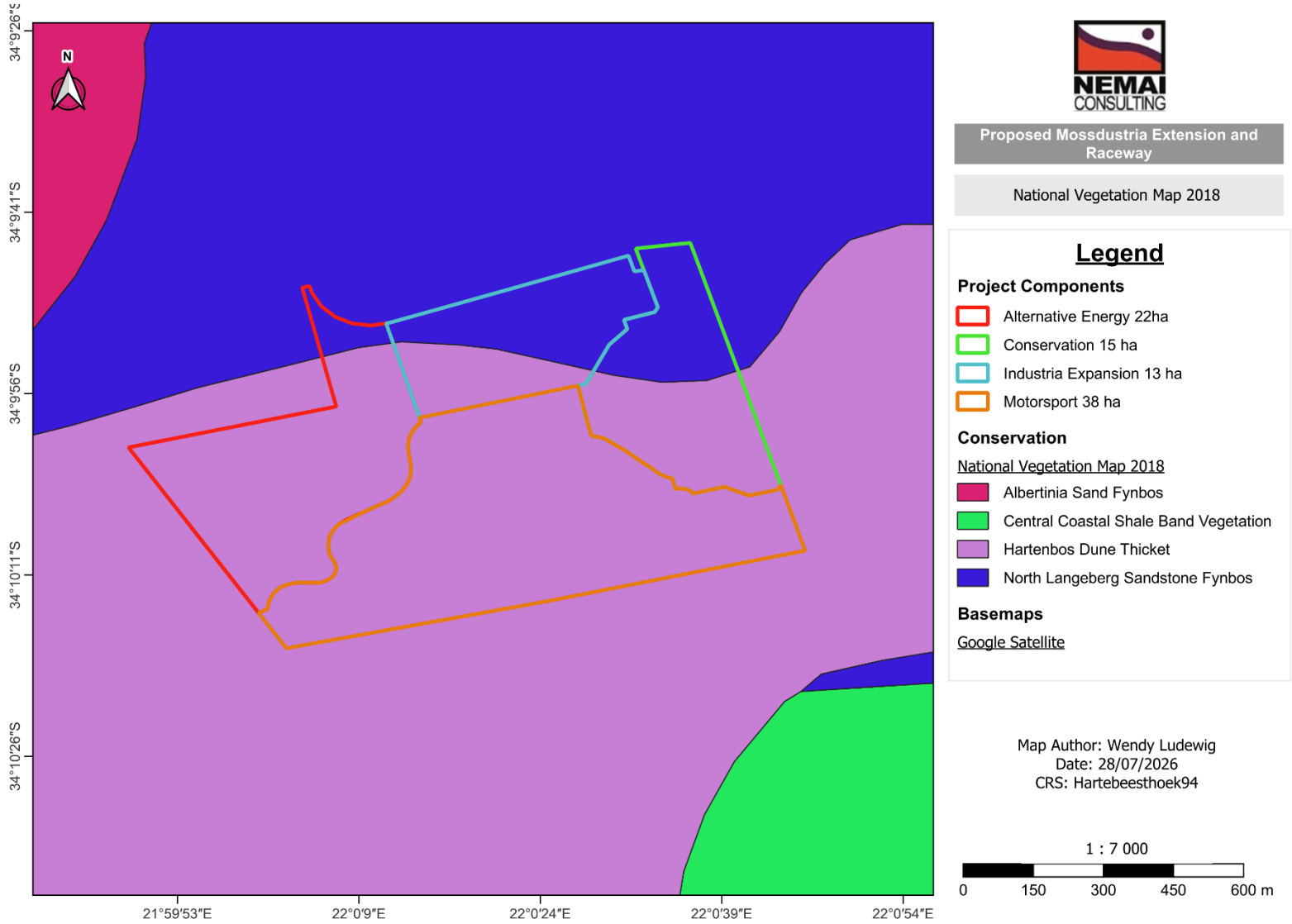

Figure 29: The vegetation type associated with the Project area according to the NVM 2018

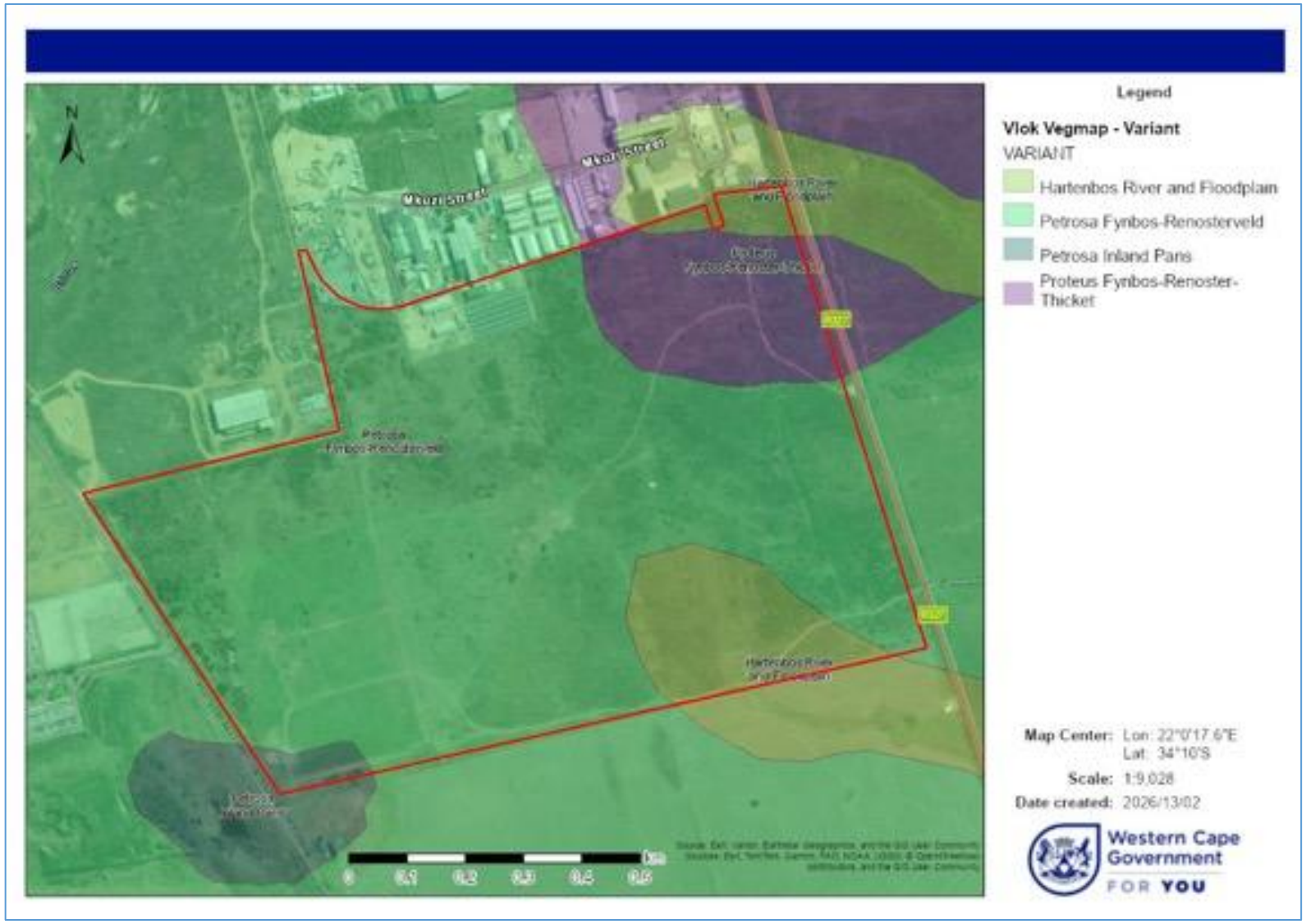

Figure 30: The Project Site in relation to Fine Scale Vegetation Map for the Riversdale Plain (Vlok & de Villiers, 2007) (Colloty, 2026b)



Figure 31: The vegetation types delineated by the terrestrial specialist from multiple site visits ground truthing the terrestrial environment (the remaining areas are all transformed)

10.8.2 Protected Areas

According to the spatial data for the South African Protected Area Database (2026) (SAPAD), no protected areas lie within 5 km of the Project site (**Figure 32**).

The site is located within a Priority Focus Area in terms of the NPAES (**Figure 33**), which identifies landscapes that may contribute to future protected area expansion initiatives. While the site has been partially fragmented by roads, rail infrastructure, industrial development and historic cultivation, the remaining intact habitat patches continue to provide ecological value within the regional context. The inclusion of a dedicated conservation area within the preferred Project layout is intended to retain and protect these higher sensitivity habitats and maintain ecological functioning within the site.

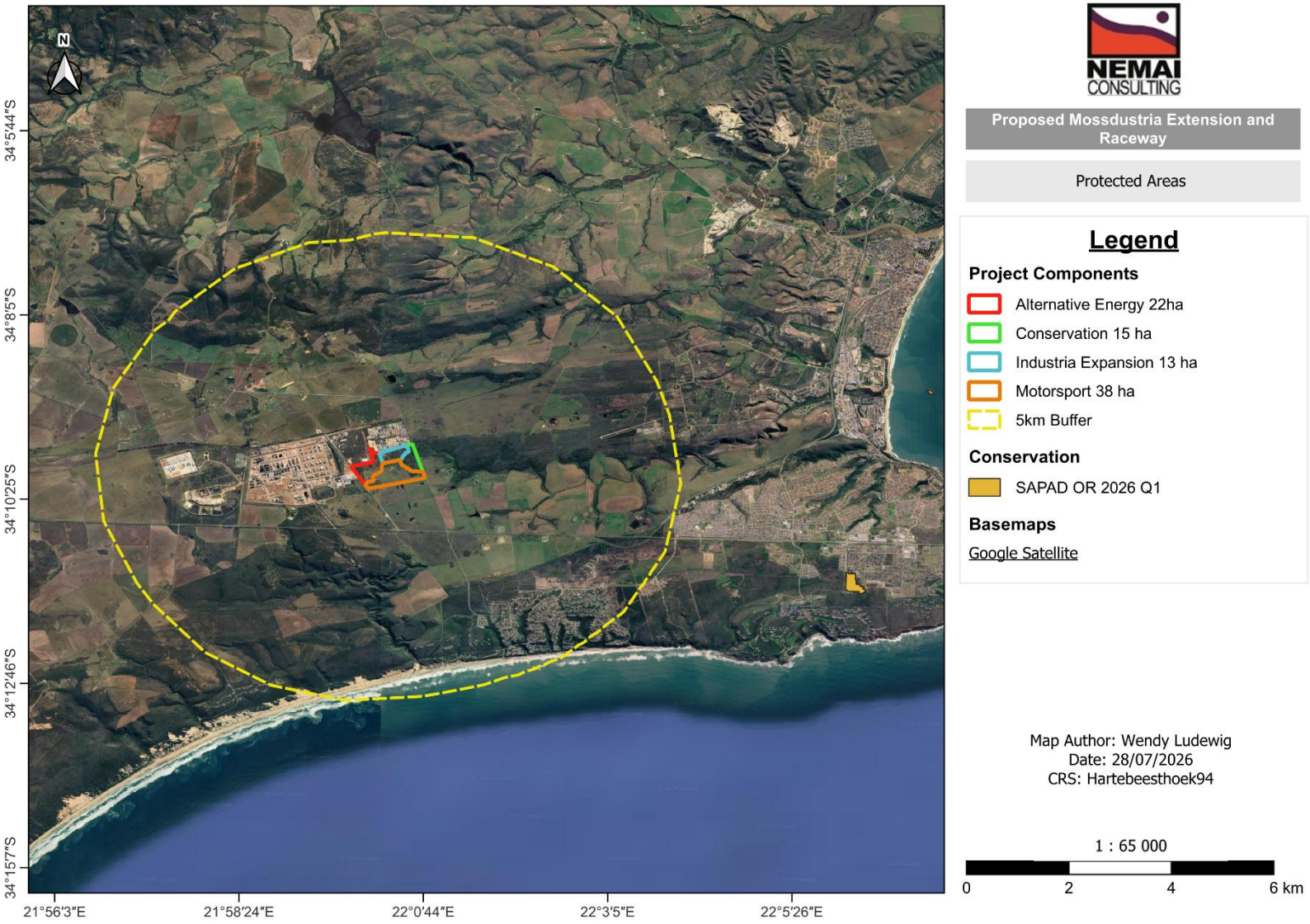

Figure 32: The Project area in relation to the nearest protected area

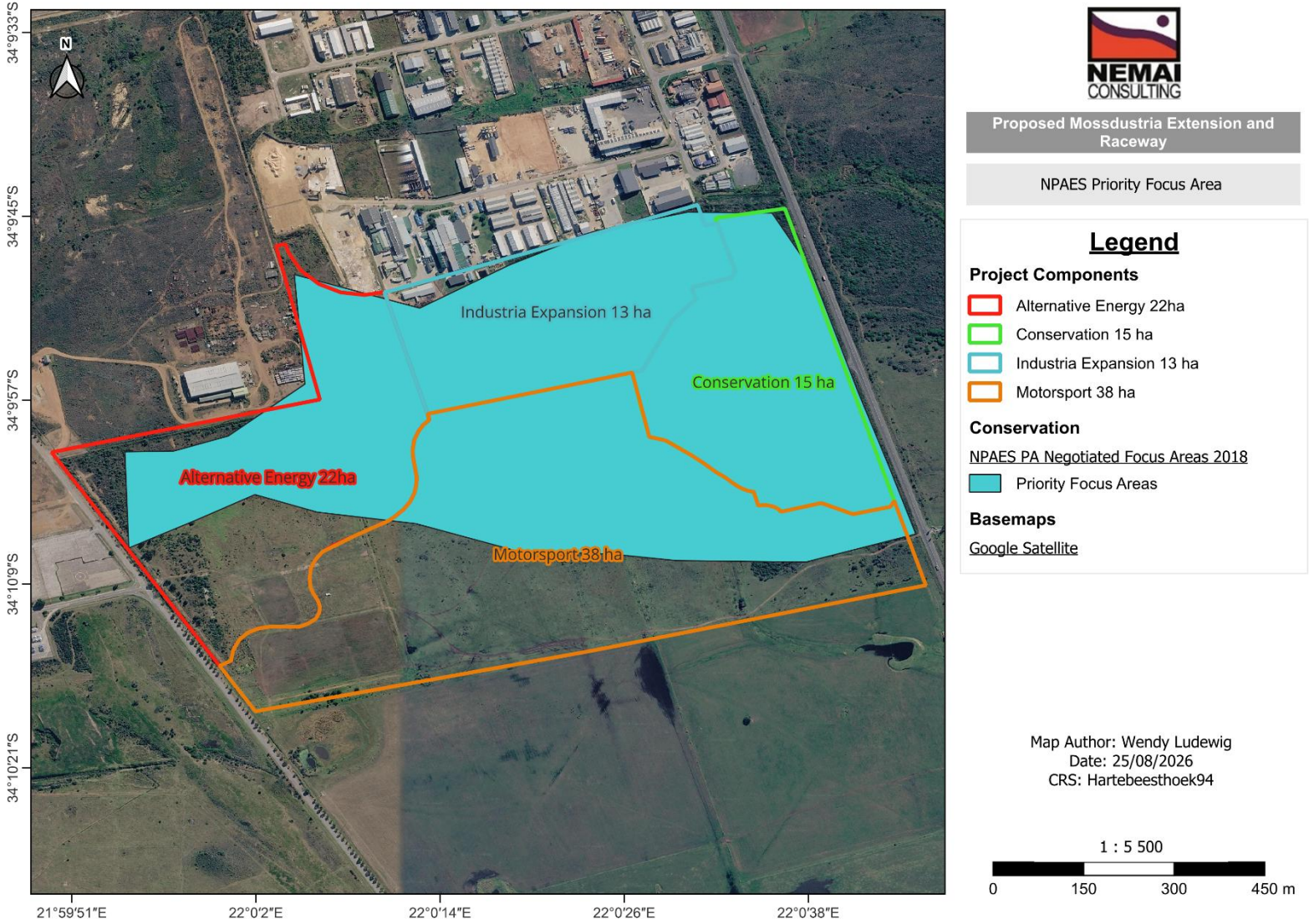

Figure 33: The Project site in relation to the NPAES Priority Focus Areas

10.8.3 Western Cape Biodiversity Spatial Plan

The WCBSP (CapeNature, 2024) identifies portions of the study area as Critical Biodiversity Areas (CBAs) (CBA 1 and CBA 2) and Ecological Support Areas (ESAs) (**Figure 34**). These areas have been identified as important for achieving biodiversity conservation targets, maintaining ecological processes, supporting landscape connectivity and enhancing ecosystem resilience. CBA 1 areas are generally considered to be in a near-natural condition and are required to meet biodiversity pattern and ecological process targets, while CBA 2 areas comprise degraded or modified habitat that still retains conservation value. ESAs, although not essential for meeting biodiversity targets, play an important role in supporting the ecological functioning of CBAs and protected areas.

According to the WCBSP, the biodiversity importance of the site is associated with the occurrence of Critically Endangered PetroSA Fynbos-Renosterveld, Critically Endangered Hartenbos Dune Thicket, and Southern Sandstone Fynbos Seep habitat. Although portions of the site have been historically disturbed by agricultural activities and livestock farming, the northern and eastern sections retain areas of relatively intact natural habitat that contribute to the conservation value of the surrounding landscape.

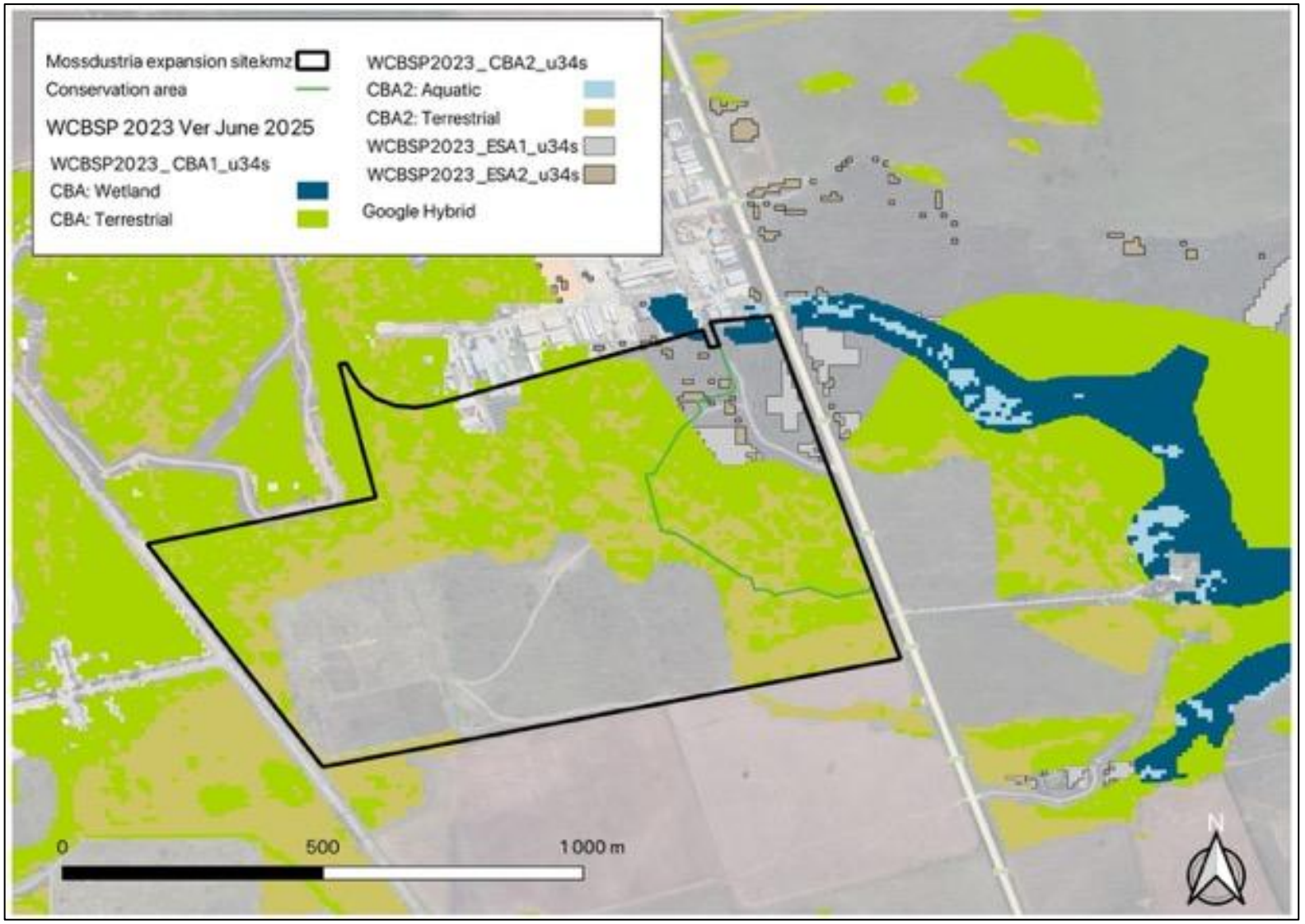

Figure 34: Map of the CBAs and ESAs relative to the Project Site (WCBSP, 2023 as amended 2025) (Colloty, 2026b)

10.8.4 The Screening Tool

10.8.4.1 Animal Species Theme

According to the Screening Tool, the majority of the site falls within a high sensitivity in terms of the Animal Species Theme (refer to **Figure 35**). This is due to the potential presence of certain highly sensitive species, namely: *Aves-Circus ranivorus, Aves-Neotis denhami, Aves-Polemaetus bellicosus, Aves-Circus maurus, Aves-Bradypterus sylvaticus* and *Aves-Afrotis afra.*



Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Neotis denhami
High	Aves-Polemaetus bellicosus
High	Aves-Circus maurus
High	Aves-Bradypterus sylvaticus
High	Aves-Afrotis afra
Medium	Aves-Circus ranivorus
Medium	Aves-Bradypterus sylvaticus
Medium	Aves-Afrotis afra
Medium	Insecta-Aloeides thyra orientis
Medium	Insecta-Lepidochrysops littoralis
Medium	Sensitive species 24
Medium	Sensitive species 13
Medium	Invertebrate-Aneuryphymus montanus

Figure 35: Map of relative Animal Species Theme sensitivity (Screening Tool)

Based on the findings of the Terrestrial Ecological Impact Assessment (Colloty, 2026b), the fauna of the area was found to be typical of a peri-urban fringe community with a relatively high diversity of small mammals and moderate reptile, butterfly and bird diversity. The faunal diversity is thus likely to be strongly correlated with habitat availability and diversity, meaning that the high-sensitivity botanical areas are also likely to be the highest-sensitivity faunal areas (refer to the sensitivities of the terrestrial environment illustrated in **Figure 31**)

10.8.4.2 Plant Species Theme

According to the Screening Tool, the majority of the site falls within a medium sensitivity in terms of the Plant Species Theme, with only the northeastern corner classified as high sensitivity (refer to **Figure 36**). This is due to the potential presence of a highly sensitive species, namely: *Hermannia lavandulifolia.*



Sensitivity	Feature(s)
High	Hermannia lavandulifolia
Low	Low Sensitivity
Medium	Sensitive species 264
Medium	Leucospermum muirii
Medium	Leucospermum praecox
Medium	Selago glandulosa
Medium	Selago villicaulis
Medium	Aspalathus obtusifolia
Medium	Aspalathus campestris
Medium	Lampranthus pauciflorus
Medium	Lampranthus foliosus
Medium	Hermannia lavandulifolia
Medium	Muraltia knysnaensis
Medium	Thamnochortus muirii

Figure 36: Map of relative Plant Species Theme sensitivity (Screening Tool)

The Terrestrial Ecological Impact Assessment (Colloty, 2026b) identified the study area as supporting a diversity of indigenous fynbos, renosterveld and thicket plant species, particularly within the relatively undisturbed portions of the site. The assessment confirmed the presence of *Hermannia lavandulifolia*, a species identified as having a high sensitivity rating by the DFFE Screening Tool, while a number of additional plant species of conservation concern were recorded or considered likely to occur within suitable habitat on the site. Sensitive habitat areas are associated primarily with intact natural vegetation, particularly areas containing exposed stone and rock outcrops, which provide habitat for a range of rare succulents, bulbs and other species of conservation importance. The specialist concluded that all remaining natural veld should be regarded as sensitive from a botanical perspective, with the highest sensitivities associated with the relatively intact fynbos-renosterveld and thicket habitats occurring predominantly within the northern and eastern portions of the site. These areas support higher species diversity, greater structural complexity and a larger proportion of characteristic indigenous vegetation than the more disturbed habitats occurring elsewhere on the property (refer to the sensitivity map illustrated in **Figure 31**).

10.8.4.3 Terrestrial Biodiversity Theme

According to the Screening Tool, the majority of the site falls within a high sensitivity in terms of the Terrestrial Biodiversity Theme (refer to **Figure 37**) due to the presence of CBA1, CBA2, ESA2, FEPA Sub catchments and the NPAES.



Sensitivity	Feature(s)
Very High	CBA: Terrestrial
Very High	CBA2: Terrestrial
Very High	ESA 2: Restore from other land use
Very High	FEPA Subcatchment
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	EN_Hartenbos Dune Thicket

Figure 37: Map of relative Terrestrial Biodiversity Theme sensitivity (Screening Tool)

The Terrestrial Ecological Impact Assessment (Colloty, 2026b) identified a clear gradient in biodiversity sensitivity across the site (refer to the sensitivities delineated in **Figure 31**). Areas containing intact natural vegetation, particularly within the northern and eastern portions of the property, were assigned moderate to high biodiversity sensitivity due to the presence of threatened vegetation, species of conservation concern and relatively undisturbed habitat. In contrast, previously cultivated, grazed and otherwise transformed areas exhibited lower biodiversity value and sensitivity as a result of habitat degradation and reduced species diversity.

Overall, the specialist assessment concluded that the site retains several areas of ecological significance despite historical disturbance. These areas support important biodiversity resources and contribute to the conservation of threatened ecosystems within the region. Consequently, the higher sensitivity habitats were identified as priority areas for avoidance and conservation during the project planning process, leading to the incorporation of a dedicated conservation area within the preferred Project layout.

10.9 Socio-Economic Environment

Some of the information included in the following sub-sections was obtained from the Socio-Economic Impact Assessment (Kempthorne and Sondwana, 2023) (report contained in **Appendix F9**). Refer to **Section 11.12** and **Section 12.25** below for a synopsis of the study and a related impact assessment, respectively.

10.9.1 Overview

The proposed Project is located within the MBLM in the Western Cape Province, which forms part of the Garden Route District Municipality. The municipality is characterised by a diversified economy supported by agriculture, manufacturing, petrochemical industries, tourism, trade, and business services. The Project area is situated adjacent to existing industrial infrastructure, including the established Mossdustria industrial area, and has been identified by the municipality as a strategic growth area for future industrial and economic development.

The municipality supports a growing population and a relatively large working-age cohort. However, unemployment, particularly amongst the youth population, remains a key socio-economic challenge within the municipal area. Educational attainment levels indicate that a substantial proportion of residents have completed secondary education, while opportunities for employment creation and skills development remain important priorities for local economic development.

Households within the municipality generally have access to basic services, including electricity and potable water, although income levels remain variable across the municipal area. The local economy is supported by a combination of agricultural activities, industrial development, commercial enterprises and tourism-related activities. The agricultural sector remains important in the broader region, while industrial activities associated with the petrochemical sector and related service industries contribute significantly to local economic output and employment.

The Project area forms part of a broader municipal development vision aimed at promoting industrial expansion, economic diversification, employment creation and investment attraction. Municipal planning instruments, including the IDP and SDF, identify the Mossdustria area as a priority development node intended to support future industrial growth and associated economic opportunities within the municipality. The receiving socio-economic environment is therefore characterised by an established industrial setting, existing transport infrastructure, surrounding agricultural activities and a socio-economic context that is supportive of further economic and employment-generating development.

10.9.2 Population and Demographics

The MBLM covers an area of approximately 2 007 km² and, as of 2022, supports a population of approximately 140 075 people residing in 52 985 households. The municipality has experienced steady population growth and is expected to continue growing over the coming

years, resulting in increased demand for housing, infrastructure, employment opportunities and municipal services. Population density within the municipality is approximately 44 persons per km^2.

The age profile of the municipality indicates that approximately 66.7% of the population falls within the economically active age group of 15 to 64 years, while 27.9% comprises children between the ages of 0 and 14 years. Persons aged 65 years and older account for approximately 15.4% of the municipal population. The relatively large working-age population represents an important labour resource, while the municipality's dependency ratio highlights the need for sustained economic growth and employment creation to support dependent population groups.

10.9.3 Employment and Income

Unemployment remains a significant socio-economic challenge within the MBLM. The Socio-Economic Impact Assessment indicates an unemployment rate of approximately 22.9%, with youth unemployment representing a particular concern. Of the economically active youth population, approximately 29.9% are unemployed, highlighting the continued need for employment opportunities and skills development initiatives within the municipal area.

Educational attainment levels indicate that approximately 34% of residents have completed Grade 12, while approximately 15% have attained a higher education qualification. Conversely, approximately 18% of the population has received either no formal schooling or only partial primary education (**Table 9**). These figures demonstrate the availability of both skilled and semi-skilled labour within the municipality, while also highlighting opportunities for further educational advancement and workforce development.

Table 9: Levels of Education (Kempthorne and Sondwana, 2023)

	Western Cape	Garden Route District	Mossel Bay Local Municipality	Mossel Bay
No schooling	7%	44%	8%	4%
Some primary	9%	4%	10%	8%
Complete primary	5%	5%	5%	4%
Some secondary	32%	7%	27%	23%
Grade 12	31%	11%	34%	42%
Higher	16%	13%	15%	19%
Unspecified	0%	16%	0%	0%

Income levels across the municipality are slightly varied, but mostly household income falls within the low-income category at 87% (**Table 10**). While 1% are classified as middle-income households and 0% as high-income households. In addition, approximately 11% of households have no reported income. These socio-economic characteristics indicate the importance of economic development initiatives that can contribute towards employment creation and improved household income levels.

Table 10: Household Income (Kempthorne and Sondwana, 2023)

	Western Cape	Garden Route District	Mossel Bay Local Municipality	Mossel Bay
No income	7%	8%	11%	13%
Low-income	91%	91%	87%	84%
Middle-income	2%	1%	1%	2%
High-income	0%	0%	0%	0%

10.9.4 Economic Profile

The economy of the MBLM is diverse and is supported by a combination of agricultural, industrial, commercial and tourism-related activities (**Table 11**). Agriculture remains an important economic sector within the broader region and includes livestock farming, dairy production, ostrich farming, viticulture, crop production, forestry and fishing activities. Industrial activity is concentrated around established industrial areas and includes petrochemical and manufacturing-related enterprises that contribute significantly to local economic output and employment.

The local economy is also supported by wholesale and retail trade, finance and business services, community services and tourism. Mossel Bay's location along the Garden Route continues to promote tourism-related economic activity, while existing industrial infrastructure and strategic transport routes support industrial expansion and investment attraction. The municipality's economic structure therefore reflects a balance between traditional agricultural activities, established industrial development and a growing service-based economy.

Table 11: Sectoral Gross Value Added contribution (Kempthorne and Sondwana, 2023)

	Western Cape	Garden Route District	Mossel Bay Local Municipality
Agriculture, forestry and fishing	8.1%	6.8%	9.4%
Mining and quarrying	4.0%	3.8%	3.8%
Manufacturing	12.5%	13.0%	11.0%
Electricity, gas and water	10.1%	9.4%	7.9%
Construction	3.4%	1.8%	-1.0%
Wholesale and retail trade, catering and accommodation	16.4%	16.3%	16.1%
Transport, storage and communication	6.5%	6.5%	6.7%
Finance, insurance, real estate and business services	8.5%	9.3%	9.4%
General government	4.1%	3.5%	3.1%
Community, social and personal services	11.4%	11.0%	11.5%

10.9.5 Land Use and Development Context

The proposed Project area is located adjacent to the existing Mossdustria industrial area and forms part of a broader municipal growth corridor identified for future industrial expansion. The Project area is situated in proximity to major industrial infrastructure, including the PetroSA

refinery and Gourikwa Power Station (**Figure 38**), and has been identified by the MBLM as a strategic development area capable of supporting additional industrial, commercial and economic activities.



Figure 38: Project site in relation to surrounding developments (Kempthorne and Sondwana, 2023)

Municipal planning frameworks, including the IDP and SDF, identify the Mossdustria area as a priority node for economic development and industrial expansion (**Figure 15**). The municipality's long-term development vision seeks to promote investment, support industrial growth, create employment opportunities and diversify the local economy. The proposed Project area is therefore situated within an environment that is already characterised by industrial land uses, supporting infrastructure and strategic planning initiatives aimed at facilitating economic growth and development.

The surrounding land uses comprise a combination of industrial, agricultural and infrastructure-related activities, reflecting the transitional nature of the area between existing industrial development and the broader rural landscape. As a result, the site is located within a socio-economic setting that has been identified for future growth and investment, consistent with municipal development objectives.

10.10 Air Quality

The proposed Project area is located within the MBLM area, where air quality is managed in terms of the NEM:AQA, the MBLM Air Quality Control By-Law and the Municipal Air Quality Management Plan (AQMP). The AQMP aims to minimise the impact of atmospheric emissions on both the natural environment and surrounding communities while maintaining acceptable ambient air quality within the municipal area. MBLM identifies air quality management as a key environmental function and has appointed Air Quality Officers responsible for

implementing and monitoring air quality management initiatives within the municipal jurisdiction (MBLM, 2025).

As part of the 2019 AQMP review, a comprehensive regional air quality assessment was undertaken by Lethabo Air Quality Specialists (Pty) Ltd on behalf of the Garden Route District Municipality. The assessment included a review of existing air quality management practices, development of an emissions inventory and atmospheric dispersion modelling for the district. The findings indicated that the majority of objectives of the previous AQMP had been achieved and that air quality management systems within MBLM are generally well established (MBLM, 2025).

Dispersion modelling undertaken for the AQMP indicated that ambient air quality within the municipality is generally acceptable. However, certain potential areas of concern were identified within the broader municipal area. These include locations where odour thresholds may occasionally be exceeded and areas along the R102 in Heiderand where nitrogen dioxide (NO_2) concentrations were predicted to approach approximately 80% of the applicable air quality standard. The AQMP further notes that long-term monitoring indicates generally acceptable air quality conditions within the municipality, although targeted short-term monitoring is recommended in identified potential problem areas (MBLM, 2025).

The receiving environment surrounding the proposed Project is characterised by a combination of industrial, transportation and natural land uses. Existing sources of atmospheric emissions within the broader area are likely to include vehicular traffic, industrial activities associated with the Mossdustria area, domestic fuel combustion, and periodic emissions associated with wildfires, which are recognised within the municipal emissions inventory (MBLM, 2025). Despite these emission sources, no widespread air quality exceedances have been identified within the municipal AQMP assessment.

10.11 Visual Quality

Some of the information included in the following paragraphs was obtained from the Landscape/Visual Impact Assessment (Marshall, 2023) (report contained in **Appendix F6**). Refer to **Section 11.9** and **Section 12.19** below for a synopsis of the study and a related impact assessment, respectively.

The proposed Project area is located approximately 5.3 km west of Mossel Bay and directly south of the existing Mossdustria Industrial Area. The site forms part of a broader landscape characterised by a combination of industrial, agricultural, transportation and open-space land uses. Existing industrial developments within the surrounding area include the Mossdustria Industrial Area, PetroSA facilities and the Gourikwa Power Plant (**Figure 38**), all of which contribute to the established visual character of the receiving environment.

The site is situated on a plateau above the coastal plain. The surrounding topography is characterised by a gradual fall in elevation towards the coastline to the south and east, while a minor ridgeline occurs approximately 2 km north of the site (**Figure 39**). These landform

features contribute significantly to the visual character of the area and influence the extent to which surrounding landscapes are visible from various viewpoints.

The predominant land cover surrounding the site consists of low shrubland vegetation, much of which has been transformed for agricultural purposes including livestock grazing and ostrich farming. Areas of the coastal plain are developed predominantly for residential use, while industrial and associated infrastructure developments are concentrated around the Mossdustria industrial precinct. Major transport infrastructure within the area includes the N2 national road located south of the site, the R327 regional road which extends along the eastern boundary of the site, and the railway line situated north of the existing industrial area (**Figure 40**).

The broader landscape can be described as comprising three primary Landscape Character Areas (LCAs), namely an urban landscape associated with Mossel Bay and surrounding residential settlements, an industrial landscape associated with Mossdustria, PetroSA and the Gourikwa Power Plant, and a rural landscape characterised by agricultural activities, open space and remnant natural vegetation. Together, these landscape elements create a mixed visual environment in which industrial development is already an established component of the existing landscape character.

The study area falls within the Gouritz Cluster Biosphere Reserve, which encompasses a mosaic of natural, rural, urban and industrial landscapes. Although the area is not recognised as a scenic landscape of exceptional visual significance, the existing open spaces, agricultural land and separation between industrial and residential areas contribute to the visual character and sense of place of the surrounding environment (Marshall, 2023).

Key visual receptors within the receiving environment include surrounding rural homesteads, residents of nearby residential areas, users of the N2 and R327 road corridors, travellers utilising the One Stop and Petroport service stations, and visitors to the Reed Valley venue located east of the site. These receptors represent the primary groups from which the existing landscape and visual environment are experienced (Marshall, 2023).

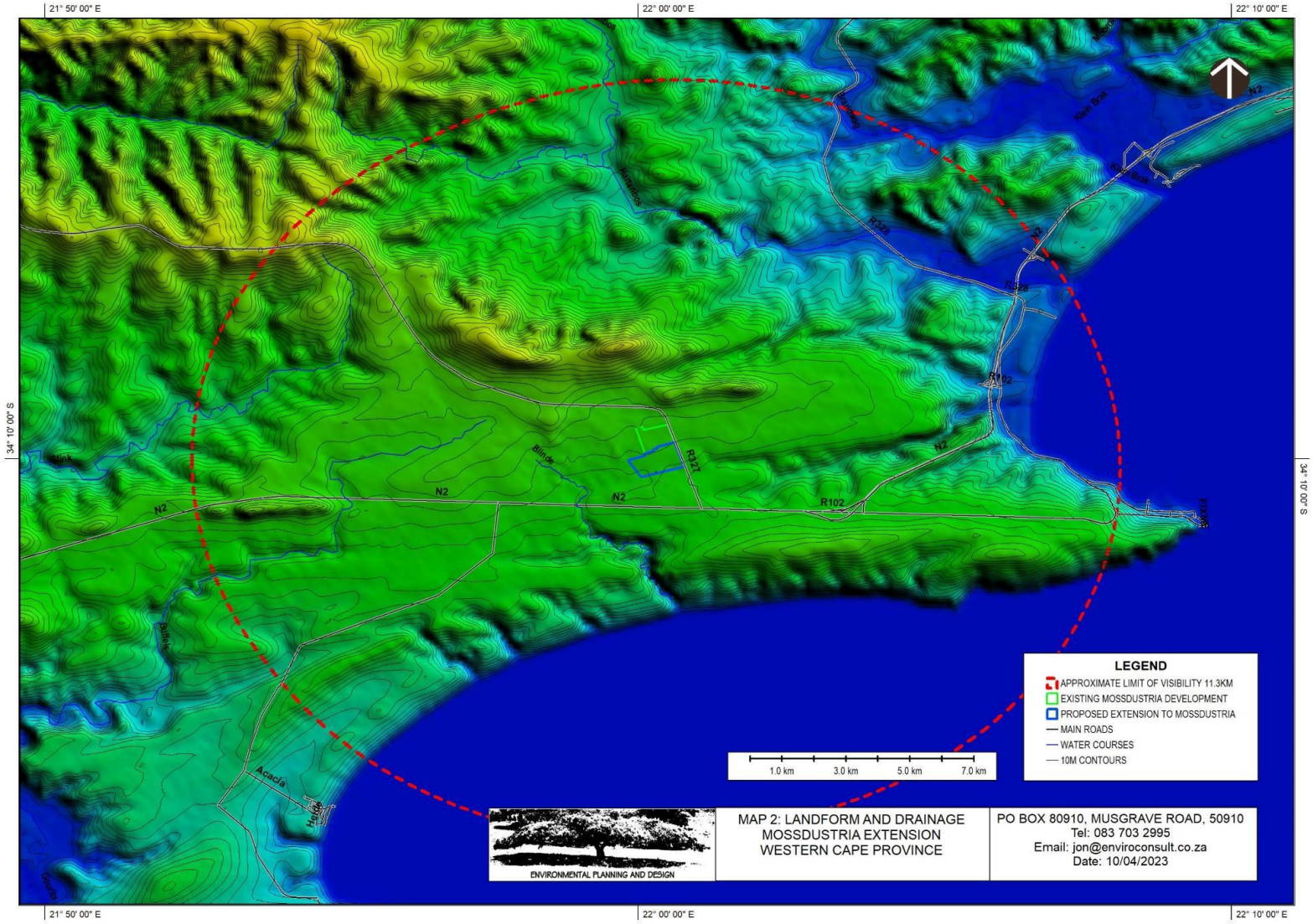

Figure 39: Digital Elevation Model and Contour Lines for Project site and surrounding area (Marshall, 2023)

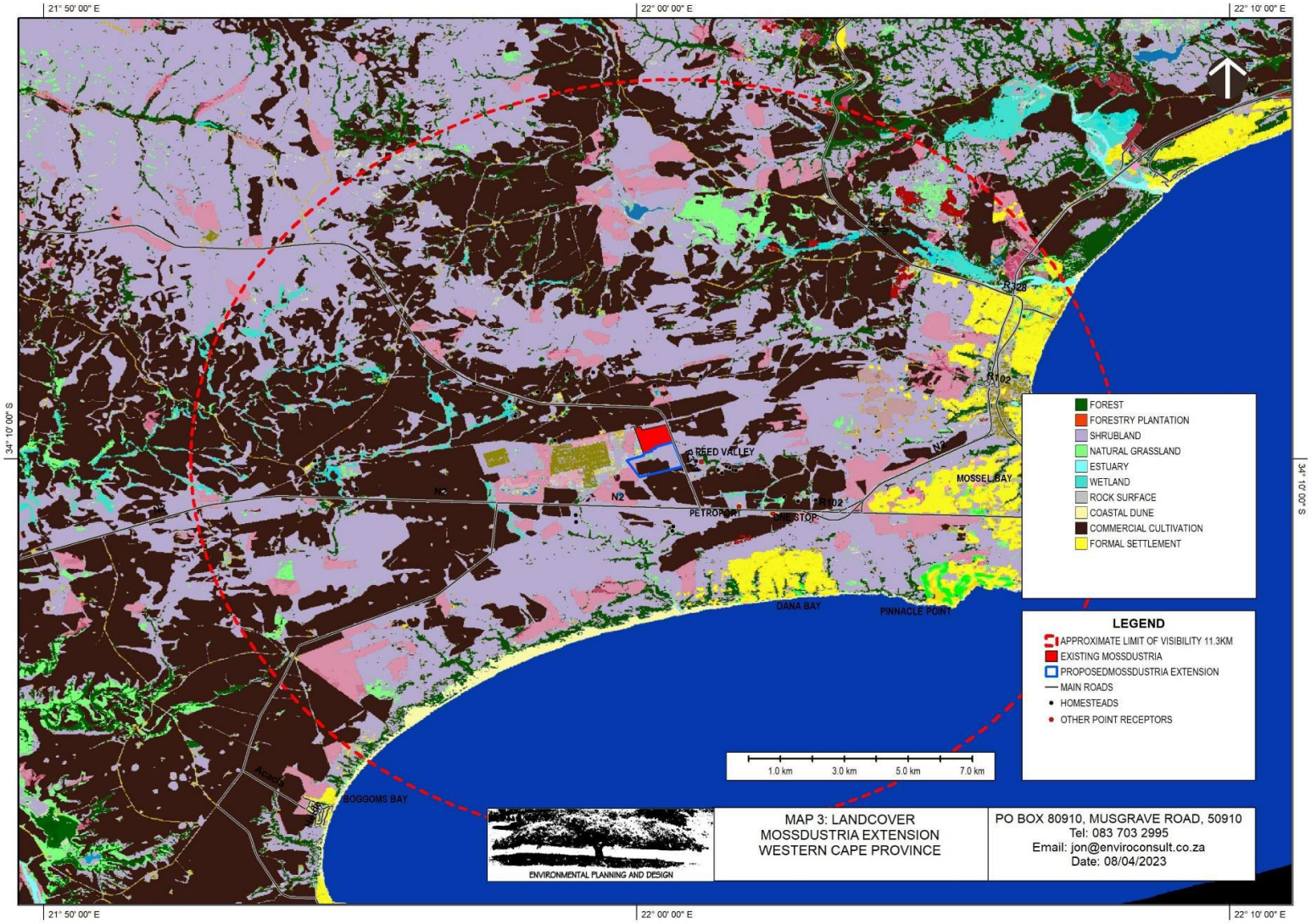

Figure 40: Landcover of the Project site and surrounding area (Marshall, 2023)

Figure 41 below includes photographs taken on site showing the surrounding visual characteristics of the Project site: A: represents the view from the N2 looking across the site and existing Mossdustria to the minor ridgeline approximately 2km to the north; B: illustrates cattle grazing on land to the east of the proposed site; C: is of the Gourika Power Plant to the left of the picture and the PetroSA to the right of the Picture as seen from the N2; D: Is of the N2; and, E: is of the railway running immediately north of the existing Mossdustria.



Figure 41: Photographs of the visual characteristics of the Project site (Marshall, 2023)

10.12 Noise & Vibration

Some of the information included in the following paragraphs was obtained from the Noise Impact Assessment (De Jager, 2026) (report contained in **Appendix F4**). Refer to **Section 11.7** and **Section 12.20** below for a synopsis of the study and a related impact assessment, respectively.

The proposed Project area is situated within a mixed rural-industrial landscape located adjacent to the existing Mossdustria Industrial Area and in proximity to major transportation infrastructure, including the N2 national road, the R327 regional road and an existing railway line. The acoustic environment is influenced by both natural and anthropogenic sound sources, resulting in a variable soundscape that differs according to location, time of day, weather conditions and seasonal factors (De Jager, 2026).

The Noise Impact Assessment (De Jager, 2026) notes that environmental sound levels within the study area are affected by a range of natural factors, including wind, temperature, humidity, seasonal variations and faunal activity. In less developed portions of the site and surrounding rural areas, ambient sound is typically influenced by bird calls, insects, livestock and wind interacting with vegetation, while the contribution of these sound sources may vary between seasons and throughout the day. Ambient sound levels are generally higher during warmer months due to increased faunal activity and lower during colder periods.

Field measurements undertaken as part of the specialist assessment (De Jager, 2026) indicate that the existing acoustic environment is largely dominated by road traffic associated with the N2 and R327 road corridors (refer to **Figure 42** for the locations of monitoring locations). Traffic noise was identified as the dominant sound source at several monitoring locations, with vehicle movements creating relatively constant background noise conditions in areas located close to these transport routes. Additional sound sources recorded during the monitoring period included birds, livestock, domestic animals, wind-induced noise, and low levels of industrial activity associated with the existing Mossdustria Industrial Area.

The specialist assessment (De Jager, 2026) further notes that ambient sound levels in the vicinity of the Project area are elevated in comparison to a typical rural environment due to the influence of surrounding transportation and industrial infrastructure. Measurements collected near the R327 and N2 confirmed that road traffic represents a significant contributor to the existing sound environment, while locations further removed from these transport corridors exhibited a greater influence from natural ambient sound sources.

Noise monitoring undertaken at receptor locations surrounding the site recorded a sound environment characterised by a combination of continuous traffic-related noise and intermittent natural sounds. At monitoring locations near Reed Valley and surrounding rural properties, dominant sound sources included passing vehicles on the N2 and R327, bird activity, livestock, occasional domestic animal noises and, in some instances, low-level industrial hums originating from the existing industrial area.

A long-term monitoring location established within the rural portion of the study area identified bird and faunal activity as the predominant source of ambient sound, with road traffic from the N2 remaining audible despite the monitoring location being partially sheltered from direct road noise. The monitoring results indicate that the receiving environment exhibits characteristics of both rural and industrialised environments, reflecting the transitional nature of the broader landscape surrounding the existing Mossdustria precinct.

The existing vibration environment is primarily associated with vehicular movement along the N2 and R327 road networks, together with activities associated with existing industrial operations in the area. No significant baseline vibration sources were identified within the specialist assessment (De Jager, 2026) beyond those typically associated with transportation infrastructure and established industrial land uses.

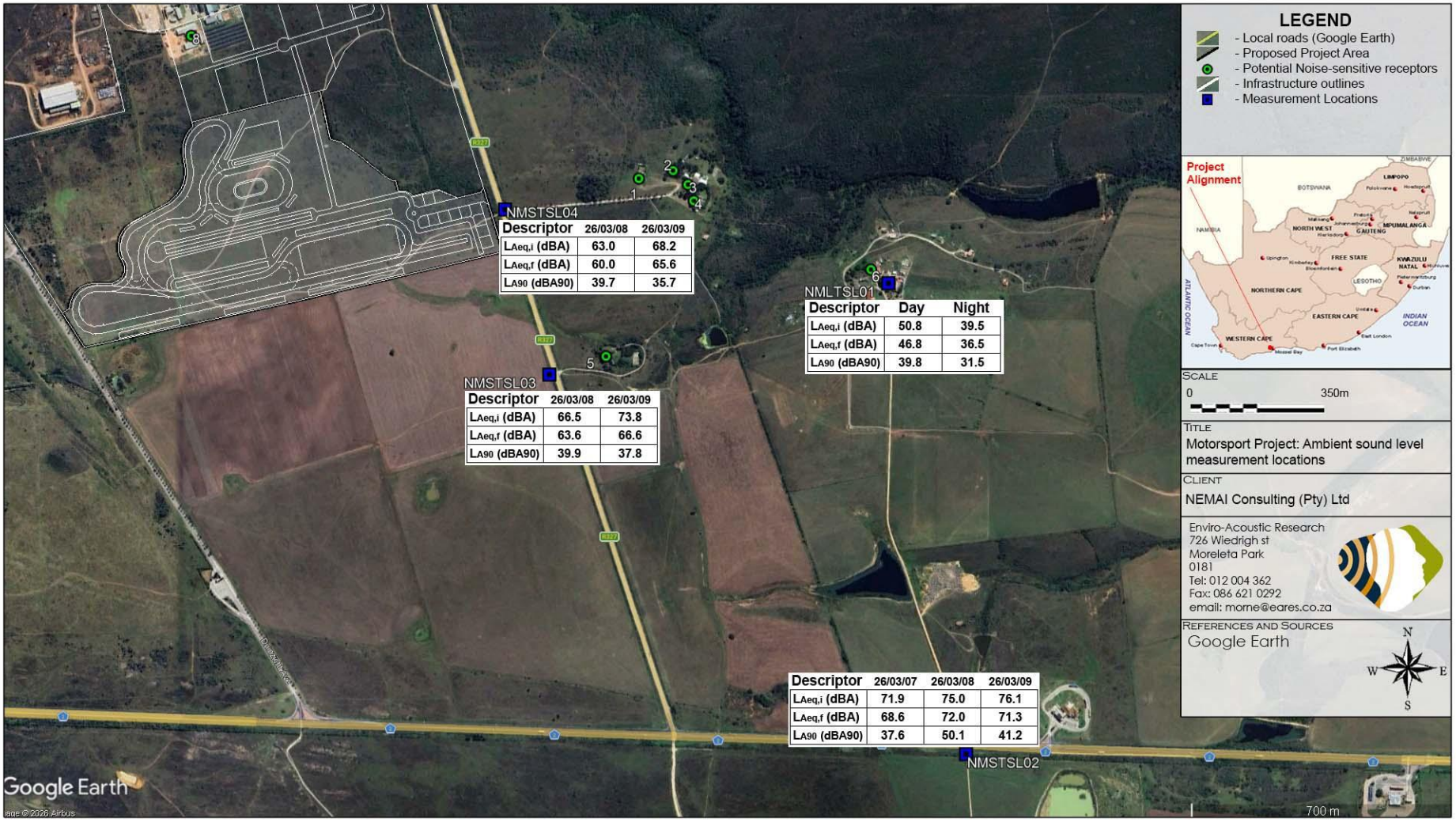

Figure 42: Location where ambient sounds (residual noise) levels were measured during March 2026 (De Jager, 2026)

10.13 Agriculture

Some of the information included in the following sub-sections was obtained from the Agricultural Compliance Statement (Bouwer, 2023) (report contained in **Appendix F10**). Refer to **Section 11.13** and **Section 0** for a synopsis of the study and a related impact assessment, respectively.

10.13.1 General

The proposed Project area occurs within a mixed landscape comprising industrial land uses, open space, natural vegetation and agricultural land. Agricultural activities within the broader area are generally associated with livestock grazing and limited cultivation, with portions of the surrounding landscape having historically been utilised for agricultural production.

The climate of the area is classified as semi-arid, which limits the productivity of dryland cultivation and places constraints on crop production without supplementary water inputs. The climate capability of the area has been classified as moderate (Bouwer, 2023).

The study area is situated within the Db Land Type (**Figure 18**), which is characterised by a predominance of duplex soils where sandy surface horizons overlie more clay-rich subsoils. Regional soil capability mapping indicates a generally low to low-moderate soil capability across the site (**Figure 43**). Terrain capability is classified as moderate to high, reflecting generally favourable topographic conditions for agricultural use (**Figure 44**). Together, the interaction of climate, soil and terrain characteristics contributes to the overall agricultural potential of the area.

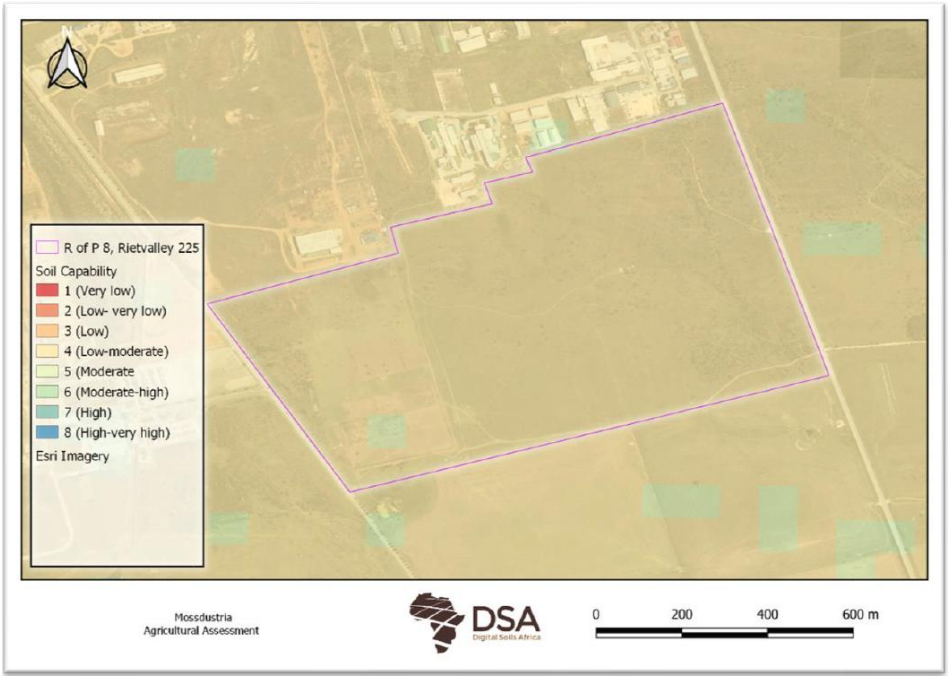

Figure 43: The Soil Capability of the site and surrounding area (Bouwer, 2023)



Figure 44: The Terrain Capability of the site and surrounding area (Bouwer, 2023)

The agricultural land capability within the study area is generally low (Bouwer, 2023). Land capability mapping indicates that most of the site falls within land capability classes ranging from 4 to 6, representing very low to low-moderate agricultural potential (**Figure 45**). The shallow nature of the dominant Mispah and Glenrosa soils constrains cultivation potential, while Westleigh soils are associated with localised depressions and wetter conditions.

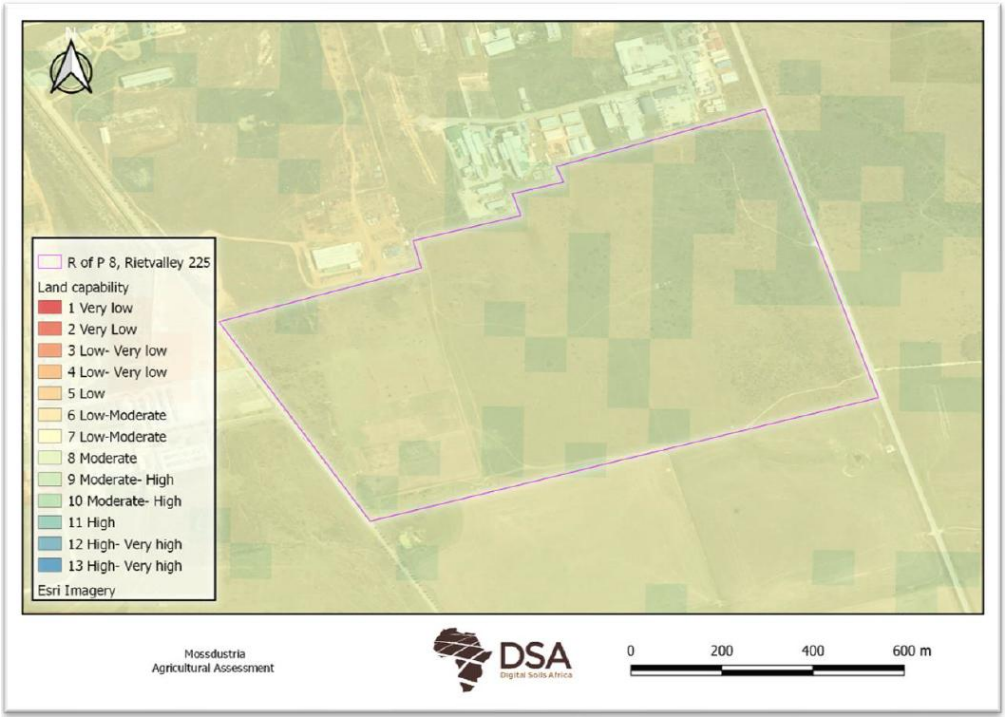

Figure 45: Land Capability Class Map of the study area (Bouwer, 2023)

The grazing capacity of the area is relatively low, with the broader area having a grazing capacity of approximately 40 hectares per large stock unit (ha/LSU). Existing agricultural land use within and surrounding the site consists primarily of natural veld and grazing land. Historical cultivation activities have occurred on portions of the property; however, site verification undertaken during the specialist assessment (Bouwer, 2023) indicated that these cultivated areas are currently abandoned and overgrown, with no active crop production occurring at the time of the survey. Evidence of livestock farming, including horse and ostrich grazing, was observed within the broader property. Infrastructure associated with these activities includes fencing, kraals and water troughs (**Figure 14**).

Land cover mapping indicates that the site and surrounding area comprise a mixture of low shrubland vegetation, cultivated commercial annual croplands and industrial land uses. The agricultural landscape has therefore already undergone varying degrees of transformation, particularly in areas adjacent to the existing Mossdustria industrial precinct (Bouwer, 2023).

10.13.2 The Screening Tool

The Screening Tool shows the area is of high sensitivity for agricultural theme sensitivity (**Figure 46**). The high sensitivity is due to the presence of rainfed annual crop cultivation/planted pastures, and the medium sensitivity is due to the land capability, classifying the soils as having a land capability class of 6-8 (Low Moderate to Moderate).

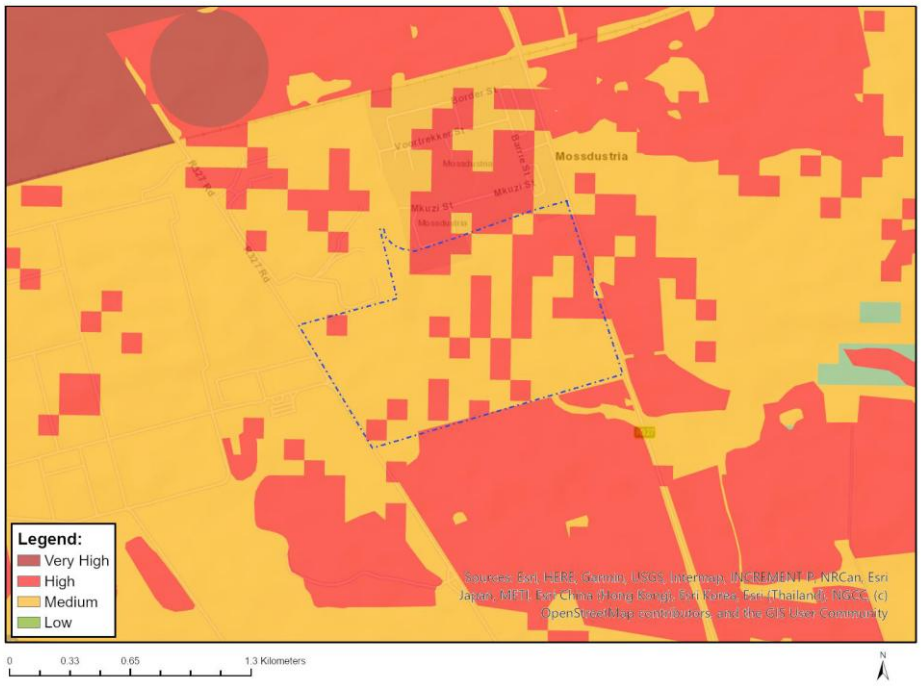

Figure 46: Map of Agriculture Theme Sensitivity (Screening Tool)

However, it is noted that based on the outcome of the Agricultural Compliance Statement (Bouwer, 2023), the agricultural land capability was found to be low due to, amongst others, the types of soils found on site which have a lower capability than identified at the desktop level.

10.14 Planning

10.14.1 Western Cape Provincial Spatial Development Framework

The Western Cape PSDF provides the long-term spatial vision for growth and development within the province. The proposed Project area is located within the Mossel Bay regional growth area and forms part of an existing development corridor associated with industrial, commercial and infrastructure-related land uses. The PSDF promotes compact and efficient settlement patterns, investment within existing development nodes, and the protection of environmentally sensitive areas. The proposed conservation area within the Project footprint contributes towards the protection of ecological resources, while the expansion of the Mossdustria Industrial Area supports the PSDF objective of directing growth towards established economic nodes.

10.14.2 Mossel Bay Municipal Spatial Development Framework

According to the MBLM SDF, the proposed Project area is situated adjacent to the existing Mossdustria Industrial Area and falls within an area identified for future urban expansion (**Figure 15**). The SDF recognises the need for additional industrial development land to support economic growth, employment creation and business investment within the municipality. The proposed industrial expansion area, renewable energy component and supporting infrastructure are therefore aligned with the intended spatial growth direction reflected in the SDF. In addition, the retention of a dedicated conservation area supports the SDF objective of protecting environmentally sensitive areas and maintaining ecological connectivity.

10.14.3 Mossel Bay Municipal Integrated Development Plan

The MBLM IDP identifies economic development, investment attraction, infrastructure expansion and job creation as key municipal development priorities. The municipality recognises the importance of providing land and infrastructure to stimulate industrial growth and strengthen the local economy. The proposed Project area forms part of the broader Mossdustria industrial precinct, which constitutes an established economic node within the municipality. As such, the proposed Project is consistent with the development objectives and growth priorities identified in the IDP

10.14.4 Land Use and Zoning Context

The Project area comprises a combination of existing industrial, agricultural and open space land uses. The proposed Project includes an expansion of the established Mossdustria industrial area, a motorsport arena, a renewable energy facility and a conservation area. Portions of the site are currently zoned Agricultural Zone I, while the proposed conservation area containing critically endangered Mossel Bay Shale Renosterveld is intended to be retained and rezoned to Open Space Zone III. The site is located immediately adjacent to

existing industrial development and associated infrastructure, supporting its role as a logical extension of the existing urban-industrial environment.

10.15 Waste

According to the Mossel Bay Municipality IDP (2025/2026), waste management services are provided by the MBLM as part of its basic service delivery mandate. The MBLM is responsible for refuse collection, street cleaning, operation of waste disposal facilities, implementation of waste minimisation initiatives and the management of illegal dumping within its jurisdiction. The MBLM further seeks to promote integrated waste management through recycling initiatives, waste reduction programmes and the development and maintenance of waste management infrastructure (MBLM, 2025).

The IDP (MBLM, 2025) identifies environmental sustainability and effective service delivery as key municipal objectives. In support of these objectives, the Municipality continues to implement waste management programmes aimed at improving refuse collection services, reducing illegal dumping, increasing recycling rates and ensuring the availability of adequate waste disposal infrastructure. Waste management services are provided to urban, industrial and commercial areas throughout the municipality, including the Mossdustria industrial precinct.

The proposed Project area is located adjacent to the existing Mossdustria Industrial Area, where waste management services are already established as part of the municipal service network. It is, however, noted that the Project area falls outside the 5 km buffer of formal waste drop-off facilities (MBLM, 2025). The surrounding area is characterised by industrial, commercial, transportation and agricultural land uses, all of which generate general waste streams that are managed through the municipal waste management system and licensed waste disposal facilities serving the MBLM area.

10.16 Transportation

Some of the information included in the following section was obtained from the Traffic Impact Assessment (GPL Consulting, 2023) (report contained as Appendix B to the Civil Engineering Services Report contained in **Appendix I**).

The proposed Project area is accessible via the National Route N2 and Provincial Road R327. The site is situated immediately south of the existing Mossdustria Industrial Area and forms part of a broader area identified by the MBLM for future industrial, commercial, tourism and associated development.

The transportation environment surrounding the site is characterised by a regional road network that provides connectivity between Mossel Bay, surrounding towns and the existing industrial activities within Mossdustria. The primary roads serving the area consist of the N2, the R327 and the internal Mossdustria road network (**Figure 47**). The N2 functions as a major

east-west transportation corridor linking Mossel Bay with Albertinia and other regional centres, while the R327 provides access between the N2, Mossdustria and Herbertsdale.

The N2 is classified as a Rural Class 1 Principal Arterial road and carries high volumes of regional traffic. In the vicinity of the study area, the road comprises a four-lane surfaced carriageway with turning lanes provided at the intersection with the R327. The road serves as an important transportation route for passenger vehicles, freight transport and industrial traffic moving through the Mossel Bay region. The posted speed limit along this section of the N2 is 100 km/h (GPL Consulting, 2023).

The R327 is classified as a Rural Class 3 Minor Arterial road and serves as the primary access route to Mossdustria. The road comprises a two-lane surfaced roadway with painted shoulders and links directly to the N2 approximately 2 km south of the proposed Project area. The R327 currently provides access to existing industrial properties, agricultural landholdings and rural developments within the surrounding area. No formal pedestrian sidewalks or street lighting are present along this section of the road. The posted speed limit is 100 km/h (GPL Consulting, 2023).

Access to the existing Mossdustria Industrial Area is provided via Unicorn Street, which intersects with the R327. Unicorn Street is classified as an Urban Class 4A Collector Street and currently represents the principal access point to the established industrial area. The road is surfaced, accommodates two-way traffic movement and is equipped with street lighting. However, no formal pedestrian walkways are currently provided. The speed limit on Unicorn Street is 60 km/h (GPL Consulting, 2023).

The key transportation nodes within the study area comprise the N2/R327 intersection (**Figure 48**) and the R327/Unicorn Street intersection (**Figure 49**). Both intersections currently operate under stop control on the minor road approaches and provide access between the regional road network and the Mossdustria precinct (GPL Consulting, 2023).

Public transport services are currently present within the study area, with minibus taxi services operating between Mossdustria and Mossel Bay via the N2 and R327 corridors. However, there are currently no formal public transport facilities, dedicated pedestrian walkways or formal pedestrian crossing infrastructure along the N2, R327 or within portions of the existing Mossdustria road network (GPL Consulting, 2023). The transportation environment is therefore predominantly vehicle-orientated, with access to the area largely reliant on private vehicles and informal public transport services.

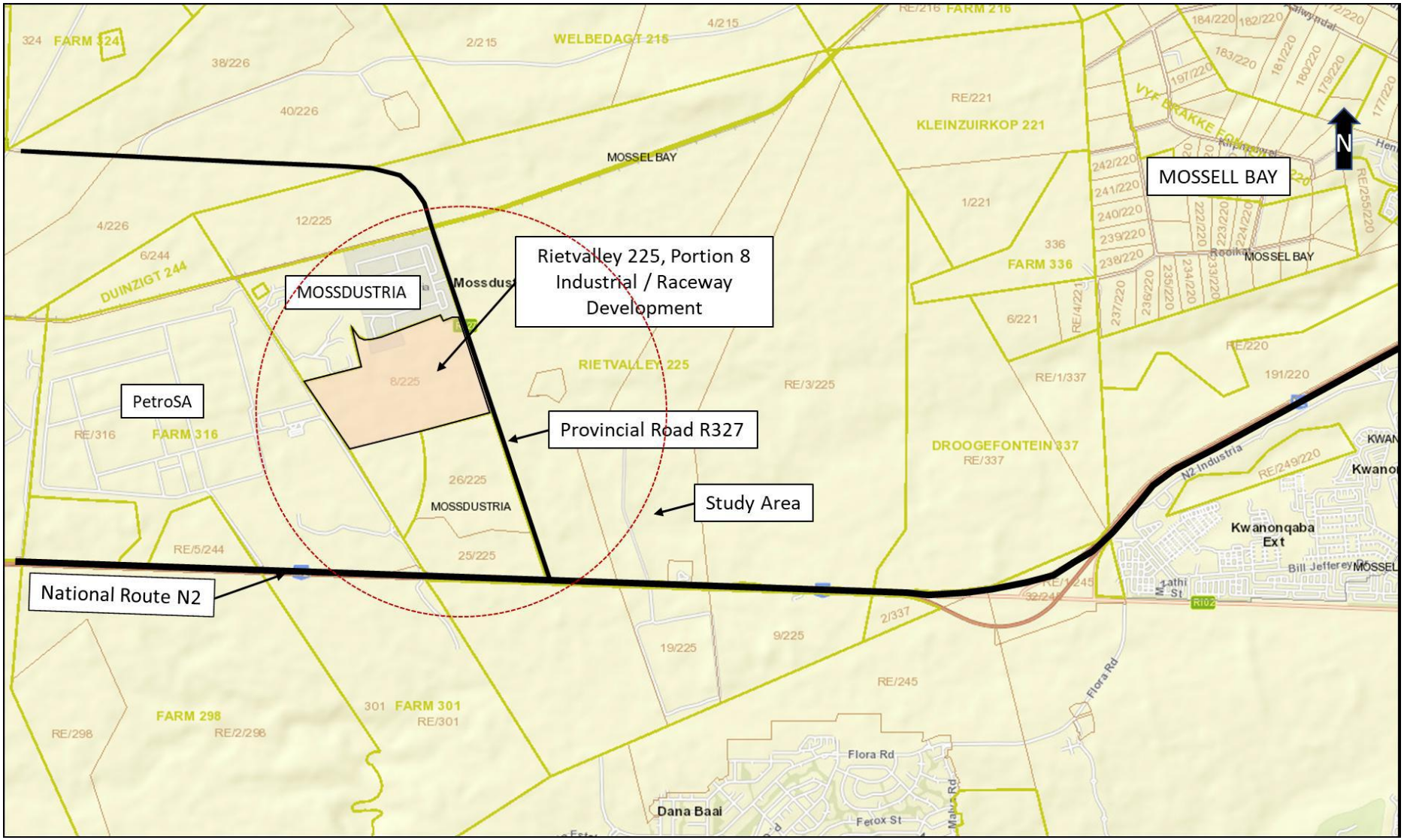

Figure 47: The Project Area in relation to the surrounding transportation network (GPL Consulting, 2023)



Figure 48: N2/R327 Existing Intersection Layout (GPL Consulting, 2023)



Figure 49: R327/Unicorn Street Existing Intersection Layout (GPL Consulting, 2023)

10.17 Heritage and Palaeontology

Some of the information included in the following sub-sections was obtained from the Archaeological Walkdown Report (Webley, 2023) (report contained in **Appendix F7**) and the Palaeotological Desktop Assessment (Butler, 2023) (report contained in **Appendix F8**). Refer to **Section 11.10** and **Section 12.17** for a synopsis of the archaeological walkdown study and a related impact assessment, respectively. Refer to **Section 11.11** and **Section 12.18** for a synopsis of the palaeontological desktop study and a related impact assessment, respectively.

10.17.1 Archaeology and Heritage

The surrounding landscape of the Project site is characterised by a mixture of industrial, agricultural and rural land uses. A historic farmstead associated with Rietvalley Farm, currently operating as Reed Valley Wines, is situated approximately 500 m east of the site and forms part of the broader historical landscape of the area (Webley, 2023).

The site has been subject to extensive historical transformation as a result of agricultural activities and more recent land uses. Evidence of former agricultural practices includes cleared agricultural lands, stone heaps associated with land clearing activities, an old reservoir, animal watering infrastructure and remnants of former ostrich farming operations. The western portion of the property was previously utilised as an ostrich quarantine facility, while portions of the site are currently utilised for horse grazing. Refuse dumping, building rubble and other disturbance were observed across sections of the property. These activities have contributed to the modified character of the receiving environment (Webley, 2023).

The archaeological context of the broader Mossel Bay area is associated with a long history of human occupation extending from the Early Stone Age through to more recent periods. The wider region contains important archaeological resources, including occurrences of Early Stone Age, Middle Stone Age and Late Stone Age artefacts. Of particular significance is the Pinnacle Point complex located approximately 8 km southeast of the study area, which is recognised internationally for its archaeological importance and evidence of early modern human occupation (Webley, 2023).

Previous archaeological investigations undertaken within the Mossel Bay region have recorded dispersed scatters of Stone Age artefacts associated with agricultural landscapes and exposed ground surfaces. Similar archaeological resources have been identified in areas surrounding the proposed Project site, particularly within previously cultivated lands. The archaeological landscape of the area is therefore representative of the broader archaeological context associated with the southern Cape coastal forelands.

The archaeological walkdown survey (Webley, 2023) undertaken across the site identified a small number of isolated Early Stone Age quartzite artefacts, including handaxes, flakes and cores, primarily within the southern portions of the property where quartzite cobbles occur naturally. Additional features observed included stone heaps associated with historical

agricultural land clearing activities and remnants of former farming infrastructure (refer to **Section 11.10** for more details on the specialist study).

10.17.2 Palaeontology

The proposed Project area is situated within a region underlain by sedimentary rocks of the Cape Supergroup, specifically formations of the Table Mountain Group and the Nardouw Subgroup. According to regional geological mapping, the site is underlain by the Peninsula Formation, Tchando Formation and Rietvlei Formation. These geological units form part of the broader geological framework of the southern Cape and record approximately 170 million years of Earth history dating from the Ordovician to Carboniferous periods (**Figure 17**).

The geological environment of the area is characterised predominantly by quartzitic sandstones with subordinate shale and conglomerate horizons. The Rietvlei Formation includes braided fluvial and shallow marine-influenced sandstone deposits, while the Peninsula Formation is associated with quartz arenite and related sedimentary deposits (Butler, 2023). These geological formations are important because they provide the conditions under which palaeontological resources may occur within the broader region.

The palaeontological record associated with the Cape Supergroup is largely represented by trace fossils and marine invertebrate fossils preserved within suitable sedimentary horizons. Fossils recorded from the broader geological units include burrows, arthropod trackways, trilobite traces and other ichnofossils, together with marine invertebrate remains preserved within fine-grained sedimentary deposits. These resources contribute to the scientific understanding of ancient shallow marine, estuarine and fluvial environments that existed in the region during the Palaeozoic Era (Butler, 2023).

The SAHRIS PalaeoMap (**Figure 50**) and the Screening Tool (**Figure 52**) identify areas of high, moderate and low palaeontological sensitivity associated with the underlying formations across the Project site.

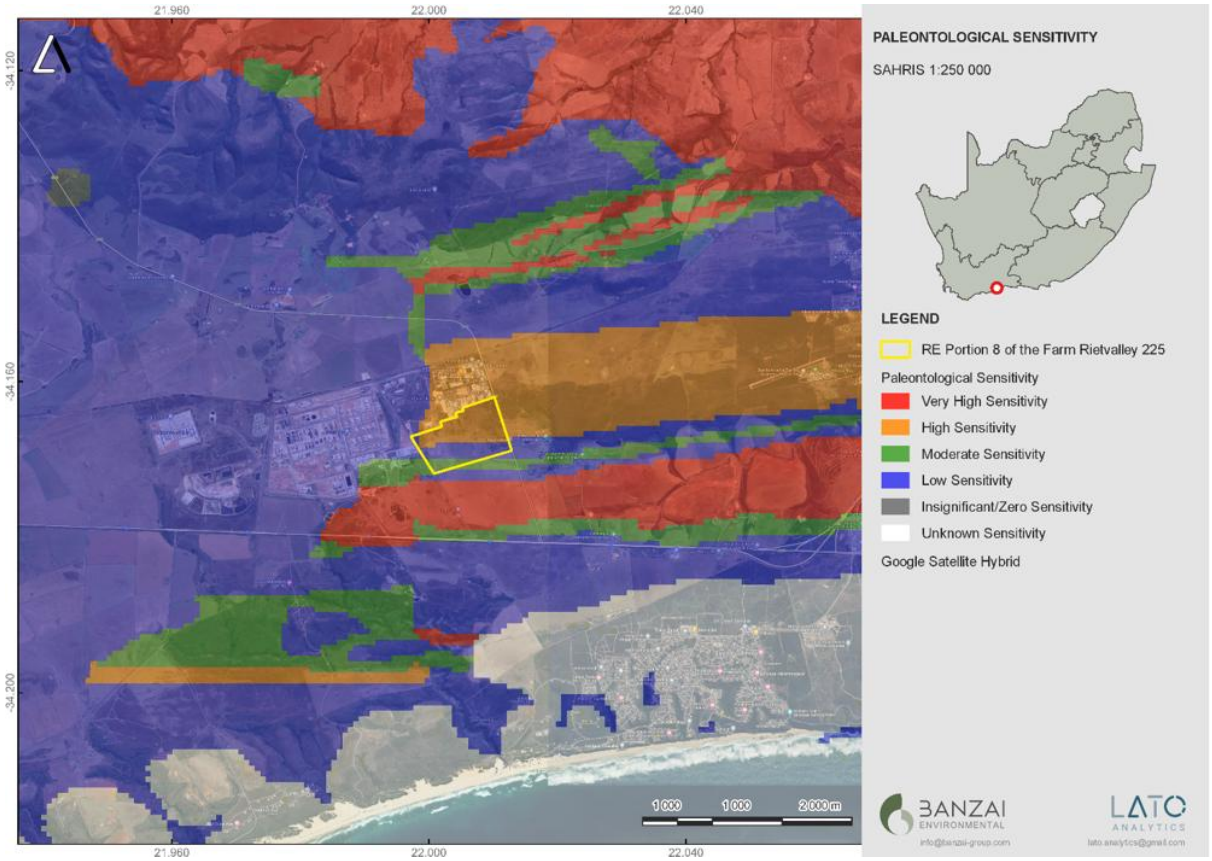

Figure 50: SAHRIS Palaeosensitivity Map (Butler, 2023)

10.17.3 The Screening Tool

The following is noted in terms of the sensitivity of the site, as determined using the Screening Tool:

- Archaeological and Cultural Heritage Theme – low sensitivity (**Figure 51**); and
- Palaeontology Theme – high, moderate and low sensitivity associated with the underlying geological formations (**Figure 52**).

The Archaeological Walkdown Study (Webley, 2023) confirms that the cultural and heritage theme is low, while the Palaeontological Desktop Assessment disputes the sensitivity, confirming that the overall sensitivity of the Project site is low (refer to **Section 11.11** for further information).



Figure 51: Map of Relative Archaeological and Cultural Heritage Theme Sensitivity (Screening Tool)

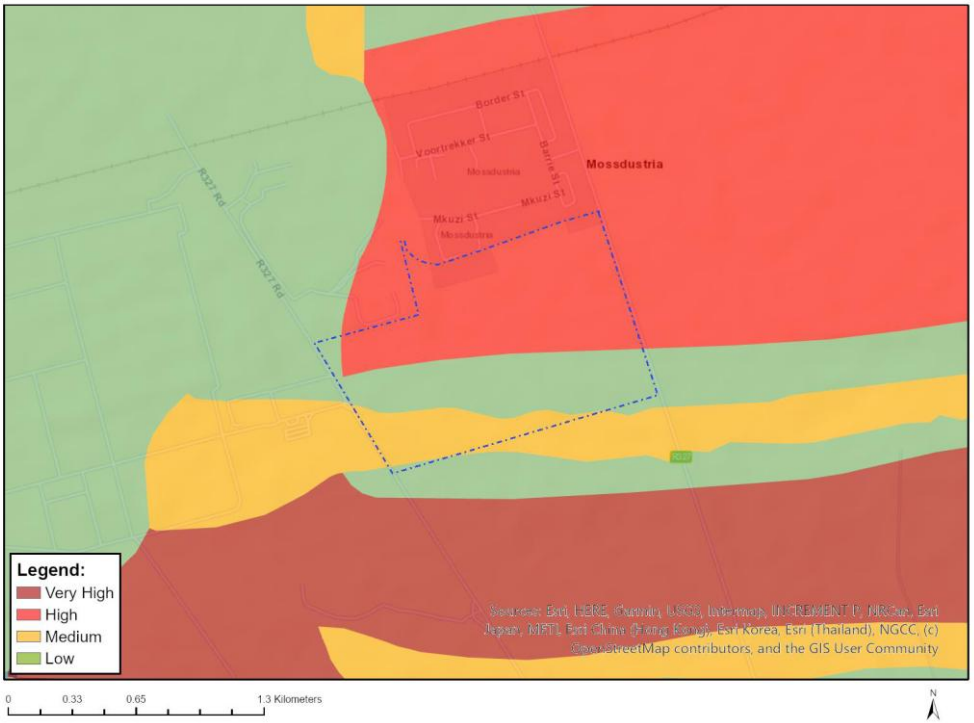

Figure 52: Map of Relative Palaeontology Theme Sensitivity (Screening Tool).

10.18 Existing Structures and Infrastructure

The proposed Project area is located immediately south of the existing Mossdustria Industrial Area and is situated within an established municipal services and infrastructure corridor. The surrounding area contains a range of industrial, transportation, energy and municipal infrastructure associated with the existing Mossdustria precinct, PetroSA facilities and the Gourikwa Power Station. Access to the site is provided via the regional road network comprising the N2 National Road, the R327 and the existing Mossdustria internal road network. These facilities contribute to a well-established infrastructure environment surrounding the proposed Project area.

The Project site itself has historically been utilised for agricultural purposes and, more recently, for ostrich farming activities. Existing structures and infrastructure identified on the property include remnants of former ostrich farming infrastructure, fencing, an old reservoir, animal drinking troughs and associated agricultural features and an existing powerline that traverses the site (**Figure 53**). Evidence of historical land transformation is also present in the form of stone heaps resulting from previous land clearing activities. These structures are primarily associated with the historical agricultural use of the property, except for the powerline that traverses the site.



Figure 53: Existing powerlines within the Project site

10.19 Health

Within the MBLM, the public healthcare network comprises (MBLM, 2025):

- 5 fixed Primary Health Care (PHC) clinics
- 11 mobile PHC clinics
- 2 Community Day Centres
- 1 District Hospital
- 3 Emergency Medical Services Ambulances

The MBLM IDP (MBLM, 2025) identifies several planned healthcare initiatives and facility upgrades within the municipal area, including the expansion of existing clinics and the

proposed development of additional healthcare infrastructure to support future population growth and community health needs.

The Project site is located 2 km north of the N2 and only 8 km to the west of Mossel Bay. Therefore, the Project site is in close proximity (via vehicle) to the major private and public healthcare services networks available to residents, employees and visitors within the MBLM.

11 SUMMARY OF SPECIALIST STUDIES

11.1 Specialist Studies undertaken as part of the EIA

A crucial element of the Plan of Study for the EIA prepared during the Scoping phase was to provide the Terms of Reference for the requisite specialist studies triggered during Scoping. According to Münster (2005), a 'trigger' is "*a particular characteristic of either the receiving environment or the proposed project which indicates that there is likely to be an issue and/or potentially significant impact associated with that proposed development that may require specialist input*".

The requisite specialist studies 'triggered' by the findings of the Scoping process, aimed at addressing the key issues and compliance with legal obligations, include the following:

1. Aquatic Ecology Impact Assessment.
2. Terrestrial Ecology Impact Assessment.
3. Noise Impact Assessment.
4. Avifaunal Impact Assessment.
5. Landscape/Visual Impact Assessment.
6. Archaeological/Heritage Walkdown.
7. Palaeontology Desktop Assessment.
8. Socio-Economic Impact Assessment.
9. Land Use Planning Risk Assessment.
10. Geohydrology Impact Assessment.
11. Agricultural Compliance Statement.

11.2 Specialist Studies identified by the Screening Tool

As mentioned in **Section 6.3**, Screening Report for the Project was compiled by means of the Screening Tool, which is appended to the Application Form (refer to the Appendices of the Scoping Report). **Table 12** lists the specialist studies that were identified in the Screening Report and notes the relevance of these studies to the Project based on SSV.

Table 12: Relevance of specialist studies identified in the Screening Report

Specialist Study identified in Screening Report	Relevance to the Project following Site Sensitivity Verification
Agricultural Impact Assessment	According to the Screening Tool, the site occurs in areas of High sensitivity for the Agricultural Theme. Based on the SSV findings, the agricultural land capability was determined to be low. **Therefore, an Agricultural Compliance Statement was undertaken (contained in Appendix F10), and the findings are presented in the EIA Report.**
Terrestrial Biodiversity Impact Assessment	According to the Screening Tool, the Terrestrial Biodiversity Theme is Very High

Specialist Study identified in Screening Report	Relevance to the Project following Site Sensitivity Verification
	Based on the SSV findings, the sensitivity of terrestrial biodiversity ranges from very low to very high across the site. **Therefore, a Terrestrial Ecological Impact Assessment was undertaken (contained in Appendix F3), and the findings are presented in the EIA Report.**
Plant Species Assessment	The DFFE Screening Tool has classified the proposed Project site as of Medium sensitivity for the Plant Species Theme Sensitivity. Based on the SSV findings, the sensitivity of plant species ranges from very low to very high across the site. **Therefore, a Terrestrial Ecological Impact Assessment was undertaken (contained in Appendix F3), and the findings are presented in the EIA Report.**
Animal Species Assessment	The DFFE Screening Tool has classified the proposed Project site as High for Relative Animal Species Theme Sensitivity. Based on the findings of the SSV, faunal diversity is likely to be strongly correlated with habitat availability and diversity, and this means that essentially the high sensitivity botanical areas are also likely to be the highest sensitivity faunal areas. **Therefore, a Terrestrial Ecological Impact Assessment was undertaken (contained in Appendix F3), and the findings are presented in the EIA Report**. Additionally, the Screening Tool Report identified a possible site environmental sensitivity of Low for the Avian theme and High and Medium for Aves under the Animal Species theme due to the potential occurrence of Species of Conservation Concern (SCC) within the study area. **Therefore, an Avifaunal Impact Assessment was undertaken (contained in Appendix F5), and the findings are presented in the EIA Report**.
Aquatic Biodiversity Impact Assessment	According to the Screening Tool, the site occurs in an area of Very High sensitivity in terms of the Aquatic Biodiversity Theme. Based on the findings of the SSV, aquatic features relevant to the proposed site have been identified as three wetlands, two watercourses and two artificial stormwater infrastructure. **Therefore, an Aquatic Ecology Impact Assessment was undertaken (contained in Appendix F1), and the findings are presented in the EIA Report**.
Archaeological and Cultural Heritage Impact Assessment	According to the Screening Tool, the site occurs in an area of Low Archaeological and Cultural Heritage Theme Sensitivity. A Heritage Specialist conducted an archaeological walkover of the site on 14 and 16 March 2023. Based on the findings of this SSV, the Specialist recommended that a Heritage Impact Assessment is not required. A Notice of Intent to Develop was provided with the SSV to HWC, and comments were received confirming that no further studies were required (refer to the CRR contained in **Appendix L3**). **Therefore, only the findings of the Archaeological Walkdown Study (contained in Appendix F7) are included in the EIA Report**.
Palaeontology Impact Assessment	According to the Screening Tool, the proposed site occurs in an area of Low, Medium and High Palaeontology Sensitivity. The SAHRIS Paleo Map agrees with the findings of the Screening Tool. A desktop Palaeontology study (Butler, 2023) confirmed that the sensitivity of the site was low and no further detailed studies were required. **Therefore, the findings of the Palaeontology Desktop Assessment (contained in Appendix F8) are presented in the EIA Report**.
Geotechnical Assessment	Although the Screening Tool indicates the need for a Geotechnical Assessment, the tool did not indicate a Geotechnical sensitivity for the study area. A Geohydrology Report was done and provided a description of the geological conditions. **The findings of the Geohydrological Impact Assessment (contained in Appendix F2) are presented in the EIA Report.** The Civil Engineering Services Report does, however, recommend that a geotechnical investigation be undertaken during the detailed design phase to confirm founding conditions for roads, infrastructure and stormwater management

Specialist Study identified in Screening Report	Relevance to the Project following Site Sensitivity Verification
	structures, and to inform the design of attenuation ponds and associated infrastructure.
Landscape/Visual	According to the DFFE Screening Tool, there is a need for a Landscape/Visual Impact Assessment for the Solar PV facility sensitivity. The Relative Landscape (Solar) Theme Sensitivity has been classified as very High by the Screening Tool. **A Landscape/Visual Impact Assessment was undertaken (contained in Appendix F6), and the findings are presented in the EIA Report**.
Socio-Economic Assessment	According to the Screening Tool, there is a need for a Socio-Economic Impact Assessment. However, no socio-economic sensitivity was indicated for the study area. **A Socio-Economic Impact Assessment was undertaken (contained in Appendix F9), and the findings are presented in the EIA Report**.
RFI Assessment	The DFFE Screening Tool has identified the RFI Theme Sensitivity for the proposed Project as Medium sensitivity. However, the proposed site is located in an area earmarked for industrial expansion/ development and situated next to already existing industrial buildings. Therefore, the impact expected from the proposed development on the RFI Theme Sensitivity is not expected to be significant in light of already existing industries. Thus, **no RFI Assessment was undertaken**.
Civil Aviation Assessment	According to the Screening Tool, the Civil Aviation Theme Sensitivity is Medium for the Project site. However, the proposed site is located in an area earmarked for industrial expansion/ development and situated next to already existing industrial buildings. Therefore, the impact expected from the proposed development is not expected to be significant in light of already existing industries. Thus, **no Civil Aviation Assessment was undertaken**. The South African Civil Aviation Authority are being engaged with as part of the S&EIR Process during the various Public Review Periods.
Defence Assessment	According to the Screening Tool, the relative Defence Theme sensitivity is Low for the proposed Project site. Upon interrogation of the surrounding environment, through the site visit and desktop review, no evidence was found of any military or defence operations or installations. The site verification thus supports/confirms the findings of the Screening Tool and the site sensitivity is identified as low. Therefore, **no Defence Assessment was undertaken**.

11.3 Incorporating the Findings from Specialist Studies

The Guideline for the review of specialist input in EIA processes (Keatimilwe & Ashton, 2005) was used for including the findings of the specialist studies into the EIA Report. Key considerations included the following:

- Ensuring that the specialists have adequately addressed I&APs' issues and specific requirements prescribed by environmental authorities;
- Ensuring that the specialists' input is relevant, appropriate and unambiguous; and
- Verifying that information regarding the receiving ecological, social and economic environment has been accurately reflected and considered.

The information obtained from the respective specialist studies was incorporated into the EIA report in the following manner:

- The assumptions and limitations identified in each study were included in **Section 7**;
- The information was used to complete the description of the receiving environment (**Section 10**) in a more detailed and site-specific manner;
- A summary of each specialist study is contained in the sub-sections to follow (**Section 11.4** – **Section 11.14**), focusing on the approach to each study, key findings and conclusions drawn;
- The specialists' impact assessments, and the identified mitigation measures, were included in the overall project impact assessment contained in **Section 12**;
- The evaluations performed by the specialists on the alternatives were included in **Section 13** to identify the most favourable option;
- Specialist input was obtained to address comments made by I&APs that related to specific environmental features pertaining to each specialist discipline; and
- Salient recommendations made by the specialists were taken forward to the final EIA conclusions in **Section 15**.

Refer to the content of each specialist study for the declarations from the respective specialists.

11.4 Aquatic Ecology Impact Assessment

A summary of the Aquatic Ecology Impact Assessment (Colloty, 2026a) (contained in **Appendix F1**) follows.

11.4.1 Details of Specialist

The details of the specialists who undertook the Aquatic Ecology Impact Assessment are outlined in **Table 13**.

Table 13: Aquatic Specialist Details

Organisation	EnviroSci (Pty) Ltd
Name	Dr Brian Colloty
Qualification	PhD (Botany – Estuaries & Mangroves)
Affiliation (if applicable)	SACNASP Professional Scientist (Ecological Science - 400268/07)

11.4.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Delineate wetlands and other aquatic features occurring within and surrounding the study area in accordance with DWS guidelines.
- Identify and classify aquatic ecosystems and determine their hydrogeomorphic (HGM) characteristics.
- Verify the aquatic biodiversity sensitivity assigned by the Screening Tool and assess the aquatic sensitivity of the site.

- Assess the Present Ecological State (PES), ecological integrity, ecological importance and sensitivity (EIS) of identified aquatic features.
- Evaluate the ecosystem services provided by wetlands and aquatic habitats within the study area.
- Determine the potential interaction between the proposed Project and aquatic ecosystems.
- Identify aquatic constraints and provide recommendations to minimise impacts on wetlands and watercourses.

11.4.3 Methodology

The assessment included the following tasks (amongst others):

- Review of relevant legislation, policies, aquatic databases and biodiversity planning tools, including the National Wetland Inventory, NFEPA datasets, WCBSP and the Screening Tool outputs.
- Desktop assessment of hydrology, topography, vegetation, wetlands, catchments and aquatic features occurring within and surrounding the study area.
- Field investigations undertaken during multiple site visits in April 2022, October 2022 and May 2025 to ground-truth desktop information and verify aquatic features.
- Wetland identification and delineation using Department of Water Affairs and Forestry wetland delineation methodologies, including assessment of terrain position, hydromorphic soils, soil wetness indicators and hydrophytic vegetation.
- HGM classification of aquatic systems using the National Wetland Classification System and associated wetland classification protocols.
- Assessment of ecological integrity and PES using WETLAND-IHI and WET-Health methodologies.
- Evaluation of EIS of identified aquatic features and associated catchments.
- Assessment of ecosystem services provided by wetlands using the WET-EcoServices methodology.
- Mapping of aquatic features, regulated areas and aquatic sensitivities in relation to the proposed Project layout.

11.4.4 Key Findings of the Study

11.4.4.1 Aquatic Setting and Sensitivity Verification

The DFFE Screening Tool identified the study area as having Very High aquatic sensitivity, driven by the presence of wetland and aquatic biodiversity features, including wetland CBAs, ESAs and a FEPA sub-catchment. However, following detailed field verification, the specialist determined that the proposed Project footprint is largely located within previously disturbed areas and does not directly affect functional aquatic ecosystems. The aquatic sensitivity of the Project footprint was therefore downgraded to Moderate/Medium sensitivity (**Figure 54**).

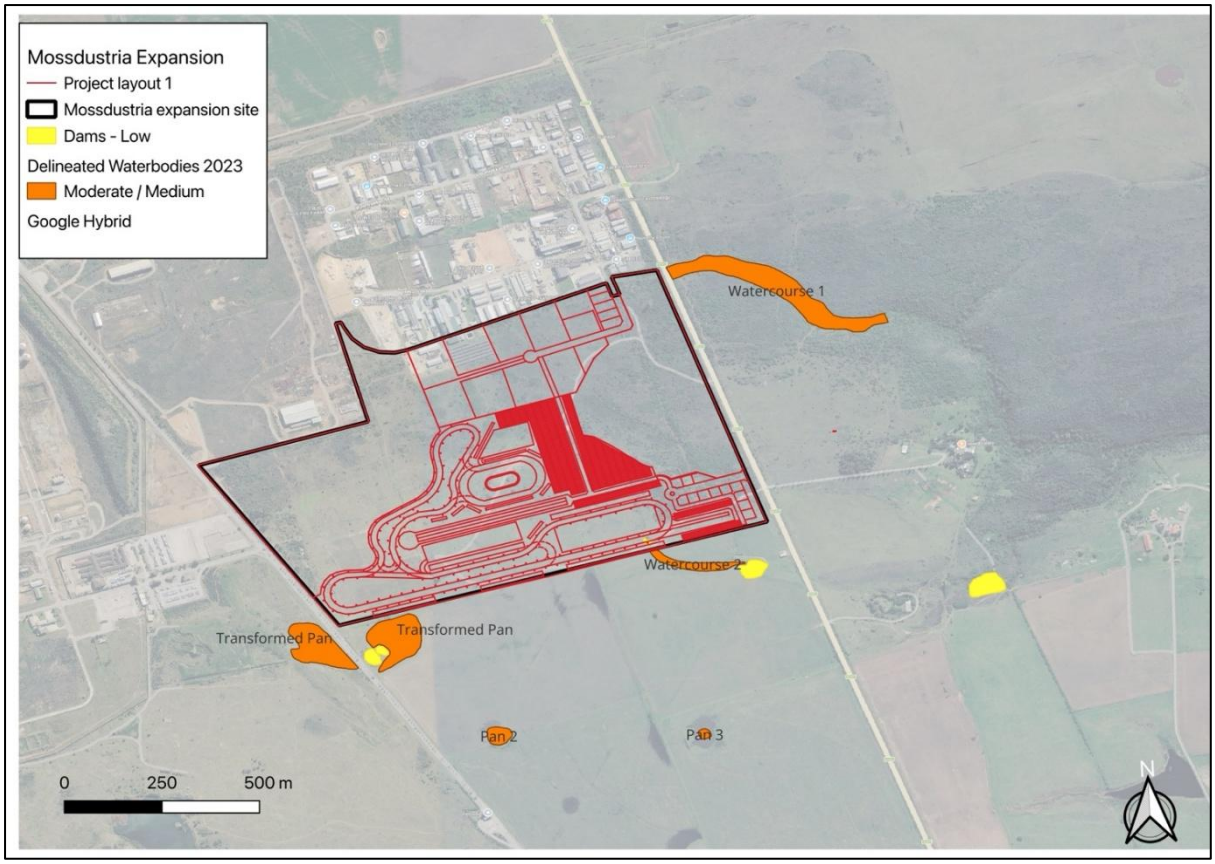

Figure 54: Overall Aquatic Sensitivity in relation to the Project layout (Colloty, 2026a)

11.4.4.2 Aquatic Features Identified

Desktop assessments, including the National Wetland Inventory, biodiversity planning datasets and the Screening Tool outputs, identified a number of wetlands, drainage features and aquatic biodiversity features within the broader study area and surrounding catchment. These findings resulted in the site being assigned a Very High aquatic sensitivity rating and necessitated a detailed aquatic assessment.

During the detailed field investigations undertaken in April 2022, October 2022 and May 2025, the majority of the aquatic features initially identified through desktop mapping were found to occur outside the proposed Project footprint or within highly modified areas influenced by historical agricultural activities, industrial development and stormwater infrastructure.

Although several minor ephemeral drainage lines and watercourse features were identified within the broader landscape, field investigations confirmed that no functional natural wetlands occur within the proposed Project footprint itself. Areas that appeared as watercourses or wetland features on desktop datasets were found to comprise shallow drainage pathways with no distinct instream habitat, no obligate riparian vegetation and limited evidence of wetland functionality. The specialist therefore concluded that these features do not constitute significant natural aquatic systems within the Project area.

The assessment further found that reed-dominated areas associated with stormwater drainage infrastructure were not natural wetlands but rather artificial systems that have

developed in response to altered hydrological conditions created by previous development activities. In particular, the reedbeds dominated by *Phragmites australis* and *Typha capensis* occur adjacent to culverts and engineered stormwater channels and are associated with concentrated runoff from the existing Mossdustria development. These systems are indicative of disturbed hydrological conditions and elevated nutrient inputs rather than naturally functioning wetland ecosystems.

Natural aquatic features identified within the broader area comprise three isolated depression wetlands (pans) and two riverine systems associated with the Tweekuilen catchment (**Figure 27** and **Figure 55** illustrates the delineated watercourses found on site). These features occur outside the proposed Project footprint and are sufficiently separated from the proposed infrastructure such that no direct impacts are anticipated.

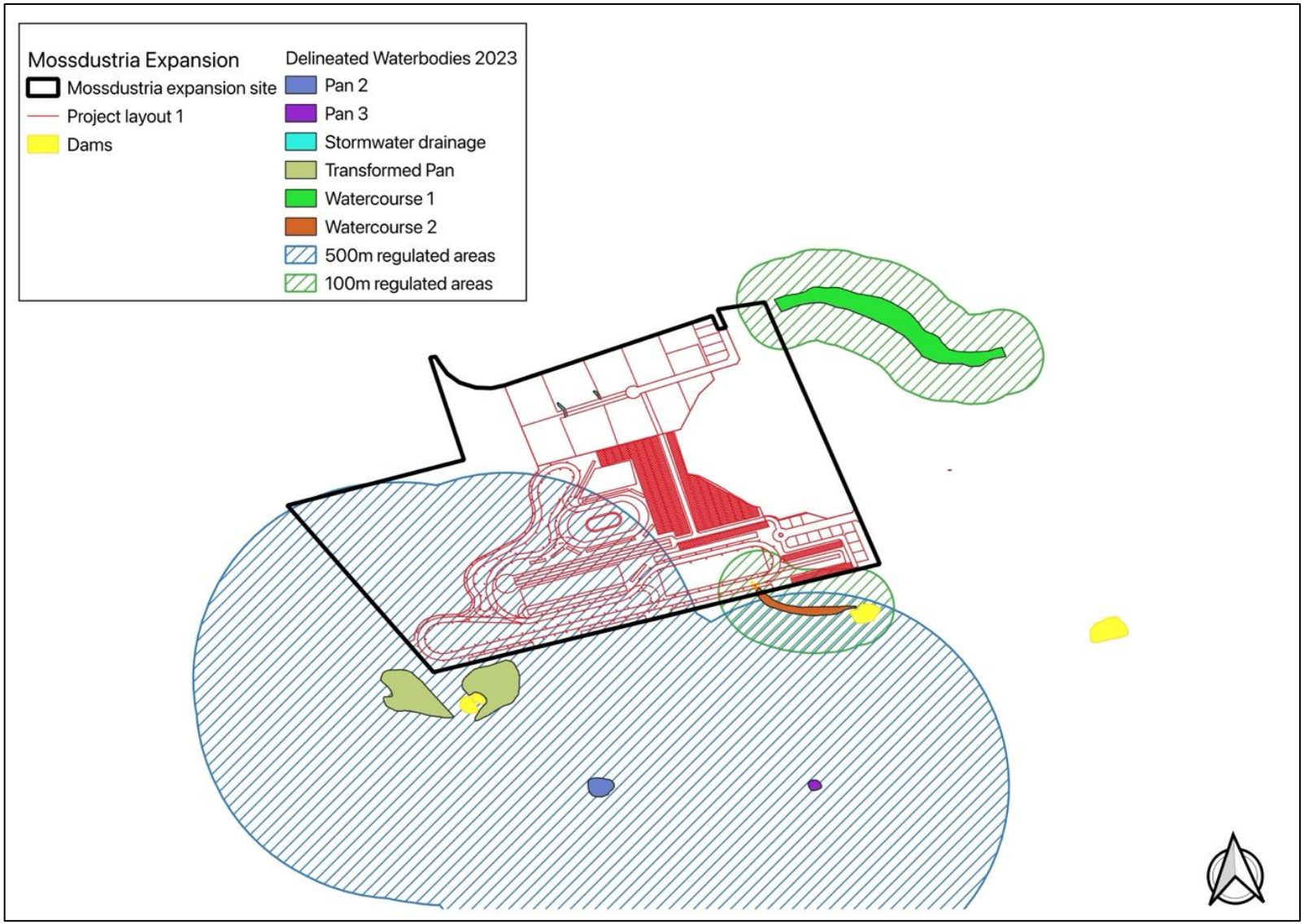

Figure 55: The Delineated Aquatic Features within the PAOI and their regulated zones (Colloty, 2026a)

11.4.4.3 Aquatic Habitat Characteristics

The aquatic environment is characterised by minor ephemeral watercourses, isolated depressions and localised reedbed systems associated with stormwater drainage infrastructure. The reedbed systems are dominated by species such as *Phragmites australis* and *Typha capensis*, which are indicative of disturbed or nutrient-enriched environments. Natural riverine habitats and pan systems support typical indigenous vegetation associated with the Southern Coastal Belt Ecoregion.

No listed aquatic plant species were recorded during the surveys. Although protected amphibian species have previously been recorded within the broader catchment, these were associated with aquatic habitats located beyond the Project footprint.

11.4.4.4 Ecological Condition and Sensitivity

Assessment of the broader aquatic systems indicated that the surrounding watercourses and wetlands are generally in a PES Category D (Largely Modified), with Moderate Ecological Importance and High Ecological Sensitivity at the catchment scale. Localised impacts associated with agriculture, alien invasive vegetation and catchment fragmentation have contributed to the modified condition of these systems.

At the feature scale, all identified pans and watercourses were assessed as having Moderate overall sensitivity, reflecting their ecological functionality despite existing modification. The specialist nevertheless confirmed that these features occur outside the proposed Project footprint and are unlikely to experience direct impacts. **Table 14** summarises the determined PES and EIS for the delineated watercourses.

Table 14: PES/EIS Summary of the Delineated Watercourses (Colloty, 2026a)

Feature Number	HGM Type	PES	EIS	Overall Sensitivity	Buffer as per Macfarlane & Bredin (2017) Model (m)
Pan 2	Pan / Depression	D	Moderate	Moderate	Not applicable as these are beyond the site or fragmented in such a way that no direct impacts are expected
Pan 3	Pan / Depression	D	Moderate	Moderate	
Transformed Pan	Pan / Depression	D	Moderate	Moderate	
Watercourse 1	Riverine	D	Moderate	Moderate	
Watercourse 2	Riverine	D	Moderate	Moderate	

11.4.4.5 Ecosystem Services

The WET-EcoServices assessment found that the identified wetlands and depressions provide relatively limited ecosystem service benefits. Most regulating, supporting, provisioning and cultural ecosystem services were rated as Very Low. The primary ecological function identified for these systems relates to localised attenuation and temporary storage of surface water.

11.4.5 Impact Assessment

Please refer to **Section 12.12** for the results from the impact assessment from this study.

11.4.6 Conclusions

The Aquatic Ecology Impact Assessment concluded that although desktop screening tools and biodiversity datasets identified aquatic features and assigned a Very High aquatic sensitivity rating to the broader study area, detailed field investigations confirmed that the proposed Project footprint does not contain significant natural wetland systems or watercourses. Features initially identified through desktop mapping were either located outside the Project footprint or were found to comprise artificial or highly modified drainage features associated with historical land use activities, stormwater infrastructure and previous development. Consequently, the aquatic sensitivity of the Project footprint was verified as being lower than that indicated by the Screening Tool.

The study confirmed the presence of aquatic ecosystems within the broader area, including three depression/pan wetlands and two riverine systems linked to the Tweekuilen River catchment. These systems retain ecological value and perform important hydrological functions; however, they are located outside the Project footprint and are not affected directly by the Project. The aquatic features identified within the broader catchment are generally in a modified ecological condition, reflecting the influence of historical agricultural activities, invasion by alien vegetation and altered hydrological processes.

Based on the findings of the assessment, the specialist concluded that the proposed Project is appropriately located within previously disturbed areas and avoids direct impacts on functional aquatic ecosystems. The specialist is of the opinion that no fatal flaws or aquatic constraints exist that would preclude the proposed Project, provided that the recommended stormwater management, erosion control and aquatic protection measures are incorporated into the EMPr and implemented throughout the Project lifecycle.

11.5 Geohydrology Impact Assessment

A summary of the Geohydrology Impact Assessment (Oberholzer *et al.,* 2026) (contained in **Appendix F2**) follows.

11.5.1 Details of Specialist

The details of the specialists that undertook the Geohydrology Impact Assessment are outlined in **Table 15**.

Table 15: Geohydrologist Specialist Details

Organisation	GEOSS South Africa (Pty) Ltd		
Name	Jana Oberholzer	Lizanne Smit	Julian Conrad

Qualification	BSc (Geo-Environmental Science)	MSc (Natural Sciences: Integrated Water Management)	MSc (Hydrogeology)
Affiliation (if applicable)	SACNASP Candidate Scientist (Earth Science - 171408)	SACNASP Professional Scientist (Earth Science – 126348)	SACNASP Professional Scientist (Earth Science – 400159/05)

11.5.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Characterise the geohydrological setting of the study area and describe the underlying aquifer systems.
- Assess the importance, sensitivity and vulnerability of groundwater resources within and surrounding the site.
- Determine the potential interaction between groundwater, wetlands and surface water features associated with the site.
- Establish baseline groundwater quality conditions through field investigations and water quality sampling.
- Assess the hydrogeological implications of the proposed Project and associated water uses requiring authorisation under Section 21(c) and (i) of the NWA.
- Identify groundwater-related risks associated with the proposed Project, including impacts on groundwater quality, shallow groundwater flow and wetland systems.
- Provide groundwater management and monitoring recommendations to protect groundwater and associated aquatic resources throughout the project lifecycle.

11.5.3 Methodology

The assessment included the following tasks (amongst others):

- Review of existing groundwater, hydrogeological, geological and climatic information relevant to the study area.
- Assessment of regional groundwater information through interrogation of the National Groundwater Archive (NGA) and Water Use Authorisation and Registration Management System (WARMS) databases to identify nearby groundwater users, boreholes and historical groundwater information.
- Review of regional aquifer yield, groundwater quality and groundwater vulnerability mapping compiled by the Department of Water Affairs and Forestry (DWAF).
- Site investigations undertaken on 29 July 2026, including a hydrocensus, borehole inspections, groundwater level observations and collection of groundwater and surface water samples.
- Installation and logging of a shallow piezometer through hand-auger investigations to evaluate subsurface conditions, shallow groundwater occurrence and infiltration characteristics.
- Collection of groundwater, wetland and surface water samples for laboratory analysis, including inorganic water quality analyses and stable isotope assessments.

- ❖ Assessment of groundwater quality against SANS 241:2015 and DWAF (1998) water quality guidelines.
- ❖ Evaluation of groundwater-surface water interactions using hydrochemical information, isotope analysis, geological information and observed site conditions.
- ❖ Development of a conceptual hydrogeological model describing groundwater occurrence, recharge mechanisms, groundwater flow pathways and the relationship between groundwater and wetland systems.

11.5.4 Key Findings of the Study

11.5.4.1 Hydrogeological Setting

The study found that the site is predominantly underlain by Tertiary-Quaternary loam and sandy loam soils overlying the fractured quartzitic sandstones of the Skurweberg Formation, which forms the principal aquifer within the area. Groundwater occurrence within the Skurweberg Formation is primarily controlled by fractures, joints and weathered zones rather than primary pore spaces. The fractured Skurweberg Formation therefore represents the main groundwater resource beneath the site.

Field investigations identified dense clay-rich material interbedded with very fine sand to a depth of approximately 1.7 meters below ground level (mbgl). The presence of these low-permeability materials is considered important from a hydrogeological perspective as they may restrict vertical infiltration, promote surface runoff and contribute to the development of shallow perched water and wetland conditions.

11.5.4.2 Groundwater Resources and Aquifer Characteristics

The regional groundwater resource is characterised as a fractured aquifer system exhibiting generally low to moderate groundwater potential, with average expected yields ranging between approximately 0.5 and 2.0 L/s. Historical borehole information within the surrounding area indicates considerable variability in borehole yields, reflecting the importance of local fracture development in controlling groundwater occurrence.

Desktop investigations identified numerous groundwater users and boreholes within the surrounding area, highlighting the presence of groundwater-dependent activities in the broader region. The assessment therefore recognised the importance of protecting groundwater quality within both the local and regional aquifer systems.

11.5.4.3 Groundwater Quality

Groundwater quality investigations revealed notable differences between shallow and deeper groundwater conditions. The shallow groundwater intercepted during the site investigation exhibited relatively fresh water characteristics with electrical conductivity values of approximately 115 mS/m. In contrast, groundwater sampled from the deeper fractured aquifer was found to be highly mineralised, exhibiting elevated salinity, sodium and chloride concentrations (refer to **Table 16**).

Laboratory analyses indicated that the deeper groundwater exceeds several SANS 241 drinking water guideline thresholds and is not suitable for domestic use without treatment (**Table 16**). The groundwater chemistry is characterised by a sodium-chloride hydrochemical signature and reflects an evolved groundwater system that has undergone extensive groundwater-rock interaction and potentially some marine influence associated with the coastal setting of the site.

Table 16: Groundwater quality analysis results according to SANS 241-1:2015

Analyses	HC_BH1	SANS 241-1:2015
Date Sampled	31 Jul 2026	
pH (at 25°C)	7.28	≥5 - ≤9.7 Operational
Conductivity (mS/m) (at 25°C)	1 065.00	≤170 Aesthetic
Total Dissolved Solids (mg/L)	7 220.70	≤1 200 Aesthetic
Turbidity (NTU)	12.10	≤1 Operational; ≤5 Aesthetic
Colour (mg/L as Pt)	<15	≤15 Aesthetic
Langelier Saturation Index (at 25°C)	0.24	
Sodium Adsorption Ratio (at 25°C)	29.38	
Sodium (mg/L as Na)	2 078.00	≤200 Aesthetic
Potassium (mg/L as K)	40.00	
Magnesium (mg/L as Mg)	156.00	
Calcium (mg/L as Ca)	122.00	
Chloride (mg/L as Cl)	3 426.09	≤300 Aesthetic
Free Chlorine (mg/L as Cl)	0.02	≤5 Chronic Health
Sulphate (mg/L as SO_4)	466.05	≤250 Aesthetic; ≤500 Acute Health
Combined Nitrate & Nitrite Nitrogen (as ratio)	0.08	≤1 Acute Health
Nitrate Nitrogen (mg/L as N)	<0.70	≤11 Acute Health
Nitrite Nitrogen (mg/L as N)	<0.05	≤0.9 Acute Health
Ammonia Nitrogen (mg/L as N)	1.34	≤1.5 Aesthetic
Total Alkalinity (mg/L as $CaCO_3$)	351.00	
Total Hardness (mg/L as $CaCO_3$)	944.60	
Fluoride (mg/L as F)	1.00	≤1.5 Chronic Health
Aluminium (mg/L as Al)	0.106	≤0.3 Operational
Chromium (mg/L as Cr)	<0.01	≤0.05 Chronic Health
Manganese (mg/L as Mn)	0.634	≤0.1 Aesthetic; ≤0.4 Chronic Health
Iron (mg/L as Fe)	0.705	≤0.3 Aesthetic; ≤2 Chronic Health
Nickel (mg/L as Ni)	<0.05	≤0.07 Chronic Health
Copper (mg/L as Cu)	<0.05	≤2 Chronic Health
Zinc (mg/L as Zn)	<0.05	≤5 Aesthetic
Arsenic (mg/L as As)	0.014	≤0.01 Chronic Health
Selenium (mg/L as Se)	0.035	≤0.04 Chronic Health
Cadmium (mg/L as Cd)	<0.003	≤0.003 Chronic Health
Antimony (mg/L as Sb)	<0.013	≤0.02 Chronic Health
Mercury (mg/L as Hg)	<0.001	≤0.006 Chronic Health
Lead (mg/L as Pb)	<0.01	≤0.01 Chronic Health
Uranium (mg/L as U)	<0.028	≤0.03 Chronic Health

Analyses	HC_BH1	SANS 241-1:2015
Cyanide (mg/L as CN^-)	<0.01	≤0.2 Acute Health
Boron (mg/L as B)	1.772	≤700 Chronic Health
Barium (mg/L as Ba)	0.057	≤2400 Chronic Health
Total Organic Carbon (mg/L as C)	6.80	≤10 Chronic Health
Charge Balance (%)	-0.81	≥ -5 to ≤ 5 Recommended

11.5.4.4 Groundwater Vulnerability and Sensitivity

The regional groundwater vulnerability assessment classified the majority of the site as having Very Low groundwater vulnerability, with portions of the eastern area classified as Low to Medium vulnerability. This generally low vulnerability is attributed to the protective characteristics of the clay-rich loam and sandy-loam soils that overlie the fractured bedrock aquifer.

However, the specialist emphasised that groundwater vulnerability may increase where the Skurweberg Formation is exposed and where protective soil layers are thin or absent. The assessment further highlighted that shallow groundwater systems and associated wetlands are inherently more vulnerable to contamination than the deeper fractured aquifer and therefore require particular protection from contamination sources.

11.5.4.5 Groundwater and Surface Water Interaction

Stable isotope analyses indicated that both groundwater and surface water within the study area are predominantly derived from meteoric (rainfall) recharge. The isotope results suggest that rainfall represents the primary source of recharge to both the shallow and deeper groundwater systems.

The assessment found that the shallow groundwater and wetland systems are likely influenced by local rainfall, surface runoff and shallow infiltration processes, whereas the deeper groundwater occurs within the fractured Skurweberg aquifer system. Although the sampled water sources share a common meteoric origin, the available data do not demonstrate direct hydraulic connectivity between the shallow groundwater system, wetlands and the deeper groundwater aquifer.

The specialist concluded that shallow perched groundwater conditions may occur locally above low-permeability clay-rich layers, which may contribute to wetland formation and hydrological functioning within lower-lying portions of the site.

11.5.5 Impact Assessment

Please refer to **Section 12.11** for the results from the impact assessment from this study.

11.5.6 Conclusions

The geohydrological assessment concluded that the proposed Project is located within a hydrogeological environment dominated by a fractured sandstone aquifer associated with the Skurweberg Formation and a shallow near-surface layer of loam, sandy loam and clay-rich

material. The assessment confirmed that groundwater recharge is derived predominantly from rainfall and that local hydrogeological conditions include the potential for shallow perched groundwater and groundwater contributions to adjacent wetland systems.

The specialist found that the deeper groundwater system exhibits generally low vulnerability to contamination due to the protective characteristics of the overlying soils, although localised areas of increased vulnerability may occur where the fractured Skurweberg Formation is exposed. The shallow groundwater and wetland systems were identified as more sensitive receptors that require protection from contamination and hydrological disturbance.

The assessment further concluded that no groundwater abstraction is proposed and that the primary groundwater-related considerations for the project relate to the protection of groundwater quality, maintenance of shallow groundwater flow pathways and protection of wetland hydrological functioning. The specialist is of the opinion that these considerations can be effectively managed through the implementation of appropriate stormwater controls, pollution prevention measures, groundwater monitoring and the recommended Groundwater Management Plan. Continued groundwater and wetland monitoring is recommended to verify baseline conditions and identify any unforeseen changes during construction and operation.

11.6 Terrestrial Ecology Impact Assessment

A summary of the Terrestrial Ecology Impact Assessment (Colloty, 2026b) (contained in **Appendix F3**) follows.

11.6.1 Details of Specialist

The details of the specialists that undertook the Terrestrial Ecology Impact Assessment are outlined in **Table 17**.

Table 17: Terrestrial Ecology Specialist Details

Organisation	EnviroSci (Pty) Ltd
Name	Dr Brian Colloty
Qualification	PhD (Botany – Estuaries & Mangroves)
Affiliation (if applicable)	SACNASP Professional Scientist (Ecological Science - 400268/07)

11.6.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Assess the terrestrial biodiversity sensitivity of the study area in accordance with the Protocols.
- Verify the terrestrial, plant and animal sensitivities identified by the Screening Tool.
- Identify and characterise terrestrial habitats, vegetation communities and ecological features occurring within the study area.
- Determine the presence or likelihood of occurrence of plant and animal SCC.

- Assess habitat condition, ecological functionality, conservation importance and sensitivity of terrestrial ecosystems within the study area.
- Evaluate the relationship between the study area and regional biodiversity planning tools, including CBAs and ESAs.
- Identify ecological constraints and provide recommendations for the protection and management of sensitive terrestrial habitats.

11.6.3 Methodology

The assessment included the following tasks (amongst others):

- Review of available biodiversity information, bioregional plans, conservation plans, species databases, literature sources and the Screening Tool outputs.
- Multiple field surveys undertaken during April 2022, October 2022, May 2025 and January 2026 to assess habitat condition and species occurrence across different seasons.
- Vegetation surveys using transects and plot-based sampling to identify vegetation communities, habitat types, protected species and SCC.
- Assessment of environmental characteristics including vegetation, soils, topography, habitat condition and ecological connectivity.
- Evaluation of mammal, reptile, amphibian and invertebrate presence through visual observations, active searches, habitat assessments and evidence such as tracks, burrows and droppings.
- Assessment of Site Ecological Importance (SEI) using biodiversity importance, functional integrity and receptor resilience criteria in accordance with SANBI guidance.
- Delineation and mapping of habitat sensitivity categories to identify areas suitable for development and areas requiring conservation.
- Assessment of ecological connectivity and alignment with CBAs, ESAs and threatened ecosystem mapping.

11.6.4 Key Findings of the Study

11.6.4.1 Vegetation and Habitat Types

The assessment identified a mosaic of terrestrial habitat types within the study area, comprising relatively intact Fynbos-Renosterveld habitat, Proteoid Fynbos-Renoster-Thicket habitat, disturbed grassy Fynbos-Renosterveld habitat and heavily transformed pasture and former agricultural areas. Field investigations confirmed a clear distinction between the relatively undisturbed habitats located primarily within the northern and eastern portions of the site and the highly disturbed areas associated with historical agricultural activities, livestock grazing and former ostrich farming operations.

The specialist noted that while regional mapping indicates several vegetation classifications, the site is most accurately characterised by PetroSA Fynbos Renosterveld and Proteoid Fynbos Renoster Thicket habitat types. These habitats contain a mixture of thicket, fynbos

and renosterveld elements and represent some of the most ecologically important terrestrial habitats remaining on the site.

11.6.4.2 Plant Species of Conservation Concern

Field investigations confirmed the presence of the Vulnerable plant species *Hermannia lavandulifolia*, which was recorded in several areas of suitable habitat on site. In addition, a number of other conservation-important and protected plant species were recorded or are considered likely to occur within the intact Fynbos-Renosterveld and Thicket habitats, particularly in areas containing exposed rocky outcrops.

The assessment also identified protected White Milkwood (*Sideroxylon inerme*) trees within the thicket habitat areas and confirmed the presence of several endemic succulent and bulb species associated with intact Renosterveld habitat. The specialist noted that rocky outcrops and intact natural veld support the greatest concentration of SCC and therefore represent priority conservation areas. **Table 18** below highlights the vegetation types and the diversity observed on site with associated expected plant species.

Table 18: Description of the Vegetation Type and Diversity verified to be covering the study area

Vegetation Type	Description	Vegetation Diversity and Structural Diversity
Fynbos Renosterveld = Vlok Proteus Fynbos Renoster Thicket = Vulnerable but due to disturbance no Proteoid component was observed	Low to medium height shrubveld, variously impacted by grazing and bush-clearing with some invasion by alien Acacias. In this habitat type the Thicket bush-clumps tend to be small, but well defined without a messy boundary. Geophytes (bulbs) are a notable feature of this unit, and quite a number of succulents are present.	Vegetation diversity medium to high. Structural diversity medium. Renosterveld characterised by: *Dicerothamnus rhinocerotis*, *Helichrysum patulum*, *Metalasia acuta* and *M. pungens, Erica peltata, Diospyros dichrophylla, Searsia sp.*, *Hermannia saccifera*, *Hermannia lavandulifolia, Carpobrotus edulis, Bobartia robusta, Crossyne guttata, Brunsvigia orientalis, Drimia calcarata/ capensis, Eriospermum dielsianum, Oxalis* sp., *Baroes* sp., *Gladiolis* sp., *Romulea* sp. and *Hawarthia* and *Aloe* sp.
Proteoid Renosterveld Thicket = Vlok Proteus Fynbos Renoster Thicket = Vulnerable	Relatively undisturbed, dense low to tall shrub *(Protea)* cover, mostly dense (mature), with thicket clumps (often on rocky outcrops). Lichens are abundant in the Thicket, indicating significant long-term stability and coastal moisture. Slight invasion by *Acacia cyclops* into the thicket along the old road and fence line	Vegetation diversity high. Structural diversity high. *Searsia lucida, Protea lanceolata, Diospyros dichrophylla, Searsia pallen, Leucadendron salignum, Erica discolor, Erica densifolia, Erica unicolor* ssp. *mutica, Erica versicolor, Erica cannaliculata, Cullumia carlinoides, Lampranthus elegans, Athanasia quinquedentata, Helichrysum patulum, Erica peltata, Dicerothamnus rhinocerotis, Sideroxylon inerme , Hawarthia* sp. *possibly H. chloracantha* (EN), *Euphorbia mauritanica* and/ or *Euphorbia burmannii, Euclea crispa, Gymnosporia capitata, Aloe ferox, Myrsine Africana, Aloe maculate*, and *Restio helenae.*
Grassy Fynbos/ disturbed Renosterveld = Degraded Petrosa Fynbos Renosterveld	There are areas where the Fynbos and Renosterveld habitats are sometimes grassy, a condition which increases with disturbance of the natural vegetation or perhaps areas that have been burnt more often in	Vegetation diversity and structural diversity is low. Largely grassveld. Very few succulents or bulbs in the disturbed areas (these are

Vegetation Type	Description	Vegetation Diversity and Structural Diversity
	the past. In contrast, some areas can be described as "weedy". In some areas, due to a lack of utilisation for cultivation or heavy grazing, the renosterveld and fynbos appear to be in an early successional state The vegetation within the previously disturbed areas is distinct from that found in the undisturbed areas. Firstly, species diversity is significantly lower, being about 15-30% less than that observed in the undisturbed areas. Secondly, the disturbed areas are heavily dominated by only a few indigenous species, all of which are typical indicators of disturbance.	common in undisturbed areas), and an almost total absence of large woody shrubs. Species include: *Themeda triandra, Eragrostis capensis, Hyparrhenia hirta, Sporobolus fimbriatus, Cynodon dactylon, Anthospermum aethiopicum, Metalasia acuta, Conyza scabrida, Boophone disticha, Indigofera nigromontana, Carpobrotus edulis, Bobartia robusta,* Oxalis sp.*, Drimia capensis,* Baroes sp., Gladiolis sp., Romulea sp. (such as *R. Rosea*), *Mesembryanthemum canaliculatum* and scattered *Elytropappus rhinocerotis* and *Osteospermum moniliferum.* No rare or threatened plant species were found in significant numbers within the disturbed areas.
Transformed areas = no resemblance to any of the described vegetation units for the region	Completely transformed into bare ground or pasture from the original thicket, fynbos and renosterveld.	Vegetation diversity very low. Structural diversity very low. It consists dominantly of grazed Kikuyu grass and clumps of *Eragrostis curvula.*

11.6.4.3 Faunal Habitat and Species

The study recorded a range of mammal, reptile and invertebrate species representative of the regional fauna. Observed species included angulate tortoise, puff adder, mole rat, scrub hare, vervet monkey, yellow mongoose and several endemic small mammal and invertebrate species (see **Table 19** for further detail). No faunal SCC were observed during field surveys.

The specialist concluded that the higher-quality natural habitat areas provide the most suitable habitat for terrestrial fauna, while the transformed and heavily disturbed areas offer limited habitat value. The study further found that many of the species identified by the Screening Tool as having potential to occur on site have a low probability of occurrence due to habitat limitations or because they are highly mobile species capable of moving between surrounding habitat patches.

Table 19: Faunal species observed within the site, previously recorded or likely to occur in the general study area, together with the conservation status. Key: Y = Observed; U = Unconfirmed, but within the distribution range

Taxon	Common Name	RDB/SSC	Presence
Amphibians			
Amietophrynus pardalis	Eastern Leopard Toad	ENCO, IUCN LC	U
Amietophrynus rangeri	Raucous Toad	ENCO, IUCN LC	U
Breviceps adspersus pentheri	Penther's Rain Frog	ENCO, IUCN LC	U
Cacosternum boettgeri	Common caco	ENCO, IUCN LC	U
Cacosternum nanum	Bronze Caco	ENCO, IUCN LC	U
Hyperolius marmoratus	Painted Reed Frog	ENCO, IUCN LC	U
Kassina senegalensis	Bubbling Kassina	ENCO, IUCN LC	U

Taxon	Common Name	RDB/SSC	Presence
Semnodactylus wealii	Rattling Frog	ENCO, IUCN LC	U
Strongylopus fasciatus	Striped Stream Frog	ENCO, IUCN LC	U
Strongylopus grayii	Clicking Stream Frog	ENCO, IUCN LC	U
Tomopterna delalandii	Cape Sand Frog	ENCO, IUCN LC	U
Vandijkophrynus angusticeps	Cape sand Toad	ENCO, IUCN LC	U
Xenopus laevis	Common Platanna	ENCO, IUCN LC	U
Reptiles			
Acontias gracilicauda	Thin tailed legless skink	ENCO, IUCN LC	U
Acontias lineicauda	Algoa legless skink	ENCO, IUCN NT	U
Acontias meleagris orientalis	Eastern legless skink	ENCO, IUCNLC	U
Acontias percivali tasmani	Tasman's legless skink	ENCO, IUCN LC	U
Agama atra	Southern rock agama	ENCO, IUCN LC	U
Aspidelapse lubricus	Cape coral snake	ENCO, IUCN LC	U
Bitis arietans	Puff adder	ENCO, IUCN LC	Y
Bradypodion ventrale	Southern Dwarf Chameleon	ENCO, IUCN LC, CITIES 2	U
Causus rhombeatus	Night adder	ENCO, IUCN LC	U
Chersina angulata	Angulate tortoise	ENCO, IUCN LC, CITIES 2	Y
Cordylus cordylus	Cape girdled lizard	ENCO, IUCN LC, CITIES 2	U
Cordylus tasmani	Tasman's girdled lizard	CITES 2 ,ENCO, IUCN VU	U
Crotaphopeltis hotamboeia	Herald snake	ENCO, IUCN LC	U
Dasypeltis scabra	Rhombic egg eater	ENCO, IUCN LC	U
Hemachatus haemachatus	Rinkhals	ENCO, IUCN LC	U
Hemidactylus mabouia	Tropical house gecko	ENCO, IUCN LC	U
Lamprophis aurora	Aurora house snake	ENCO, IUCN LC	U
Lamprophis capensis	Brown house snake	ENCO, IUCN LC	U
Lamprophis fuscus	Yellow bellied house snake	ENCO, IUCN NT	U
Lamprophis inornatus	Olive house snake	ENCO, IUCN LC	U
Lycodonomorphus rufulus	Brown water snake	ENCO, IUCN LC	U
Naja nivea	Cape cobra	ENCO, IUCN LC	U
Nucras intertexta	Spotted Sandveld Lizard	ENCO	U
Pelomedusa subrufa	Marsh terrapin	ENCO, IUCN LC	U
Philothamnus natalensis occidentalus	Natal green snake	ENCO, IUCN LC	U
Psammophis notostictus	Karroo whip snake	ENCO, IUCN LC	U
Psammophylax rhombeatus	Rhombic skaapsteker	ENCO, IUCN LC	U
Pseudaspis cana	Mole snake	ENCO, IUCN LC	Y – 1 moved to cover when observed
Stigmochelys pardalis	Leopard Tortoise	ENCO, IUCN LC CITIES 2	U
Trachylepis capensis	Cape skink	ENCO, IUCN LC	Y – 1 moved to cover when observed
Trachylepis homalcephala	Red sided skink	ENCO, IUCN LC	U
Trachylepis varia varie	Variable skink	ENCO, IUCN LC	U
Varanus albigularis	Rock Monitor	ENCO, IUCN LC CITIES 2	U

Taxon	Common Name	RDB/SSC	Presence
Varanus niloticus	Water Monitor	ENCO, IUCN LC CITIES 2	U
Mammals			
Amblysomus corriae	Fynbos golden mole	ENCO, IUCN NT	U
Amblysomus hittentotus	Hottentot Golden Mole	ENCO, IUCN DD	U
Aonyx capensis	African clawless otter	ENCO, IUCN LC	U
Atilax paludinosus	Marsh mongoose	ENCO, IUCN LC	U
Caracal caracal	Caracal	ENCO, IUCN LC	U
Cercopithecus pygerythrus	Vervet monkey	ENCO, IUCN LC	Y 3 observed on the fence adjacent the site
Chlorotalpa duthieae	Duthie's golden mole	ENCO, IUCN LC	U
Crocidura cyanea	Reddish-Grey Musk Shrew	ENCO, IUCN DD	U
Crocidura flavescens	Greater red musk shrew	ENCO, IUCN LC	U
Cryptomys hottentotus	African mole rat	ENCO, IUCN LC	Y – Mole hills
Cynictis penicillata	Yellow mongoose	ENCO, IUCN LC	Y - 1 moved from the site when observed
Dendromus melanotis	Grey climbing mouse	ENCO, IUCN LC	U
Dendromus mesomelas	Brant's climbing mouse	ENCO, IUCN LC	U
Felis cattus	Domestic cat	Alien	Y – 1 near current factories
Felis silvestris	African wild cat	ENCO, IUCN LC	U
Galerella pulverulenta	Cape grey mongoose	ENCO, IUCN LC	U
Genetta genetta	Small spotted genet	ENCO, IUCN LC	U
Genetta tigrina	Large spotted genet	ENCO, IUCN LC	U
Georychus capensis	Cape mole rat	ENCO, IUCN LC	U
Graphiurus murinus	Woodland dormouse	ENCO, IUCN LC	U
Graphiurus ocularis	Spectacled dormouse	ENCO, IUCN LC	U
Herpestes ichneumon	Large grey mongoose	ENCO, IUCN LC	U
Hystrix africaeaustralis	Cape porcupine	ENCO, IUCN LC	U
Ictonyx striatus	Striped pole cat	ENCO, IUCN LC	U
Lepus saxatilis	Scrub hare	ENCO, IUCN LC	Y - scat observed
Macroscelides proboscideus	Round eared elephant shrew	ENCO, IUCN LC	U
Mastomys natalensis	Natal multimammate mouse	ENCO, IUCN LC	U
Mellivora capensis	Honey badger	ENCO, IUCN CITES 3 NT	U
Micaelamys namaquensis	Namaqua rock mouse	LC	U
Mus minutoides	Pygmy mouse	LC	U
Mus musculus	House mouse	Alien	Y 1 on rubble
Myosorex varius	Forest Shrew	ENCO, IUCN DD	U
Neoromicia capensis	Cape serotine bat	ENCO, IUCN LC	U
Nycteris thebaica	Egyptian slit faced bat	ENCO, IUCN LC	U
Orycteropus afer	Aardvark	ENCO, IUCN LC	U
Otocyon megalotis	Bat eared fox	ENCO, IUCN LC	U
Otomys irroratus	Vlei rat	ENCO, IUCN LC	U
Otomys unisulcatus	Bush vlei rat	ENCO, IUCN LC	U
Panthera pardus	Leopard	ENCO, IUCN LC	U

Taxon	Common Name	RDB/SSC	Presence
Papio cynocephalus ursinus	Chacma baboon	ENCO, IUCN LC	U
Species13		ENCO, IUCN CITES2 VU	Likely in dense vegetation areas
Poecilogale albinucha	African striped weasel	ENCO, IUCN VU	U
Potamochoerus larvatus	Bush pig	ENCO, IUCN LC	U
Raphicerus campestris	Steenbok	ENCO, IUCNLC	U
Raphicerus melanotis	Grysbok	ENCO, IUCNLC	U
Rattus rattus	House rat	ENCO, IUCN LC	U
Rhabdomys pumilio	Four striped grass mouse	ENCO, IUCN LC	Y Figure 12 - runs
Saccostomus campestris	Pouched mouse	ENCO, IUCNLC	U
Suncus infinitesimus	Least dwarf shrew	ENCO, IUCN E	U
Sylvicapra grimmia	Common duiker	ENCO, IUCN LC	U
Tragelaphus scriptus	Bush buck	ENCO, IUCN LC	U
Vulpes chama	Cape Fox	ENCO, IUCN LC	U

11.6.4.4 Critical Biodiversity Areas and Ecological Connectivity

The study area overlaps with areas mapped as CBAs, ESAs and threatened ecosystems in regional biodiversity planning tools. However, field investigations confirmed that the site comprises a mosaic of intact, degraded and transformed habitats rather than a uniformly high-sensitivity landscape (refer to **Figure 31**).

The assessment found that the highest-quality habitats occur within the northern and eastern portions of the site, corresponding broadly with the proposed conservation area. These habitats retain ecological value despite historical disturbance and support the remaining biodiversity of conservation importance within the study area.

The specialist further noted that ecological connectivity within the broader landscape has already been reduced through historical agriculture, industrial development, railway infrastructure and roads. Although the site remains connected to some surrounding habitat areas, it does not function as an intact regional ecological corridor.

11.6.4.5 Site Sensitivity

The assessment identified a range of habitat sensitivity classes across the site. High sensitivity habitats comprise relatively intact Fynbos-Renosterveld and Proteoid Fynbos-Renoster-Thicket communities that support SCC, high species diversity and important ecological functions. Medium sensitivity habitats consist of partially disturbed vegetation that retains ecological value and rehabilitation potential. Low and Very Low sensitivity areas correspond largely with heavily disturbed agricultural and pasture areas that have experienced significant ecological transformation (refer to **Figure 31**).

The study found that the majority of sensitive habitat occurs within areas proposed for conservation, while the majority of development is concentrated within lower sensitivity habitat areas.

11.6.5 Impact Assessment

Please refer to **Section 12.13** for the results from the impact assessment from this study.

11.6.6 Conclusions

The specialist concluded that the study area contains terrestrial habitats of conservation importance, particularly the remaining patches of intact Fynbos-Renosterveld and Proteoid Thicket habitat associated with threatened ecosystems and SCC. These habitats represent the most environmentally sensitive portions of the site and are considered important from both a biodiversity and conservation planning perspective.

The assessment further concluded that historical agricultural activities, livestock grazing, invasive alien plants and surrounding industrial development have resulted in substantial disturbance across portions of the site. Consequently, large areas of the study area have relatively low ecological value and are more suitable for development than the remaining intact habitat areas.

The specialist supports the retention and management of the proposed 15 ha conservation area, as this area encompasses the majority of the high-sensitivity habitats identified during the assessment and will provide long-term protection for important terrestrial biodiversity, including *Hermannia lavandulifolia* and other conservation-important species. The conservation area also provides an opportunity for habitat rehabilitation and alien vegetation management.

Overall, the specialist is of the opinion that, provided the proposed conservation area is retained, and the recommended mitigation and rehabilitation measures are implemented, the proposed Project is acceptable from a terrestrial ecological perspective and may proceed.

11.7 Noise Impact Assessment

A summary of the Noise Impact Assessment (De Jager, 2026) (contained in **Appendix F4**) follows.

11.7.1 Details of Specialist

The details of the specialists who undertook the Noise Impact Assessment are outlined in **Table 20**.

Table 20: Noise Specialist Details

Organisation	Enviro Acoustic Research (Pty) Ltd	
Name	M. De Jager	Johan Mare
Qualification	Bachelor of Engineering (Chemical Engineering)	MSc (Microbiology)
Affiliation (if applicable)		SACNASP Professional Scientist (400092/91)

11.7.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Identify and describe the potential noise impacts associated with the construction and operation of the proposed Project.
- Establish baseline ambient noise conditions and identify noise-sensitive receptors (NSRs) within the study area.
- Assess existing ambient sound levels against applicable standards and guidelines, including SANS 10103 and the Western Cape Noise Control Regulations.
- Predict and assess potential construction and operational noise impacts using recognised acoustic modelling techniques.
- Evaluate the significance of potential noise impacts on surrounding receptors and determine compliance with applicable criteria.
- Recommend practical mitigation and management measures to minimise adverse noise impacts.

11.7.3 Methodology

The assessment was conducted through the following tasks (amongst others):

- Review of relevant legislation, standards and guidelines, including the Western Cape Noise Control Regulations, SANS 10103 and international best-practice guidance applicable to the study.
- Identification and mapping of surrounding land uses and noise-sensitive receptors within the study area to determine receptor sensitivity and applicable rating levels.
- Baseline ambient noise monitoring undertaken at representative receptor locations using calibrated sound level monitoring equipment to establish existing daytime and nighttime noise conditions.
- Collection and analysis of environmental, topographical and land-use information relevant to noise propagation within the receiving environment.
- Development of operational noise scenarios representing different categories of motorsport activities and vehicle classes likely to utilise the proposed facility.
- Application of recognised acoustic modelling techniques to predict future noise levels at sensitive receptors under both construction and operational conditions.
- Comparison of measured and predicted noise levels against applicable assessment criteria to determine impact significance and compliance requirements.
- Evaluation of potential mitigation measures, including source controls, acoustic barriers, operational restrictions and management interventions.

11.7.4 Key Findings of the Study

11.7.4.1 Noise Sensitive Receptors

Although several noise-sensitive receptors occur within the broader study area, most benefit from separation distances and intervening landscape features that reduce noise exposure.

The assessment determined that receptors closest to the proposed motorsport arena would experience the highest potential increases in noise levels during racing events and therefore represent the most sensitive receptors from an impact assessment perspective.

11.7.4.2 Ambient Noise Environment

The existing acoustic environment is influenced by a combination of rural, agricultural, transport and industrial activities. Ambient noise monitoring indicated variable sound levels across the study area, with elevated noise levels generally associated with receptors located closer to major transport routes and industrial activities. The assessment identified eight noise-sensitive receptors within the study area (**Figure 56**), each of which was assigned an appropriate rating level based on the surrounding land use and applicable noise district classification (**Table 21**).

Table 21: Potential rating levels at various NSR (De Jager, 2026)

Location Reference	Designated rating level		Comment on recommendation
	Day	Night	
NSR01	60	50	Location within 500m from busy road, near commercial premises. NSR located within 1,000m from industrial area.
NSR02	60	50	Location within 500m from busy road, near commercial premises. NSR located within 1,000m from industrial area.
NSR03	60	50	Location within 500m from busy road, near commercial premises. NSR located within 1,000m from industrial area.
NSR04	60	50	Location within 500m from busy road, near commercial premises. NSR located within 1,000m from industrial area.
NSR05	60	50	Location within 500m from busy road, near commercial premises. NSR located within 1,000m from industrial area.
NSR06	55	45	NSR located within 1,000m from industrial area, but further than 1,000m from very busy road (and further than 500m from the R327)
NSR07	60	50	Location within 1,000m from very busy road. NSR located within 1,000m from industrial area.
NSR08	70	60	NSR located within 1,000m from heavy industrial area, with factory located within light-industrial area.

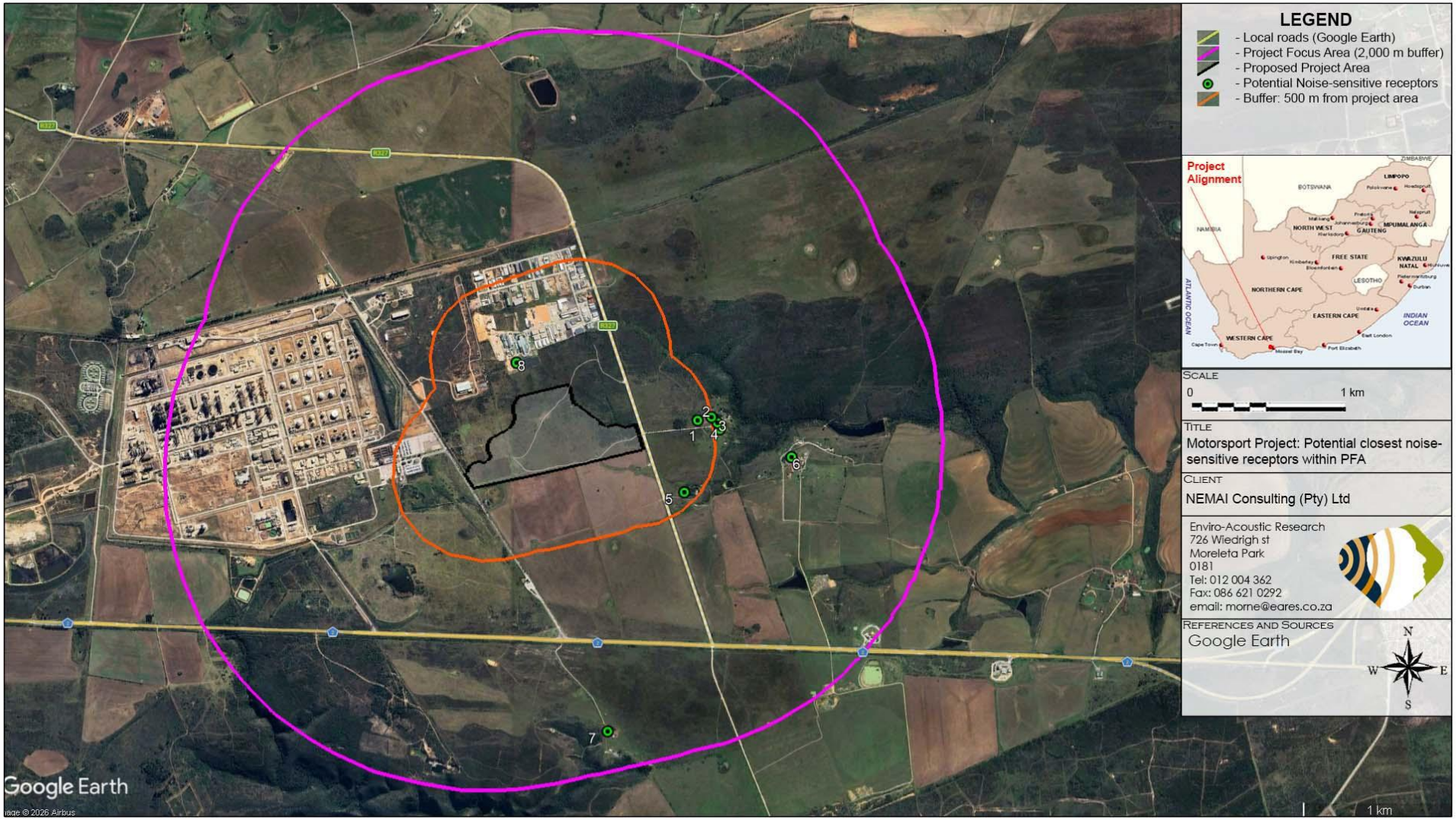

Figure 56: Aerial image indicating potentially noise-sensitive receptors close to the proposed Project Focus Area (De Jager, 2026)

11.7.4.3 Construction Noise

Construction activities are expected to generate noise associated with earthworks, excavation, construction traffic and the operation of heavy machinery. The assessment found that these impacts would be temporary, localised and largely restricted to the active construction period. Due to the separation distances between the construction activities and surrounding receptors, most receptors are expected to experience relatively low noise levels during construction. Consequently, construction-phase noise impacts were assessed as being of low significance, provided that standard construction management measures are implemented.

11.7.4.4 Operational Noise

Operational noise modelling identified motorsport events as the primary source of noise associated with the proposed Project. The predicted noise levels vary depending on the type of event and vehicles involved. Events involving standard road-legal vehicles (Light Motor Vehicle (LMV)) are expected to result in relatively small increases above existing ambient noise levels at most receptors (**Table 22** and **Figure 57**). In contrast, events involving high-performance racing vehicles have the potential to generate substantially higher noise levels, particularly at receptors situated closest to the motorsport facility (**Table 23** and **Figure 58**). Under worst-case scenarios, predicted noise levels may exceed applicable guideline limits at certain receptors if no mitigation measures are implemented. However, the specialist identified several mitigation measures capable of reducing operational noise levels, including the implementation of source controls on vehicles, the provision of acoustic barriers and earth berms, strategic facility design, control of operating hours, scheduling of high-noise events, and ongoing stakeholder engagement (further detail provided in **Section 12.20** below). The assessment found that the combined implementation of these measures would significantly reduce noise impacts and improve compliance with applicable noise criteria.

Table 22: Projected noise rating levels and significance due to racing with LMV (De Jager, 2026)

Potential Noise-sensitive development / Receptor(s)	Recommended Rating Levels (noise limit - daytime rating level, Various noise districts)	Potential Existing Ambient Sound Levels (long-term, night-time fast-weighted	Projected Noise Level, Light Motor Vehicle racing event	Change in residual noise levels	Magnitude / Intensity	Duration	Extent	Probability of Impact Occurring	Significance
1	60	46.8	48.3	3.8	Low	Long-term	Local	Improbable	Low
2	60	46.8	47.1	3.1	Low	Long-term	Local	Improbable	Low
3	60	46.8	46.2	2.7	Minor	Long-term	Local	Improbable	Low
4	60	46.8	46.0	2.6	Minor	Long-term	Local	Improbable	Low

Potential Noise-sensitive development / Receptor(s)	Recommended Rating Levels (noise limit - daytime rating level, Various noise districts)	Potential Existing Ambient Sound Levels (long-term, night-time fast-weighted	Projected Noise Level, Light Motor Vehicle racing event	Change in residual noise levels	Magnitude / Intensity	Duration	Extent	Probability of Impact Occurring	Significance
5	60	46.8	39.2	0.7	Minor	Long-term	Local	Improbable	Low
6	55	46.8	41.2	1.0	Minor	Long-term	Local	Improbable	Low
7	60	46.8	34.4	0.2	Minor	Long-term	Local	Improbable	Low
8	70	46.8	55.1	8.9	High	Long-term	Local	Improbable	Low

Table 23: Projected noise rating levels and significance due to racing with GT3 class vehicles (De Jager, 2026)

Potential Noise-sensitive development / Receptor(s)	Recommended Rating Levels (noise limit - daytime rating level, Various noise districts)	Potential Existing Ambient Sound Levels (long-term, night-time fast-weighted	Projected Noise Level, GT3 Class Vehicle racing event	Change in residual noise levels	Magnitude / Intensity	Duration	Extent	Probability of Impact Occurring	Significance
1	60	46.8	62.4	15.7	Very High	Long-term	Regional	Highly Likely	High
2	60	46.8	61.2	14.5	Very High	Long-term	Regional	Highly Likely	High
3	60	46.8	60.4	13.8	Very High	Long-term	Regional	Highly Likely	High
4	60	46.8	60.1	13.5	Very High	Long-term	Regional	Highly Likely	High
5	60	46.8	53.5	7.5	High	Long-term	Regional	Possible	Medium
6	55	46.8	55.7	9.4	High	Long-term	Regional	Likely	Medium
7	60	46.8	48.9	4.2	Low	Long-term	Regional	Improbable	Low
8	70	46.8	69.0	22.2	Very High	Long-term	Regional	Possible	Medium

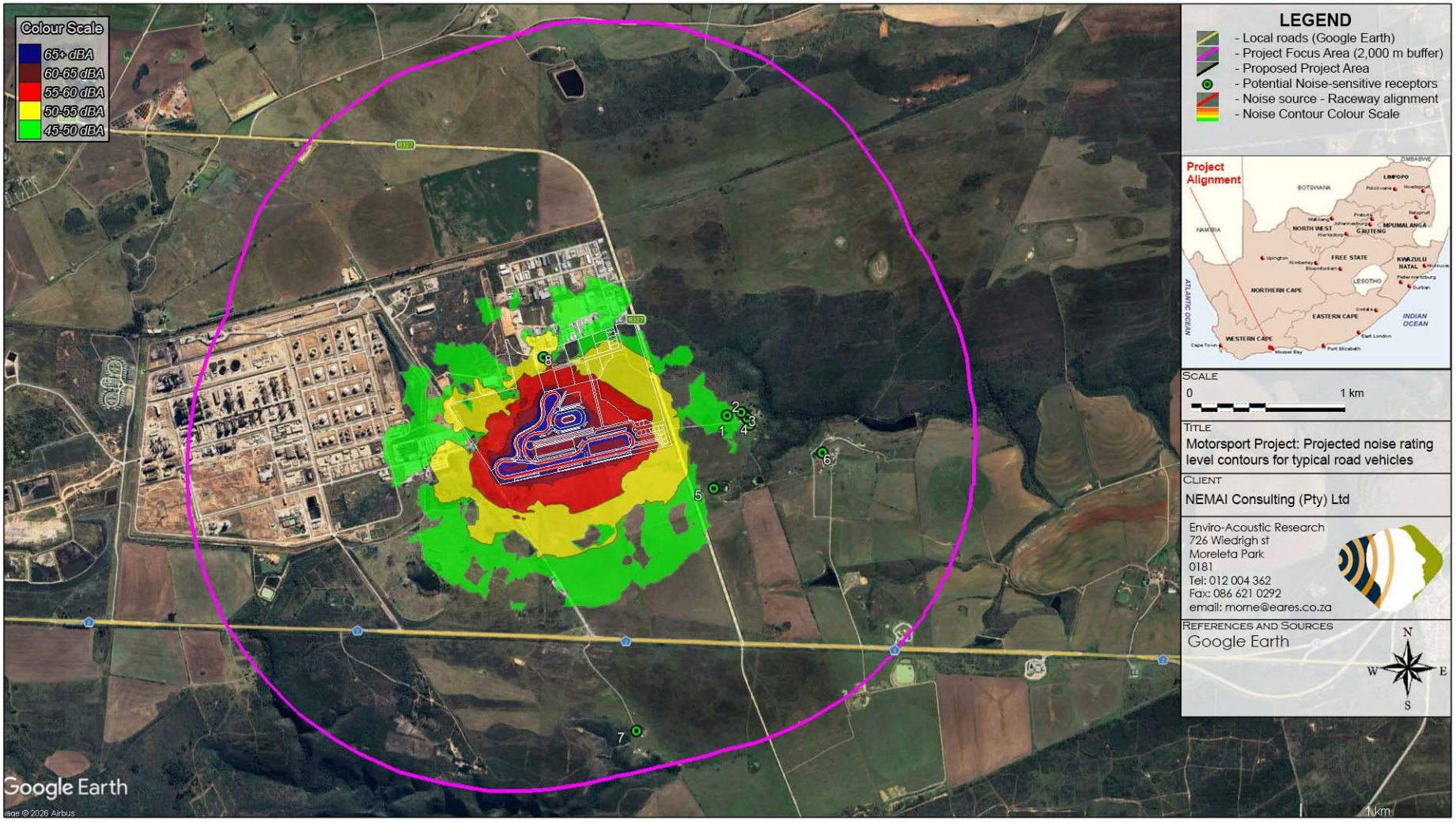

Figure 57: Projected noise rating level contours for a race with LMV (De Jager, 2026)

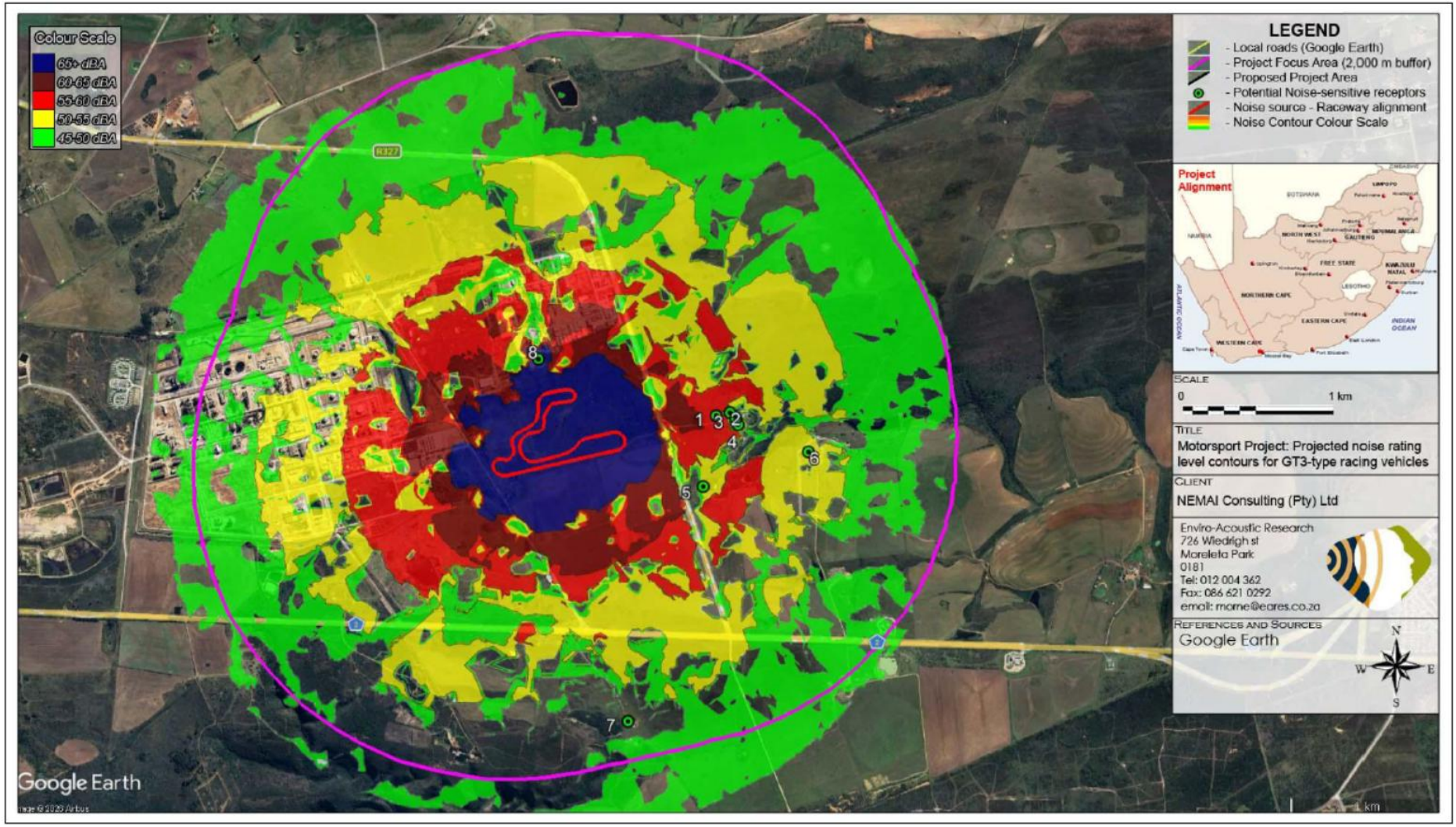

Figure 58: Projected noise rating level contours for a race with GT3-class vehicles (De Jager, 2026)

11.7.5 Impact Assessment

Please refer to **Section 12.20** for the results from the impact assessment from this study.

11.7.6 Conclusions

The specialist concluded that noise impacts associated with the construction phase would be temporary and localised and could be effectively managed through the implementation of standard construction mitigation measures. Construction-related noise was therefore not considered to represent a significant constraint to the Project.

While motorsport activities will generate elevated noise levels during operational events, particularly those involving high-performance race vehicles, the assessment found that these impacts can be successfully managed through the implementation of recommended mitigation measures and operational controls. The specialist is of the opinion that the proposed Project is acceptable from an acoustic perspective and does not present a fatal flaw to the Project. Subject to the implementation of the recommended noise management and monitoring measures, the proposed Project can proceed without resulting in unacceptable long-term noise impacts on surrounding receptors.

11.8 Avifaunal Impact Assessment

A summary of the Avifaunal Impact Assessment (Phillips, 2025) (contained in **Appendix F5**) follows.

11.8.1 Details of Specialist

The details of the specialists who undertook the Avifaunal Impact Assessment are outlined in **Table 24**.

Table 24: Avifaunal Specialist Details

Organisation	Cossypha Ecological (Pty) Ltd
Name	Robyn Phillips
Qualification	MSc (Zoology)
Affiliation (if applicable)	SACNASP Professional Scientist (Zoological and Ecological – 400401/12)

11.8.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Describe the avifaunal ecological context of the study area and identify habitat features of importance to birds.
- Assess the avifaunal sensitivity of the proposed Project area in accordance with the applicable animal species assessment protocol.
- Characterise existing bird communities and identify SCC that may occur within the study area.

- Evaluate the ecological importance and sensitivity of avifaunal habitats within the Project Area of Influence (PAOI).
- Assess the potential impacts of the proposed Project on avifaunal species and habitats, including habitat loss, disturbance, displacement, collision risk and cumulative impacts.
- Identify mitigation measures and monitoring requirements to reduce potential impacts on avifauna.
- Provide specialist input regarding the ecological suitability of the site for the proposed Project.

11.8.3 Methodology

The assessment was conducted through the following tasks (amongst others):

- Review of applicable legislation, protocols and guidelines, including the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Animal Species and the SANBI Species Environmental Assessment Guideline.
- Desktop review of recent and historical aerial imagery to identify natural, transformed and modified habitats within the study area and surrounding landscape.
- Review of available biodiversity datasets and conservation planning tools, including the WCBSP, protected area databases, Important Bird Areas (IBAs), threatened ecosystem mapping and relevant avifaunal databases.
- Compilation of a regional bird species list using the Atlas of Southern African Birds, Southern African Bird Atlas Project (SABAP2), Roberts Multimedia Birds of Southern Africa and other avifaunal databases.
- Identification of bird SCC, priority species and species potentially sensitive to solar PV development.
- Field surveys undertaken on 26 and 27 February 2024, including meander surveys, direct bird observations, targeted searches for species of conservation concern and assessments of habitat suitability.
- Mapping and assessment of avifaunal habitats, ecological corridors, drainage features and potential impact receptors within the Project Area of Influence.
- Evaluation of SEI and sensitivity using conservation importance, functional integrity and receptor resilience criteria prescribed by SANBI.
- Assessment of potential project-related impacts and identification of mitigation and monitoring requirements.

11.8.4 Key Findings of the Study

11.8.4.1 Avifaunal Habitat Characteristics

The study area is largely transformed and modified as a result of long-term agricultural activities dating back to at least the 1950s. The western portion of the site comprises agricultural fields, livestock grazing areas and pastures, while the central portion consists

predominantly of secondary grassy vegetation. The eastern section supports secondary thicket vegetation and a drainage line, which represent the most intact and ecologically valuable habitats from an avifaunal perspective (**Figure 59**).

The site occurs within a landscape dominated by industrial development, agricultural fields and fragmented natural vegetation. Although natural habitat remains in the surrounding region, the study area itself provides relatively limited habitat for specialist bird species due to its modified condition and habitat fragmentation.

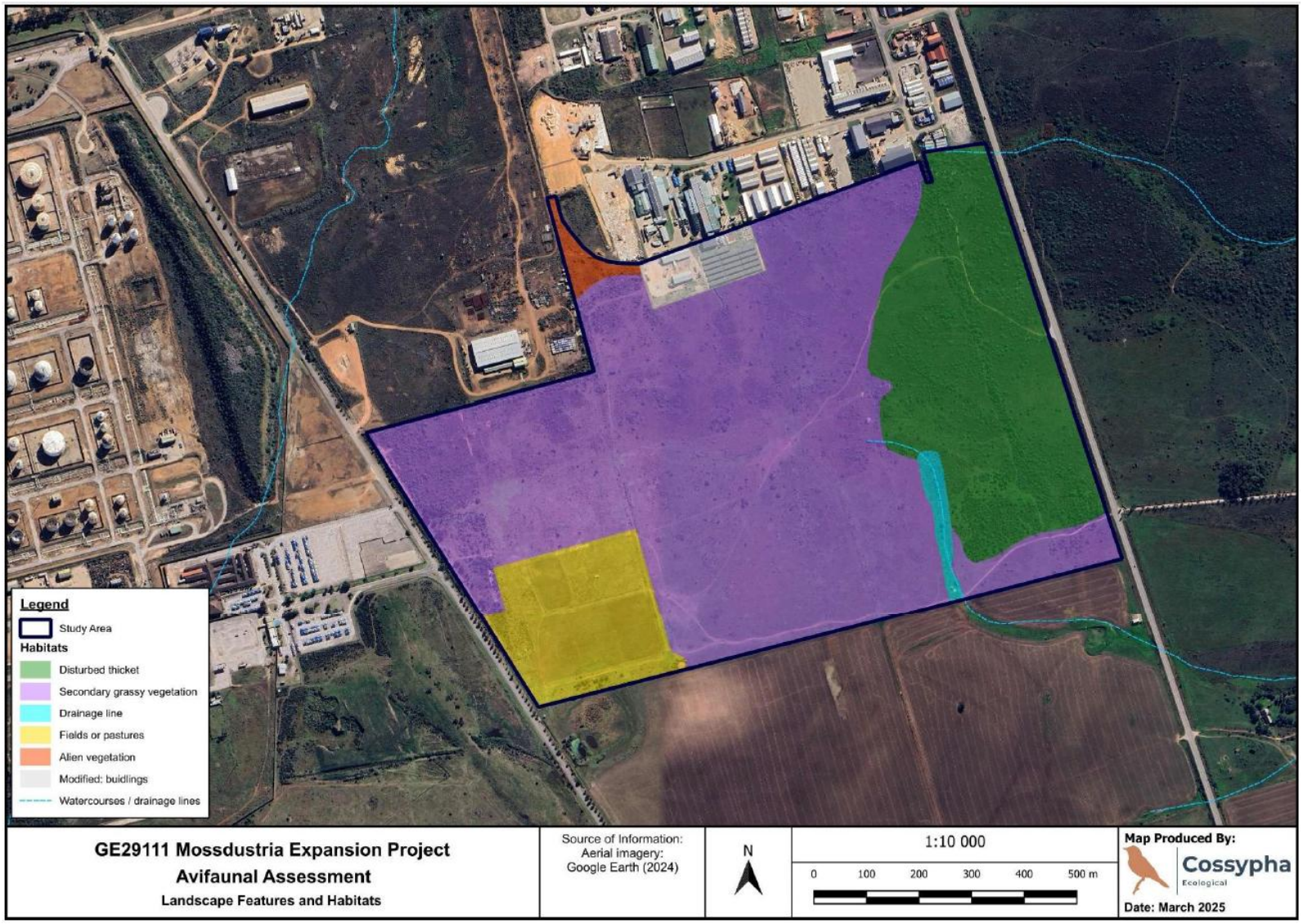

Figure 59: Avifaunal habitat features of the study area (Phillips, 2026)

11.8.4.2 Avifaunal Diversity

Desktop analysis identified approximately 354 bird species that may occur within the broader Quarter Degree Grid Cell, while 224 species have been recorded within the relevant SABAP2 pentads. These records include several species of conservation concern, endemic species and priority species associated with agricultural landscapes, wetlands, water bodies and open habitats.

Field surveys (conducted between 26 and 27 February 2024) recorded 37 bird species within the study area and immediate surroundings (**Table 25**). Observed species consisted predominantly of widespread generalist species typically associated with disturbed habitats, agricultural land and secondary vegetation. Only a limited number of species associated with thicket and fynbos habitats were recorded.

Table 25: Species recorded in the study area and surroundings listed in taxonomic order (Phillips, 2025)

Common Name	Scientific Name	National Status	Global Status	Endemism
Cape Spurfowl	*Pternistis capensis*	LC	LC	NE
Helmeted Guineafowl	*Numida meleagris*	LC	LC	
Spur-winged Goose	*Plectropterus gambensis*	LC	LC	
Speckled Mousebird	*Colius striatus*	LC	LC	
Red-faced Mousebird	*Urocolius indicus*	LC	LC	
African Palm Swift	*Cypsiurus parvus*	LC	LC	
Speckled Pigeon	*Columba guinea*	LC	LC	
Red-eyed Dove	*Streptopelia semitorquata*	LC	LC	
Blue Crane	*Grus paradisea*	NT	VU	SLE, NE
Crowned Lapwing	*Vanellus coronatus*	LC	LC	
Jackal Buzzard	*Buteo rufofuscus*	LC	LC	NE
Western Cattle Egret	*Bubulcus ibis*	LC	LC	
African Sacred Ibis	*Threskiornis aethiopicus*	LC	LC	
Southern Fiscal	*Lanius collaris*	LC	LC	
Cape Crow	*Corvus capensis*	LC	LC	
Pied Crow	*Corvus albus*	LC	LC	
Bokmakierie	*Telophorus zeylonus*	LC	LC	
Cape Batis	*Batis capensis*	LC	LC	
Cape Robin-Chat	*Cossypha caffra*	LC	LC	
African Stonechat	*Saxicola torquatus*	LC	LC	
Capped Wheatear	*Oenanthe pileata*	LC	LC	
Common Starling	*Sturnus vulgaris*	LC	LC	
Barn Swallow	Hirundo rustica	LC	LC	
Cape Bulbul	*Pycnonotus capensis*	LC	LC	E
Neddicky	*Cisticola fulvicapilla*	LC	LC	
Zitting Cisticola	*Cisticola juncidis*	LC	LC	
Karoo Prinia	*Prinia maculosa*	LC	LC	NE
Bar-throated Apalis	*Apalis thoracica*	LC	LC	
Large-billed Lark	*Galerida magnirostris*	LC	LC	NE

Common Name	Scientific Name	National Status	Global Status	Endemism
Southern Double-collared Sunbird	*Cinnyris chalybeus*	LC	LC	NE
Cape Sparrow	*Passer melanurus*	LC	LC	
Cape Longclaw	*Macronyx capensis*	LC	LC	
African Pipit	*Anthus cinnamomeus*	LC	LC	
Cape Weaver	*Ploceus capensis*	LC	LC	NE
Southern Red Bishop	*Euplectes orix*	LC	LC	
Quailfinch	*Ortygospiza atricollis*	LC	LC	
Yellow Canary	*Crithagra flaviventris*	LC	LC	

VU = Vulnerable; NT = Near Threatened; LC = Least Concern
E = endemic; NE = near endemic (i.e. ~70% or more of population in RSA); SLE NE = near endemic to South Africa, Lesotho and Eswatini

11.8.4.3 Species of Conservation Concern

No species of conservation concern were recorded within the Project footprint during the field survey (**Table 25**). However, a small group of Blue Crane (*Grus paradisea*), listed as Near Threatened nationally and Vulnerable globally, was observed within agricultural fields immediately south of the site. The specialist noted that while the development area itself does not provide important habitat for Blue Crane, the species is likely to utilise surrounding agricultural lands periodically for foraging purposes.

Several other species of conservation concern, including Secretarybird, Denham's Bustard, Black Harrier, African Marsh Harrier and Martial Eagle, have been recorded within the broader region. However, the specialist determined that the proposed Project site does not provide the specific habitat requirements necessary to support these species on a regular basis.

11.8.4.4 Site Ecological Importance and Sensitivity

The thicket vegetation and drainage line within the eastern portion of the site were assessed as having Medium Ecological Importance due to their relatively higher habitat diversity and more natural condition. Although disturbed and secondary in nature, these habitats provide the most suitable avifaunal habitat within the study area.

The secondary grassland, agricultural fields, pastures and alien vegetation were assessed as having Low Ecological Importance because of their modified condition, reduced ecological functionality and limited conservation value. Previously transformed areas associated with existing infrastructure were assessed as having Very Low Ecological Importance.

The specialist confirmed the Low Avian Theme sensitivity assigned by the Screening Tool and concluded that the High Animal Species sensitivity assigned through the screening process was not representative of on-site conditions. The majority of the site was therefore considered to be of Low sensitivity, with the eastern thicket and drainage line areas considered of Medium sensitivity (**Figure 60**).

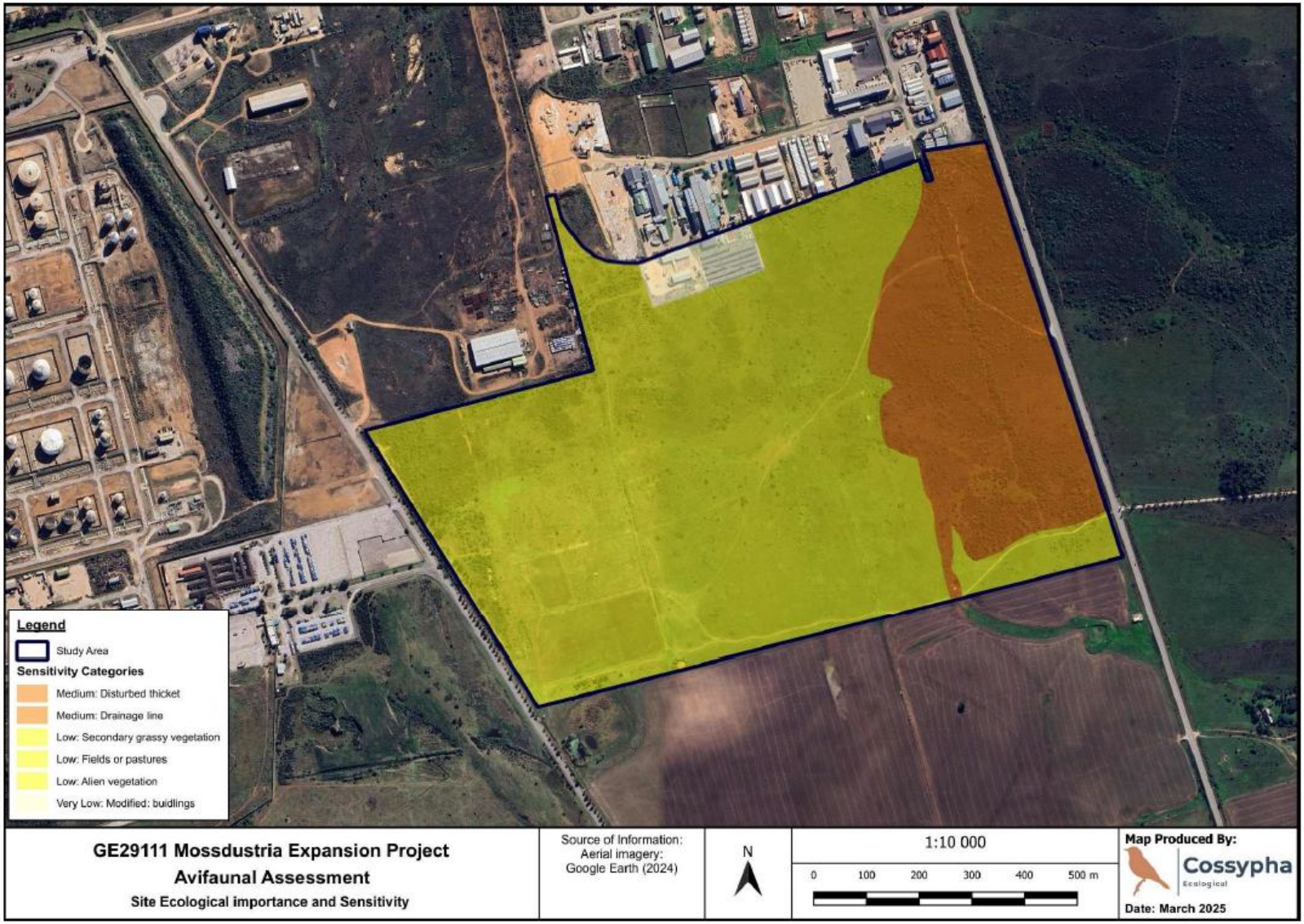

Figure 60: Avifaunal Site Ecological Importance and Sensitivity (Phillips, 2025)

11.8.5 Impact Assessment

Please refer to **Section 12.14** for the results from the impact assessment from this study.

11.8.6 Conclusions

The specialist concluded that the study area consists predominantly of transformed and modified habitats that provide limited avifaunal habitat value. While the eastern thicket vegetation and associated drainage line retain moderate ecological importance and should be conserved where possible, the majority of the site is considered to have low ecological sensitivity from an avifaunal perspective. The proposed conservation area located within the eastern portion of the site is supported, as it will retain the highest-value habitat identified during the assessment.

Although a number of species of conservation concern occur within the broader region, none were recorded within the Project footprint and the site is not considered to provide critical habitat for these species. The bird community present is dominated by widespread generalist species associated with disturbed and agricultural environments.

The specialist is of the opinion that the direct, indirect and cumulative impacts associated with the proposed Project can be adequately mitigated through the implementation of the recommended avoidance, management, rehabilitation and monitoring measures. Accordingly, the proposed Project is considered acceptable from an avifaunal perspective and may be authorised, provided that the recommended mitigation measures are incorporated into the EMPr and implemented throughout the project lifecycle.

11.9 Landscape/Visual Impact Assessment

A summary of the Landscape & Visual Impact Assessment (Marshall, 2023) (contained in **Appendix F6**) follows.

11.9.1 Details of Specialist

The details of the specialists who undertook the Landscape & Visual Impact Assessment are outlined in **Table 26**.

Table 26: Landscape & Visual Specialist Details

Organisation	Environmental Planning and Design (Pty) Ltd
Name	Jonathan Marshall
Qualification	Diploma in Landscape Architecture, Gloucestershire College of Art and Design, UK
Affiliation (if applicable)	Registered Professional Landscape Architect (SACLAP) Chartered Member of the Landscape Institute (UK) Member of the International Association of Impact Assessment, South Africa

11.9.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Assess the potential landscape and visual impacts associated with the proposed Project.
- Verify and evaluate the landscape and visual sensitivity of the site in accordance with the Screening Tool requirements and the Protocols.
- Characterise the receiving landscape and identify the LCAs within the broader study area.
- Identify visual receptors that may be affected by the proposed Project and determine their relative sensitivity to visual change.
- Assess the visibility of the proposed Project and determine the potential extent of visual influence.
- Identify areas of potential visual sensitivity and determine whether any visual no-go areas exist.
- Evaluate the likely landscape and visual impacts associated with the proposed Project and identify practical mitigation measures to reduce these impacts.

11.9.3 Methodology

The assessment was conducted through the following tasks (amongst others):

- Review of relevant legislation, guidelines and best-practice documents, including the Western Cape Guideline for Involving Visual and Aesthetic Specialists in EIA Processes and the Landscape Institute's Guidelines for Landscape and Visual Impact Assessment.
- Desktop assessment of available topographical, land cover and aerial imagery datasets to characterise the receiving landscape and identify potentially sensitive visual receptors.
- Site inspection undertaken on 23 March 2023 to verify landscape characteristics, visual conditions and potential receptor locations.
- Assessment of landform, drainage patterns, land cover, surrounding development and existing visual influences within the study area.
- Delineation of LCAs and assessment of their visual absorption capacity and sensitivity to change.
- Identification and mapping of visual receptors, including settlement areas, transport routes, tourism facilities and surrounding homesteads.
- Viewshed modelling and Zone of Theoretical Visibility (ZTV) analysis using GIS-based visibility assessment tools and Digital Elevation Model data to determine the potential visibility of the proposed development.
- Assessment of landscape and visual sensitivity, visibility, magnitude of change and potential visual impacts on identified receptors.
- Evaluation of potential mitigation measures, including visual screening, buffering, landscaping and colour treatment of infrastructure.

11.9.4 Key Findings of the Study

11.9.4.1 Landscape Character and Visual Context

The study area occurs within a landscape characterised by a combination of industrial, rural and urban land uses. The existing Mossdustria Industrial Area, PetroSA facilities and Gourikwa Power Station already contribute to an established industrial landscape character within the immediate vicinity of the site. The surrounding landscape comprises a mix of agricultural land, open grazing areas, industrial development and urban areas associated with Mossel Bay. As a result, the receiving environment is not considered to be a highly scenic or pristine landscape.

Three LCAs were identified within the broader study area, namely the Industrial LCA, Rural LCA and Urban LCA. The Industrial LCA is the dominant landscape character surrounding the proposed Project and provides a degree of visual absorption capacity as the proposed Project would be visually consistent with the existing industrial setting.

11.9.4.2 Visual Receptors

The assessment identified a number of visual receptors that may experience views of the proposed Project, including users of the N2 and R327, surrounding rural homesteads, visitors to Reed Valley, users of the Petroport and One Stop service stations, and residents located on the western edge of Mossel Bay and Kwanonqaba (refer to **Figure 40** and **Figure 61**).

The majority of visual receptors were assessed as having medium sensitivity due to the potential importance of landscape views from these locations. No highly sensitive visual receptors were identified within the study area. **Table 27** provides a summary of the sensitivity rating of the LCAs and their relative receptors.

Table 27: Summary of the Sensitivity Rating of the LCAs and their relevant Receptors (Marshall, 2023)

Sensitivity	LCA	Receptors
Low	Areas not recognised as having specific landscape value. **The Urban and the Industrial LCAs.**	Viewer's attention not focused on landscape. These include: ▪ **Residents of urban areas**
Medium	Landscape value is recognised locally, but is not protected; the landscape is relatively intact, with a distinctive character; and the landscape is reasonably tolerant of change. These areas include: ▪ **The Rural LCA.**	Viewers' attention may be focused on landscape. These include: ▪ **The N2 and the R327;** ▪ **Homesteads;** ▪ **One Stop and Petroport;** ▪ **Reed Valley; and** ▪ **Users of main and local roads.**
High	The qualities for which the landscape is valued are in a good condition, with a clearly apparent distinctive character. This distinctive character is susceptible to relatively small changes.	Viewer's attention very likely to be focused on landscape, e.g. people experiencing views from important landscape features of local physical, cultural or historic interest and beauty spots. Large number of viewers and/or location in a highly valued landscape could elevate viewer sensitivity to the highest level. **There are no receptors that are likely to have a high sensitivity**.

Sensitivity	LCA	Receptors
	There are no landscape character areas with a high significance.	

11.9.4.3 Visibility and Viewshed Analysis

Viewshed modelling indicated that visibility of the proposed Project would largely be confined to areas already influenced by existing industrial development. Topographical features, including the ridgeline north of the site and the coastal escarpment to the south, limit visibility from inland areas and coastal settlements respectively.

The proposed Project may be visible from sections of the N2 and R327, several surrounding homesteads, Reed Valley, the Petroport service station, and portions of Mossel Bay and Kwanonqaba. However, existing industrial infrastructure, vegetation and topography provide varying levels of visual screening across the study area. **Figure 61** illustrates the ZTV indicating the predicted visibility of the proposed Project and associated visual receptors.

11.9.4.4 Site Sensitivity

The specialist found that the Project footprint is generally of low visual sensitivity. No landscape or visual no-go areas were identified and no highly sensitive landscape features occur within the proposed Project area.

The only area identified as having a higher level of sensitivity is a proposed 30 m buffer along the eastern boundary adjacent to the R327. This area was identified as a medium sensitivity zone due to its role in providing visual screening and softening views towards the development from the road corridor and neighbouring receptors such as Reed Valley. The remainder of the site was assessed as having low visual sensitivity (**Figure 62**).

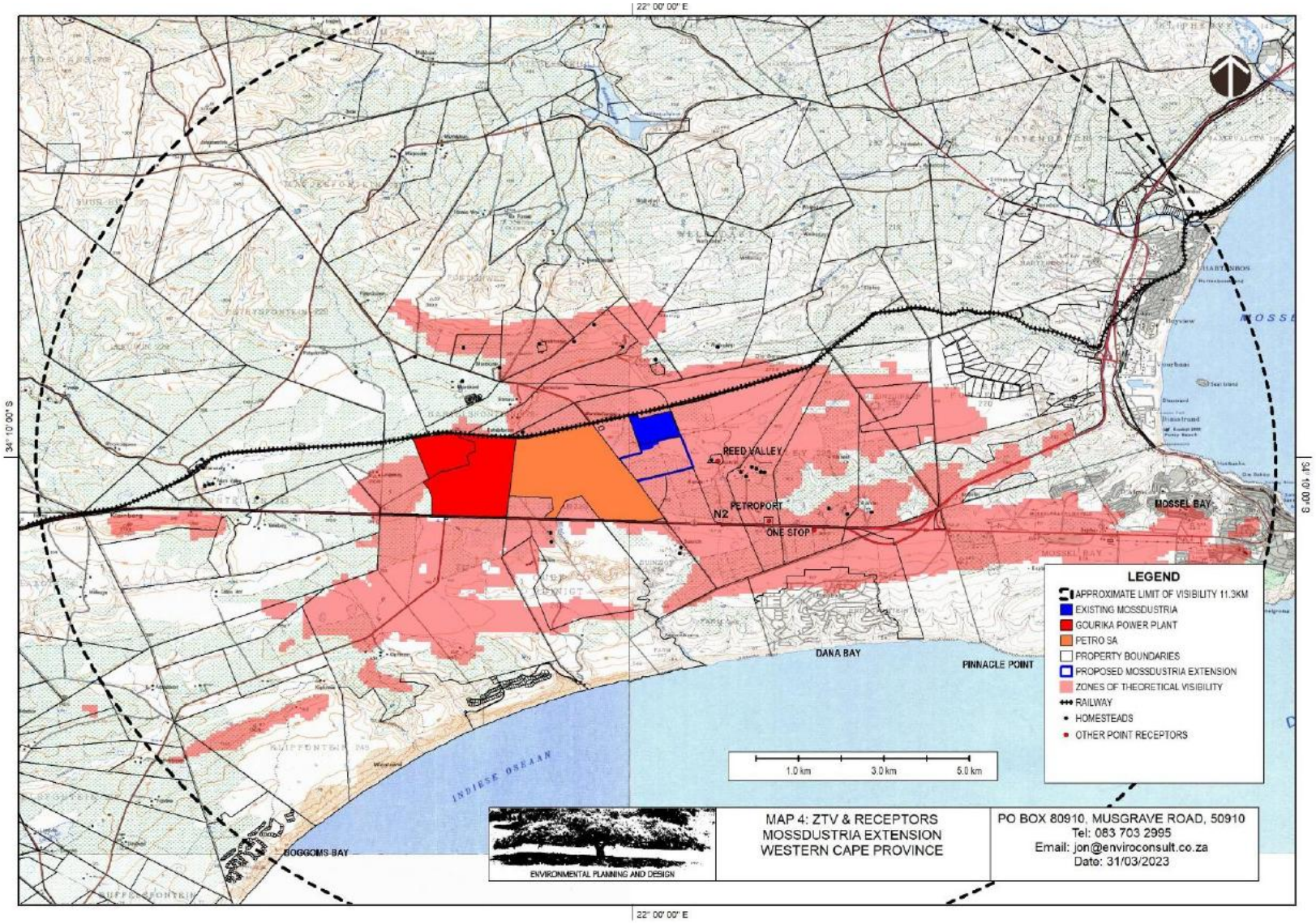

Figure 61: Zones of Theoretical Visibility and Visual Receptors (Marshall, 2023)

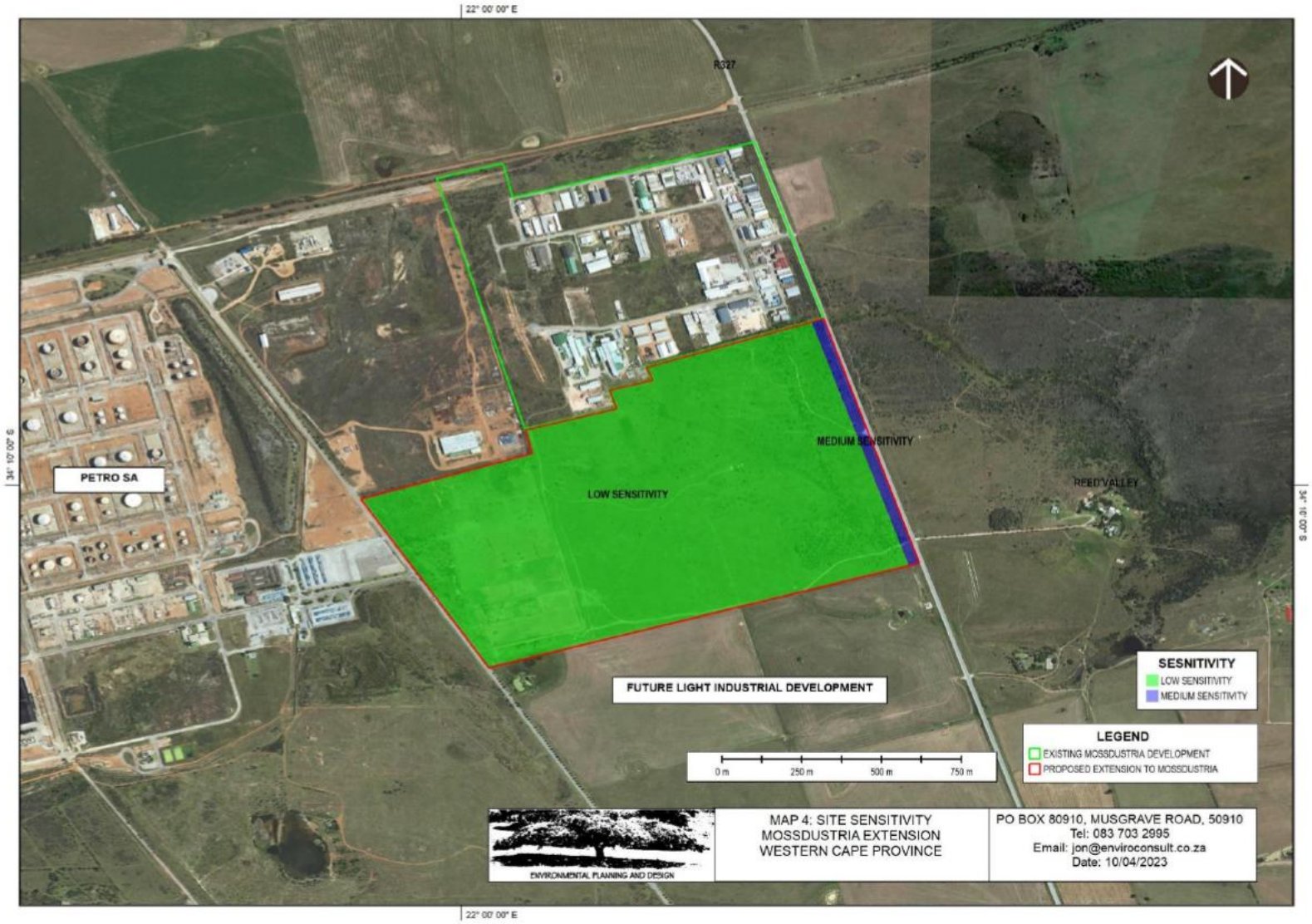

Figure 62: Landscape and Visual Sensitivity Map (Marshall, 2023)

11.9.5 Impact Assessment

Please refer to **Section 12.19** for the results from the impact assessment from this study.

11.9.6 Conclusions

The specialist concluded that the proposed Project is located within an area that already exhibits a strong industrial character and where existing topography, vegetation and surrounding infrastructure reduce the potential for widespread visual intrusion. The assessment did not identify any landscape or visual constraints that would preclude development of the site, nor were any visual no-go areas identified.

The specialist recommended the retention and enhancement of a visual buffer along the eastern boundary of the site together with appropriate landscaping and colour treatment of infrastructure to further integrate the development into the receiving environment.

Overall, the specialist is of the opinion that the site is suitable for the proposed Project from a landscape and visual perspective and that there is no reason why the proposed Project should not be authorised.

11.10 Archaeological/Heritage Walkdown Report

A summary of the Archaeological/Heritage Walkdown Report (Webley, 2023) (contained in **Appendix F7**) follows.

11.10.1 Details of Specialist

The details of the specialists who undertook the Archaeological/Heritage Walkdown are outlined in **Table 28**.

Table 28: Heritage Specialist Details

Organisation	Dr Lita Webley
Name	Dr Lita Webley
Qualification	Doctor of Philosophy (Archaeology)
Affiliation (if applicable)	Association of Professional Heritage Practitioners - Professional Heritage Practitioner

11.10.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Assess the archaeological sensitivity of the proposed Project area and determine whether any significant archaeological resources occur within the site.
- Verify the archaeological and cultural heritage sensitivity identified by the Screening Tool.
- Identify, record and map any archaeological resources, features or heritage sites present within the study area.

- Determine the significance and conservation value of any identified archaeological resources.
- Assess whether the proposed Project would trigger the need for a Heritage Impact Assessment (HIA) or additional heritage investigations.
- Provide recommendations regarding the archaeological suitability of the site for the proposed Project.

11.10.3 Methodology

The assessment included the following tasks (amongst others):

- Review of the archaeological and heritage context of the broader Mossel Bay region, including previously completed archaeological and heritage studies undertaken in the surrounding area.
- Review of available literature, historical information, archaeological databases and heritage records relevant to the study area.
- Examination of current and historical aerial imagery and topographic mapping to identify potential archaeological features and areas of interest.
- Field surveys undertaken on 14 and 16 March 2023 to identify, record and evaluate archaeological resources occurring within the Project footprint.
- Systematic walkover survey of the site with archaeological observations recorded using a handheld GPS and supported by photographic documentation.
- Assessment of identified archaeological resources according to accepted heritage grading criteria and conservation significance categories.
- Comparison of field observations with the Screening Tool sensitivity rating in order to verify the archaeological sensitivity of the site.

11.10.4 Key Findings of the Study

11.10.4.1 Archaeological Context

The study area is situated within a region that contains known Early Stone Age, Middle Stone Age and Late Stone Age archaeological resources. Previous archaeological studies undertaken in the broader Mossel Bay area have documented dispersed stone tool scatters associated primarily with Early Stone Age and Middle Stone Age occupation. The specialist noted that archaeological material encountered in the wider region is typically associated with open-air scatters rather than concentrated archaeological sites.

11.10.4.2 Site Condition

The site has been substantially modified by historical and recent agricultural activities and is characterised by a mix of indigenous vegetation, alien invasive species and evidence of previous land use disturbances. Former agricultural infrastructure and associated features, including stone heaps, a reservoir, animal watering facilities and remnants of past farming activities, were recorded across the site. The western portion was formerly utilised as an ostrich quarantine facility and is considered highly disturbed.

11.10.4.3 Archaeological Resources Identified

The field survey identified a very sparse scatter of Early Stone Age stone tools within the southern portion of the property. The recorded material consisted primarily of isolated quartzite artefacts, including handaxes, cores and flakes occurring within previously ploughed agricultural land. Fewer than ten archaeological artefacts were recorded during the survey.

The assessment also recorded several stone heaps, a small stone ridge, a reservoir and other features associated with historical agricultural land clearing and farming activities. These features were determined to have no archaeological significance. **Table 29** tabulates the archaeological findings of the field survey and **Figure 63** illustrates the track log of the specialist as well as the location of the archaeological finds and other observations.

Table 29: Archaeological sites recorded during the field survey (Webley, 2023)

Site Number	GPS Co-ordinates	Description	Significance
001	S34.170370°; E22.000621°	Two Early Stone Age quartzite cores	Not conservation-worthy
002	S34.170500°; E22.001579°	One Early Stone Age quartzite handaxe	Not conservation-worthy
003	S34.170458°; E22.001513°	One Early Stone Age quartzite handaxe	Not conservation-worthy
004	S34.165879°; E22.002575°	Bedrock	Not conservation-worthy
005	S34.165668°; E22.003342°	Rough heap of large stones	Not conservation-worthy
006	S34.166205°; E22.004425°	Stone heap from old lands	Not conservation-worthy
007	S34.165977°; E22.006109°	Reservoir	Not conservation-worthy
008	S34.167147°; E22.004785°	Stone heap from old lands	Not conservation-worthy
009	S34.166992°; E22.004004°	Three stone heaps from old lands	Not conservation-worthy
010	S34.165977°; E22.006109°	Stone heap from old lands	Not conservation-worthy
011	S34.167147°; E22.004785°	Small stone ridge	Not conservation-worthy
012	S34.166138°; E22.007595°	Three Early Stone Age quartzite cores	Not conservation-worthy
013	S34.169389°; E22.009859°	One Early Stone Age quartzite flake	Not conservation-worthy



Figure 63: Tracks and archaeological sites (as well as observations) made during the field survey (Webley, 2023)

11.10.4.4 Significance of Archaeological Resources

The identified Early Stone Age artefacts were determined to occur in a disturbed secondary context as a result of historical ploughing and agricultural activities. Consequently, the archaeological material has limited scientific value and does not represent a significant archaeological resource. All recorded archaeological observations and associated features were classified as Not Conservation Worthy and were not considered significant enough to warrant conservation or further archaeological investigation (**Table 29**).

11.10.4.5 Site Sensitivity

The specialist confirmed the low archaeological and cultural heritage sensitivity assigned to the site by the Screening Tool. No heritage features of local, provincial or national significance were identified within the Project footprint. The study therefore concluded that the site has very low archaeological sensitivity and does not contain heritage resources that would constrain the proposed Project.

11.10.5 Impact Assessment

Due to the findings of this study, which showed the Project site to be very low sensitivity to heritage features, it was deemed unnecessary to conduct a full HIA; therefore, only an archaeological walkdown report was compiled. Therefore, no impact assessment was required/conducted by the specialist for this theme.

11.10.6 Conclusions

The Archaeological Walkdown Report confirmed that the proposed Project area contains very limited archaeological material and that any archaeological resources present are of low significance. The sparse Early Stone Age artefacts identified during the survey occur within a disturbed agricultural context, while the remaining features recorded on site are associated with previous farming activities and are considered not conservation worthy.

The specialist concluded that the site has very low archaeological sensitivity and that the Screening Tool sensitivity rating is appropriate. No significant archaeological or heritage constraints to the proposed Project were identified, and a HIA is not required.

The specialist is of the opinion that the proposed Project may proceed from an archaeological and heritage perspective without additional mitigation measures. As a precautionary measure, a chance-find procedure should be followed whereby any previously unidentified archaeological material or human remains uncovered during construction are reported immediately to HWC for further assessment.

11.11 Palaeontology Desktop Assessment

A summary of the Palaeontology Desktop Assessment (Butler, 2023) (contained in **Appendix F8**) follows.

11.11.1 Details of Specialist

The details of the specialists who undertook the Palaeontology Desktop Assessment are outlined in **Table 30**.

Table 30: Palaeontology Specialist Details

Organisation	Banzai Environmental (Pty) Ltd
Name	Elize Butler
Qualification	MSc (Zoology)
Affiliation (if applicable)	Palaeontological Society of South Africa

11.11.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Assess the palaeontological sensitivity of the proposed Project area.
- Determine whether fossil material may occur within the geological formations underlying the Project footprint.
- Evaluate the palaeontological significance of the geological units present within the study area and verify the sensitivity assigned by available screening tools.
- Identify any palaeontologically sensitive areas that may require avoidance, further assessment or mitigation.
- Assess the potential implications of the proposed Project for palaeontological resources.
- Provide recommendations regarding the suitability of the site for the proposed Project from a palaeontological perspective.

11.11.3 Methodology

The assessment was conducted through the following tasks (amongst others):

- Completion of a desktop-based palaeontological assessment in accordance with the NHRA, SAHRA guidelines and the applicable NEMA specialist assessment protocols.
- Review of the Screening Tool palaeontological sensitivity mapping and the SAHRIS Palaeosensitivity Map for the study area.
- Examination of regional and local geological mapping to determine the geological formations underlying the proposed Project footprint.
- Review of available palaeontological literature, previous impact assessments, scientific publications and geological records relevant to the Mossel Bay area and the geological formations present.
- Assessment of the known fossil content and fossil-producing potential of the Peninsula, Tchando and Rietvlei Formations associated with the Table Mountain Group.

- Evaluation of the fossil occurrence potential of the geological units present within the site and consideration of the likelihood of fossil resources being impacted by the proposed Project.
- Assessment of the need for further field investigations, specialist mitigation measures and monitoring requirements based on the outcome of the desktop study.

11.11.4 Key Findings of the Study

11.11.4.1 Geological and Palaeontological Setting

The study area is underlain by geological formations of the Table Mountain Group (Cape Supergroup), specifically the Peninsula Formation, Tchando Formation and Rietvlei Formation of the Nardouw Subgroup. These formations are known to contain fossil-bearing horizons in certain locations, particularly trace fossils and marine invertebrate fossils associated with the Cape Supergroup (**Figure 17**).

11.11.4.2 Fossil Resource Potential

Although the geological formations within the study area have recognised fossil-bearing potential regionally, the desktop assessment concluded that fossil heritage of scientific and conservation value within the Project footprint is relatively scarce. The specialist determined that the likelihood of encountering significant fossil resources within the proposed Project area is low.

The assessment found that, despite the elevated sensitivity ratings assigned through regional screening tools, the actual palaeontological sensitivity of the Project footprint is low based on the geological context and known fossil occurrence potential of the site.

11.11.4.3 Site Suitability

No palaeontologically sensitive areas requiring avoidance were identified within the proposed Project footprint. Furthermore, the assessment found no evidence indicating that the Project area contains fossil resources of sufficient significance to constrain the proposed Project.

The specialist therefore concluded that the Project footprint is not considered sensitive from a palaeontological perspective and that no additional palaeontological investigations are requried.

11.11.5 Impact Assessment

Please refer to **Section 12.18** for the results from the impact assessment from this study.

11.11.6 Conclusions

The Palaeontological Desktop Assessment concluded that, although the study area is underlain by geological formations that are regionally associated with fossil occurrences and are assigned moderate to high palaeontological sensitivity on regional mapping products, the fossil heritage of scientific and conservation importance within the development footprint is limited and relatively scarce.

The specialist determined that the proposed development is unlikely to result in significant impacts on palaeontological resources and that the development footprint is of low palaeontological sensitivity. Consequently, no additional palaeontological studies, field verification surveys or specialist mitigation measures are required prior to construction.

The specialist is of the opinion that the proposed development may proceed from a palaeontological perspective and may be authorised. As a precautionary measure, a Chance Find Protocol should be included in the EMPr and implemented should any previously unidentified fossil material be uncovered during construction activities. Any fossil discoveries should be protected in situ and reported to the relevant heritage authority for further assessment.

11.12 Socio-Economic Impact Assessment

A summary of the Socio-Economic Impact Assessment (Kempthorne & Sondwana, 2023) (contained in **Appendix F9**) follows.

11.12.1 Details of Specialist

The details of the specialists who undertook the Socio-Economic Impact Assessment are outlined in **Table 31**.

Table 31: Socio-Economic Specialist Details

Organisation	Urban-Econ	
Name	Alexandra Kempthorne	Buhle Sondwana
Qualification	Master of Arts (City and Regional Planning)	Master of Arts (Development Studies)
Affiliation (if applicable)	Development Society of Southern Africa	-

11.12.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Establish the socio-economic baseline of the study area, including demographic, economic, labour market and household characteristics.
- Assess the potential socio-economic implications associated with the proposed Project.
- Evaluate the potential benefits and risks associated with the construction and operational phases of the Project.
- Assess the Project's potential contribution to economic growth, employment creation, income generation and local economic development.
- Determine the likely effects of the Project on surrounding communities, businesses, municipal services and tourism activities.
- Assess the economic implications of the No-Go Alternative.

- Identify measures to enhance positive socio-economic benefits and minimise potential adverse effects.

11.12.3 Methodology

The assessment was conducted through the following tasks (amongst others):

- Review of relevant planning, economic development and strategic policy documentation applicable to the MBLM, Garden Route District Municipality and Western Cape Province.
- Collection and analysis of demographic, employment, income, education and household data from Statistics South Africa and other publicly available datasets.
- Assessment of local and regional economic trends, key economic sectors, labour market conditions and development opportunities within the study area.
- Evaluation of the proposed Project components, including the industrial expansion area, motorsport arena and solar energy facility, to determine their potential economic contributions.
- Input-output and economic multiplier modelling to estimate direct, indirect and induced economic impacts associated with construction and operational activities.
- Estimation of employment creation, household income generation and gross domestic product (GDP) contributions associated with the Project.
- Assessment of potential social impacts, including community wellbeing, public health, tourism, local business opportunities and demand for infrastructure and municipal services.
- Consideration of the No-Go Alternative to assess the socio-economic implications of not proceeding with the proposed Project.

11.12.4 Key Findings of the Study

11.12.4.1 Socio-Economic Context

The study found that the MBLM has a growing population and a relatively large economically active population, providing a substantial labour pool for future development initiatives. Despite this, unemployment remains a socio-economic challenge and a significant proportion of households fall within lower income categories. The assessment identified a need for employment creation, skills development and economic diversification to support long-term socio-economic wellbeing in the area.

The local economy is characterised by a mix of manufacturing, trade, tourism, services and industrial activities, with the Mossdustria industrial area forming an important component of the municipal economic base. The proposed Project is aligned with broader economic development objectives aimed at supporting investment, industrial growth and employment opportunities within the municipality.

11.12.4.2 Economic Development and Investment

The assessment found that the proposed Project would contribute significantly to economic activity within Mossel Bay and the broader Garden Route region. Economic modelling indicated that the Project would generate substantial direct, indirect and induced economic benefits through capital investment, procurement expenditure, increased business activity and secondary economic linkages.

The Project was found to support local economic diversification through the introduction of motorsport, recreation and renewable energy activities, while also expanding industrial development opportunities within an existing industrial node. The motorsport facility in particular was identified as a unique regional attraction that could contribute to economic growth and tourism development.

11.12.4.3 Employment and Income Generation

The study identified significant employment benefits associated with the Project. Construction activities are expected to generate substantial short-term employment opportunities across a range of skill levels, while operational activities will create permanent employment opportunities associated with the industrial expansion, motorsport facility and solar energy development.

The assessment found that these employment opportunities would contribute to increased household income, support local livelihoods and create opportunities for skills development and workforce participation. Additional indirect and induced employment opportunities are also anticipated through supply chain activities, local procurement and increased spending within the local economy.

11.12.4.4 Tourism and Local Business Opportunities

The proposed motorsport arena was identified as a potentially important tourism and recreational asset for the region. The assessment found that motorsport events have the potential to attract visitors from outside the municipality, increasing spending within the local economy and generating benefits for accommodation providers, restaurants, fuel stations, retailers and tourism-related businesses.

The Project was also found to create opportunities for local businesses, suppliers and SMMEs through procurement, service provision and construction-related activities. The study highlighted the importance of promoting local procurement and local participation to maximise these benefits.

11.12.4.5 Community and Infrastructure Considerations

The assessment acknowledged that development-related activities may increase demand for municipal services and infrastructure during both the construction and operational phases. Potential pressures on transport infrastructure, municipal services and community facilities were identified as considerations requiring planning and coordination with relevant authorities.

The study further recognised potential social challenges associated with the temporary influx of construction workers, including increased demand on health and social services. However, these risks were considered manageable through the implementation of appropriate management, awareness and monitoring measures.

11.12.5 Impact Assessment

Please refer to **Section 12.25** for the results from the impact assessment from this study.

11.12.6 Conclusions

The socio-economic assessment concluded that the proposed Mossdustria expansion, motorsport arena and solar energy facility would provide significant socio-economic benefits at both the local and regional scale. The Project is expected to contribute positively to economic growth, employment creation, household income generation, tourism development and business opportunities, while supporting broader municipal and regional development objectives.

Although the assessment identified several social and infrastructure-related considerations, these were not considered to represent significant constraints to the Project and can be effectively managed through appropriate planning, stakeholder engagement, local procurement initiatives and implementation of the recommended management measures.

The specialist is of the opinion that the proposed Project would result in an overall net positive socio-economic outcome and that there are no fatal flaws from a socio-economic perspective. The Project is therefore supported from a socio-economic standpoint, provided that the recommended enhancement and management measures are implemented throughout the Project lifecycle.

11.13 Agricultural Compliance Statement

A summary of the Agricultural Compliance Statement (Bouwer, 2023) (contained in **Appendix F10**) follows.

11.13.1 Details of Specialist

The details of the specialists who undertook the Agricultural Compliance Statement are outlined in **Table 32**.

Table 32: Agricultural Specialist Details

Organisation	Digital Soils Africa (Pty) Ltd
Name	Dr Darren Bouwer
Qualification	Doctor of Philosophy (Soil Science)
Affiliation (if applicable)	SACNASP Professional Scientist (Soil Science – 400081/16)

11.13.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Assess the agricultural sensitivity of the proposed Project area in accordance with the Protocols.
- Verify the agricultural sensitivity assigned to the site by the Screening Tool.
- Assess the agricultural potential of the site through evaluation of climate, terrain, soil and land capability characteristics.
- Identify existing agricultural land uses and determine the extent to which agricultural activities currently occur on the site.
- Conduct field verification of agricultural resources, including soil investigations and land capability assessments.
- Determine whether the proposed Project would result in the loss of important agricultural resources and identify any agricultural constraints applicable to the site.
- Provide a specialist opinion regarding the suitability of the site for the proposed Project from an agricultural perspective.

11.13.3 Methodology

The assessment was conducted through the following tasks (amongst others):

- Review of agricultural sensitivity information generated by the Screening Tool and assessment of the factors contributing to the assigned sensitivity rating.
- Desktop evaluation of climate capability, soil capability, terrain capability, grazing capacity and land capability datasets obtained from the Department of Agriculture, Forestry and Fisheries.
- Assessment of regional land types and soil-forming characteristics using available land type mapping and soil capability information.
- Review and comparison of historical and current land cover datasets, including South African National Land Cover (SANLC) datasets, to evaluate past and present agricultural land use.
- Site verification undertaken on 10 March 2023 to assess land use, grazing activities, soil characteristics and agricultural conditions within the study area.
- Completion of soil auger investigations and visual soil observations at representative locations across the site, with soils classified according to the Soil Classification Working Group (2018).
- Assessment of soil depth, drainage characteristics, agricultural potential, grazing suitability and land capability associated with the identified soil forms.
- Evaluation of agricultural sensitivity based on field observations, desktop information and specialist interpretation of the site's long-term agricultural production potential.

11.13.4 Key Findings of the Study

11.13.4.1 Climate and Agricultural Potential

The study area experiences a warm temperate climate with an average annual temperature of approximately 17°C and an average annual rainfall of approximately 543 mm. The site occurs within a semi-arid climatic zone where rainfall and moisture availability impose constraints on agricultural productivity. As a result, cultivation of dryland crops is considered challenging and agricultural yields are expected to be limited without favourable conditions.

Desktop analysis assigned the site a moderate climate capability rating, indicating that climatic conditions are not optimal for intensive agricultural production.

11.13.4.2 Soils and Land Capability

Field investigations indicated that the site is dominated by shallow Mispah soils, with Glenrosa and Westleigh soils occurring in localized areas (**Table 33**). The Mispah and Glenrosa soils are generally shallow, rocky and characterised by low agricultural potential, while the Westleigh soils occur in depressions within the landscape and exhibit wetter conditions.

The land capability of the site was calculated to range from Class 4 to Class 6, corresponding to very low to low-moderate agricultural potential. The dominant Mispah soils were classified as having very low land capability and were considered unsuitable for cultivation. Glenrosa soils were classified as having low land capability and are more suited to grazing than crop production. Westleigh soils were identified as potentially arable but with severe limitations, including restricted rooting depth and limited water-holding capacity.

Table 33: Description of the Soil Types found in the Study Area (Bouwer, 2023)

Soil Forms	Soil Characteristics	Dryland Potential	Land Capability Class
Mispah	Shallow soils on relatively solid rock. The topsoil was sandy, apedal and bleached in colour. Depths ranged from 100 to 200m	Very Low	Low
Glenrosa	Topsoil is like the Mispah, but slightly deeper soil depth. There was variation in the lithic, ranging from chemically weathered subsoil to rounded large stones.	Very Low	Low
Westleigh	These soils were associated with micro depressions in the landscape. The A horizons were darkened and contained mottling in the transition to the soft plinthic. Most of the Westleigh soils were underlied by a highly weathered saprolite with redoximorphic features. Soil depths ranged from 500 to 800 mm.	Low	Low

11.13.4.3 Grazing Capacity and Wetlands

The site exhibits a low grazing capacity of approximately 40 ha per large stock unit (LSU), indicating limited agricultural grazing potential. The specialist therefore concluded that any loss of grazing land associated with the proposed Project would be insignificant.

Wetland areas and associated aquatic features were identified within portions of the site and surrounding area. The assessment highlighted that these areas should remain protected, as they are sensitive to disturbance and overgrazing. The presence of wetlands further limits the

extent of land considered suitable for agricultural cultivation.It is noted however, that these wetlands were determined to be artificial wetlands by the Aquatic Specialist (Colloty, 2026) and therefore, are not protected.

11.13.4.4 Agricultural Sensitivity

The Screening Tool identified the site as having medium agricultural sensitivity (**Figure 46**), primarily due to moderate land capability classifications associated with portions of the site. However, the specialist found that the screening result overestimates the agricultural value of the site because the site boundary adjoins cultivated lands located to the south. Following field verification, the study concluded that a predominantly low agricultural sensitivity rating is more representative of actual site conditions (**Figure 64**).



Figure 64: Agricultural Sensitivity of the Study Area (Bouwer, 2023)

11.13.5 Impact Assessment

As only a compliance statement was required for this environmental theme, no impact assessment was conducted or required.

11.13.6 Conclusions

The Agricultural Compliance Statement concluded that the Project area is characterised by low agricultural potential owing to a combination of limiting factors, including shallow soils, low land capability, low grazing capacity and the presence of wetland-associated soils. Although

regional datasets and the Screening Tool initially identified portions of the site as having medium agricultural sensitivity, field verification determined that the majority of the site exhibits low agricultural sensitivity and limited long-term agricultural value.

The specialist found that the cultivated areas historically present on the property have largely been abandoned and that current agricultural activities are limited to low-intensity grazing. As a result, the proposed Project is not expected to result in the loss of important agricultural resources.

The specialist is of the opinion that the proposed Project can proceed at the identified site from an agricultural perspective, as no significant agricultural constraints were identified. No micro-siting requirements, mitigation measures or additional specialist studies were considered necessary, and the site was deemed suitable for the proposed Project.

11.14 Land Use Planning Risk Assessment

A summary of the Land Use Planning Risk Assessment (Mitchell, 2023) (contained in **Appendix F11**) follows.

11.14.1 Details of Specialist

The details of the specialists who undertook the Land Use Planning Risk Assessment are outlined in **Table 34**.

Table 34: Land Use Planning Risk Assessment Specialist Details

Organisation	ISHECON
Name	Debra Mitchell
Qualification	-
Affiliation (if applicable)	ISHECON CC is a South African National Accreditation System Accredited Inspection Body to undertake Type A inspections (Accreditation Number: MHI0008)

11.14.2 Objectives of the Study

The following tasks were completed in fulfilment of the terms of reference for this study:

- Assess the potential risks associated with the proposed Project in proximity to the adjacent PetroSA Gas-to-Liquids refinery.
- Identify major hazard scenarios associated with the storage, handling and processing of hazardous materials at the PetroSA facility that could result in off-site consequences.
- Determine the potential extent and severity of accidental events, including fires, explosions and toxic releases, that could affect the proposed Project area.
- Quantify individual and societal risks associated with identified major hazard scenarios.

- ❖ Evaluate the compatibility of the proposed Project with accepted land use planning risk criteria and international land use planning guidelines.
- ❖ Delineate risk-based land use planning zones and identify any development restrictions associated with these zones.
- ❖ Provide recommendations regarding the suitability of the proposed Project from a risk and land use planning perspective.

11.14.3 Methodology

The assessment was conducted through the following tasks (amongst others):

- ❖ Site inspection undertaken on 25 April 2023 to verify site conditions, surrounding land uses and the relationship between the proposed Project and adjacent hazardous installations.
- ❖ Review of the proposed Project layout, surrounding land uses, population assumptions and planned facility locations.
- ❖ Identification of hazardous materials present at the PetroSA facility with the potential to result in off-site impacts, including liquefied natural gas, liquefied petroleum gas, natural gas, low flash-point hydrocarbons and hydrofluoric acid.
- ❖ Identification and evaluation of credible major accident scenarios involving fires, explosions, vapour cloud explosions, BLEVEs and toxic gas releases.
- ❖ Consequence modelling using SAFETI software to assess the potential extent of thermal radiation, overpressure and toxic gas exposure associated with major accident events.
- ❖ Frequency analysis and risk modelling to determine both individual risk and societal risk associated with potential accident scenarios.
- ❖ Comparison of calculated risk levels against recognised international risk acceptability criteria and land use planning guidelines, including UK Health and Safety Executive guidance.
- ❖ Delineation of land use planning risk zones and assessment of the compatibility of the proposed land uses within these zones.

11.14.4 Key Findings of the Study

11.14.4.1 Existing Risk Environment

The proposed Project is situated adjacent to the PetroSA Gas-to-Liquids refinery, which stores and processes various hazardous materials capable of causing major accident events. Hazardous substances identified as having the greatest potential for off-site effects include natural gas, liquefied gases such as petroleum gas, low flash-point hydrocarbons and hydrofluoric acid associated with the alkylation unit.

The assessment found that hydrofluoric acid releases, liquefied natural gas incidents and liquefied petroleum gas explosion scenarios are the dominant contributors to the off-site risk profile of the area.

11.14.4.2 Site Context and Exposure

The proposed Project comprises an expansion of the Mossdustria Industrial Area, a solar PV facility, a conservation area and a motorsport raceway. Public facilities associated with the raceway, including parking areas, pavilions, spectator facilities and viewing areas, are proposed within the eastern portion of the site, while the race tracks extend further west towards the PetroSA facility.

The assessment notes that the surrounding area is characterised by existing industrial land uses, agricultural land and isolated farmsteads, with no nearby residential suburbs, schools or hospitals.

11.14.4.3 Risk Modelling and Individual Risk

Risk modelling indicated that, across most of the proposed Project area, the individual risk posed by potential major accidents at PetroSA falls within broadly acceptable levels. The assessment found that unmitigated location-specific individual risk across the majority of the development area is generally less than one in a million chance per year of a fatality resulting from a major accident event.

11.14.4.4 Land Use Planning Zones

The assessment applied United Kingdom Health and Safety Executive land use planning principles to establish consultation and restricted-risk zones surrounding the PetroSA facility. These zones were used to evaluate the compatibility of the proposed land uses relative to the potential risks posed by major accident scenarios (**Figure 65**).

The solar PV facility was found to be the least vulnerable land use and is not constrained by the identified risk zones. Similarly, the proposed industrial expansion area is considered compatible with the identified risk environment given the nature of the intended industrial activities and anticipated occupancy levels.

The motorsport raceway represents the most sensitive land use due to the potential concentration of large numbers of members of the public. Accordingly, portions of the western section of the raceway site fall within the outer land use planning risk zone and require consideration in the layout and operation of the facility.

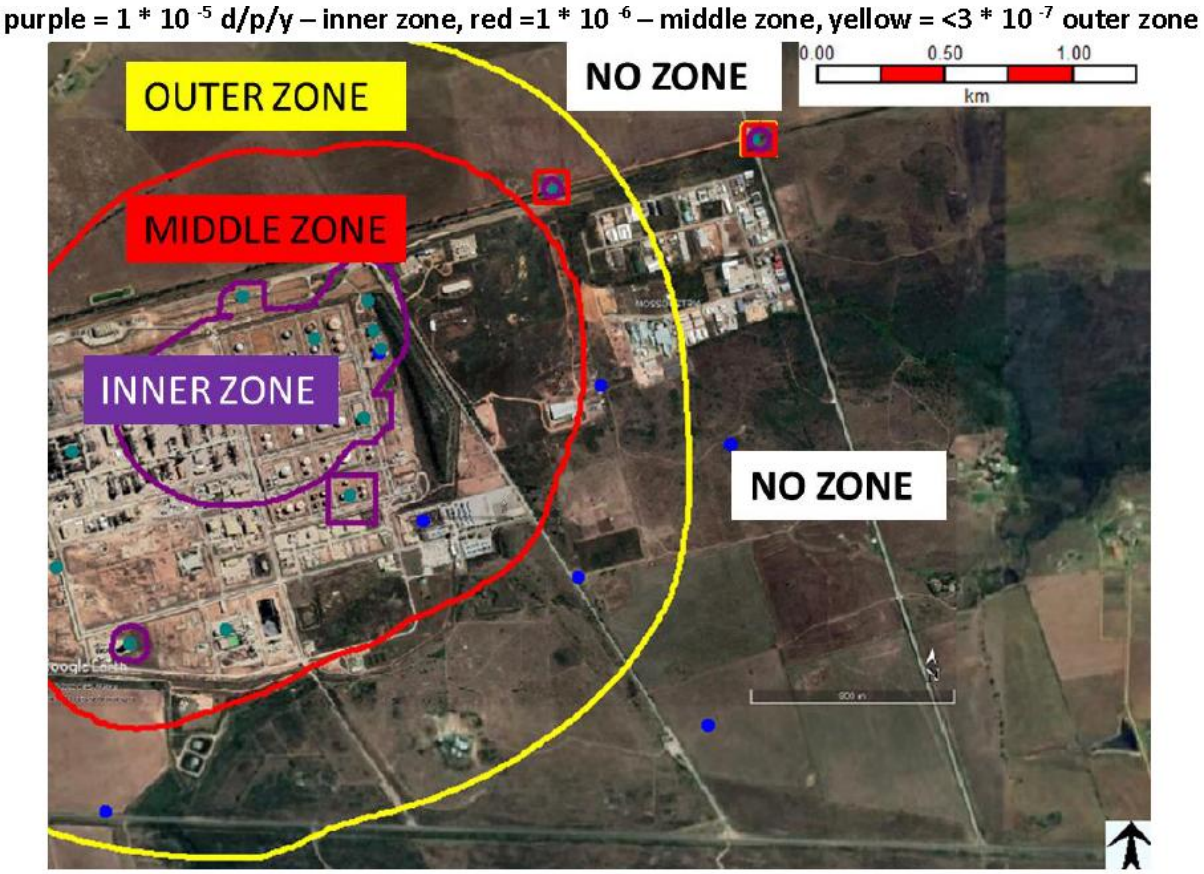

Figure 65: Land-use Planning Risk Contours for Mossdustria Area (Mitchell, 2023)

11.14.4.5 Societal Risk Considerations

The specialist found that societal risks associated with the proposed Project are tolerably low, provided that appropriate risk management measures are implemented and PetroSA continues to apply reasonable risk reduction measures.

The assessment emphasised that risks are strongly influenced by the number and distribution of people present within the development area, particularly during large motorsport events. As a result, the placement of public facilities within the site layout is an important consideration in maintaining acceptable risk levels.

Although not present in the UK HSE land use planning system, there is another criterion that is sometimes used in risk assessment called the Hong Kong criterion, named after the region that implemented it. This criterion states that from the results of a risk assessment, it is unacceptable if there is a major hazard event with the potential to fatally affect significantly more than 1000 persons. With this criterion in mind, the specialist specifies that it may be advisable to limit the size of large race events to 5000 persons, as with 10 000 persons the risks significantly exceed the Hong Kong criterion.

11.14.4.6 Emergency Preparedness

The assessment recommends that all facilities within the Project area, particularly the motorsport raceway, maintain an emergency response plan linked to the PetroSA emergency response system. Emergency preparedness, communication protocols and regular drills were identified as important measures to ensure appropriate response capabilities in the unlikely event of a major industrial accident.

11.14.5 Impact Assessment

The Land Use Planning Quantitative Risk Assessment differs from the other specialist studies undertaken for the Project in that it is not a conventional environmental impact assessment. Rather than assessing Project-related impacts and assigning significance ratings, the study evaluates the compatibility of the proposed Project with the existing risk environment associated with the adjacent PetroSA facility. The findings of the Quantitative Risk Assessment have therefore been used to inform the assessment of relevant impacts, particularly those relating to health and safety and land use compatibility and have not been assessed as a separate specialist impact within the impact assessment chapter.

11.14.6 Conclusions

The Land Use Planning Risk Assessment concluded that the proposed Project area is generally suitable for the intended land uses from a risk and land use planning perspective. The assessment found that individual risk levels across most of the site are within broadly acceptable limits and that no fatal flaws were identified that would preclude development of the site.

The specialist concluded that the proposed solar PV facility and industrial expansion area are compatible with the surrounding risk environment. The motorsport raceway can also be accommodated, provided that the layout is designed to avoid concentrating public gathering areas within portions of the western site that fall within the outer risk zone and that appropriate emergency preparedness measures are implemented.

Overall, the specialist is of the opinion that there is no risk-based justification to oppose the proposed Project, subject to the incorporation of land use planning recommendations and emergency response requirements identified in the assessment.

12 IMPACT ASSESSMENT

12.1 General

This section focuses on the potential environmental impacts that may occur during the pre-construction, construction, and operational phases of the Project.

Note that an 'impact' refers to the change to the environment resulting from an environmental aspect (or activity), whether desirable or undesirable. An impact may be the direct or indirect consequence of an activity.

Potential impacts were identified as follows:

- Impacts associated with listed activities contained in the EIA Regulations' Listing Notices;
- Impacts identified during the Scoping phase;
- An appraisal of the Project's activities and components;
- An assessment of the receiving biophysical, social, economic and built environments;
- Findings from specialist studies;
- Issues highlighted by environmental authorities; and
- Comments received during public participation from IAPs.

12.2 Impacts Associated with Listed Activities

As mentioned, the Project requires an EA for certain activities listed in the EIA Regulations, which serve as triggers for the EIA. The potential impacts associated with the key listed activities are broadly stated in **Table 35**. These impacts are further assessed in greater detail in **Section 12.9** to **Section 12.28** below

Table 35: Potential Impacts associated with the key listed activities

Listed Activities	Potential Impact Overview
GN No. R. 983 of 4 December 2014 (as amended) (Listing Notice 1)	
GN No. R. 983 – Activity 1 (i) (as amended): *The development of facilities or infrastructure for the generation of electricity from a renewable resource where-* *(i) the electricity output is more than 10 megawatts but less than 20 megawatts; or* *(ii) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare;* *excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs* *(a) within an urban area; or* *(b) on existing infrastructure.*	Impacts associated with the Alternative Energy Facility Area, including: ▪ Disturbance to fauna and flora. ▪ Loss of agricultural land and agricultural potential. ▪ Soil disturbance, erosion, and degradation. ▪ Dust, noise, and traffic impacts associated with construction activities. ▪ Waste generation and pollution risks associated with hazardous substances. ▪ Impacts on stormwater management and surface water quality. ▪ Visual and land use impacts. ▪ Impacts on existing services and infrastructure. ▪ Occupational health and safety risks..

Listed Activities	Potential Impact Overview
	▪ Increased renewable energy generation contributing to energy security and reduced reliance on conventional energy sources. ▪ Positive contribution to climate change mitigation through the generation of renewable energy.
GN No. R. 983 – Activity 9 (i)(ii) (as amended): *The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water* *(i) with an internal diameter of 0.36 metres or more; or* *(ii) with a peak throughput of 120 litres per second or more;* *excluding where -* *(a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or* *(b) where such development will occur within an urban Area.*	Impacts associated with the development of bulk water and stormwater infrastructure, including: ▪ Loss and disturbance of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Soil disturbance, erosion, and degradation. ▪ Alteration of stormwater drainage patterns and potential impacts on surface water quality. ▪ Dust, noise, and traffic impacts associated with construction activities. ▪ Waste generation and pollution risks associated with hazardous substances. ▪ Impacts on existing services and infrastructure. ▪ Occupational health and safety risks. ▪ Positive socioeconomic impacts associated with employment creation and economic activity during construction. ▪ Improved stormwater management and site drainage, reducing flood and erosion risks.
GN No. R. 983 – Activity 12 (ii)(a) & (c) (as amended): *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.*	Impacts associated with the development of infrastructure within 32m of the watercourse: ▪ Loss and disturbance of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Soil disturbance, erosion, and degradation. ▪ Impacts on wetlands, watercourses, and surface water quality. ▪ Alteration of stormwater flow and drainage patterns. ▪ Dust, noise, and traffic impacts associated with construction activities.
GN No. R. 983 – Activity 19 (as amended): *The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal*	Impacts associated with the infilling of artificial watercourses on site, including: ▪ Impacts on wetlands and watercourses. ▪ Alteration of stormwater and drainage patterns.

Listed Activities	Potential Impact Overview
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.*	▪ Impacts on aquatic habitat and biodiversity. ▪ Soil disturbance, erosion and sedimentation. ▪ Water quality impacts.
GN No. R. 983 – Activity 24 (ii) (as amended): *The development of a road -* *(i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or* *(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;* *but excluding a road -* *(a) which is identified and included in activity 27 in Listing Notice 2 of 2014;* *(b) where the entire road falls within an urban area; or* *(c) which is 1 kilometre or shorter.*	Impacts associated with the development of roads, including: ▪ Loss and disturbance of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Loss of agricultural land and agricultural potential. ▪ Soil disturbance, erosion, and degradation. ▪ Impacts on wetlands, watercourses, and surface water quality. ▪ Dust and noise impacts associated with road construction and use. ▪ Noise impact associated with motorsport events on the internal road network. ▪ Traffic and transportation impacts associated with increased vehicle movement and access, especially during motorsport events. ▪ Waste generation and pollution risks associated with hazardous substances, like hydrocarbons. ▪ Visual and land use impacts associated with the introduction of road infrastructure. ▪ Occupational health and safety risks. ▪ Positive socioeconomic impacts through improved site access, employment creation, tourism and economic development.
GN No. R. 983 – Activity 28 (i) (as amended): *Residential, mixed, retail, commercial, industrial or institutional developments, where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:* *(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or* *(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;* *excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.*	Impacts associated with the overall development, including: ▪ Loss of agricultural land and agricultural potential. ▪ Loss and transformation of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Impacts on wetlands, watercourses, and associated ecological systems. ▪ Soil disturbance and degradation. ▪ Air quality impacts. ▪ Noise impacts. ▪ Traffic and transportation impacts. ▪ Visual and sense of place impacts. ▪ Increased demand on municipal services and infrastructure. ▪ Waste generation and hazardous substances risks associated with industrial and commercial activities. ▪ Positive socioeconomic impacts through employment creation, investment, and economic growth.
GN No. R. 983 - Activity 45 (as amended):	Impacts associated with the development of bulk water and stormwater infrastructure, including:

Listed Activities	Potential Impact Overview
The expansion of infrastructure for the bulk transportation of water or storm water, where the existing infrastructure— *(i) has an internal diameter of 0,36 metres or more; or* *(ii) has a peak throughput of 120 litres per second or more; and* *(a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or* *(b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more;* *excluding where such expansion—* *(aa) relates to transportation of water or storm water within a road reserve or railway line reserve; or* *(bb) will occur within an urban area.*	▪ Loss and disturbance of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Soil disturbance, erosion, and degradation. ▪ Alteration of stormwater drainage patterns and potential impacts on surface water quality. ▪ Dust, noise, and traffic impacts associated with construction activities. ▪ Waste generation and pollution risks associated with hazardous substances. ▪ Impacts on existing services and infrastructure. ▪ Occupational health and safety risks. ▪ Positive socioeconomic impacts associated with employment creation and economic activity during construction. ▪ Improved stormwater management and site drainage, reducing flood and erosion risks.
GN No. R. 983 - Activity 46 (as amended): *The expansion of infrastructure for the bulk transportation of sewage, effluent , process water, waste water, return water, industrial discharge or slimes where the existing infrastructure—* *(i) has an internal diameter of 0,36 metres or more; or* *(ii) has a peak throughput of 120 litres per second or more; and* *(a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or* *(b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more;* *excluding where such expansion—* *(aa) relates to transportation of water or storm water within a road reserve or railway line reserve; or* *(bb) will occur within an urban area.*	Impacts associted with the development of bulk sewer infrastructure, inlcuding: ▪ Soil disturbance, erosion, and degradation associated with trenching and pipeline installation. ▪ Disturbance of terrestrial habitat and vegetation during construction. ▪ Impacts on wetlands, watercourses, and surface water quality resulting from construction activities or infrastructure failure. ▪ Groundwater and surface water contamination associated with sewage or wastewater leaks, spillages, or overflows. ▪ Dust, noise, and traffic impacts associated with construction activities. ▪ Temporary disruption of existing services and infrastructure during installation and tie-in works. ▪ Occupational health and safety risks associated with construction and maintenance activities. ▪ Positive socioeconomic impacts through improved service capacity, support for industrial growth, and economic development.
GN No. R. 983 - Activity 56 (ii) (as amended): *The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre—* *(i) where the existing reserve is wider than 13,5 meters; or* *(ii) <u>where no reserve exists, where the existing road is wider than 8 metres</u>;* *excluding where widening or lengthening occur inside urban areas.*	Impacts associated with the development of roads, including: ▪ Loss and disturbance of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Loss of agricultural land and agricultural potential. ▪ Soil disturbance, erosion, and degradation. ▪ Impacts on wetlands, watercourses, and surface water quality. ▪ Dust and noise impacts associated with road construction and use. ▪ Traffic impacts associated with the construction of the roads. ▪ Traffic and transportation impacts associated with increased vehicle movement and access, especially during motorsport events. ▪ Waste generation and pollution risks associated with hazardous substances, like hydrocarbons. ▪ Visual and land use impacts associated with the introduction of road infrastructure. ▪ Occupational health and safety risks. ▪ Positive socioeconomic impacts through improved site access, employment creation, tourism and economic development.

Listed Activities	Potential Impact Overview
GN No. R. 984 of 4 December 2014 (as amended) (Listing Notice 2)	
GN No. R. 984 – Activity 15 (as amended): *The clearance of an area of 20 hectares or more of indigenous vegetation,* *excluding 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*	Impacts associated with the clearance of indigenous vegetation required for the development of the Alternative Energy Facility, Industrial Expansion Area and the Motorsports Arena, including: ▪ Loss and transformation of terrestrial habitat. ▪ Loss of indigenous vegetation. ▪ Habitat fragmentation and reduction in ecological connectivity. ▪ Disturbance and displacement of fauna. ▪ Impacts on floral SCC. ▪ Impacts on faunal SCC. ▪ Loss of ecosystem functioning and ecological services. ▪ Soil disturbance, erosion, and land degradation following vegetation clearance. ▪ Increased risk of invasive alien plant establishment. ▪ Positive socioeconomic impacts through employment creation and economic development.
GN No. R. 985 of 4 December 2014 (as amended) (Listing Notice 3)	
GN No. R. 985 - Activity 1 (i). (as amended): *The development of billboards exceeding 18 square metres in size outside urban areas, mining areas or industrial complexes.* ***(i) Western Cape*** *(i) All areas outside urban areas, mining, areas or industrial complexes.*	Impacts associated with the potential of billboards used within the development for advertising purposes, including: ▪ Visual impacts associated with the introduction of advertising signage. ▪ Impacts on sense of place and landscape character. ▪ Potential distraction of road users and associated traffic safety concerns. ▪ Positive socioeconomic impacts through advertising and support of commercial activities within the development.
GN No. R. 985 - Activity 4 (i)(iii). (as amended): *The development of a road wider than 4 metres with a reserve less than 13.5 metres.* ***(i) 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* *(iii) 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.*	Impacts associated with the development of internal and access roads, including: ▪ Loss and fragmentation of indigenous vegetation and terrestrial habitat. ▪ Disturbance and displacement of fauna. ▪ Impacts on SCC. ▪ Loss of agricultural land and agricultural potential. ▪ Soil disturbance, erosion, and land degradation. ▪ Impacts on wetlands, watercourses, and surface water quality where roads intersect or occur adjacent to these artificial and/or natural features. ▪ Dust and noise impacts associated with road construction and use. ▪ Traffic and transportation impacts associated with increased vehicle movement. ▪ Visual impacts associated with the introduction of road infrastructure. ▪ Positive socioeconomic impacts through improved access, employment creation, and economic development.
GN No. R. 985 - Activity 10 (i)(iii). (as amended): *The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in*	Impacts associated with the storage and handling of hazardous substances, including: ▪ Soil contamination resulting from spills, leaks, or improper handling of hazardous substances.

Listed Activities	Potential Impact Overview
containers with a combined capacity of 30 but not exceeding 80 cubic metres. ***(i) Western Cape*** *(i) Areas zoned for use as public open space or equivalent zoning;* *(ii) All areas outside urban areas; or* *(iii) Inside urban areas:* *(aa) Areas seawards of the development setback line or within 200 metres from the high water mark of the sea if no such development setback line is determined;* *(bb) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined; or* *(cc) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.*	▪ Surface water and groundwater contamination resulting from accidental releases of hazardous substances. ▪ Impacts on wetlands and watercourses due to pollution incidents. ▪ Risks to terrestrial flora and fauna associated with contamination events. ▪ Health and safety risks to workers and site users associated with the storage and handling of hazardous substances. ▪ Fire and explosion risks associated with the storage of flammable materials. ▪ Generation of hazardous waste requiring appropriate handling and disposal. ▪ Positive socioeconomic impacts through support of construction and operational activities, employment creation, and economic development.
GN No. R. 985 - Activity 11 (i)(iii). (as amended): *The development of tracks or routes for the testing, recreational use or outdoor racing of motor-powered vehicles excluding conversion of existing tracks or routes for the testing, recreational use or outdoor racing of motor powered vehicles.* ***(i) Western Cape*** *(i) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined;* *(ii) Seawards of the development setback line or within 200 metres of the high-water mark of the sea if no such development setback line is determined; or* *(iii) Areas of indigenous vegetation outside urban areas.*	Impacts associated with the development of the Motorsports Arena, including: ▪ Loss and fragmentation of indigenous vegetation and terrestrial habitat. ▪ Disturbance and displacement of fauna. ▪ Impacts on SCC. ▪ Soil disturbance, erosion, and land degradation associated with track construction. ▪ Impacts on wetlands, watercourses, and surface water quality resulting from stormwater runoff. ▪ Air quality impacts associated with dust generation and vehicle emissions. ▪ Noise impacts associated with motorsport activities. ▪ Traffic impacts associated with motorsports events. ▪ Risks associated with the storage and handling of fuels, oils, and other hazardous substances. ▪ Visual impacts associated with the motorsport facility and associated infrastructure. ▪ Positive socioeconomic impacts through employment creation, tourism, recreation, and economic development.
GN No. R. 985 Activity 12 (i) (ii). (as amended): *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 NEM:BA 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;*	Impacts associated with the clearance of indigenous vegetation for the development of the proposed Project components, including: ▪ Loss and transformation of indigenous vegetation. ▪ Loss and fragmentation of terrestrial habitat. ▪ Disturbance and displacement of fauna. ▪ Impacts on floral and faunal SCC. ▪ Reduction in ecological connectivity and ecosystem functioning. ▪ Loss or degradation of areas mapped as CBA, ESA and Other Natural Areas. ▪ Soil exposure, erosion and land degradation following vegetation clearance. ▪ Increased risk of alien invasive plant establishment. ▪ Potential indirect impacts on nearby wetlands and drainage features through increased runoff, sedimentation and vegetation disturbance.

Listed Activities	Potential Impact Overview
(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.*	
GN No. R. 985 - Activity 14 (ii) (c); (i) (ff). (as amended): *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.* ***(i) 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.*	Impacts associated with the development of infrastructure within 32 m of watercourses on site, including: ▪ Loss and disturbance of aquatic and riparian habitat. ▪ Impacts on wetlands, watercourses, and associated ecological functioning. ▪ Impacts on CBAs and ecological support functions. ▪ Disturbance to flora and fauna, including SCC. ▪ Soil disturbance, erosion, sedimentation, and land degradation. ▪ Deterioration of surface water quality resulting from construction activities and stormwater runoff. ▪ Alteration of hydrological processes, drainage patterns, and stormwater flows. ▪ Pollution risks associated with hazardous substances, waste, and accidental spills. ▪ Positive socioeconomic impacts through employment creation and infrastructure development.
GN No. R. 985 - Activity 15 (f) (ii)(cc). (as amended): *The transformation of land bigger than 1 000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, such land was zoned open space, conservation or had an equivalent zoning, on or after 02 August 2010.* ***(f) Western Cape*** *(i) Outside urban areas, or* *(ii) Inside urban areas:* *(aa) Areas zoned for conservation use or equivalent zoning, on or after 02 August 2010;* *(bb) A protected area identified in terms of NEMPAA, excluding conservancies; or* *(cc) Sensitive areas as identified in an environmental management framework as contemplated in Chapter 5 of the Act as adopted by the competent authority.*	Impacts associated with land transformation of the Project's footprint land uses associated with the proposed Project components, including: ▪ Loss of agricultural land and agricultural production potential. ▪ Loss and transformation of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Impacts on ecological corridors, ecological support areas, and biodiversity features. ▪ Soil disturbance, erosion, and land degradation. ▪ Impacts on wetlands, watercourses, and surface water resources. ▪ Visual and sense of place impacts associated with the change in land use character. ▪ Traffic and transportation impacts arising from industrial, commercial, and retail activities.

Listed Activities	Potential Impact Overview
	▪ Increased demand on municipal services and infrastructure. ▪ Positive socioeconomic impacts through employment creation, investment, and economic development.
GN No. R. 985 - Activity 18 (i) (ii)(iii). (as amended): *The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.* ***(i) Western Cape*** *(i) Areas zoned for use as public open space or equivalent zoning;* *(ii) All 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* *(iii) 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.*	Impacts associated with the development of roads, including: ▪ Loss and disturbance of terrestrial habitat. ▪ Disturbance to fauna and flora. ▪ Loss of agricultural land and agricultural potential. ▪ Soil disturbance, erosion, and degradation. ▪ Impacts on wetlands, watercourses, and surface water quality. ▪ Dust and noise impacts associated with road construction and use. ▪ Traffic impacts associated with the construction of the roads. ▪ Traffic and transportation impacts associated with increased vehicle movement and access, especially during motorsport events. ▪ Waste generation and pollution risks associated with hazardous substances, like hydrocarbons. ▪ Visual and land use impacts associated with the introduction of road infrastructure. ▪ Occupational health and safety risks. ▪ Positive socioeconomic impacts through improved site access, employment creation, tourism and economic development.

12.3 Comments Raised by Organs of State and I&APs

The comments raised by authorities (both regulatory and commenting) and I&APs to date during the execution of the EIA are captured and addressed in the CRR (refer to **Appendix L3**).

The consolidated comments raised by authorities and I&APs have been succinctly grouped into the following main categories (*note: please refer to the CRR for a comprehensive and accurate representation of the issues raised*):

- Biodiversity, Ecology and Freshwater Resources
  - Protection of CBAs, ESAs, wetlands and sensitive habitats.
  - Verification of vegetation mapping and ecological sensitivities through additional specialist investigations and seasonal surveys.
  - Assessment of SCC, ecological corridors, buffer areas and conservation area management.
  - Consideration of cumulative biodiversity impacts and the applicability of biodiversity offsets.
- Wetlands, Surface Water and Groundwater
  - Delineation and assessment of wetlands and seasonal wet areas.
  - Potential impacts on groundwater, water quality and hydrological processes.

- Stormwater management requirements and prevention of pollution of water resources.
- Water Use Authorisation requirements and compliance with the NWA.

❖ Noise Impacts
- Potential operational noise impacts associated with the motorsport facility.
- Possible effects of noise on neighbouring land uses, including residential areas and existing commercial operations.
- Requirement for a detailed Noise Impact Assessment and consideration of worst-case operating scenarios.

❖ Heritage and Cultural Resources
- Protection of heritage resources, archaeological material, graves and palaeontological resources.
- o Inclusion of chance-find procedures and notification requirements should heritage resources be identified during construction.

❖ Land Use Planning and Development Need
- Alignment of the proposed Project with municipal planning frameworks and strategic development objectives.
- Consideration of alternatives and justification of the need and desirability of the proposed Project.
- Compatibility of the proposed Project with surrounding land uses.

❖ Engineering Services and Infrastructure
- Availability and capacity of municipal engineering services.
- Provision and assessment of water, sewer, stormwater and other supporting infrastructure.
- Requests for additional technical information, infrastructure details and site coordinates.

❖ Pollution Prevention, Waste and Hazardous Materials
- Management of fuel storage and handling within the motorsport facility.
- Prevention of spills, contamination of soil and groundwater, and management of hazardous waste.
- Inclusion of appropriate stormwater treatment and pollution prevention measures.

❖ Socio-Economic and Visual Impacts
- Potential impacts on neighbouring properties, investment confidence and economic activities.
- Potential tourism and economic benefits associated with the proposed Project.
- Consideration of visual impacts and effects on surrounding receptors.

❖ EIA Process and Regulatory Compliance
- Compliance with EIA Regulations, public participation requirements and application procedures.
- Clarification regarding listed activities, specialist study requirements and the Plan of Study for EIA.

- Synchronisation of the EIA process with other regulatory processes, including Water Use Authorisations.
- Roles and responsibilities of the EAP and Candidate EAP and associated procedural requirements.

These issues received further attention during the investigations in the EIA phase, including the environmental specialist studies.

12.4 Project Activities

In order to understand the impacts related to the Project it is necessary to unpack the activities associated with the Project life-cycle, as done in the sub-sections to follow.

12.4.1 Project Phase: Pre-Construction

Some of the main Project activities, as well as high-level environmental activities, to be undertaken in the pre-construction phase are listed in **Table 36**.

Table 36: Simplified list of activities associated with Pre-Construction Phase

Project Phase: Pre-construction
Project Activities
Detailed engineering design, including road and stormwater infrastructure detailed designs
Detailed geotechnical investigations
Topographical and as-built infrastructure surveys
Procurement process for Contractor
Review Contractor's method statements (as relevant)
The building of a site office and ablution facilities
Confirmation of the location and condition of all structures and infrastructure on the Project site
Determining and documenting the conditions of the roads to be used during construction
Delineation and pegging of infrastructure footprints, servitudes and access routes
Site establishment planning and demarcation of contractor laydown areas, material storage areas and site access points
Establishment of survey control points and setting out of infrastructure.
High Level Environmental Activities
Appointment of an Environmental Control Officer (ECO).
Environmental induction and awareness training for contractors and site personnel
Diligent compliance monitoring of the EMPr, Environmental Authorisation and other relevant environmental legislation
Pre-construction photographic condition surveys of environmentally sensitive features and adjacent infrastructure
Demarcation of construction footprints, no-go areas and environmentally sensitive areas
Demarcation and establishment of Conservation Area, including creation of Management Plan for the Conservation Area
Other activities as per EMPr for Pre-Construction Phase

12.4.2 Project Phase: Construction

Some of the main Project activities, as well as high-level environmental activities, to be undertaken in the construction phase are listed in **Table 37**.

Table 37: Simplified list of activities associated with Construction Phase

Project Phase: Construction
Project Activities
Site establishment including construction camps, temporary offices, ablutions, laydown areas and material storage areas.
Prepare access roads
Establish construction laydown area
Construction employment
Site clearing (as necessary)
Earthworks, Excavation, levelling and shaping of development platforms
Concrete Works
Mechanical and Electrical Works
Electrical supply
Construction of the industrial expansion area and associated municipal services.
Construction of the motorsport arena and associated infrastructure, including tracks, workshops, showrooms, parking areas, pavilions, ablution facilities and gatehouses.
Construction of the solar PV facility and associated electrical infrastructure.
Construction and upgrading of access roads, internal roads, intersections, traffic circles and parking areas.
Construction of stormwater infrastructure, including pipelines, attenuation ponds and oil separation systems.
Construction of sewer reticulation infrastructure and connection to the existing municipal sewer network.
Construction of potable water reticulation infrastructure and associated bulk water connections.
Installation of electrical reticulation and grid connection infrastructure.
Transportation, storage and handling of construction materials, fuel, equipment and personnel.
Waste generation, storage, handling and disposal associated with construction activities.
Stockpiling
High Level Environmental Activities
Diligent compliance monitoring of the EMPr, Environmental Authorisation, and other relevant environmental legislation
Monitoring of construction activities by the ECO
Dust, erosion, stormwater and pollution management
Management of waste, hazardous substances and wastewater.
Rehabilitation of disturbed areas not required for permanent infrastructure.
Management of construction traffic and access routes.
Monitoring of impacts on sensitive environmental features and adjacent land uses.
Implement Environmental Management Plan for the Conservation Area
Other activities as per EMPr for Construction Phase

12.4.3 Project Phase: Operation

Some of the main Project activities, as well as high-level environmental activities, to be undertaken in the operational phase are listed in **Table 38**.

Table 38: Simplified list of activities associated with Operational Phase

Project Phase: Operation
Project Activities
Controlling vegetation
Operation of the industrial expansion area and associated industrial activities.
Operation of the motorsport arena, including motorsport events, workshops, showrooms, spectator facilities and parking areas.
Operation of the solar PV facility and associated electrical infrastructure.
Operation and maintenance of roads, parking areas and access infrastructure.
Operation and maintenance of potable water, sewer and stormwater infrastructure.
Operation of attenuation ponds, stormwater management systems and oil separation infrastructure.
Water use, wastewater generation and municipal service consumption by the various development components.
Operation of public facilities, ablutions, commercial activities and tourism-related facilities.

Project Phase: Operation
Vehicle access, traffic circulation, parking and spectator movement associated with normal operations and events.
Routine maintenance of infrastructure, buildings, services and landscaped areas.
High Level Environmental Activities
Diligent compliance monitoring of the EMPr, Environmental Authorisation, and other relevant environmental legislation
Implement Environmental Management Plan for the Conservation Area to ensure the conservation area is conserved appropriately
Maintenance and inspection of stormwater, sewer and water infrastructure.
Monitoring and management of pollution risks, including hydrocarbons associated with motorsport activities.
Waste management and housekeeping.
Monitoring of rehabilitation areas and conservation areas.
Ongoing environmental compliance auditing and reporting.
Other activities as per EMPr for Operational Phase

12.5 Environmental Aspects

Environmental aspects are regarded as those components of an organisation's activities, products and services that are likely to interact with the environment and cause an impact.

The environmental aspects that have been identified for the proposed Project, which are linked to the Project activities, are provided in **Table 39**. Note that only high-level aspects are provided.

Table 39: Environmental Aspects associated with Project life-cycle

Project Phase: Pre-construction
Environmental Aspects
Inadequate consultation with relevant stakeholders
Inadequate environmental and compliance monitoring
Poor construction site planning and layout
Site-specific environmental issues not fully understood
Land occupancy by temporary buildings, provisional on-site facilities and storage areas
Poor waste management
Absence of ablution facilities
Traffic and transport associated with specialist investigations, surveying and site preparation activities
Noise generation from survey, testing and investigation activities
Project Phase: Construction
Environmental Aspects
Inadequate environmental and compliance monitoring
Lack of environmental awareness creation
Indiscriminate site clearing
Poor site establishment
Poor management of access and use of access roads
Disruptions to traffic
Air emissions and dust generation from construction activities and vehicle movement
Noise and vibration associated with construction machinery and equipment
Poor transportation practices
Increased traffic and transportation of labour, materials and equipment.
Poor fencing arrangements
Disturbance, compaction and erosion of soils
Excavation, earthworks and alteration of surface topography
Disruptions to existing services

Project Phase: Pre-construction
Disturbance of remaining topsoil
Poor management of excavations
Inadequate storage and handling of material
Inadequate storage and handling of hazardous material
Poor maintenance of equipment and plant
Poor management of labour force
Pollution from ablution facilities
Inadequate management of construction camp
Poor waste management practices – hazardous and general solid, liquid
Wastage of water
Poor management of pollution generation potential
Damage to significant flora
Damage to significant fauna
Inadequate stormwater management
Consumption of water, fuel and construction materials.
Increased traffic and transportation of labour, materials and equipment.
Visual intrusion associated with construction activities and temporary infrastructure.
Damage to cultural heritage and palaeontological features (if encountered)
Poor reinstatement and rehabilitation
Failure to comply with mitigation measures specified in the EMPr
Project Phase: Operation
Environmental Aspects
Inadequate environmental and compliance monitoring
Inadequate management of access, routine maintenance and maintenance works
Inadequate management of invasive alien plants
Inadequate stormwater management
Operation of industrial activities
Operation of the motorsport arena and associated tourism and recreational facilities
Operation of the solar PV facility and associated electrical infrastructure
Increased traffic volumes, vehicle movement and parking activities
Generation of operational noise from motorsport, industrial and associated activities
Atmospheric emissions and dust associated with vehicle movements and racing activities
Stormwater generation and management from developed surfaces
Generation and management of wastewater
Water consumption and utilisation of municipal services
Storage and handling of fuels and hazardous substances
Risk of accidental spills and contamination of soil, surface water and groundwater
Generation and management of general and hazardous waste
Maintenance of infrastructure and landscaped areas
Operation and maintenance of stormwater attenuation ponds and oil separation infrastructure
Failure to comply with health, safety and environmental specifications
Failure to comply with Conservation Area Management Plan, EA and other relevant environmental legislation
Failure to comply with required monitoring measures

12.6 Potentially Significant Environmental Impacts

Environmental impacts are the change to the environment resulting from an environmental aspect, whether desirable or undesirable.

Note that it is not the intention of the impact assessment to evaluate all potential environmental impacts associated with the Project's environmental aspects, but rather to focus on the potentially significant direct, indirect and cumulative impacts identified during the Scoping phase and any additional issues uncovered during the EIA phase.

The potentially significant environmental impacts associated with the Project, as listed in **Table 40** below were identified through an appraisal of the following:

- Project-related components and infrastructure (see **Section 9**);
- Activities associated with the project life-cycle (i.e. pre-construction, construction and operation);
- Nature and profile of the receiving environment and potential sensitive environmental features and attributes (see **Section 10**);
- Findings from specialist studies (see **Section 11**);
- Understanding of direct and indirect effects of the Project as a whole (see **Section 12**);
- Comments received during public participation (see **Section 14**); and
- Legal and policy context (see **Section 5**).

It is noted that the potentially significant environmental impacts listed in **Table 40** were evaluated as part of the specialist studies, and suitable mitigation measures were identified where these impacts could occur. These impacts are assessed in **Sections 12.9 – 12.28** below.

Table 40: Potentially Significant Environmental Impacts Associated with the Project

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts
Land Use	▪ Temporary disruption of existing land uses due to construction activities. ▪ Loss of grazing land and previously cultivated land within the construction footprint. ▪ Temporary restriction of access to portions of the site during construction. ▪ Disturbance of existing open space and natural areas during site clearing and earthworks.	▪ Permanent conversion of grazing, agricultural and open space land to industrial, motorsport and alternative energy land uses. ▪ Permanent alteration of existing land use patterns within the site. ▪ Reduction in land available for agricultural and grazing activities. ▪ Increased industrialisation of the area and change in local land use character. ▪ Increased demand for supporting infrastructure and services associated with the expanded development footprint.
Geology and Geohydrology	▪ Deterioration of groundwater quality resulting from accidental spills or leaks of fuels, hydrocarbons, chemicals or other contaminants. ▪ Interception or alteration of shallow groundwater flow through excavation and construction of below-ground infrastructure. ▪ Disturbance of natural recharge and drainage processes through vegetation clearing, earthworks and soil compaction.	▪ Continued risk of groundwater contamination from fuels, hydrocarbons, chemicals and other hazardous substances associated with industrial and motorsport activities. ▪ Localised alteration of shallow groundwater flow in areas occupied by permanent infrastructure. ▪ Reduced groundwater recharge within areas affected by permanent surface hardening and infrastructure development.
Topography	▪ The site will be flattened and levelled to create a stable surface for the Project and its associated	▪ The development of the Project will alter the drainage on the site and cause an increase in the runoff.

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts
	infrastructure, which will change the existing topography of the Project site. ▪ Erosion may occur in areas cleared for construction purposes.	
Soil	▪ Disturbance and removal of topsoil during site clearing, excavation and earthworks. ▪ Soil compaction resulting from the movement of construction vehicles, machinery and equipment. ▪ Increased susceptibility of exposed soils to erosion and degradation. ▪ Mixing, loss or deterioration of soil horizons through construction activities. ▪ Localised soil contamination from accidental spills of fuels, oils, chemicals and other hazardous substances. ▪ Permanent loss of soil resources beneath buildings, roads and associated infrastructure	▪ Permanent sealing and loss of soil resources beneath operational infrastructure. ▪ Reduced soil functionality within developed portions of the site. ▪ Soil contamination resulting from hydrocarbon spills, fuel storage, vehicle maintenance activities and hazardous substances associated with industrial and motorsport activities. ▪ Continued soil degradation in areas affected by accidental spills or inappropriate waste management practices.
Surface Water	▪ Increased erosion of exposed soils and disturbed areas resulting from vegetation clearing and earthworks. ▪ Increased sedimentation of downstream drainage features and aquatic habitats due to sediment-laden runoff from construction areas. ▪ Deterioration of surface water quality due to sediment transport and uncontrolled stormwater runoff. ▪ Pollution of surface water resources through accidental spills or leakages of fuels, oils, cement, chemicals, wastewater, and other hazardous substances associated with construction activities.	▪ Alteration of existing surface water runoff patterns due to the establishment of hard surfaces, roads, buildings and associated infrastructure. ▪ Increased stormwater runoff volumes and flow velocities resulting from reduced infiltration across developed areas. ▪ Increased erosion and sediment transport associated with concentrated stormwater discharges. ▪ Deterioration of downstream water quality due to contaminated stormwater runoff. ▪ Pollution of surface water resources through hydrocarbons, oils and other contaminants associated with the industrial and motorsport activities. ▪ Potential indirect impacts on downstream aquatic ecosystems resulting from altered hydrological processes and reduced water quality.
Terrestrial Biodiversity (Including flora, fauna and avifauna)	▪ Loss of natural terrestrial vegetation through site clearing and earthworks. ▪ Loss or disturbance of habitats associated with Critically Endangered vegetation, CBAs, and ESAs. ▪ Loss or disturbance of plant SCCs, protected plant species, and sensitive renosterveld, fynbos and thicket habitats. ▪ Direct disturbance, displacement, injury, or mortality of fauna during vegetation clearing and construction activities.	▪ Permanent loss of terrestrial habitat within developed portions of the site. ▪ Long-term reduction in the extent of natural vegetation and ecological habitat. ▪ Ongoing habitat fragmentation and reduced ecological connectivity between remaining habitat patches. ▪ Continued degradation of terrestrial habitat through alien invasive plant encroachment if not actively managed.

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts
	▪ Reduction in available habitat for fauna through vegetation removal. ▪ Habitat fragmentation caused by construction-related disturbance and the creation of developed areas. ▪ Increased risk of alien invasive plant establishment in disturbed areas. ▪ Secondary disturbance outside the approved construction footprint.	▪ Long-term impacts on plant SCC and protected plant species through habitat loss. ▪ Reduced habitat availability for fauna associated with renosterveld, fynbos and thicket habitats. ▪ Increased faunal disturbance associated with ongoing human activity, traffic, noise and operational activities.
Socio-Economic Environment	▪ Positive Impacts o Direct employment creation. o Indirect and induced employment opportunities. o Increased household income and spending. o Skills development and transfer. o Increased expenditure within the local economy. o Support for local businesses and suppliers. ▪ Negative Impacts o Construction-related noise, dust and disturbance. o Increased traffic volumes and road safety risks. o Increased pressure on local infrastructure and services. o Potential public health and social risks associated with the influx of workers.	▪ Positive Impacts o Sustained employment opportunities. o Long-term economic growth and investment. o Increased tourism expenditure associated with the motorsport arena. o Growth of local businesses and enterprise development. o Increased municipal revenues and economic activity. o Improved energy resilience through the solar PV facility. o Increased recreational and community opportunities. ▪ Negative Impacts o Increased traffic volumes associated with operational activities and events. o Increased demand on local infrastructure and municipal services. o Noise nuisance associated with motorsport activities.
Air Quality	▪ Dust generation from vegetation clearing, site preparation, excavation and earthworks. ▪ Dust generation from construction vehicle movement on exposed surfaces and access roads. ▪ Exhaust emissions from construction vehicles, machinery and equipment. ▪ Dust nuisance experienced by nearby receptors.	▪ Vehicle exhaust emissions associated with normal site operations and increased traffic volumes. ▪ Exhaust emissions associated with motorsport activities. ▪ Dust generation from vehicle movement on internal roads, parking areas and exposed surfaces. ▪ Localised deterioration of air quality associated with maintenance and operational activities. ▪ Air quality nuisance impacts experienced by nearby receptors.
Visual	▪ Temporary degradation of visual quality due to vegetation clearing, earthworks, stockpiles, construction equipment and construction activities. ▪ Visual disturbance associated with the presence and movement of construction vehicles and machinery. ▪ Temporary alteration of views experienced by road users, nearby residents and other visual receptors.	▪ Change in landscape character through the introduction of industrial buildings, motorsport infrastructure, solar PV panels and associated infrastructure. ▪ Increased industrialisation of the receiving environment and surrounding viewsheds. ▪ Visual intrusion experienced by surrounding visual receptors,

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts
	▪ Increased visibility of disturbed ground and construction infrastructure within the landscape.	including users of the N2 and R327, nearby homesteads, Reed Valley, Petroport and the western extent of Mossel Bay and Kwanonqaba. ▪ Increased visibility of built infrastructure within the landscape. ▪ Alteration of existing views due to the presence of permanent development infrastructure. ▪ Potential glare effects associated with solar PV panels under certain viewing conditions. ▪ Night-time visual impacts associated with lighting of the industrial area and motorsport facilities.
Noise & Vibration	▪ Temporary increase in ambient noise levels due to vegetation clearing, earthworks and general construction activities. ▪ Noise generated by construction vehicles, heavy machinery and equipment. ▪ Disturbance and noise nuisance experienced by nearby residences, agricultural properties and tourism facilities. ▪ Temporary disruption of the existing acoustic environment during peak construction activities.	▪ Increased noise levels associated with motorsport activities and racing events. ▪ Noise generated by high-performance racing vehicles, particularly during major motorsport events. ▪ Noise associated with public address systems, maintenance activities and supporting infrastructure. ▪ Noise nuisance and disturbance experienced by surrounding noise-sensitive receptors, including nearby residences, farms and tourism facilities. ▪ Potential exceedance of acceptable noise limits at receptors located closest to the facility during high-noise events. ▪ Disturbance to agricultural activities and sensitive receptors within the surrounding area due to periodic motorsport events. ▪ Increased community annoyance and potential noise-related complaints associated with motorsport operations.
Agriculture	▪ Permanent loss of agricultural land within the development footprint. ▪ Loss of grazing land currently used for low-intensity livestock grazing. ▪ Loss of abandoned cultivated land and future agricultural use potential. ▪ Disturbance and removal of agricultural soils during vegetation clearing and earthworks.	▪ Permanent conversion of agricultural land to industrial, motorsport and alternative energy land uses. ▪ Reduction in land available for future agricultural activities. ▪ Permanent loss of low-capability grazing and agricultural land within the operational footprint.
Hazardous Substances & Waste	▪ Generation of general construction waste. ▪ Generation of hazardous waste, including waste oils, fuels, and contaminated materials. ▪ Soil contamination resulting from accidental spills or leaks of fuels, oils and hazardous substances.	▪ Generation of hazardous waste associated with motorsport, workshop, industrial and maintenance activities. ▪ Generation of general waste associated with daily operations and visitors to the motorsport facility.

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts
	▪ Surface water and groundwater contamination resulting from improper waste management or accidental spillages. ▪ Health and safety risks associated with the handling and storage of hazardous substances. ▪ Visual and environmental nuisance resulting from poor waste management practices.	▪ Soil contamination resulting from spills or leaks of fuels, hydrocarbons, oils and chemicals. ▪ Surface water and groundwater contamination resulting from accidental releases of hazardous substances. ▪ Increased environmental and health risks associated with the storage and handling of hazardous substances. ▪ Pollution resulting from the improper storage, handling or disposal of hazardous and general waste.
Traffic	▪ Increased construction vehicle and heavy vehicle traffic on surrounding roads. ▪ Temporary disruption to traffic flow and road safety. ▪ Increased traffic volumes at site access points and along the R327.	▪ Increased traffic volumes associated with the industrial expansion and motorsport arena. ▪ Increased spectator traffic during motorsport events. ▪ Increased vehicle delays and congestion at key intersections. ▪ Increased road safety risks due to higher traffic volumes and turning movements. ▪ Increased demand for parking, pedestrian and public transport facilities.
Historical and Cultural Features	▪ Possible direct impacts on heritage/archaeological resources because of ground disturbance.	-
Palaeontology	▪ Disturbance, damage or destruction of fossil material during excavation and earthworks. ▪ Permanent loss of palaeontological resources through the removal of fossil-bearing material. ▪ Permanent sealing-in or burial of fossil resources beneath infrastructure, rendering them inaccessible for future scientific study. ▪ Accidental damage to previously unidentified fossil material exposed during construction activities. ▪ Loss of scientific information associated with fossil resources if discoveries are not appropriately recorded and managed.	No significant operational impacts on palaeontological resources are anticipated, as any impacts would occur during ground disturbance and construction activities
Health	▪ Occupational health and safety risks to construction workers. ▪ Community health and safety risks associated with construction activities and increased traffic. ▪ Public health risks associated with the influx of workers and temporary construction-related disturbance.	▪ Occupational health and safety risks associated with industrial, maintenance and operational activities. ▪ Health and safety risks associated with motorsport activities, spectators and increased traffic volumes. ▪ Health and safety risks associated with the storage and handling of fuels, hydrocarbons and hazardous substances.

The cumulative impacts are discussed in **Section 12.28**.

The findings of the specialists are of particular importance in terms of understanding the impacts of the Project and managing these during the project life-cycle, as these studies focused on the significant environmental issues identified during the execution of the EIA. As can be seen from the various impact assessments performed by the specialists, there are a host of cross-cutting impacts that are addressed in a number of these studies. The mitigation measures proposed by the specialists for these similar types of impacts are regarded as complementary and aligned with best practices and principles.

12.7 Impact Assessment Methodology

The impacts and the proposed management thereof are first discussed in **Section 12.9** to **Section 12.25** below on a qualitative level and thereafter quantitatively assessed by evaluating the nature, extent, magnitude, duration, probability and ultimately the significance of the impacts (refer to methodology provided in **Table 41** below). Where applicable, the impact assessments and significance ratings provided by the respective specialists are included.

The assessment considers impacts before and after mitigation, where in the latter instance the residual impact following the application of the mitigation measures is determined.

In the case of the specialist studies, some of the impact assessment methodologies deviated from the approach shown in **Table 41** below. However, the quantitative basis for these specialist evaluations of the impacts to specific environmental features still satisfied the intention of the EIA.

Table 41: Quantitative Impact Assessment Methodology

Nature (/Status) The project could have a positive, negative or neutral impact on the environment.
Extent ▪ Local - extend to the site and its immediate surroundings. ▪ Regional - impact on the region but within the province. ▪ National - impact on an interprovincial scale. ▪ International - impact outside of SA.
Magnitude Degree to which impact may cause irreplaceable loss of resources. ▪ Low - natural and social functions and processes are not affected or minimally affected. ▪ Medium - affected environment is notably altered; natural and social functions and processes continue albeit in a modified way. ▪ High - natural or social functions or processes could be substantially affected or altered to the extent that they could temporarily or permanently cease.
Duration ▪ Short term - 0-5 years. ▪ Medium term - 5-11 years. ▪ Long term - impact ceases after the operational life cycle of the activity either because of natural processes or by human intervention. ▪ Permanent - mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
Probability ▪ Almost certain - the event is expected to occur in most circumstances.

- Likely - the event will probably occur in most circumstances.
- Moderate - the event should occur at some time.
- Unlikely - the event could occur at some time.
- Rare/Remote - the event may occur only in exceptional circumstances.

Significance
Provides an overall impression of an impact's importance, and the degree to which it can be mitigated. The range for significance ratings is as follows-
0 – Impact will not affect the environment. No mitigation necessary.
1 – No impact after mitigation.
2 – Residual impact after mitigation.
3 – Impact cannot be mitigated.

12.8 Impact Mitigation

12.8.1 Mitigation Hierarchy

Impacts are to be managed by assigning suitable mitigation measures, where the objectives are to:

- Find more environmentally sound ways of executing an activity;
- Enhance the environmental benefits of a proposed activity;
- Avoid, minimise or remedy negative impacts; and
- Ensure that residual negative impacts are within acceptable levels.

Mitigation should strive to abide by the following hierarchy – (1) prevent; (2) reduce; (3) rehabilitate (or remediate); and/or (4) compensate for the environmental impacts.

The proposed mitigation of the impacts associated with the Project includes specific measures identified by the technical team (including engineering solutions) and environmental specialists, stipulations of environmental authorities and environmental best practices.

Note that the mitigation measures in the subsequent sections are not intended to be exhaustive but rather focus on the potentially significant impacts identified. The EMPr (contained in **Appendix G**) provides a comprehensive list of mitigation measures for specific elements of the Project and the receiving environment, which extends beyond the impacts evaluated in the body of the EIA Report.

12.8.2 EMPr Framework

An EMPr represents a detailed plan of action prepared to ensure that recommendations for enhancing positive impacts and/or limiting or preventing negative environmental impacts are implemented during the life-cycle of a project.

The content of an EMPr must either contain the information set out in Appendix 4 of the EIA Regulations or must be a generic EMPr relevant to an application as identified and gazetted by the Minister in a Government Notice. Once the Minister has identified, through a Government Notice, that a generic EMPr is relevant to an application for Environmental Authorisation, that generic EMPr must be applied by all parties involved in the EA process, including, but not limited to, the Applicant and the Competent Authority.

In accordance with the above, an EMPr was developed for the Project which is contained in **Appendix G**. All liability for the implementation of the EMPr (as well as the EIA findings and Environmental Authorisation, if granted) lies with the Applicant.

The following considerations and assumptions accompany the compilation of the EMPr for the Project:

- The EMPr is guided by the following principles, based on Lochner (2005) –
  - **Continuous improvement** - The Applicant should be committed to review and to continually improve environmental management, with the objective of improving overall environmental performance;
  - **Broad level of commitment** - A broad level of commitment is required from all levels of management as well as the workforce in order for the implementation of the EMPr to be successful and effective; and
  - **Flexible and responsive** - The implementation of the EMPr needs to be responsive to new and changing circumstances. The EMPr report is a dynamic "living" document that will need to be updated regularly throughout the duration of the project life-cycle.
- Compliance with the EMPr must be audited in terms of Regulation 34 of the EIA Regulations.
- The EMPr provides the framework for the overarching environmental management requirements for the project life-cycle. Following detailed design and planning, the EMPr may need to be revised to render the management actions more explicit and accurate to the final project specifications. Any amendments to the EMPr must be undertaken in accordance with Regulations 35 – 37 of the EIA Regulations.
- The EMPr will be linked to the project's overall Environmental Management System (EMS) (if applicable), where the EMS constitutes an iterative process that aims to achieve continuous improvement and enhanced environmental performance.
- Although every effort has been made to ensure that the scope and level of detail of the EMPr are tailored to the level of environmental risk (i.e., type and scale of activity and the sensitivity of the affected environment) and the project- and site-specific conditions, certain of the environmental management requirements within the EMPr may be regarded as generic to make provision for activities that may take place as part of the overall Project.

12.9 Land Use

12.9.1 Impact Description

The proposed Project will result in the conversion of land currently characterised by a combination of grazing land, previously cultivated land, natural open space, conservation areas and existing industrial uses to industrial, motorsport and alternative energy land uses. The Project will therefore alter existing land use patterns within the site and contribute to the expansion of the Mossdustria industrial area.

Construction activities may temporarily disrupt existing land uses through vegetation clearing, earthworks, infrastructure development and the movement of construction vehicles and machinery. During operation, the development will permanently transform portions of the site from agricultural, grazing and open space uses to industrial, recreational and renewable energy land uses.

The proposed Project is located adjacent to existing industrial development, including Mossdustria, PetroSA and the Gourika Power Plant, and is consistent with the existing industrial character of the area. However, the Project will reduce the extent of land available for grazing, natural critically endangered vegetation and other existing land uses within the Project footprint and contribute to the continued industrialisation of the surrounding landscape.

12.9.2 Impact Assessment

Table 42 to **Table 43** contain the results of the impact assessment conducted for the impacts of the Project on Land Use.

Table 42: Land Use Construction Phase Impacts

Environmental Feature	**Land Use**
Relevant Alternatives & Activities	All physical infrastructure and ancillary structures that form part of the Project
Project life-cycle	Construction phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Temporary disruption of existing land uses due to construction activities. ▪ Loss of grazing land and previously cultivated land within the construction footprint. ▪ Temporary restriction of access to portions of the site during construction. ▪ Disturbance of existing open space and natural areas during site clearing and earthworks.	▪ Restrict all construction activities to the approved Project footprint. ▪ Clearly demarcate construction areas, conservation areas and no-go areas prior to commencement of construction. ▪ Minimise disturbance to areas outside the approved footprint.

	+/- Impacts	**Extent**	**Magnitude**	**Duration**	**Probability**	**Significance**
Before Mitigation	-	local	medium	long-term	almost certain	2
After Mitigation	-	local	Low-medium	long-term	likely	2

Residual Risk	Although a residual impact remains, it is associated with the permanent loss of agricultural land within the Project footprint, as land occupied by infrastructure cannot be restored to its pre-development use. However, the affected land has been assessed as having low agricultural potential and low grazing value. In addition, the conservation area conserves most of the vegetation in its natural state found on the site (as confirmed by the terrestrial assessment). Consequently, the magnitude of the residual impact is considered low.

Table 43: Land Use Operation Phase Impacts

Environmental Feature	**Land Use**

Relevant Alternatives & Activities	All physical infrastructure and ancillary structures that form part of the Project
Project life-cycle	Operation phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Permanent conversion of grazing, agricultural and open space land to industrial, motorsport and alternative energy land uses. ▪ Permanent alteration of existing land use patterns within the site. ▪ Reduction in land available for agricultural and grazing activities. ▪ Increased industrialisation of the area and change in local land use character. ▪ Increased demand for supporting infrastructure and services associated with the expanded development footprint.	▪ Retain and manage the proposed conservation area as a long-term open space and biodiversity resource. ▪ Ensure continued compliance with approved zoning, land use rights and municipal planning frameworks. ▪ Maintain conservation areas identified through the specialist studies. ▪ Limit future expansion beyond the approved Project footprint without the necessary environmental and planning approvals. ▪ Implement the recommendations of the ecological, visual, traffic and other specialist studies to minimise land use conflicts and ensure compatibility with surrounding land uses.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	regional	medium	long-term	almost certain	2
After Mitigation	- / + (conservation area is +)	local	Low-medium	long-term	likely	2

Residual Risk	A residual impact remains, as the proposed Project will result in the permanent conversion of land currently used predominantly for agricultural, grazing, and open space purposes to industrial, motorsport, solar PV, and conservation land uses. While this change in land use cannot be fully mitigated, the impact significance is reduced to low following the implementation of mitigation measures. This is primarily due to the low agricultural potential of the affected land, as confirmed by the agricultural assessment, and the incorporation of a substantial conservation area within the Project layout, which preserves a significant portion of the remaining natural habitat, as confirmed by the terrestrial assessment. Furthermore, the proposed Project is aligned with the long-term development objectives of the MBLM as reflected in the relevant planning frameworks, including the IDP and associated spatial planning documents.

12.10 Soils

12.10.1 Impact Description

The proposed Project has the potential to impact soil resources through vegetation clearing, earthworks, excavation, construction activities and the establishment of permanent infrastructure. These activities may result in the disturbance, compaction, erosion, loss and sealing of soils within the Project footprint.

The study area is dominated by shallow Mispah and Glenrosa soils, with more limited occurrences of Westleigh soils associated with wetter portions of the landscape. The soils generally have low agricultural potential owing to their shallow depth, limited water-holding capacity and restrictions to root development. Despite their low agricultural capability, these

soils perform ecological functions and may be vulnerable to degradation if disturbed during construction activities.

Construction activities may result in the removal and compaction of topsoil, increased susceptibility to erosion on exposed surfaces, and the permanent loss of soil resources beneath buildings, roads and other infrastructure. In addition, the movement and storage of materials, vehicles and machinery may further degrade soil quality through compaction and disturbance.

During operation, impacts on soil resources are expected to be associated primarily with the permanent sealing of soils beneath infrastructure and the potential for soil contamination resulting from hydrocarbons, fuels, chemicals and waste associated with industrial and motorsport activities.

12.10.2 Impact Assessment

Table 44 to **Table 45** contain the results of the impact assessment conducted for the impacts of the Project on soils.

Table 44: Soil Construction Phase Impacts

Environmental Feature	Soils
Relevant Alternatives & Activities	Construction activities
Project life-cycle	Construction phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Disturbance and removal of topsoil during site clearing, excavation and earthworks. ▪ Soil compaction resulting from the movement of construction vehicles, machinery and equipment. ▪ Increased susceptibility of exposed soils to erosion and degradation. ▪ Mixing, loss or deterioration of soil horizons through construction activities. ▪ Localised soil contamination from accidental spills of fuels, oils, chemicals and other hazardous substances. ▪ Permanent loss of soil resources beneath buildings, roads and associated infrastructure.	▪ Restrict vegetation clearing and earthworks to the approved Project footprint. ▪ Strip, stockpile and preserve topsoil separately for use during rehabilitation (where applicable). ▪ Limit vehicle and machinery movement to designated access routes to reduce soil compaction. ▪ Implement erosion control measures on exposed surfaces and slopes. ▪ Store fuels, oils and hazardous substances in designated, bunded areas. ▪ Immediately contain and remediate any hydrocarbon or chemical spills.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium-high	short-term	likely	3
After Mitigation	-	local	low	short-term	unlikely	1

Table 45: Soil Operation Phase Impacts

Environmental Feature	Soils
Relevant Alternatives & Activities	Operational activities

Project life-cycle	Operation phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Permanent sealing and loss of soil resources beneath operational infrastructure. ▪ Reduced soil functionality within developed portions of the site. ▪ Soil contamination resulting from hydrocarbon spills, fuel storage, vehicle maintenance activities and hazardous substances associated with industrial and motorsport activities. ▪ Continued soil degradation in areas affected by accidental spills or inappropriate waste management practices.	▪ Maintain stormwater management systems to prevent erosion, soil degradation and soil contamination from motorsport operations. ▪ Store fuels, oils and hazardous materials in appropriately bunded areas. ▪ Ensure appropriate waste storage and disposal practices to prevent soil contamination. ▪ Monitor and repair leaks from vehicles, equipment, tanks and associated infrastructure.

	+/- Impacts	**Extent**	**Magnitude**	**Duration**	**Probability**	**Significance**
Before Mitigation	-	local	medium-high	long-term	likely	3
After Mitigation	-	local	low	long-term	unlikely	1

12.11 Geohydrology

The findings from the Geohydrological Impact Assessment (Oberholzer *et al.,* 2026) follow. The specialist report is contained in **Appendix F2**.

12.11.1 Impact Description

The proposed Project is underlain by loam and sandy loam soils overlying the fractured sandstone aquifer of the Skurweberg Formation, which represents the principal groundwater-bearing formation in the area. The site also contains shallow clay-rich layers which may locally restrict infiltration, promote surface runoff and contribute to the development of perched groundwater and wetland systems. Groundwater vulnerability across most of the site is generally rated as very low to low; however, the shallow groundwater and wetland systems are considered inherently more vulnerable to contamination and hydrological disturbance.

The proposed Project does not require groundwater abstraction. However, construction and operation activities may influence groundwater and wetland systems through the alteration of surface runoff patterns, interception of shallow groundwater, modification of drainage pathways, and accidental releases of hydrocarbons, fuels, chemicals or other contaminants. These activities may affect groundwater quality, shallow groundwater movement and the hydrological functioning of nearby wetlands and watercourses.

The principal geohydrological impacts therefore relate to potential contamination of groundwater resources, alteration of wetland flow and water quality, and the interception or diversion of shallow groundwater associated with excavation and below-ground infrastructure.

12.11.2 Impact Assessment

Table 46 to **Table 48** contain the results of the impact assessment which were obtained from the Geohydrology Impact Assessment (Oberholzer *et al.,* 2026).

Table 46: Geohydrology Impact on wetland flow and water quality (Oberholzer *et al.,* 2026)

Impact on wetland flow and water quality	
Potential impact and risk:	Negative – reduced runoff and alteration of shallow flow pathways and contaminant mobilisation during construction could affect wetland hydrology and water quality.
Nature of impact:	Direct
Extent and duration of impact:	Local, short- to medium-term, primarily during construction, with potential long-term effects.
Consequence of impact or risk:	Moderate
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	The impact is unlikely to cause any irreplaceable loss of the wetland if appropriate mitigation measures are implemented.
Degree to which the impact can be reversed:	The impact is largely reversible.
Consequence of impact or risk:	Alteration of wetland hydrological functioning and potential deterioration of water quality.
Significance rating of impact prior to mitigation	**Moderate**
Degree to which the impact can be avoided:	Partially avoidable
Degree to which the impact can be managed:	Fully manageable
Degree to which the impact can be mitigated:	Fully mitigatable
Proposed mitigation:	Natural drainage pathways towards the wetland must be maintained where practicable. Appropriate stormwater, erosion and sediment-control measures must be implemented during construction. Fuels, chemicals and other potentially contaminating materials must be appropriately stored and handled and spills must be promptly contained and remediated. The wetland should be regularly inspected during construction for changes in flow, sedimentation and water quality, with corrective measures implemented where required.
Residual impacts:	Localised alteration of wetland flow and water quality may remain during ongoing operation.
Significance rating of impact after mitigation	**Very low**

Table 47: Geohydrology Impact of groundwater quality deterioration

Impact of groundwater quality in the deeper Skurweberg formation	
Potential impact and risk:	Negative – accidental spills or releases of hydrocarbons, chemicals or other contaminants during construction could infiltrate through the subsurface and potentially affect groundwater quality within the fractured Skurweberg Formation.
Nature of impact:	Direct
Extent and duration of impact:	Local to regional, Long term >15 years but less than <30.
Consequence of impact or risk:	Moderate

Impact of groundwater quality in the deeper Skurweberg formation	
Probability of occurrence:	Unlikely
Degree to which the impact may cause irreplaceable loss of resources:	The impact is highly unlikely to cause any irreplaceable loss of resources.
Degree to which the impact can be reversed:	The impact is partially reversible.
Consequence of impact or risk:	Potential deterioration of groundwater quality within the deeper fractured-rock aquifer.
Significance rating of impact prior to mitigation	**Moderate**
Degree to which the impact can be avoided:	Fully avoidable
Degree to which the impact can be managed:	Fully manageable
Degree to which the impact can be mitigated:	Fully mitigatable
Proposed mitigation:	Good construction practices and due diligence must be followed to prevent the release of hydrocarbons, chemicals and other potential contaminants. Hazardous substances should be stored appropriately and spill response equipment should be available on site
Residual impacts:	Decreased groundwater quality.
Significance rating of impact after mitigation	**Very low**

Table 48: Geohydrology Impact of interception or alteration of shallow groundwater flow

Interception or alteration of shallow groundwater flow	
Potential impact and risk:	Negative – excavation and below-ground infrastructure may intercept or divert shallow groundwater and perched water, potentially altering the flow of water towards nearby wetlands and drainage features.
Nature of impact:	Direct
Extent and duration of impact:	Local, short- to medium-term during construction.
Consequence of impact or risk:	Moderate
Probability of occurrence:	Possible
Degree to which the impact may cause irreplaceable loss of resources:	The impact is unlikely to cause irreplaceable loss of groundwater or wetland resources if shallow groundwater pathways are appropriately managed.
Degree to which the impact can be reversed:	The impact is partially reversible.
Consequence of impact or risk:	Localised alteration of shallow groundwater flow and potential reduction of groundwater contribution to nearby wetland areas.
Significance rating of impact prior to mitigation	**Moderate**
Degree to which the impact can be avoided:	Partially avoidable
Degree to which the impact can be managed:	Partially manageable
Degree to which the impact can be mitigated:	Partially mitigatable
Proposed mitigation:	Excavations and below-ground infrastructure must be designed to minimise disruption of shallow groundwater flow. Where shallow groundwater is encountered, natural flow pathways must be maintained or reinstated following construction. Unnecessary disturbance of low-permeable clay layers should be avoided and any required dewatering should be avoided where possible. Areas surrounding the major excavations should be inspected for changes in

Interception or alteration of shallow groundwater flow	
	groundwater levels and wetland flow. Remedial measures should be implemented where significant changes are observed.
Residual impacts:	Localised alteration of shallow groundwater flow may remain in areas directly affected by permanent infrastructure.
Significance rating of impact after mitigation	**Moderate to Low**

12.12 Surface Water

The findings from the Aquatic Ecology Impact Assessment (Colloty, 2026a) follow. The specialist report is contained in **Appendix F1**.

12.12.1 Impact Description

The proposed Project may affect surface water resources through changes to existing stormwater runoff patterns, increased erosion and sediment transport, and potential deterioration of water quality. The Project will introduce additional hard surfaces and infrastructure that may increase the volume and rate of surface water runoff and alter local drainage characteristics.

During construction and operation, exposed surfaces and disturbed areas may result in increased sediment generation and erosion, which could affect downstream watercourses and aquatic habitats. There is also a risk of surface water contamination associated with the storage, handling, and accidental spillage of fuels, oils, hydrocarbons, cement, and other pollutants. Contaminated runoff has the potential to negatively affect the ecological functioning and water quality of downstream aquatic systems.

Although the proposed Project footprint avoids direct impacts on identified natural aquatic features, indirect impacts on the receiving surface water environment may occur if stormwater, sediment, and potential pollutants are not appropriately managed.

12.12.2 Impact Assessment

Table 49 to **Table 52** contain the results of the impact assessment which were obtained from the Aquatic Ecology Impact Assessment (Colloty, 2026a).

Table 49: Surface Water Impact 1 - Habitat fragmentation - Direct during construction and operation phases (Colloty, 2026a)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
Based on the information collected during the assessment, that contained and substantiated by national databases,	Due to the nature of the project this will persist in the long term into the operational phase impact. The past disturbance and	All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free form alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region.

it is unlikely any impact will occur within the aquatic environment	avoidance of any aquatic environment that has already occurred would not be exacerbated during the proposed activities	In adhering to the above, habitat fragmentation within, and more importantly the connection with intact habitats still surrounding the site, will be promoted, assuming that the areas around the site will remain undeveloped in the near future. i.e. integrated into regional conservation plans for the municipality.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 50: Surface Water Impact 2 - Surface water runoff patterns - Direct during operation phase (Colloty, 2026a)

Environmental Impact	Activity/Aspect & Impact Source:	Proposed Mitigation:
The clearing of dense vegetation that will be replaced with hard surfaces has the ability to increase run-off due to reduced vegetation cover / change in vegetation cover. By intercepting and slowing precipitation hitting the ground, vegetation substantially reduces the volume and rate of runoff. This then prevents soil erosion.	Due to the nature of the project this will persist in the long term in the operational phase impact.	No run-off should be allowed to leave the site directly. Any flows should be contained using the detention ponds as part of a stormwater management plan, especially if any runoff may contain any hydrocarbons that may be generated by the raceway.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 51: Surface Water Impact 3: Increase in sedimentation and erosion – Direct during operation phase (Colloty, 2026a)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
Increase amount of siltation in downstream areas when increased volumes of water are generated by the site.	Due to the nature of the project this will persist in the long term in the operational phase impact.	Suitable stormwater management must be included such as the stormwater detention ponds. This will trap sediment, coupled to revegetation of bare soil areas with local plant species.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**

Without Mitigation :	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation :	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 52: Surface Water Impact 4: Water Quality Impacts - Indirect during construction phase (Colloty, 2026a)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
This impact is mostly related to use of substances such as cement, oils and hydrocarbons during the construction process and, to a limited degree, solid waste.	Due to the nature of the project this will persist in the short term in the construction phase.	Due care to prevent accidental leakage of pollutants (e.g. oil, fuel, cement), must be an utmost priority during the construction phase and operational phases of the raceway in particular Proper solid waste disposal (e.g. bins, no littering or burning policy and the maintenance of ablution facilities, including the disposal of liquid and hazardous waste at a licensed waste disposal site must be adhered to by the contractors. No re-fuelling of construction vehicles or maintenance activities to occur proximate to the watercourse near the site.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation :	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation :	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

12.13 Terrestrial Biodiversity

The findings from the Terrestrial Ecology Impact Assessment (Colloty, 2026b) follow. The specialist report is contained in **Appendix F3**.

12.13.1 Impact Description

The proposed Project has the potential to result in the loss, degradation and fragmentation of terrestrial habitat through vegetation clearing, earthworks, infrastructure development and associated activities. The site contains a mosaic of transformed, degraded and relatively intact terrestrial habitats, including areas of Fynbos Renosterveld, Proteoid Fynbos Renoster Thicket and grassy Renosterveld vegetation. Portions of the site are associated with Critically Endangered vegetation, CBAs, ESAs, and habitat that may support SCC.

The removal of natural vegetation may reduce the extent of remaining terrestrial habitat and impact plant communities, protected plant species, and habitat utilised by fauna. Habitat loss

may also reduce ecological functioning and diminish the availability of refuge, foraging and movement areas for terrestrial fauna. Although much of the site has been historically disturbed through agricultural activities, grazing, industrial development and alien plant invasion, the remaining natural habitat retains conservation value and contributes to local biodiversity.

The development also has the potential to increase habitat fragmentation through the further subdivision and isolation of remnant natural habitat patches. Fragmentation can reduce ecological connectivity, restrict species movement and increase edge effects on remaining natural areas. In addition, vegetation disturbance may facilitate the spread of alien invasive plant species into adjacent natural habitats, further degrading habitat quality and ecological integrity over time.

Overall, the primary terrestrial ecological impacts associated with the proposed Project relate to the loss of natural vegetation and ecological habitat, increased habitat fragmentation and the potential spread of invasive alien species.

12.13.2 Impact Assessment

Table 53 to **Table 58** contain the results of the impact assessment which were obtained from the Terrestrial Ecology Impact Assessment (Colloty, 2026b).

Table 53: Plant Species Impact 1: Loss of terrestrial vegetation or habitats that could contain various SCC or species listed as High/Medium in the Screening Tool (Colloty, 2026b)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
The clearing of terrestrial habitat with a HIGH sensitivity rating, notably the Fynbos habitat associated with a Threatened Ecosystem (See **Figure 31**)	Due to the nature of the project this will persist in the long term into the operational phase impact and would impact in particular on intact Renosterveld rated as HIGH (**Figure 31**), although the intact areas will be retained within the proposed Conservation Area	Ideally all areas rated as HIGH should be excluded from the development proposal, however as this is not possible due to various development & economic constraints the following is proposed: Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site., however as the development proposes an on-site conservation area of important habitat, this is not envisaged. This will also serve to protect any important or conservation worth species identified in this assessment and highlighted in the DFFE Screening Tool, e.g. *Hermannia lavandulifolia* All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free form alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region. A detailed walkdown must be conducted to determine the final list of species that will require Cape Nature & DFFE permits. As the majority of Fynbos species are difficult to relocate, alternative means of collecting seed and or propagules must be used to assist with the revegetation of any disturbed areas or areas clear of alien vegetation. Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation, to a minimum.
Impact Significance		

	Extent	Duration	Severity	Reversibility	Irreplaceable Loss	Probability	Impact Significance
Without Mitigation:	Local (2)	Long-term (4)	High (8)	Completely (0)	Partly (0.5)	Definite (5)	High (72.5)
With Mitigation:	Site (1)	Long-term (4)	Low (4)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 54: Plant Species Impact 2: Spread of alien invasive trees (Colloty, 2026b)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
The clearing of any areas during the construction phase especially will result in areas being colonised by alien invasive species already present in the landscape	Due to the nature of the project this will persist in the long term into the operational phase impact and would impact in particular the proposed Conservation Area	All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free form alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region. Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation, to a minimum.

Impact Significance							
	Extent	Duration	Severity	Reversibility	Irreplaceable Loss	Probability	Impact Significance
Without Mitigation:	Local (2)	Long-term (4)	High (8)	Completely (0)	Partly (0.5)	Definite (5)	High (72.5)
With Mitigation:	Site (1)	Long-term (4)	Low (4)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 55: Animal Species Impact 1: Loss of terrestrial vegetation or habitats that could contain various animal SCC and/or important habitat for fauna (Colloty, 2026b)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
The clearing of terrestrial habitat with a HIGH sensitivity rating, notably the Fynbos habitat associated with a Threatened Ecosystem (See **Figure 31**), could also result in the loss or additional fragmentation of faunal habitat.	Due to the nature of the project this will persist in the long term into the operational phase impact and would impact on particular on intact Renosterveld rated as HIGH (**Figure 31**), although the intact areas will be retained within the proposed Conservation Area, thus providing habitat for any remaining species	Ideally all areas rated as HIGH should be excluded from the development proposal, however as this is not possible due to various development & economic constraints the following is proposed: Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site., however as the development proposes an on-site conservation area of important habitat, this is not envisaged. This 15 ha conservation area will then provide suitable habitat for all of the species that are expected to occur, as when as any highlighted by the Screening Tool, especially the Birds, butterfly and mammal species listed. All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free form alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region.

		A detailed walkdown must be conducted to determine the final list of species that will require CAPE NATURE & DFFE permits, to relocate any reptiles for example Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation, to a minimum.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Local (2)	Long-term (4)	High (8)	Completely (0)	Partly (0.5)	Definite (5)	High (72.5)
With Mitigation:	Site (1)	Long-term (4)	Low (4)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 56: Animal Species Impact 2: Habitat fragmentation - Direct during construction and operation phases (Colloty, 2026b)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
Based on the information collected during the assessment, that contained within the conservation plant, vegetation maps the potential for habitat fragmentation - reduction in ecosystem corridors for the terrestrial animals	Due to the nature of the project this will persist in the long term into the operational phase impact and would impact on particular on intact Renosterveld rated as HIGH (**Figure 31**), although the intact areas will be retained within the proposed Conservation Area, thus providing habitat for any remaining species.	Ideally all areas rated as HIGH should be excluded from the development proposal, however as this is not possible due to various development & economic constraints the following is proposed: Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site., however as the development proposes an on-site conservation area of important habitat, this is not envisaged All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free form alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region. In adhering to the above, habitat fragmentation within, and more importantly the connection with intact habitats still surrounding the site, will be promoted, assuming that the areas around the site will remain undeveloped in the near future. i.e. integrated into regional conservation plans for the municipality.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 57: Terrestrial Biodiversity Impact 1: Loss of terrestrial vegetation or habitats that could contain various SCC, habitat rated as Critically Endangered and/or important habitat for fauna (Colloty, 2026b)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
The clearing of terrestrial habitat with a HIGH sensitivity rating, notably the Renosterveld habitat associated with a Threatened Ecosystem (See **Figure 31**), could also result in the loss or additional fragmentation of faunal habitat	Due to the nature of the project this will persist in the long term into the operational phase impact and would impact on particular on intact Renosterveld rated as HIGH (**Figure 31**), although the intact areas will be retained within the proposed Conservation Area, thus providing habitat for any remaining species	Ideally all areas rated as HIGH should be excluded from the development proposal, however as this is not possible due to various development & economic constraints the following is proposed: Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site., however as the development proposes an on-site conservation area of important habitat, this is not envisaged All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free form alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region. A detailed walkdown must be conducted to determine the final list of species that will require CAPE NATURE & DFFE permits. Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation, to a minimum.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Local (2)	Long-term (4)	High (8)	Completely (0)	Partly (0.5)	Definite (5)	High (72.5)
With Mitigation:	Site (1)	Long-term (4)	Low (4)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Table 58: Terrestrial Biodiversity Impact 2: Habitat fragmentation due to development or alien invasive plant encroachment - Direct during construction and operation phases (Colloty, 2026b)

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
Based on the information collected during the assessment, that contained within the conservation plant, vegetation maps the potential for habitat fragmentation - reduction in ecosystem corridors for the terrestrial animals	Due to the nature of the project this will persist in the long term into the operational phase impact and would impact on particular on intact Renosterveld rated as HIGH **(Figure 31**), although the intact areas will be retained within the proposed Conservation Area, thus providing habitat for any remaining species.	Ideally all areas rated as HIGH should be excluded from the development proposal, however as this is not possible due to various development & economic constraints the following is proposed: Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site., however as the development proposes an on-site conservation area of important habitat, this is not envisaged All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free form alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region. In adhering to the above, habitat fragmentation within, and more importantly the connection with intact habitats still surrounding the site, will be promoted, assuming that the areas around the site will remain undeveloped in the near

		future. i.e. integrated into regional conservation plans for the municipality.					
Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

12.14 Avifauna

The findings from the Avifauna Impact Assessment (Phillips, 2025) follow. The specialist report is contained in **Appendix F5**.

12.14.1 Impact Description

The proposed Project has the potential to affect avifauna through the loss and modification of habitat, increased disturbance and displacement of bird species, potential collisions with infrastructure, and degradation of habitat quality. The Project will require the clearance of secondary grassy vegetation, fallow fields, pastures, disturbed thicket vegetation and vegetation associated with the drainage line, resulting in a reduction in available habitat and foraging resources for birds occurring within and around the site.

Construction activities, including vegetation clearing, earthworks, vehicle movement, noise, vibration and increased human presence, may disturb resident and transient bird species and result in the temporary displacement of birds from suitable habitat areas. Operational activities associated with the industrial expansion, solar facility and motorsport arena may also contribute to ongoing disturbance through increased human activity, noise and lighting within the landscape.

Birds may further be affected by the presence of solar PV infrastructure. Reflective solar panels can present a collision risk to avifauna where birds perceive panel surfaces as open water or open sky, potentially resulting in injury or mortality. Although the site is largely transformed and supports predominantly generalist bird species, several SCC have been recorded within the broader area and may periodically utilise surrounding habitats.

Additional impacts may arise through the pollution or contamination of habitats from construction and operational activities, as well as the spread of invasive alien plant species into disturbed areas, which may reduce habitat quality and alter ecological conditions for avifauna. Overall, the primary impacts on avifauna relate to habitat loss, disturbance and displacement, collision risk, and habitat degradation associated with the proposed Project.

12.14.2 Impact Assessment

Table 59 to **Table 65** contain the results of the impact assessment which were obtained from the Avifauna Impact Assessment (Phillips,, 2025).

Table 59: Avifauna Construction Phase Direct Impact 1 (Phillips, 2025)

Project Phase	**Construction phase**			
Direct Impact	**Destruction of avifaunal habitat**			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-12	3
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-36**	**low negative**		
Proposed Mitigation Measures				
Limit the development footprint to areas classified as low and very low sensitivity as far as possible				
The proposed development activities must remain strictly within the approved development footprint				
For the solar site, limit clearing of vegetation where possible and retain as much ground cover as possible				
Construction camps must not be placed in areas of medium sensitivity				
Where possible, vegetation clearing and construction activities should commence during the autumn or winter months, preferably between May and September, to minimise the impacts on breeding birds				
The proposed conservation area on the eastern side is supported and must be implemented to ensure this impact is minimised				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-6	3
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Negligible**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-18**	**very low negative**		
Confidence Level				
Medium				

Table 60: Avifauna Construction Phase Direct Impact 2 (Phillips, 2025)

Project Phase	Construction phase			
Direct Impact	**Pollution and contamination of the environment**			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	2	The duration of the activity associated with the impact will last 6-18 months and as such is rated as Short Term	-10	3
Extent	3	The extent of the impact is rated as site as it will affect only the development area		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-30**	**low negative**		
Proposed Mitigation Measures				
An independent Environmental Control Officer (ECO) must be appointed to oversee all construction activities				
All vehicles and machinery must be checked for leaks and serviced on a regular basis during construction				
Any spillage must be dealt with rapidly and in the most appropriate manner				
Appropriate stormwater management must be implemented during construction				
Construction camps and crews must remain outside of areas of medium sensitivity				
Washing of construction vehicles must not take place on site				
Dumping of solid waste in natural areas, including cigarette butts and litter by construction workers must be prohibited				
Appropriate solid waste disposal facilities must be provided for construction workers				
Post-Mitigation				
Duration	2	The duration of the activity associated with the impact will last 6-18 months and as such is rated as Short Term	-8	2
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-16**	**very low negative**		
Confidence Level				
Medium				

Table 61: Avifauna Operation Phase Direct Impact 1 (Phillips, 2025)

Project Phase	Operation phase			
Direct Impact	**Injury and fatalities caused by collision with solar panels**			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-12	2
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-24**	**low negative**		
Proposed Mitigation Measures				
Conduct post-construction monitoring to ascertain if collisions of birds with the panels becomes a problem				
If collisions become a problem, bird diverters / visual deterrents that can be installed around the solar tables to break up the continuity and deter birds from perceiving the panels to be open water must be investigated / researched using the latest available information from the global solar industry				
Tracking panels are preferred to fixed panels as the movement of the panel will aid in altering the light reflected				
The cumulative effect of this impact is not well documented and results from research and monitoring is required to assess the efficacy of mitigation measures. It is therefore recommended that all bird mortalities are recorded during the operational phase of the project. The site should be inspected on a regular basis, for example during routine maintenance, and any bird mortalities recorded, including probable cause of death. The results must be reported to BirdLife SA				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-6	1
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Negligible**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-6**	**very low negative**		
Confidence Level				
High				

Table 62: Avifauna Operation Phase Direct Impact 2 (Phillips, 2025)

Project Phase	Operation phase

Direct Impact	Pollution and contamination of the environment			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-14	3
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Moderately detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-42**	**low negative**		
Proposed Mitigation Measures				
An independent Environmental Control Officer (ECO) must be appointed to oversee operational phase activities at a minimum every 6 months for the first 2 years and then yearly for 5 years thereafter				
A formal stormwater management plan must be incorporated into the development design for each component				
Dirty water from the raceway must be treated and cleaned (e.g. solids and hydrocarbons removed) before being released into the environment				
If possible, panels should be cleaned using water that is clear of detergents only (e.g. potable water or borehole water). The use of grey water should be avoided. Should the need arise to clean the panels with detergents, then biodegradable detergents are preferred. Care must be taken not to allow the detergents to accumulate in the soil. Detergents must not be used in the rainy season when they can be washed into the downstream watercourses				
All maintenance vehicles must be checked for leaks and serviced on a regular basis				
Any spillage must be dealt with rapidly and in the most appropriate manner				
Dumping of solid waste in natural areas, including cigarette butts and litter by operational staff must be prohibited				
Appropriate solid waste disposal and ablution facilities must be provided for operational				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-12	2
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-24**	**low negative**		
Confidence Level				
Medium				

Table 63: Avifauna Construction Phase Indirect Impact 1 (Phillips, 2025)

Project Phase	Construction phase			
Indirect Impact	**Disturbance to and displacement of birds**			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	2	The duration of the activity associated with the impact will last 6-18 months and as such is rated as Short Term	-10	3
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-30**	**low negative**		
Proposed Mitigation Measures				
An independent Environmental Control Officer (ECO) must be appointed to oversee all construction activities				
Construction should commence in the winter months (preferably between May and September) to minimise the impacts on the breeding activities of avifauna				
No bird or wild animal may under any circumstance be handled, removed, or be interfered with by construction workers				
No birds or wild animal may under any circumstance be hunted, snared, captured, injured, or killed. This includes animals perceived to be vermin				
To prevent possible collisions with birds (especially gamebirds such as guineafowl), drivers of construction vehicles must remain vigilant to the possibility of animals crossing their paths and a strict speed limit should be adhered to				
Lighting during construction should be avoided as far as possible. Where required, lighting must not include those that fall within the white spectrum or emit ultra-violet light such as high-pressure sodium or mercury lamps. Light that is emitted at one wavelength, contains no ultraviolet (UV) light, and has a low attraction to insects, such as low-pressure sodium lamps, is preferred				
If lighting is necessary, upward lighting must be avoided to minimise light pollution. Light can be restricted by fitting shields that direct the light below the horizontal plane, at preferably an angle less than 70 degrees. Limiting the height of lighting columns and directing light at a low level reduces the ecological impact of the light				
Post-Mitigation				
Duration	2	The duration of the activity associated with the impact will last 6-18 months and as such is rated as Short Term	-4	2
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Negligible**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-8**	**Very low negative**		

Confidence Level
Medium

Table 64: Avifauna Construction Phase Indirect Impact 2 (Phillips, 2025)

Project Phase	Construction phase			
Indirect Impact	**Spread of invasive alien plant species**			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	2	The duration of the activity associated with the impact will last 6-18 months and as such is rated as Short Term	-10	3
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-30**	**low negative**		
Proposed Mitigation Measures				
Where vegetation clearing takes place, topsoil must be retained and used to rehabilitate underneath the solar arrays and other cleared areas, and for landscaping. Only indigenous plants found in the area must be used for rehabilitation and landscaping				
Only clear vegetation where absolutely necessary and retain as much of the existing vegetation as possible under the solar panels				
A site-specific and region-specific invasive alien plant species management and monitoring plan must be written by a suitably qualified professional and implemented during the construction phase and operational phase				
A specialist contractor must be appointed to clear invasive alien plants that may establish in areas disturbed by construction. All alien plant seedlings and saplings must be removed as they become evident. Alien vegetation must be disposed of at the municipal waste dump, and not dumped on or off the site				
All construction vehicles and equipment must be free of plant material before entering the site				
Post-Mitigation				
Duration	2	The duration of the activity associated with the impact will last 6-18 months and as such is rated as Short Term	-8	2
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		

SIGNIFICANCE	**-16**	**Very low negative**		
Confidence Level				
Medium				

Table 65: Avifauna Operation Phase Indirect Impact 1 (Phillips, 2025)

Project Phase	**Operation phase**			
Indirect Impact	**Disturbance to and displacement of birds**			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-10	3
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-30**	**low negative**		
Proposed Mitigation Measures				
Lighting must not include those that fall within the white spectrum or emit ultra-violet light such as high-pressure sodium or mercury lamps. Light that is emitted at one wavelength, contains no ultraviolet (UV) light, and has a low attraction to insects, such as low-pressure sodium lamps, is preferred				
Upward lighting must be avoided as far as possible to minimise light pollution. Light can be restricted by fitting shields that direct the light below the horizontal plane, at preferably an angle less than 70 degrees. Limiting the height of lighting columns and directing light at a low level reduces the ecological impact of the light				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-8	2
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-16**	**Very low negative**		
Confidence Level				
Medium				

12.15 Air Quality

12.15.1 Impact Description

The proposed Project has the potential to affect local air quality during both the construction and operational phases. Construction activities, including vegetation clearing, earthworks, excavation, material handling, site preparation and vehicle movement, may generate dust emissions and exhaust gases that could temporarily reduce local air quality and create nuisance conditions for nearby receptors. Increased heavy vehicle traffic associated with the transport of construction materials and equipment may further contribute to localised emissions.

During operation, air quality impacts may be associated with increased vehicle movements, motorsport activities, maintenance activities, fuel storage and handling, and the movement of vehicles on internal roads and parking areas. These activities may generate vehicle exhaust emissions and localised dust, which could contribute to temporary deterioration of air quality in the immediate vicinity of the Project.

Overall, the primary air quality impacts associated with the proposed Project relate to dust generation, vehicle and equipment exhaust emissions, and localised air quality nuisance impacts during construction and operation.

12.15.2 Impact Assessment

Table 66 to **Table 67** contain the results of the impact assessment conducted for the impacts of the Project on air quality.

Table 66: Air Quality Construction Phase Impacts

Environmental Feature	Air Quality
Relevant Alternatives & Activities	Construction activities
Project life-cycle	Construction phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Dust generation from vegetation clearing, site preparation, excavation and earthworks. ▪ Dust generation from construction vehicle movement on exposed surfaces and access roads. ▪ Exhaust emissions from construction vehicles, machinery and equipment. ▪ Dust nuisance experienced by nearby receptors.	▪ Apply dust suppression measures (e.g. water spraying) to exposed surfaces and haul roads during dry and windy conditions. ▪ Minimise the extent and duration of exposed soil surfaces. ▪ Implement speed limits on unpaved roads to reduce dust generation. ▪ Cover or stabilise stockpiles where required. ▪ Ensure construction vehicles and equipment are regularly maintained to minimise exhaust emissions. ▪ Switch off vehicles and equipment when not in use to minimise unnecessary idling.

	+/- Impacts	**Extent**	**Magnitude**	**Duration**	**Probability**	**Significance**
Before Mitigation	-	local	low	short-term	likely	1
After Mitigation	-	local	low	short-term	moderate	1

Table 67: Air Quality Operation Phase Impacts

Environmental Feature	Air Quality
Relevant Alternatives & Activities	Operation activities
Project life-cycle	Operation phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Vehicle exhaust emissions associated with normal site operations and increased traffic volumes. ▪ Exhaust emissions associated with motorsport activities. ▪ Dust generation from vehicle movement on internal roads, parking areas and exposed surfaces. ▪ Localised deterioration of air quality associated with maintenance and operational activities. ▪ Air quality nuisance impacts experienced by nearby receptors.	▪ Maintain internal roads, parking areas and operational surfaces to minimise dust generation. ▪ Implement dust suppression measures where dust nuisance is identified. ▪ Ensure all vehicles, equipment and motorsport vehicles are maintained in accordance with manufacturer specifications. ▪ Implement appropriate fuel storage and handling measures to minimise fugitive emissions. ▪ Maintain vegetated areas and landscaping to reduce dust mobilisation. ▪ Implement good housekeeping practices to minimise dust accumulation and re-entrainment. ▪ Investigate and address any air quality complaints received from surrounding receptors.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium	long-term	likely	2
After Mitigation	-	local	low	long-term	moderate	2

Residual Risk	Although a residual impact remains, it is associated with ongoing vehicle and motorsport-related emissions generated during the operational phase of the development. These emissions are inherently linked to the nature of the proposed activities and cannot be completely eliminated. However, through the implementation of dust management measures, vehicle and equipment maintenance programmes, good housekeeping practices and appropriate operational controls, the impact is reduced to a low level. The residual impact is expected to be localised and of low magnitude.

12.16 Agricultural

12.16.1 Impact Description

The proposed Project has the potential to result in the permanent loss of agricultural land through the conversion of land currently used for grazing, natural veld and previously cultivated areas to industrial, motorsport and alternative energy land uses. Construction activities, including vegetation clearing, earthworks and the establishment of infrastructure, will remove agricultural soils from productive use within the development footprint.

The study area is characterised predominantly by shallow Mispah and Glenrosa soils with low agricultural potential, together with limited areas of Westleigh soils associated with wetter portions of the site. The agricultural assessment (Bouwer, 2023) found that the site generally has low land capability, low grazing capacity and limited suitability for sustainable cultivation. Field verification further confirmed that previously cultivated lands within the site are currently abandoned and overgrown, with the area primarily utilised for low-intensity grazing.

Potential agricultural impacts therefore relate primarily to the loss of grazing land, the loss of low-capability agricultural soils and the reduction of land available for future agricultural use.

However, due to the generally low agricultural potential of the site, the specialist concluded that the proposed Project is unlikely to result in significant impacts on agricultural resources (Bouwer, 2023). Therefore, an Agricultural Compliance Statement was undertaken, and no impact assessment was determined necessary.

12.16.2 Impact Assessment

An Agricultural Compliance Statement (refer to **Appendix F10**) was undertaken for the proposed Project and determined no further studies were required for the Project site due to the overall low agricultural sensitivity of the site. This study assisted in informing the impact assessment contained in **Table 68**.

Table 68: Agricultural Impact Assessment

Environmental Feature	Agriculture
Relevant Alternatives & Activities	Construction and operational activities
Project life-cycle	Construction and operational phases
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Permanent loss of agricultural land within the development footprint. ▪ Loss of grazing land currently used for low-intensity livestock grazing. ▪ Loss of abandoned cultivated land and future agricultural use potential. ▪ Disturbance and removal of agricultural soils during vegetation clearing and earthworks.	Due to the low agricultural potential of the site, no additional agricultural mitigation measures are required.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	low	long-term	almost certain	0
After Mitigation	-	local	low	long-term	almost certain	0

12.17 Cultural Heritage & Archaeology

12.17.1 Impact Description

The proposed Project has the potential to impact archaeological and heritage resources through vegetation clearing, excavation, earthworks and other ground-disturbing activities undertaken during construction. Such activities may result in the disturbance, damage or destruction of archaeological material, including any buried heritage resources that may occur beneath the surface.

An archaeological walkdown survey (Webley, 2023) identified a very sparse scatter of ESA stone artefacts within the study area, together with a number of stone heaps and remnants of historic farming activities. The recorded artefacts are considered to be of low heritage

significance and were assessed as Not Conservation Worthy, largely due to their disturbed context within previously cultivated land. The archaeological survey confirmed that the study area is highly disturbed and of very low archaeological sensitivity.

The principal heritage impact relates to the potential disturbance of previously unidentified archaeological material or human burials that may be exposed during construction activities. While the specialist concluded that impacts on known archaeological resources are expected to be low, the possibility of chance finds during excavation and earthworks remains. No significant heritage or archaeological impacts are anticipated during the operational phase.

12.17.2 Impact Assessment

An Archaeological walkdown (refer to **Appendix F7**) was conducted and determined no further studies were required for the Project site due to the very low archaeological/heritage sensitivity of the site. This study assisted in informing the impact assessment contained in **Table 69**.

Table 69: Archaeological/Heritage Impact Assessment

Environmental Feature	**Cultural Heritage & Archaeology**
Relevant Alternatives & Activities	Construction and operational activities
Project life-cycle	Construction and operational phases
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
Construction activities resulting in the chance find of unmarked graves or unidentified archaeological material.	See HWC chance find protocols available on the HWC website and contained in the EMPr.

	+/- Impacts	**Extent**	**Magnitude**	**Duration**	**Probability**	**Significance**
Before Mitigation	-	local	low	short-term	unlikely	1
After Mitigation	-	local	Low-negligible	short-term	unlikely	1

12.18 Palaeontology

The findings from the Palaeontology Desktop Assessment (Butler, 2023) follow. The specialist report is contained in **Appendix F8**.

12.18.1 Impact Description

The proposed Project may impact palaeontological resources during construction activities involving excavation, earthworks and other ground-disturbing activities. Such activities have the potential to damage, remove, destroy or permanently seal-in fossil material that may occur within the underlying geological formations.

Although the broader area is associated with geological formations of varying palaeontological sensitivity, the specialist concluded that fossil resources of scientific and conservation significance within the Project footprint are relatively scarce. As such, potential impacts are

largely limited to the accidental disturbance of previously unidentified fossil material during construction. No significant impacts on palaeontological resources are anticipated during the operational phase.

12.18.2 Impact Assessment

Table 70 contains the results of the impact assessment which were obtained from the Palaeontology Desktop Assessment (Butler, 2023).

Table 70: Summary of Palaeontology Impacts (Butler, 2023)

Nature	Loss of fossil heritage by destruction, movement or sealing in of fossil heritage in or below the earth's surface							
Development Phase	Development Impact			Impact Rating		Recommended Mitigation	Is Impact Acceptable?	
	Criteria	*BM	**AM	Before Mitigation	After Mitigation		*BM	**AM
Planning Phase	Extent	1	1	Positive low impact	Positive low impact	None	Yes	Yes
	Probability	1	1					
	Reversibility	1	1					
	Irreplaceability	1	1					
	Duration	1	1					
	Cumulative Effect	1	1					
	Magnitude	1	1					
	Impact Significance	6	6					
Construction Phase	Extent	1	1	Negative low impact	Negative low impact	Implement the Chance Finds Procedure should fossil material be encountered during construction activities.	No	Yes
	Probability	2	2					
	Reversibility	4	4					
	Irreplaceability	4	4					
	Duration	4	4					
	Cumulative Effect	2	2					
	Magnitude	2	1					
	Impact Significance	34	17					
Operational Phase	Extent	1	1	Positive low impact	Positive low impact	None	Yes	Yes
	Probability	1	1					
	Reversibility	1	1					
	Irreplaceability	1	1					
	Duration	1	1					
	Cumulative Effect	1	1					
	Magnitude	1	1					
	Impact Significance	6	6					
Decommissioning Phase	Extent	1	1	Positive low impact	Positive low impact	None	Yes	Yes
	Probability	1	1					
	Reversibility	1	1					
	Irreplaceability	1	1					
	Duration	1	1					
	Cumulative Effect	1	1					
	Magnitude	1	1					

	Impact Significance	6	6					

12.19 Visual Quality

The findings from the Landscape/Visual Impact Assessment (Marshall, 2023) follow. The specialist report is contained in **Appendix F6**.

12.19.1 Impact Description

The proposed Project may alter the visual character of the receiving environment through the expansion of industrial land uses, development of a motorsport arena and establishment of a solar PV facility. The introduction of buildings, spectator facilities, solar infrastructure and associated structures will increase the visibility of built development within the surrounding rural landscape and may contribute to the further industrialisation of views experienced by surrounding visual receptors.

Potential visual impacts are primarily associated with changes in landscape character and views from surrounding receptors, including users of the N2 and R327, nearby homesteads, Reed Valley, Petroport and the western edge of Mossel Bay and Kwanonqaba. The solar PV facility may also introduce limited glare effects under certain conditions.

Overall, the primary visual impacts relate to changes in landscape character, increased visibility of Project infrastructure, and alteration of views experienced by surrounding receptors.

12.19.2 Impact Assessment

Table 71 to **Table 76** contain the results of the impact assessment which were obtained from the Landscape/Visual Impact Assessment (Marshall, 2023).

Table 71: Visual Quality Impact 1: Landscape Change (Marshall, 2023)

Project Phase	Construction, Operational & Decommissioning Phases. Impacts will increase to peak level on completion of construction, be relatively constant during operation and decrease again from peak levels during decommissioning.			
Direct Impact	Change of character due to industrialisation of a Rural Landscape			
Indirect Impact				
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions	**Slightly Detrimental**	**Likely**

		and processes are minimally affected		
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted.		
SIGNIFICANCE	**-14**	**Very low - negative**		
Proposed Mitigation Measures				
The use of colours that blend with the natural landscape should be maximised.				
The use of bright colours that contrast with the natural landscape should be minimised.				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-14**	**very low negative**		
Confidence Level				
High				

Table 72: Visual Quality Impact 2: Industrialisation of views from the N2 (Marshall, 2023)

Project Phase	Construction, Operational & Decommissioning Phases. Impacts will increase to peak level on completion of construction, be relatively constant during operation and decrease again from peak levels during decommissioning.			
Direct Impact	Change of character due to industrialisation of a Rural Landscape			
Indirect Impact				
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted.		
SIGNIFICANCE	**-14**	**Very low - negative**		
Proposed Mitigation Measures				
Development of the intervening land between the proposed development and the N2				
Screening of the southern edge of the development and particularly the rear of spectator stands with tree planting is likely to help minimise the impact.				

Screening on the eastern site boundary				
The use of colours that blend with the natural landscape should be maximised.				
The use of bright colours that contrast with the natural landscape should be minimised.				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-14**	**very low negative**		
Confidence Level				
High				

Table 73: Visual Quality Impact 3: Industrialisation of views from the R327 (Marshall, 2023)

Project Phase	Construction, Operational & Decommissioning Phases. Impacts will increase to peak level on completion of construction, be relatively constant during operation and decrease again from peak levels during decommissioning.			
Direct Impact	Change of character due to industrialisation of a Rural Landscape			
Indirect Impact				
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Moderately Detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted.		
SIGNIFICANCE	**-42**	**Moderate - negative**		
Proposed Mitigation Measures				
Screening of the eastern edge of the development.				
The use of colours that blend with the natural landscape should be maximised.				
The use of bright colours that contrast with the natural landscape should be minimised.				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last	-7	2

		more than 5 years and as such is rated as Long Term		
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**LIkely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-14**	**very low negative**		
Confidence Level				
High				

Table 74: Visual Quality Impact 4: Industrialisation of views from the Homesteads (Marshall, 2023)

Project Phase	Construction, Operational & Decommissioning Phases. Impacts will increase to peak level on completion of construction, be relatively constant during operation and decrease again from peak levels during decommissioning.			
Direct Impact	Change of character due to industrialisation of a Rural Landscape			
Indirect Impact				
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	1
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted.		
SIGNIFICANCE	**-7**	**Very low - negative**		
Proposed Mitigation Measures				
Development of the intervening land between the proposed development and the N2				
Screening of the eastern edge of the development.				
The use of colours that blend with the natural landscape should be maximised.				
The use of bright colours that contrast with the natural landscape should be minimised.				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that	**Slightly Detrimental**	**Definite**

		natural, cultural and social functions and processes are minimally affected		
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-14**	**very low negative**		
Confidence Level				
High				

Table 75: Visual Quality Impact 5: Industrialisation of views from the Western Suburbs and the Kwanonqaba settlement (Marshall, 2023)

Project Phase	Construction, Operational & Decommissioning Phases. Impacts will increase to peak level on completion of construction, be relatively constant during operation and decrease again from peak levels during decommissioning.			
Direct Impact	Change of character due to industrialisation of a Rural Landscape			
Indirect Impact				
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	1
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Moderately Detrimental**	**Unlikely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted.		
SIGNIFICANCE	**-7**	**Very low - negative**		
Proposed Mitigation Measures				
Screening of the eastern edge of the development.				
Screening on the southern edge of the development				
The use of colours that blend with the natural landscape should be maximised.				
The use of bright colours that contrast with the natural landscape should be minimised.				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-14**	**very low negative**		

Confidence Level
High

Table 76: Visual Quality Impact 6: Industrialisation of views from the Petroport, east bound land of N2 (Marshall, 2023)

Project Phase		Construction, Operational & Decommissioning Phases. Impacts will increase to peak level on completion of construction, be relatively constant during operation and decrease again from peak levels during decommissioning.		
Direct Impact		Change of character due to industrialisation of a Rural Landscape		
Indirect Impact				
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted.		
SIGNIFICANCE	**-14**	**Very low - negative**		
Proposed Mitigation Measures				
Development of the intervening land between the proposed development and the N2				
Screening of the eastern edge of the development.				
The use of colours that blend with the natural landscape should be maximised.				
The use of bright colours that contrast with the natural landscape should be minimised.				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-7	2
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-1	The severity of the impact is rated as Low negative as the impact affects the environment in such a way that natural, cultural and social functions and processes are minimally affected	**Slightly Detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-14**	**very low negative**		
Confidence Level				
High				

12.20 Noise

The findings from the Noise Impact Assessment (De Jager, 2026) follow. The specialist report is contained in **Appendix F4**.

12.20.1 Impact Description

The proposed Project has the potential to generate noise during both the construction and operational phases. Construction-related noise will be associated with vegetation clearing, earthworks, construction vehicles, machinery and general site activities. These activities may result in temporary increases in ambient noise levels at surrounding noise-sensitive receptors.

Operational noise will be predominantly associated with motorsport activities, including racing vehicles, public address systems, maintenance activities and supporting infrastructure. Noise levels will vary depending on the type and frequency of events, with high-performance motorsport activities representing the most significant source of noise. The increase in noise levels may affect surrounding noise-sensitive receptors, including nearby residences, agricultural properties and tourism facilities.

Overall, the primary noise impacts associated with the proposed Project relate to increased ambient noise levels, noise nuisance and disturbance experienced by surrounding receptors during construction activities and motorsport operations.

12.20.2 Impact Assessment

Table 77 to **Table 80** contain the results of the impact assessment which were obtained from the Noise Impact Assessment (De Jager, 2026).

Table 77: Noise Construction Phase Impact 1: Temporary high-noise activities (De Jager, 2026)

Nature of Impact:	Precautious approach, with daytime ambient sound level measurements indicating ambient sound levels typical of a rural to suburban noise district at residential dwellings in the area, though it should be noted that measurements were collected at a quiet farm dwelling, as it is expected that ambient sound levels at NSR located closer to the R327 would be higher. The projected noise levels from pile driving activities may be ±60 dBA at NSR08, ±51 dBA at NSR05 and ±50 dBA at NSR01 during piling events.		
Impact Description:	Increase in ambient sound levels at closest NSR in area.		
Prior to Mitigation			
	Rating	**Motivation**	**Significance**
Magnitude	High (8)	Construction noises might change the ambient sound levels during the day assuming low ambient sound levels.	**Low (11)**
Duration	Temporary (1)	The noise impact will be temporary.	
Extent ($\Delta L_{Aeq,D}$>7dBA)	Local (2)	The noise impact would extend from the site, potentially audible as far as 1,000m.	
Probability	Improbable (1)	It is improbable that the higher noise level and change in ambient sound levels will impact on the closest NSR.	
Mitigation:	Significance for high intensity temporary noise-generating construction activities will be **low** for the scenario as conceptualised, and additional mitigation measures are not required for daytime construction activities.		

Residual Risks:	Noise levels will increase during the operational phase, for the duration of the operational phase. The significance of the noise impact for daytime operational activities is projected to be low (see **Table 79**).

Table 78: Noise Construction Phase Impact 2: Potential night-time activities (De Jager, 2026)

Nature of Impact:	Precautious approach, with daytime ambient sound level measurements indicating ambient sound levels typical of a rural to suburban noise district at residential dwellings in the area, though it should be noted that measurements were collected at a quiet farm dwelling, as it is expected that ambient sound levels at NSR located closer to the R327 would be higher. The projected noise levels from typical construction activities may be ±56 dBA at NSR08, ±48 dBA at NSR05 and ±47 dBA at NSR01 during typical construction activities.		
Impact Description:	Increase in ambient sound levels at closest NSR in area.		
Prior to Mitigation			
	Rating	**Motivation**	**Significance**
Magnitude	High (8)	Construction noises might change the ambient sound levels during the day assuming low ambient sound levels.	**Low (12)**
Duration	Short (2)	The noise impact may last 6 - 12 months.	
Extent ($\Delta L_{Aeq,D}$>7dBA)	Local (2)	The noise impact would extend from the site, potentially audible as far as 1,000m.	
Probability	Improbable (1)	It is improbable that the higher noise level and change in ambient sound levels will impact on the closest NSR.	
Mitigation:	Significance for high intensity temporary noise-generating construction activities will be **low** for the scenario as conceptualised, and additional mitigation measures are not required for daytime construction activities.		
Residual Risks:	Noise levels will increase during the operational phase, for the duration of the operational phase. The significance of the noise impact for daytime operational activities is projected to be low (see **Table 79**).		

Table 79: Noise Operation Phase Impact 1: Typical LMV race (De Jager, 2026)

Nature of Impact:	Precautious approach, with daytime ambient sound level measurements indicating ambient sound levels typical of a rural to suburban noise district at residential dwellings in the area, though it should be noted that measurements were collected at a quiet farm dwelling, as it is expected that ambient sound levels at NSR located closer to the R327 and the industrial area would be higher. The projected noise levels, the potential change in ambient sound level as well as the potential significance are defined in **Table 22** for a potential LMV race for the NSR as identified.		
Impact Description:	Increase in ambient sound levels at closest NSR in area.		
Prior to Mitigation			
	Rating	**Motivation**	**Significance**
Magnitude	Low (4)	Racing noises may be audible, but unlikely to change ambient sound levels.	**Low (14)**
Duration	Long-term (4)	The noise impact relating to the project could last up to 25 years.	
Extent ($\Delta L_{Aeq,D}$>7dBA)	Local (2)	The noise impact would extend from the site, potentially audible as far as 1,000m.	
Probability	Improbable (1)	It is improbable that the higher noise level and change in ambient sound levels will impact on the closest NSR.	
Mitigation:	Significance of the noise from LMV races is considered to be low for the scenario as conceptualised, and additional mitigation measures are not required.		
Residual Risks:	Noise levels will reduce after the operational phase, though noise levels may still be elevated (due to the other industrial activities associated with the industrial development zone and road traffic).		

Table 80: Noise Operation Phase Impact 2: High noise race (GT3 class) (De Jager, 2026)

Nature of Impact:	Precautious approach, with daytime ambient sound level measurements indicating ambient sound levels typical of a rural to suburban noise district at residential dwellings in the area, though it should be noted that measurements were collected at a quiet farm dwelling, as it is expected that ambient sound levels at NSR located closer to the R327 would be higher (or located in the industrial area). The projected noise levels, the potential change in ambient sound level as well as the potential significance are defined in **Table 23** for a high noise race (e.g. GT3 class vehicles).		
Impact Description:	Increase in ambient sound levels at closest NSR in area.		
Prior to Mitigation			
	Rating	**Motivation**	**Significance**
Magnitude	Very High (10)	Operational noises (motor racing during event) will result in a very high change in residual noise levels at NSR located within 1,000m from the project.	**High (68)**
Duration	Long-term (4)	The noise impact relating to the operational phase can last up to 25 years or longer.	
Extent ($\Delta L_{Aeq,D}$>7dBA)	Regional (3)	The noise impact would extent from the site, potentially further than 1,000m.	
Probability	Highly Likely (4)	It is highly likely that the higher noise level and change in ambient sound levels will impact on the closest NSR.	
Mitigation / Management Measures:			
Measures that will assist in significantly reducing noise levels include: ▪ *Source Limits (Vehicle Technical Regulations):* Imposing strict decibel limits (e.g., 95–105 dB) and requiring high-efficiency exhaust silencers or mufflers. This addresses propulsion noise directly. ▪ *Earth Berms:* Large mounds of earth (soil bunds) act as heavy, dense barriers that block the direct line-of-sight between the track and the closest NSR. When constructed with an acoustically soft (grass-covered) surface, they absorb sound better than hard walls and are less affected by wind-driven noise refraction. ▪ *Sunken Carriageways (Topography Changes):* Excavating the track so it sits in a trench below ground level (subject to safe operation considering wet conditions and stormwater control). The surrounding earth acts as a natural, permanent barrier that contains sound waves before they can propagate horizontally. ▪ *Acoustic Barriers:* Purpose-built sound walls made of concrete, metal, or mineral foam. These can achieve reductions of 5–15 dB once they break the line of sight. ▪ *Buildings and Grandstands:* Strategic placement of pit buildings or large spectator stands can act as secondary shields for receptors located behind them. However, they may also reflect noise toward other areas if not placed carefully.		
The following measures could also reduce noise levels in association with other measures; ▪ *Topography Manipulation:* The topography slopes upwards towards NSR08, but “cutting” the track into this higher area, the surrounding walls could assist in reducing noise levels on the ostrich abattoir. ▪ *Low-Noise Asphalt:* Utilising porous or open-graded road construction methods can reduce rolling noise and tyre friction. While highly effective for highway traffic, this is less impactful in racing where propulsion (engine) noise dominates. ▪ *SAFER Barriers:* While primarily a safety feature (Steel and Foam Energy Reduction), the foam backing can provide minor localised sound absorption compared to bare concrete walls, though it is not a primary noise mitigation tool. ▪ *Operational Management:* Limiting race hours, restricting high-decibel categories to specific times, providing "respite periods". While not lowering the peak noise level, it reduces the Race Equivalent Level perceived by closest receptors. ▪ *Specific time slots for high-noise classes:* By planning high-noise classes during the early afternoons, a racing event can benefit from lapse conditions.		
Post Mitigation			
	Rating	**Motivation**	**Significance**
Magnitude	High (8) or less	Operational noises (motor racing during event) could result in a high change in residual noise levels at NSR located within 1,000m from the project.	**Low (30)**
Duration	Long-term (4)	The noise impact relating to the operational phase can last up to 25 years or longer.	
Extent ($\Delta L_{Aeq,D}$>7dBA)	Regional (3)	The noise impact would extent from the site, potentially further than 1,000m.	

Probability	Possible (2)	It is still possible that the higher noise level and change in ambient sound levels will annoy the closest NSR.	
Residual Risks:	Noise levels will reduce after the operational phase, though noise levels may still be elevated (due to the noise associated with the industrial development zone and the R327).		

12.21 Hazardous Substances & Waste

12.21.1 Impact Description

The proposed Project has the potential to generate both hazardous and general waste during the construction and operational phases. Construction activities may result in waste streams including building rubble, packaging materials, scrap materials, waste oils, fuels, and other construction-related wastes. In addition, the handling, storage, and use of fuels, hydrocarbons, chemicals, and hazardous substances during construction may create a risk of accidental spills, leaks, or contamination of the receiving environment.

During operation, hazardous substances and waste may be generated through the operation of the motorsport arena, industrial facilities, workshops, vehicle maintenance activities, fuel storage facilities and associated infrastructure. These activities may result in the generation of waste oils, hydrocarbons, contaminated materials, hazardous chemicals and general waste. If not appropriately managed, hazardous substances and waste have the potential to contaminate soils, surface water, groundwater and surrounding habitats, as well as create health and safety risks.

Overall, the primary impacts associated with hazardous substances and waste relate to the generation of hazardous and general waste, accidental spills and leaks, contamination of environmental resources, and the improper storage, handling or disposal of hazardous substances and waste materials.

12.21.2 Impact Assessment

Table 81 to **Table 82** contain the results of the impact assessment conducted for the impacts of the Project on hazardous substances and waste.

Table 81: Hazardous Substances & Waste Construction Phase Impacts

Environmental Feature	Hazardous Substances & Waste
Relevant Alternatives & Activities	Storage and use of hazardous substances & generation of waste
Project life-cycle	Construction phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Generation of general construction waste. ▪ Generation of hazardous waste, including waste oils, fuels, and contaminated materials. ▪ Soil contamination resulting from accidental spills or leaks of fuels, oils and hazardous substances.	▪ Store fuels, oils and hazardous substances in designated bunded areas. ▪ Maintain spill kits on site and ensure personnel are trained in spill response procedures. ▪ Immediately contain and clean up all spills and leaks. ▪ Segregate hazardous and general waste streams. ▪ Dispose of all waste at appropriately licensed waste disposal facilities.

▪ Surface water and groundwater contamination resulting from improper waste management or accidental spillages. ▪ Health and safety risks associated with the handling and storage of hazardous substances. ▪ Visual and environmental nuisance resulting from poor waste management practices.	▪ Prohibit the burning and unlawful disposal of waste on site. ▪ Inspect storage areas regularly for signs of leaks or damage.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium	medium-term	moderate	3
After Mitigation	-	local	low	short-term	unlikely	1

Table 82: Hazardous Substances & Waste Operation Phase Impacts

Environmental Feature	Hazardous Substances & Waste
Relevant Alternatives & Activities	Storage and use of hazardous substances & generation of waste
Project life-cycle	Operation phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Generation of hazardous waste associated with motorsport, workshop, industrial and maintenance activities. ▪ Generation of general waste associated with daily operations and visitors to the motorsport facility. ▪ Soil contamination resulting from spills or leaks of fuels, hydrocarbons, oils and chemicals. ▪ Surface water and groundwater contamination resulting from accidental releases of hazardous substances. ▪ Increased environmental and health risks associated with the storage and handling of hazardous substances. ▪ Pollution resulting from the improper storage, handling or disposal of hazardous and general waste.	▪ Store hazardous substances in accordance with applicable safety and environmental requirements. ▪ Maintain bunding around fuel storage and hazardous substance storage areas. ▪ Implement hazardous waste and general waste management procedures. ▪ Ensure hazardous waste is collected and disposed of by appropriately authorised service providers. ▪ Implement spill prevention and spill response procedures for all motorsport, workshop and industrial activities. ▪ Regularly inspect fuel storage areas, pipelines, equipment and infrastructure for leaks. ▪ Maintain adequate waste storage facilities and ensure routine waste removal. ▪ Train operational personnel in hazardous substance handling and emergency response procedures. ▪ Implement adequate stormwater management procedures in accordance with the stormwater management plan.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium-high	long-term	likely	3
After Mitigation	-	local	low	long-term	unlikely	2

Residual Risk	Although a residual impact remains, it is associated with the ongoing storage, handling and use of fuels, hydrocarbons and other hazardous substances required for the operation of the industrial facilities and motorsport arena. While the implementation of appropriate storage, handling, spill prevention and emergency response measures substantially reduces the likelihood and consequence of contamination incidents, the risk cannot be completely eliminated due to the nature of the activities undertaken on site. The residual impact is therefore considered to be of low significance, localised in extent and manageable through the continued implementation of environmental management measures.

12.22 Traffic

12.22.1 Impact Description

The proposed Project will generate additional traffic on the surrounding road network during both the construction and operational phases. Construction activities will result in increased traffic volumes associated with the movement of construction workers, delivery vehicles, heavy vehicles, machinery and construction materials. This may temporarily affect traffic flow and road safety on the surrounding road network, particularly along the R327 and at site access points.

During operation, the industrial expansion and motorsport arena will generate additional vehicle trips on the surrounding road network, primarily utilising the R327, Unicorn Street and the N2/R327 intersection. Traffic volumes will vary depending on the nature of activities and events occurring at the motorsport arena, with spectator traffic associated with major events representing the most significant source of traffic generation. The increase in traffic has the potential to affect intersection operations, increase vehicle delays and result in temporary queuing at key access points and surrounding intersections.

The Project will also require new access infrastructure, upgrades to existing intersections, additional parking facilities and associated pedestrian and public transport facilities to safely accommodate future traffic demand.

Overall, the primary traffic impacts associated with the proposed Project relate to increased traffic volumes on the surrounding road network, increased heavy vehicle traffic during construction, increased spectator traffic during motorsport events, and potential impacts on road safety, traffic flow and intersection performance.

12.22.2 Impact Assessment

A Traffic Study was undertaken to inform the preliminary designs of the Project, especially with regard to the roads. This study assisted in informing the impact assessment contained in **Table 83** and **Table 84**. The study can be found as Appendix B of the Civil Engineering Services Report (contained in **Appendix I**).

Table 83: Traffic Construction Phase Impacts

Environmental Feature	Traffic
Relevant Alternatives & Activities	All construction activities that may affect the existing road network
Project life-cycle	Construction Phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Increased construction vehicle and heavy vehicle traffic on surrounding roads. ▪ Temporary disruption to traffic flow and road safety.	▪ Maintain a minimum sight distance of 300 m at construction access points on the R327 and ensure that construction-related objects do not obstruct visibility. ▪ Manage construction vehicle movements to minimise disruption to existing road users. ▪ Ensure construction vehicle access and egress occurs in a safe and controlled manner.

▪ Increased traffic volumes at site access points and along the R327.	

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium-low	short-term	likely	2
After Mitigation	-	local	low	short-term	moderate	1

Table 84: Traffic Operation Phase Impacts

Environmental Feature	Traffic
Relevant Alternatives & Activities	All operational activities that may affect the existing road network and the internal Project road network
Project life-cycle	Operation Phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Increased traffic volumes associated with the industrial expansion and motorsport arena. ▪ Increased spectator traffic during motorsport events. ▪ Increased vehicle delays and congestion at key intersections. ▪ Increased road safety risks due to higher traffic volumes and turning movements. ▪ Increased demand for parking, pedestrian and public transport facilities.	▪ Upgrade the N2/R327 intersection by providing a left-turn slip lane and separate right-turn lane on the R327 approach. ▪ Construct the proposed primary access intersection on the R327 in accordance with the recommendations of the Traffic Study. ▪ Provide right-turn lanes on the R327 at the Motorsport Arena access to improve safety and traffic flow. ▪ Ensure security gates or access-control points are located at least 20 m from the R327 to prevent vehicle queues extending onto the roadway. ▪ Provide adequate internal road widths, turning radii and turning circles to accommodate buses, emergency vehicles and heavy vehicles. ▪ Provide sufficient on-site parking to accommodate event traffic and avoid spill-over parking onto surrounding roads. ▪ Provide formal public transport stops or embayments to support public transport usage. ▪ Provide pedestrian walkways, road crossings and appropriate street lighting to improve pedestrian safety. ▪ Consider reducing the speed limit on the R327 from 100 km/h to 80 km/h as development in the area increases. ▪ Implement event traffic management measures during major motorsport events to manage spectator arrivals and departures.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	regional	medium	long-term	likely	2
After Mitigation	-	local	low	long-term	moderate	1

12.23 Civil Aviation

12.23.1 Impact Description

The proposed Project is located approximately 5 km west of the Mossel Bay Aerodrome and therefore has the potential to interact with aviation activities operating within the broader area. Potential impacts are primarily associated with the introduction of buildings, lighting infrastructure, the solar PV facility and other structures that may influence the visual environment experienced by pilots operating to and from the aerodrome.

It is noted that the surrounding area already contains existing industrial development and associated buildings and infrastructure. Consequently, the proposed Project is not expected to introduce significant new aviation obstruction risks within the receiving environment

Potential aviation-related impacts may arise from glare associated with the solar PV facility, lighting associated with the industrial area and motorsport arena, and the presence of physical structures within the surrounding landscape. In addition, poor waste management or stormwater management practices could attract birds to the site, potentially increasing the risk of bird-aircraft interactions within the vicinity of the aerodrome.

Overall, the primary civil aviation impacts associated with the proposed Project relate to potential pilot distraction from glare or lighting, the introduction of physical obstacles within the landscape, and the attraction of birds through inadequate waste or stormwater management practices.

12.23.2 Impact Assessment

Table 85 to **Table 86** contain the results of the impact assessment conducted for the impacts of the Project on civil aviation.

Table 85: Civil Aviation Construction Phase Impacts

Environmental Feature	Civil Aviation
Relevant Alternatives & Activities	Construction activities
Project life-cycle	Construction phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Temporary use of cranes and elevated construction equipment that may affect aviation operations if not appropriately managed. ▪ Temporary lighting associated with construction activities that may affect the surrounding visual environment. ▪ Attraction of birds through poor waste management practices. ▪ Dust from construction activities.	▪ Notify and obtain any required approvals from SACAA or the aerodrome operator if cranes or temporary structures exceed applicable height thresholds. ▪ Restrict unnecessary night-time construction lighting. ▪ Direct temporary lighting downward and minimise light spill. ▪ Implement effective waste management measures to avoid attracting birds. ▪ Refer to best practices for construction methodologies and associated mitigation measures outlined in the EMPr.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	Local	Low	short-term	Unlikely	1
After Mitigation	-	Local	Low	short-term	Rare	1

Table 86: Civil Aviation Operation Phase Impacts

Environmental Feature	Civil Aviation
Relevant Alternatives & Activities	Operation activities
Project life-cycle	Operation phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Potential glare impacts associated with the solar PV facility. ▪ Potential pilot distraction associated with motorsport arena, industrial and security lighting. ▪ Potential obstruction effects associated with buildings, lighting structures and associated infrastructure.	▪ Utilise low-reflectivity solar PV panels and maintain the facility in accordance with manufacturer specifications. ▪ Design all lighting to minimise upward light spill and pilot distraction. ▪ Prevent the accumulation of standing water that may attract birds. ▪ Implement effective waste management and housekeeping measures to discourage bird activity.

▪ Attraction of birds through poor waste or stormwater management practices, potentially increasing bird strike risk. ▪ Alteration of the visual environment within the vicinity of the Mossel Bay Aerodrome.	▪ Ensure that all structures comply with applicable aviation safety requirements and approved development parameters. ▪ Consult with SACAA, if required, regarding any future changes that may affect aviation operations.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	Local	Low	Long-term	Moderate	1
After Mitigation	-	Local	Low	Long-term	Unlikely	1

12.24 Existing Structures and Infrastructure

12.24.1 Impact Description

The proposed Project is located within an area characterised by existing industrial, commercial and service infrastructure associated with the Mossdustria Industrial Area, PetroSA, the Gourika Power Plant and associated municipal infrastructure. Construction and operation of the Project have the potential to place additional demands on existing infrastructure and services, whilst also introducing new infrastructure that must integrate with the existing built environment.

During construction, activities may temporarily affect existing infrastructure through increased construction traffic, utility connections and works undertaken in proximity to existing services. During operation, the Project may result in increased utilisation of road infrastructure, municipal services and associated utilities. However, the Project includes receiving confirmation from the MBLM that the existing infrastructure has the capacity for the proposed Project and is located adjacent to an established industrial area where infrastructure already exists.

Overall, the primary impacts associated with existing structures and infrastructure relate to temporary disruption of existing infrastructure during construction, increased demand on existing infrastructure and services during operation, and the integration of the proposed Project with the existing built environment.

12.24.2 Impact Assessment

Table 87 to **Table 88** contain the results of the impact assessment conducted for the impacts of the Project on existing structures and infrastructure.

Table 87: Existing Structures and Infrastructure Construction Phase Impacts

Environmental Feature	Existing structures and infrastructure
Relevant Alternatives & Activities	Construction activities
Project life-cycle	Construction phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Temporary disruption or damage to existing services and utilities during earthworks and construction activities.	▪ Identify and record existing services and infrastructure.

▪ Temporary disruption to access routes and existing infrastructure during construction. ▪ Increased pressure on existing road and service infrastructure due to construction traffic and workforce activities. ▪ Potential conflicts with existing underground and above-ground infrastructure during installation of new services.	▪ Conform to requirements of relevant service providers and infrastructure custodians (e.g., Eskom, Sasol, Telkom, etc.). ▪ Ensure access to infrastructure is always available to service providers. ▪ Immediately notify service providers of disturbance to services. Rectify disturbance to services, in consultation with service providers. Maintain a record of all disturbances and remedial actions on site. ▪ Implement measures to protect existing infrastructure from accidental damage during construction

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	low	short-term	moderate	2
After Mitigation	-	local	low	short-term	unlikely	1

Table 88: Existing Structures and Infrastructure Operation phase Impacts

Environmental Feature	Existing structures and infrastructure
Relevant Alternatives & Activities	Operation activities
Project life-cycle	Operation phase
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Increased demand on existing municipal and service infrastructure. ▪ Increased utilisation of road infrastructure and associated services. ▪ Potential service interruptions if infrastructure is not adequately maintained or upgraded. ▪ Permanent integration of new industrial, motorsport and solar infrastructure within the existing built environment.	▪ Ensure that all infrastructure upgrades recommended by the engineering and traffic assessments are implemented prior to operation. ▪ Maintain infrastructure in accordance with approved operational and maintenance plans. ▪ Monitor infrastructure performance and implement corrective measures where deficiencies are identified. ▪ Ensure adequate capacity is available to support the operational requirements of the Project. ▪ Coordinate future infrastructure expansion with the relevant service providers and authorities.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium	Long-term	Almost certain	2
After Mitigation	-	local	low	Long-term	likely	1

12.25 Social Environment

The findings from the Socio-Economic Impact Assessment (Kempthorne & Sondwana, 2023) follow. The specialist report is contained in **Appendix F9**.

12.25.1 Impact Description

The proposed Project has the potential to result in a range of positive and negative socio-economic impacts during both the construction and operational phases. Positive impacts are primarily associated with employment creation, skills development, increased household income, economic stimulation, business development, tourism growth and investment within the Mossel Bay area. The Project is also expected to contribute towards industrial expansion, recreational opportunities and improved energy security through the establishment of the solar PV facility.

Potential negative socio-economic impacts may arise from construction-related disturbance, increased traffic volumes, pressure on local infrastructure and services, noise, dust, and potential public health risks associated with the influx of workers. During operation, the motorsport arena may generate noise impacts and increased traffic associated with events, while the Project may also contribute to changes in land use character and local development patterns.

Overall, the primary socio-economic impacts relate to employment creation, economic growth, tourism and business development, skills transfer, improved energy resilience, increased demand for infrastructure and services, and temporary construction- and operational-related nuisance impacts.

12.25.2 Impact Assessment

Table 89 and **Table 90** contain a summary of the results of the impact assessment that was undertaken in the Socio-Economic Impact Assessment (Kempthorne & Sondwana, 2023). For further detail on the impact assessment, refer to the Specialist study which is contained in **Appendix F9**.

Table 89: Summary of Socio-Economic Construction Phase Impacts

Construction Phase Impacts									
Impact	**Mitigation Measures / Monitoring Requirements**								
Temporary Impact on Production and Local Economy (GVA)	▪ The developer should encourage the contractor to increase local procurement practices and promote the employment of people from local communities, as far as feasible, to maximise the benefits to the local economies. ▪ The developer should engage with local authorities and business organisations to investigate the possibility of procuring construction materials, goods, and products from local suppliers. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Short to medium-term (2)	Medium-High (8)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium (52)
With Mitigation	+	Regional (3)	Short to medium-term (2)	High (10)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium (60)
Impact	**Mitigation Measures / Monitoring Requirements**								
Temporary Impact on Employment Provision	▪ Co-ordinate with the local municipality and relevant labour unions to inform the local labour force about the proposed project and the jobs that can potentially ensue. ▪ Establish a local skills desk in Mossel Bay to determine the potential skills that could be sourced in the area. ▪ Recruit local labour as far as feasible. ▪ Employ labour-intensive methods in construction where feasible. ▪ Sub-contract to local construction companies, particularly SMMEs and BBBEE compliant enterprises, where possible. ▪ Use local suppliers where feasible and arrange with the local SMMEs to provide transport, catering, and other services to the construction crews. ▪ Set clear expectations with contractors to promote fair recruitment of both women and men for suitable construction roles, and avoid unnecessary barriers that exclude women. ▪ Provide a safe, respectful working environment through a code of conduct that prohibits discrimination, harassment and gender-based violence, with simple reporting and follow-up procedures. ▪ Ensure basic gender-sensitive facilities and conditions on site, including appropriate PPE, safe sanitation and secure transport arrangements for all workers. ▪ Offer basic training and on-the-job learning opportunities that are open to women as well as men, helping to improve longer-term employability in the construction sector. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Short to medium term (2)	Medium-High (8)	Highly Likely (4)	High	Benefit terminated with end of construction	Yes	Medium (52)
With Mitigation	+	Regional (3)	Short to medium term (2)	High (10)	Highly Likely (4)	High	Benefit terminated with end of construction	Yes	Medium(60)

Construction Phase Impacts									
Impact	**Mitigation Measures / Monitoring Requirements**								
Temporary Impact on Household Income	▪ Recruit local labour as far as feasible. ▪ Employ labour-intensive methods in construction where feasible. ▪ Sub-contract to local construction companies, particularly SMMEs and BBBEE compliant enterprises, where possible ▪ Use local suppliers where feasible and arrange with the local SMMEs to provide transport, catering, and other services to the construction crews. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Short to medium term (2)	Medium-High (8)	Highly Likely (4)	High	Benefit terminated with end of construction	Yes	Medium (52)
With Mitigation	+	Regional (3)	Short to medium term (2)	High (10)	Highly Likely (4)	High	Benefit terminated with end of construction	Yes	Medium(60)
Impact	**Mitigation Measures / Monitoring Requirements**								
Temporary Impact on noise, dust, and pollution	▪ Implement suitable dust management and prevention measures during the construction phase. ▪ Normal working hours(07H00-17H00) should be adhered to at all times, and changes to these times should be communicated in advance. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	-	Regional (3)	Short to medium term (2)	Medium-High (8)	Definite (5)	High	Impact terminated with end of construction	Yes	High (65)
With Mitigation	-	Regional (3)	Short to medium term (2)	Medium (6)	Highly Likely (4)	High	Impact terminated with end of construction	Yes	High (44)
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Traffic Flows Along Access Routes	▪ Mitigation measures as per the traffic study (refer to Appendix B of the Civil Engineering Report contained in **Appendix I** and to **12.22** containing the impact assessment for traffic).								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	-	Site (2)	Long-term (4)	Low-Medium (4)	Likely (3)	High	Issue sustained over project lifespan	Yes	Low (3)
With Mitigation	-	Site (2)	Long-term (4)	Low (2)	Likely (3)	High	Issue sustained over project lifespan	Yes	Low (24)
Impact	**Mitigation Measures / Monitoring Requirements**								
Impact on HIV/ Aids, STDs and Tuberculosis in Local	▪ Assess, in consultation with the local municipality, whether nearby towns and settlements have the capacity to accommodate the anticipated number of construction workers, and consider a well-managed construction camp if local capacity is inadequate, to minimise unmanaged interaction and associated HIV, TB, and STI/STD risks.								

Construction Phase Impacts	
Area due to Presence of Construction Workers.	▪ Require contractors to implement a locals-first recruitment policy for semi- and low-skilled positions to reduce the number of non-resident workers and associated social and health risks, including the transmission of HIV, TB, and STIs/STDs. ▪ Establish a Monitoring Forum before construction, including community representatives, Councillors, farmers, and the contractor, to oversee construction activities, monitor HIV, TB, and STI/STD-related risks, and track implementation of mitigation measures. ▪ Develop and enforce a construction-phase code of conduct, in consultation with the Monitoring Forum, that clearly prohibits high-risk behaviour, including sexual exploitation, harassment, and discrimination against people living with HIV, TB, or STIs/STDs, with sanctions for non-compliance that remain consistent with labour legislation. ▪ Implement a comprehensive HIV/AIDS, TB, and STI/STD awareness programme for all workers at induction and through regular toolbox talks, covering prevention, symptoms, testing, treatment, and the importance of adherence. ▪ Facilitate confidential voluntary counselling and testing (VCT) for HIV, together with regular TB symptom screening and sexual health awareness, in partnership with local health facilities, and ensure clear referral pathways for diagnosis and treatment. ▪ Ensure free, discreet access to condoms at the construction site, worker accommodation, and key local venues, coupled with ongoing education to encourage correct and consistent use and reduce the risk of HIV and STI/STD transmission. ▪ Manage and monitor worker movement on and off site through organised transport, and allow non-local workers to return home regularly, for example on weekends or agreed cycles, thereby limiting the formation of risky, transient relationships that may increase the transmission of HIV, TB, and STIs/STDs. ▪ Prohibit non-essential overnight stays on site, except for critical or security staff, to support effective management of worker behaviour and reduce the potential for unregulated, high-risk interactions with nearby communities. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.

	Nature	Extent	Duration	Intensity	Probability	Confidence	Reversibility	Replicability	Significance
Without Mitigation	-	Regional (3)	Short Term (1) for the community as a whole Long Term (4) for individuals who may be affected by HIV/ AIDS and TB	Medium (6)	Likely (3)	High	Issue remains long term	Yes	Medium (30) for community as a whole Medium (39) may be affected by HIV/ AIDS and TB
With Mitigation	-	Regional (3)	Short Term (1) for the community as a whole Long Term (4) for individuals who may be affected by HIV/ AIDS and TB	Low-Medium (4)	Possible (2)	High	Issue remains long term	Yes	Low (16) for community as a whole Low (22) may be affected by HIV/ AIDS and TB

Table 90: Summary of Socio-Economic Operation Phase Impacts

Operation Phase Impacts									
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Production and Local Economy (GVA)	▪ The developer of the proposed development should be encouraged to, as far as possible, procure materials, goods and products required for the operation and maintenance of the facility from local suppliers to increase the positive impact in the local economy. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the proposed mitigation measures are adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Long-term (4)	Medium (4)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium (44)
With Mitigation	+	Regional (3)	Long-term (4)	Medium-High (8)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium-High (60)
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Employment Provision	▪ Where possible, local labour should be considered for employment so as to increase the positive impact on the local economy. ▪ As far as possible, local small and medium enterprises should be approached to investigate the opportunities for supplying inputs required for the maintenance and operation of the development. ▪ Adopt and enforce a clear gender equity and non-discrimination policy, with zero tolerance for harassment and gender based violence. ▪ Use fair, transparent, skills-based recruitment and promotion processes, and set internal goals to increase women's participation across suitable operational roles. ▪ Provide targeted training and mentoring for women to support entry into, and progression within, operational and supervisory positions. ▪ Ensure safe, supportive working conditions for all staff, including appropriate facilities, safe transport where relevant, and confidential grievance mechanisms. ▪ Regularly monitor workforce data by gender and engage with employees to identify barriers, then adjust policies and practices to improve gender equity over time. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Long-term (4)	Low-medium (4)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium (44)
With Mitigation	+	Regional (3)	Long-term (4)	Medium (6)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium (52)
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Household Income	▪ Where possible, the local labour supply should be considered for employment opportunities to increase the positive impact on the area's economy. ▪ As far as feasible, local small and medium enterprises should be approached to investigate the opportunities for supply inputs required for the maintenance and operation of the facilities. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								

Operation Phase Impacts									
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Long-term (4)	Low (2)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium (36)
With Mitigation	+	Regional (3)	Long-term (4)	Low-medium (4)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium (44)
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Landscape & Visual Impact Assessment	▪ Mitigation measures as per the Landscape/Visual Impact Assessment (refer to **Appendix F6** and to **Section 12.19** containing the impact assessment for visual quality).								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	Neutral	Regional (3)	Long-term (4)	Low-Medium (2)	Possible (2)	High	Issue sustained over project lifespan	No: Affected environment is irreplaceable.	Low (18)
With Mitigation	Neutral	Regional (3)	Long-term (4)	Low (2)	Improbable (1)	High	Issue sustained over project lifespan	No: Affected environment is irreplaceable.	No impact (9)
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Mossel Bay Tourism	▪ Mossel Bay Tourism should update their marketing media to include the motorsport racing as an activity. ▪ Mossel Bay Tourism should actively market Mossel Bay as a destination for motorsport racing in order to attract sponsors, race companies, etc. ▪ There should be engagement with broader tourism organisations, such as Wesgro to assist in promoting motorsport. ▪ For tourism to make even greater contributions to regional economies, close cooperation is required between key regional role players such as the business community via business chambers, provincial and local government, and local communities. ▪ An effective regional tourism organisation that has as its goals as sustainable tourism development is important. It could help promote the region, initiate new regional projects, share information, and improve coordination among industry leaders. ▪ Cooperation between the public and private sectors could ensure natural environment protection, leading to a more attractive and marketable region. ▪ In order to maximise the tourism benefits that flow from motor sport events and activities in the region, there needs to be joint working between the motor sport venues and tourism related businesses ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Long-term (4)	Medium (6)	Likely(3)	High	Benefits are sustained only over project's lifespan	Yes	Medium (39)
With Mitigation	+	Regional (3)	Long-term (4)	Medium-High (8)	Highly Likely (4)	High	Benefits are sustained only over project's lifespan	Yes	Medium-High (60)

Operation Phase Impacts									
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Alternative Energy Supply	▪ No mitigation measures required								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Site (2)	Long-term (4)	High (10)	Definite (5)	High	Benefits are sustained only over project's lifespan	Yes	High (80)
With Mitigation	+	Site (2)	Long-term (4)	High (10)	Definite (5)	High	Benefits are sustained only over project's lifespan	Yes	High (80)
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Local Business Development in Mossel Bay	▪ Mossel Bay Local Municipality, provincial and national government (Department of Economic Development and Department of Small Business Development) should offer start-up incentives for emerging entrepreneurs, especially those who want to start their own businesses in the industrial area. ▪ Local governments could organise platforms where representatives of local businesses could come, network with each other, exchange good practices and ideas, and identify ways of supporting each other. Within the hubs, new initiatives related to innovation and sustainability could be initiated and promoted. ▪ The Department of Economic Development and Department of Small Business Development in Mossel Bay and the local government in Mossel Bay should dedicate spaces where local businesses could come and promote themselves and interact with customers and business partners. ▪ The Environmental Compliance Officer will create a Monitoring and Evaluation Programme, which will be monitored by the holder of the EA. This will ensure that the mitigation measures proposed will be adhered to and monitored.								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Regional (3)	Long-term (4)	Medium-High (8)	Definite (5)	High	Benefits are sustained only over project's lifespan	Yes	High (75)
With Mitigation	+	Regional (3)	Long-term (4)	High (10)	Definite (5)	High	Benefits are sustained only over project's lifespan	Yes	High (85)
Impact	**Mitigation Measures / Monitoring Requirements**								
Sustainable Impact on Mossdustria	▪ No mitigation measures required								
	Nature	**Extent**	**Duration**	**Intensity**	**Probability**	**Confidence**	**Reversibility**	**Replicability**	**Significance**
Without Mitigation	+	Site (2)	Long-term (4)	Low-Medium (4)	Likely (3)	High	Benefits are sustained only over project's lifespan	Yes	Medium (30)
With Mitigation	+	Site (2)	Long-term (4)	Low-Medium (4)	Likely (3)	High	Benefits are sustained only over project's lifespan	Yes	Medium (30)

12.26 Health and Safety

12.26.1 Impact Description

The proposed Project has the potential to result in a range of occupational and community health and safety impacts during both the construction and operational phases. Construction activities involving vegetation clearing, earthworks, excavation, heavy machinery, vehicle movements, hazardous substances and construction personnel may expose workers and surrounding communities to health and safety risks. Potential impacts include injuries, accidents, increased traffic safety risks, exposure to dust and noise, and risks associated with the handling and storage of hazardous substances.

During operation, health and safety risks may be associated with industrial activities, motorsport events, increased traffic volumes, hazardous substances, fuel storage, maintenance activities, noise exposure and public access to the site. In addition, the influx of workers during construction and operation may create public health risks if appropriate awareness, education and management measures are not implemented.

Overall, the primary health and safety impacts associated with the proposed Project relate to occupational health and safety risks, community safety risks, traffic-related incidents, exposure to noise, dust and hazardous substances, and public health impacts associated with workforce activities and operational events.

12.26.2 Impact Assessment

Table 91 to **Table 92** contain the results of the impact assessment conducted for the impacts of the Project on health and safety.

Table 91: Health and Safety Construction Phase Impacts

Environmental Feature	Health and Safety
Relevant Alternatives & Activities	Construction activities
Project life-cycle	Construction phases
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Occupational injuries and accidents associated with construction activities, vehicles, machinery and equipment. ▪ Increased road safety risks associated with construction traffic and heavy vehicles. ▪ Exposure of workers and nearby receptors to construction dust and reduced air quality. ▪ Exposure of workers and nearby receptors to elevated noise levels. ▪ Health and safety risks associated with the storage, handling and use of fuels, oils, chemicals and other hazardous substances.	▪ Ensure compliance with the Occupational Health and Safety Act and associated regulations. ▪ Provide appropriate personal protective equipment (PPE) to all workers. ▪ Implement site-specific induction and safety training programmes. ▪ Implement traffic management measures and enforce site speed limits. ▪ Implement dust suppression and noise control measures. ▪ Store hazardous substances in appropriately bunded and secured areas. ▪ Maintain spill kits on site and implement spill response procedures. ▪ Restrict public access to construction areas through fencing, signage and access control.

▪ Potential public health risks associated with the influx of workers, including the spread of communicable diseases. ▪ Unauthorised public access to construction areas resulting in injury or safety incidents.	▪ Implement HIV/AIDS, TB and communicable disease awareness programmes for the workforce.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium	short-term	likely	2
After Mitigation	-	local	low	short-term	unlikely	1

Table 92: Health and Safety Operation Phase Impacts

Environmental Feature	Health and Safety
Relevant Alternatives & Activities	Operation and maintenance activities
Project life-cycle	Operational phases
Potential Aspects & Impacts	**Proposed Management Objectives / Mitigation Measures**
▪ Occupational health and safety risks associated with industrial operations, workshops, maintenance activities and facility management. ▪ Increased road safety risks associated with operational traffic and motorsport events. ▪ Health and safety risks associated with the storage and handling of fuels, hydrocarbons and hazardous substances. ▪ Noise-related nuisance and potential health effects associated with motorsport activities. ▪ Risk of fires, spills, accidents or emergency incidents associated with industrial and motorsport activities. ▪ Risks to spectators, staff and visitors associated with motorsport events and public gatherings. ▪ Potential exposure to hazardous substances through accidental spills, leaks or equipment failures.	▪ Ensure all operational personnel receive appropriate health and safety training. ▪ Maintain emergency response, fire prevention and evacuation procedures. ▪ Implement motorsport event safety procedures for participants, staff and spectators. ▪ Implement traffic management measures during major events. ▪ Store and handle hazardous substances in accordance with applicable safety requirements. ▪ Inspect and maintain fuel storage facilities, workshops and operational infrastructure on a regular basis. ▪ Maintain access control, signage and emergency services access throughout the facility. ▪ Implement the recommendations of the Noise, Traffic and Land Use Risk assessments.

	+/- Impacts	Extent	Magnitude	Duration	Probability	Significance
Before Mitigation	-	local	medium	long-term	likely	2
After Mitigation	-	local	low	long-term	moderate	2

Residual Risk	Although a residual impact remains, it is associated with the inherent health and safety risks related to motorsport activities, increased traffic volumes, industrial operations, and the storage and handling of hazardous substances during the operational phase of the development. While the implementation of operational health and safety management systems, emergency response procedures, traffic management measures, event safety controls and hazardous substance management measures will substantially reduce both the likelihood and consequence of incidents, these risks cannot be completely eliminated due to the nature of the proposed activities. The residual impact is therefore considered to be of low significance, localised in extent and manageable through ongoing implementation of the prescribed mitigation measures.

12.27 "No-Go" Impacts

The "no-go option" is the alternative of not implementing the activity/development. The "no-go option" also provides the baseline against which the impacts of other alternatives are compared.

The "no-go option" needs to be considered in light of the Project motivation (**Section 3**) as well as the need and desirability of the Project (**Section 8**). The implications of the "no-go option" are discussed in **Section 13.6** below. While the 'no-go option' eliminates the potential environmental impacts of the proposed Project, it also precludes the realisation of the benefits associated with the construction and operation of the proposed Project.

Potentially significant environmental impacts were identified for the Project, including noise impacts, terrestrial biodiversity impacts and traffic impacts (amongst others). Based on the specialists' findings, these impacts can be mitigated to a satisfactory level. This included optimising the layout to include a 15ha conservation area to conserve the more natural vegetation found on site, namely the Proteoid Fynbos Thicket. All the mitigation measures required to mitigate the impacts to a satisfactory level are contained in the EMPr (**Appendix G**).

In light of the above, the Project is preferred over the 'no-go option', provided that the management measures outlined in the EIA Report and EMPr are successfully implemented.

12.28 Cumulative Impacts

12.28.1 Introduction

A cumulative impact, concerning an activity, means the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity that may not be significant, but may become significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities.

According to the International Finance Corporation (IFC) Good Practice Handbook (Cardinale & Greig, 2013), cumulative impacts are contextual and encompass a broad spectrum of impacts at different spatial and temporal scales. The spatial area of influence encompasses the geographical area impacted by the Project. The timescale over which the Project is likely to cause impacts includes the construction and operational phases of these activities.

The potential negative cumulative impacts are listed in **Section 12.28.3** below, based on the current understanding of the Project and the receiving environment, which includes the findings of the specialist studies. The adverse cumulative impacts are addressed through the management measures contained in the EMPr (**Appendix G**).

12.28.2 Past, Current and Reasonably Foreseeable Projects and Activities

Negative cumulative impacts can be identified by combining the potential adverse environmental implications of the Project with the impacts of projects and activities that have occurred in the past, are currently occurring, or are proposed in the future within the Project's area of influence. It is noted that the accurate characterisation of the future state of the Project Area is inherently speculative to an extent, due to the dynamic nature of future decisions related to land use (e.g., PetroSA gas fields viability for future production), water use (consumptive, waste-related and encroachments), protection of terrestrial and aquatic biological resources, etc.

The following is noted in terms of past, current and reasonably defined/foreseeable third-party projects within the Project's area of influence:

- The St Blaize development occurs on RE of Portion 7 of Farm 255 and the future expansion of this development occurs directly south of this proposed Project. The St Blaize development is a Global Business Services Campus including (amongst others) the development of the reception, retail, medical, restaurants, offices, etc., and parking area, as well as the road upgrades required for access from the N2 and Herbertsdale road;
- PetroSA occurs directly west of the proposed Project site. It is noted that the PetroSA gas field has not been delivering processable volumes of gas and there is an expectation of substantial job losses should this trend continue;
- The existing Mossdustria Industrial Area occurs directly north of the Project site;
- According to the MBLM IDP (2025-2026), the Project site forms part of the Mossdustria Special Expansion Zone (refer to **Figure 67**); and
- The ReedValley venue occurs across the R327 to the east of the Project site. ReedValley is a wine estate and entertainment venue that combines fine wine, food, and live entertainment with a countryside setting.

Figure 66 below shows the Project site in relation to surrounding proposed/current developments.



Figure 66: Project site in relation to surrounding proposed/current developments (MBLM, 2026)

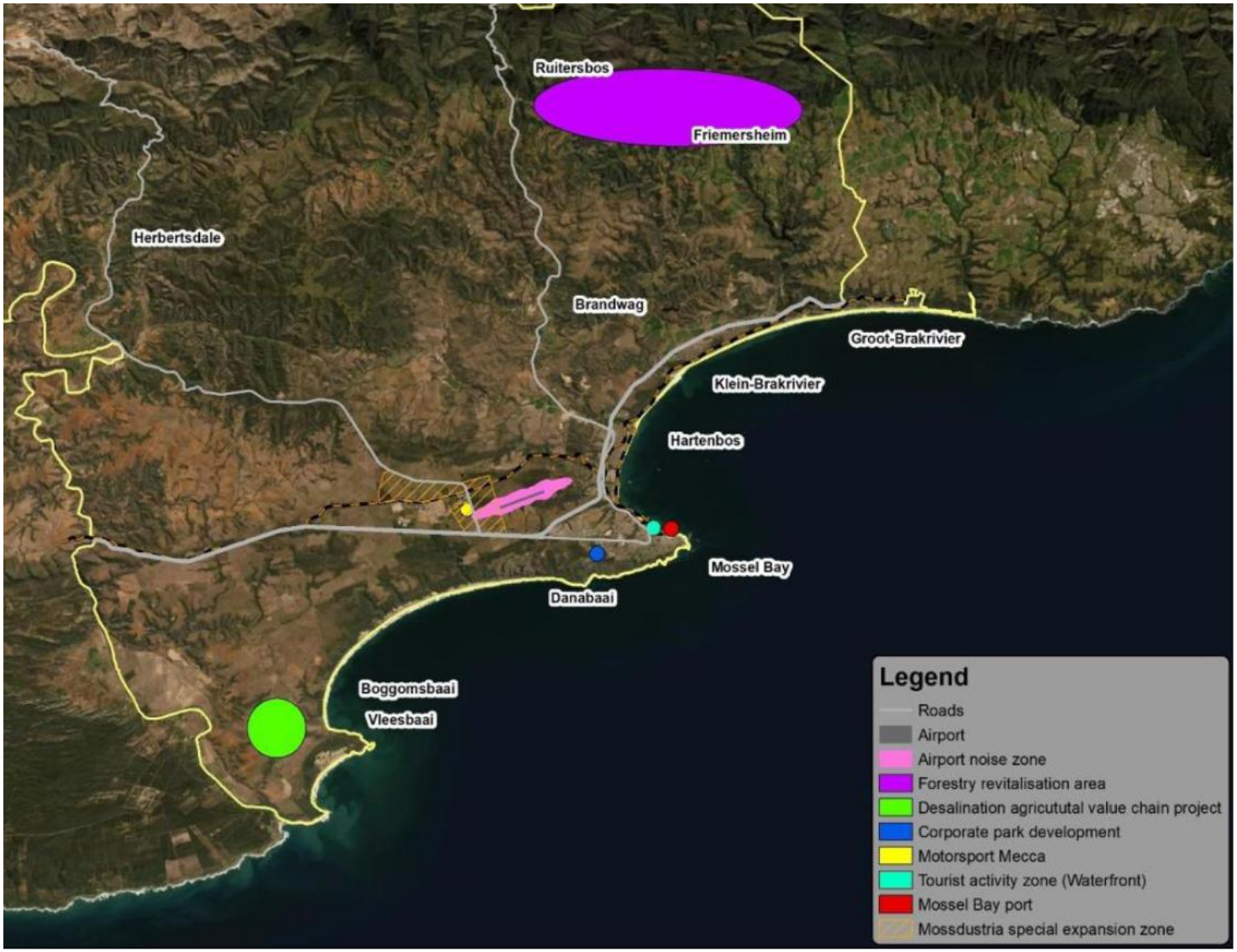

Figure 67: Proposed Project site in relation to the Mossdustria special expansion zone (MBLM, 2025)

12.28.3 Negative Cumulative Impacts

12.28.3.1 Aquatic Biodiversity

The evaluation of cumulative impacts from the Aquatic Ecology Impact Assessment (Colloty, 2026a) (refer to the report contained in **Appendix F1**) is presented below.

Environmental Impact:		Activity/Aspect & Impact Source:		Proposed Mitigation:			
The cumulative impacts are related to the loss of any aquatic habitats		Due to the nature of the project, this will persist in the long term in the operational phase impact.		Ideally, all areas rated as HIGH should be excluded from the Project footprint. Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation to a minimum.			
Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

12.28.3.2 Geohydrology

The evaluation of cumulative impacts from the Geohydrology Impact Assessment (Oberholzer *et al.,* 2026) (refer to the report contained in **Appendix F2**) is presented below.

The Geohydrological Assessment considered the potential cumulative effects of the Project on groundwater resources, shallow groundwater systems and associated wetlands. The assessment found that cumulative impacts may arise through the combined effects of land transformation, increased hardened surfaces, stormwater infrastructure, excavation activities and the potential release of contaminants associated with construction and operational activities. Existing and foreseeable industrial and commercial development within the broader Mossdustria area may contribute to similar pressures on local groundwater resources and hydrological processes. The assessment recognised that shallow groundwater and wetland systems are inherently more vulnerable to surface-derived contamination and disturbance than the deeper fractured-rock aquifer.

The specialist identified the cumulative alteration of wetland flow and water quality as a potential impact associated with multiple construction activities and increased hardened areas that may collectively alter runoff patterns, shallow flow pathways and the movement of sediment or contaminants towards wetlands. Similarly, repeated or multiple contaminant releases associated with development activities could cumulatively affect groundwater quality within the deeper Skurweberg Formation aquifer if not appropriately managed. The assessment also found that multiple excavations, roads, services and other infrastructure may

collectively alter shallow groundwater flow pathways and reduce natural hydrological connectivity between recharge areas and nearby wetlands.

The Geohydrological Assessment concluded that these cumulative impacts can be effectively managed through the implementation of appropriate stormwater management measures, protection of natural drainage pathways, pollution prevention measures, groundwater and wetland monitoring programmes and careful management of excavation activities. Following the implementation of the recommended mitigation measures, cumulative impacts on wetland hydrological functioning, groundwater quality and shallow groundwater flow are expected to be low to negligible.

12.28.3.3 Terrestrial Biodiversity

The evaluation of cumulative impacts from the Terrestrial Ecology Impact Assessment (Colloty, 2026b) (refer to the report contained in **Appendix F3**) is presented below.

Environmental Impact:	**Activity/Aspect & Impact Source:**	**Proposed Mitigation:**
The cumulative impacts are related to the loss of habitats associated with a Threatened Ecosystem or listed/protected species.	Due to the nature of the project, this will persist in the long term in the operational phase impact.	Ideally all areas rated as HIGH should be excluded from the development proposal; however, as this is not possible due to various development & economic constraints the following is proposed: ▪ Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site; however, as the development proposes an on-site conservation area of important habitat, this is not envisaged ▪ All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free from alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region. ▪ A detailed walkdown must be conducted to determine the final list of species that will require CAPE NATURE & DFFE permits. ▪ As the majority of Fynbos species are difficult to relocate, alternative means of collecting seed and/or propagules must be used to assist with the revegetation of any disturbed areas or areas clear of alien vegetation. ▪ Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation to a minimum.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
The cumulative impacts are related to the loss of habitats associated with faunal habitats or species. This also relates to animal loss due to traffic, noise and vibration impacts, as these already occur in and around the site (farming and industrial activities). Therefore, this must be assessed as a cumulative impact.	Due to the nature of the project, this will persist in the long term in the operational phase impact.	Ideally, all areas rated as HIGH should be excluded from the development proposal; however, as this is not possible due to various development & economic constraints, the following is proposed: ▪ Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site; however, as the development proposes an on-site conservation area of important habitat, this is not envisaged ▪ All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free from alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region. ▪ A detailed walkdown must be conducted to determine the final list of species that will require CAPE NATURE & DFFE permits. ▪ Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation to a minimum. ▪ The conservation area should be demarcated as no-go from the onset of the project, to allow any resident fauna not relocated to be able to move to this area of safety, so ideally should not be fenced but only pegged as no-go.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

Environmental Impact:	Activity/Aspect & Impact Source:	Proposed Mitigation:
The cumulative impacts are related to the loss of habitats associated with Critical Biodiversity Areas and Ecological Support Areas.	Due to the nature of the project, this will persist in the long term in the operational phase impact.	Ideally all areas rated as HIGH should be excluded from the development proposal; however, as this is not possible due to various development & economic constraints, the following is proposed: ▪ Loss of any area rated High would typically require an offset with protection of any remaining areas within and adjacent to the site; however, as the development proposes an on-site conservation area of important habitat, this is not envisaged ▪ All alien cover must be removed and then be allowed to fully recover and revegetate with climax fynbos species. These areas should remain free from alien plants and be monitored for any erosion. Where soils are slow to revegetate, these areas should be grubbed and planted with species suited to the region.

		▪ A detailed walkdown must be conducted to determine the final list of species that will require CAPE NATURE & DFFE permits. ▪ As the majority of Fynbos species are difficult to relocate, alternative means of collecting seed and/or propagules must be used to assist with the revegetation of any disturbed areas or areas clear of alien vegetation. ▪ Construction must be limited to the footprint only to minimise secondary disturbance, thus reducing the size of the areas that require revegetation to a minimum.

Impact Significance							
	Extent	**Duration**	**Severity**	**Reversibility**	**Irreplaceable Loss**	**Probability**	**Impact Significance**
Without Mitigation:	Site (1)	Long-term (4)	Moderate (4)	Completely (0)	Partly (0.5)	Definite (5)	Moderate (47.5)
With Mitigation:	Site (1)	Long-term (4)	Minor (2)	Completely (0)	Partly (0.5)	Probable (3)	Low (22.5)
Potential to Mitigate: Moderate potential / easy to mitigate				***Assessment Confidence:*** Complete			

12.28.3.4 Noise

The evaluation of cumulative impacts from the Noise Impact Assessment (De Jager, 2026) (refer to the report contained in **Appendix F4**) is presented below.

The Noise Impact Assessment considered the cumulative effects of construction and operational noise in combination with existing noise sources within the receiving environment, including road traffic and surrounding industrial activities. Construction phase cumulative impacts were found to be low due to the temporary nature of construction activities and the separation distance between the Project and surrounding noise-sensitive receptors.

During operation, cumulative noise impacts may occur due to the combination of motorsport activities, road traffic and existing industrial noise sources. The specialist's modelling indicated that higher-noise motorsport events may result in elevated cumulative noise levels at certain receptors. However, these impacts would be intermittent and event-based rather than continuous and can be managed through the implementation of recommended mitigation measures, including operational controls, noise management procedures and monitoring programmes. The specialist concluded that cumulative noise impacts do not represent a fatal flaw to the Project.

12.28.3.5 Avifaunal

The evaluation of cumulative impacts from the Avifaunal Impact Assessment (Phillips, 2025) (refer to the report contained in **Appendix F5**) is presented below.

The Avifaunal Impact Assessment notes that the Project site is located within an already modified landscape characterised by surrounding industrial and agricultural land uses. As a result, the area has been subject to existing anthropogenic disturbance and habitat fragmentation. The proposed development would contribute to these existing pressures through additional disturbance, particularly associated with noise, lighting and potential

pollution-related effects if not appropriately managed. In combination with existing and foreseeable land uses in the area, this may contribute to further habitat degradation, fragmentation and disturbance of avifauna. Although the Project site itself is considered to be of low avifaunal conservation importance and ecological functionality, species of conservation concern, including the Blue Crane (*Grus paradisea*), are known to occur within the broader area and may utilise modified habitats such as agricultural fields and pastures. The table below outlines the cumulative impact assessment undertaken regarding avifaunal environmental degradation.

Project Phase	**Construction and Operational Phases**			
Direct Impact	**Environmental degradation**			
Dimension	**Rating**	**Motivation**	**Consequence**	**Likelihood**
Pre-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-14	3
Extent	3	The extent of the impact is rated as Local as it affects the development area and adjacent properties		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Moderately detrimental**	**Definite**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	**-42**	**moderate negative**		
Proposed Mitigation Measures				
All mitigation measures prescribed for the impacts must be strictly adhered to				
Construction should commence in the winter months (preferably between May and September) to minimise the impacts on the breeding activities of avifauna				
The proposed conservation area on the eastern side is supported and must be implemented to ensure impacts are minimised				
Lighting must not include those that fall within the white spectrum or emit ultraviolet light such as high-pressure sodium or mercury lamps. Light that is emitted at one wavelength, contains no ultraviolet (UV) light, and has a low attraction to insects, such as low-pressure sodium lamps, is preferred				
Upward lighting must be avoided to minimise light pollution. Light can be restricted by fitting shields that direct the light below the horizontal plane, preferably at an angle less than 70 degrees. Limiting the height of lighting columns and directing light at a low level reduces the ecological impact of the light				
Only clear vegetation where absolutely necessary and retain as much of the existing vegetation as possible under the solar panels				
Where vegetation clearing takes place, topsoil must be retained and used to rehabilitate underneath the solar arrays and other cleared areas, and for landscaping. Only indigenous plants found in the area must be used for rehabilitation and landscaping				
A site-specific and region-specific invasive alien plant species management and monitoring plan must be written by a suitably qualified professional and implemented during the construction phase and operational phase				
The cumulative effect of the impact of potential collision with solar panels by birds is not well documented, and results from research and monitoring are required to assess the efficacy of mitigation measures. It is therefore recommended that all bird mortalities are recorded during the operational phase of the project. The site should be inspected on a regular basis, for example during routine maintenance, and any bird mortalities recorded, including probable cause of death. The results should be reported to BirdLife SA				

If collisions become a problem, bird diverters / visual deterrents that can be installed around the solar tables to break up the continuity and deter birds from perceiving the panels to be open water must be investigated/researched using the latest available information from the global solar industry				
Post-Mitigation				
Duration	4	The duration of the activity associated with the impact will last more than 5 years and as such is rated as Long Term	-12	2
Extent	2	The extent of the impact is rated as site as it will affect only the development area		
Severity	-2	The severity of the impact is rated as Moderate negative as the affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way; and valued, important, sensitive or vulnerable systems or communities are negatively affected	**Slightly detrimental**	**Likely**
Impact on irreplaceable resources	0	No irreplaceable resources will be impacted		
SIGNIFICANCE	-24	**low negative**		
Confidence Level				
Medium				

12.28.3.6 Traffic

The Traffic study (GPL Consulting, 2023) considered the cumulative effects of the proposed Project together with existing traffic volumes, anticipated background traffic growth, and future development within the broader Mossdustria development area. The assessment incorporated projected traffic growth to the 2028 design horizon and assessed the combined influence of the proposed Industrial Expansion area, Motorsport Arena and associated business activities on the surrounding road network.

The specialist identified the primary cumulative traffic impacts as increased traffic volumes on the R327, additional turning movements at access intersections, increased traffic demand associated with motorsport events and industrial activities, and increased pressure on the N2/R327 intersection. The assessment found that the R327/Unicorn Street intersection and the proposed Motorsport Arena access intersection would continue to operate at acceptable levels of service under future traffic conditions. However, the N2/R327 intersection was identified as the most sensitive location, where the combination of background traffic growth and development-related traffic would result in a deterioration in operational performance if upgrades were not implemented.

To accommodate future cumulative traffic growth, the specialist recommended upgrades to the N2/R327 intersection, including dedicated turning lanes and associated geometric improvements. The assessment concluded that, with the implementation of the recommended upgrades, traffic management measures and supporting transport infrastructure, the surrounding road network would have sufficient capacity to accommodate future traffic demands (GPL Consulting, 2023).

In the broader cumulative context, the St Blaize Development, existing Mossdustria Industrial Area, PetroSA, ReedValley venue and future expansion within the Mossdustria Special Expansion Zone all have the potential to contribute to increased traffic volumes within the project area of influence. Of particular importance is the N2/R327 intersection, which has been identified by both the St Blaize development traffic impact assessment and this project's traffic study as a critical intersection requiring capacity improvements to accommodate future traffic growth. Although the traffic studies assessed these developments separately, their findings are complementary in demonstrating that cumulative development within the broader Mossdustria node will place increasing pressure on the N2/R327 intersection over time. The recommended intersection upgrades and associated traffic management measures are therefore considered essential to maintain acceptable levels of service, reduce congestion and ensure that cumulative traffic impacts on the surrounding road network remain acceptable.

12.28.3.7 Socio-Economic

The evaluation of cumulative impacts from the Socio-Economic Impact Assessment (Kempthorne & Sondwana, 2023) (refer to the report contained in **Appendix F9**) is summarised below.

The Socio-Economic Impact Assessment identified a number of potential cumulative adverse socio-economic impacts that may arise when the Project is considered together with existing and foreseeable development within the broader area. Increased economic activity and development may contribute to additional pressure on municipal infrastructure and services, including transportation networks, water supply, sanitation services and other public infrastructure. Cumulative increases in traffic volumes may also result in greater congestion and travel delays on sections of the surrounding road network if infrastructure upgrades are not implemented timeously.

The concentration of development activities within the area may also contribute to cumulative nuisance impacts, including increased noise, dust and visual intrusion experienced by surrounding receptors. Furthermore, the influx of construction workers and job seekers associated with multiple developments may place additional pressure on available housing, community facilities and social services. The assessment also notes the potential for increased health and safety risks associated with growing population movements and economic activity within the area.

Notwithstanding these potential adverse effects, the assessment found that the identified cumulative socio-economic impacts are generally capable of being managed through appropriate planning, infrastructure provision and the implementation of the recommended mitigation measures. In addition, the assessment concluded that the positive cumulative impacts are expected to provide substantial long-term benefits and the overall cumulative socio-economic effect of the Project is considered to be positive.

12.28.4 Positive Cumulative Impacts

12.28.4.1 Socio-Economic

The Socio-Economic Impact Assessment found that the proposed Project, together with existing and reasonably foreseeable developments within the broader Mossdustria area, has the potential to generate significant cumulative socio-economic benefits. The combined effect of ongoing industrial expansion, commercial investment and tourism-related activities is expected to contribute to increased employment opportunities during both the construction and operational phases, resulting in improved household incomes and enhanced economic resilience within surrounding communities.

The Project is also expected to contribute cumulatively to local economic growth through increased expenditure, procurement opportunities and demand for goods and services. In combination with other existing and planned development initiatives in the area, the Project may support the growth of local businesses and SMMEs, promote skills development and capacity building, and stimulate further investment within the Mossel Bay region. The motorsport component of the development is further anticipated to contribute to increased visitor numbers and tourism-related expenditure, providing additional benefits to the local hospitality, retail and service sectors.

Overall, the assessment concludes that the cumulative positive socio-economic impacts associated with employment creation, economic diversification, business development, tourism stimulation and improved economic activity are expected to result in a net positive contribution to the local and regional economy.

12.28.4.2 Terrestrial Biodiversity

The proposed Project includes the establishment and long-term management of an approximately 15 ha conservation area that will retain and protect portions of the remaining natural habitat within the Project site. Although the surrounding area has been subject to historical agricultural transformation, industrial development, road infrastructure and ongoing land-use pressures, the conservation area will secure ecologically important habitat and contribute towards maintaining biodiversity and ecological functioning within the broader Mossdustria area.

The conservation area will contribute positively to cumulative biodiversity outcomes by protecting remaining areas of Fynbos-Renosterveld and thicket habitat, supporting habitat available to SCC, and reducing the cumulative loss of natural vegetation associated with ongoing industrial and commercial expansion within the region. In addition, the proposed rehabilitation and management of the conservation area, including the removal of alien invasive vegetation and restoration of disturbed areas, will improve habitat quality over time and provide ecological benefits beyond the Project footprint.

In the context of existing and foreseeable development within the broader Mossdustria area, the conservation area is expected to provide a positive cumulative environmental benefit by retaining natural habitat, supporting local biodiversity, and offsetting, to some extent, the

incremental habitat fragmentation and ecological disturbance associated with surrounding development. As such, the conservation area represents a long-term positive cumulative impact of the Project.

12.28.5 Cumulative Environmental Impact Statement

The cumulative impact assessment has identified a range of potential adverse and beneficial cumulative impacts associated with the proposed Project when considered in combination with existing and reasonably foreseeable developments within the broader Mossdustria area. Potential adverse cumulative impacts are primarily associated with the continued transformation of the landscape, increased traffic volumes on the surrounding road network, elevated noise levels during motorsport events, and incremental pressure on biodiversity resources and municipal infrastructure. However, the specialist studies concluded that these impacts can be effectively avoided, reduced or managed through the implementation of the recommended mitigation measures, infrastructure upgrades, environmental management commitments and long-term monitoring programmes.

Conversely, the Project is expected to contribute several positive cumulative impacts, including employment creation, economic growth, increased tourism and business opportunities, skills development, improved energy security and the protection and management of a dedicated conservation area. The conservation area is anticipated to provide a long-term biodiversity benefit through the protection, rehabilitation and ongoing management of ecologically important habitat within an already transformed and developing landscape.

Overall, while residual cumulative impacts relating to landscape transformation, habitat loss and fragmentation, increased traffic volumes, operational noise and demand on municipal infrastructure will remain following mitigation, these impacts are expected to occur within an area already characterised by industrial, commercial, transportation and agricultural activities. The specialist studies concluded that the identified cumulative impacts can be effectively managed through the implementation of the recommended mitigation measures, environmental management commitments, infrastructure upgrades and long-term monitoring programmes. Furthermore, the Project incorporates a dedicated conservation area that will provide a long-term biodiversity benefit through habitat protection, rehabilitation and ecological management.

13 ANALYSIS OF ALTERNATIVES

13.1 Introduction

Alternatives are the different ways in which the Project can be executed to ultimately achieve its objectives. Examples could include carrying out a different type of action, choosing an alternative location or adopting a different technology or design for a project. This section presents the Project's alternatives, as considered during the EIA Phase.

13.2 Project Location Alternatives

No location alternatives were considered for the proposed Project. This is primarily because a key component of the proposed Project involves the expansion of the existing Mossdustria industrial area, which necessitates its location adjacent to the current industrial footprint (refer to **Figure 2**). The proposed site is situated on municipally owned land, enhancing the financial feasibility of the development, and is strategically located in close proximity to the N2, providing suitable access and connectivity.

During the early planning stages, it was identified that the proposed motorsport arena has the potential to generate elevated noise levels. Consequently, locating this component adjacent to an established and expanding industrial area was considered the most appropriate land use option. The proposed site and surrounding area have been identified for industrial expansion in the MBLM IDP (MBLM, 2025), which supports the intended land use (**Figure 68**). Furthermore, rezoning the site and adjacent properties for industrial purposes will help prevent potentially incompatible land uses, such as residential development, from encroaching into the area in the future. The proposed industrial expansion area is intended to consolidate industrial development within a defined region and support large-scale employment creation and economic growth within the municipality.

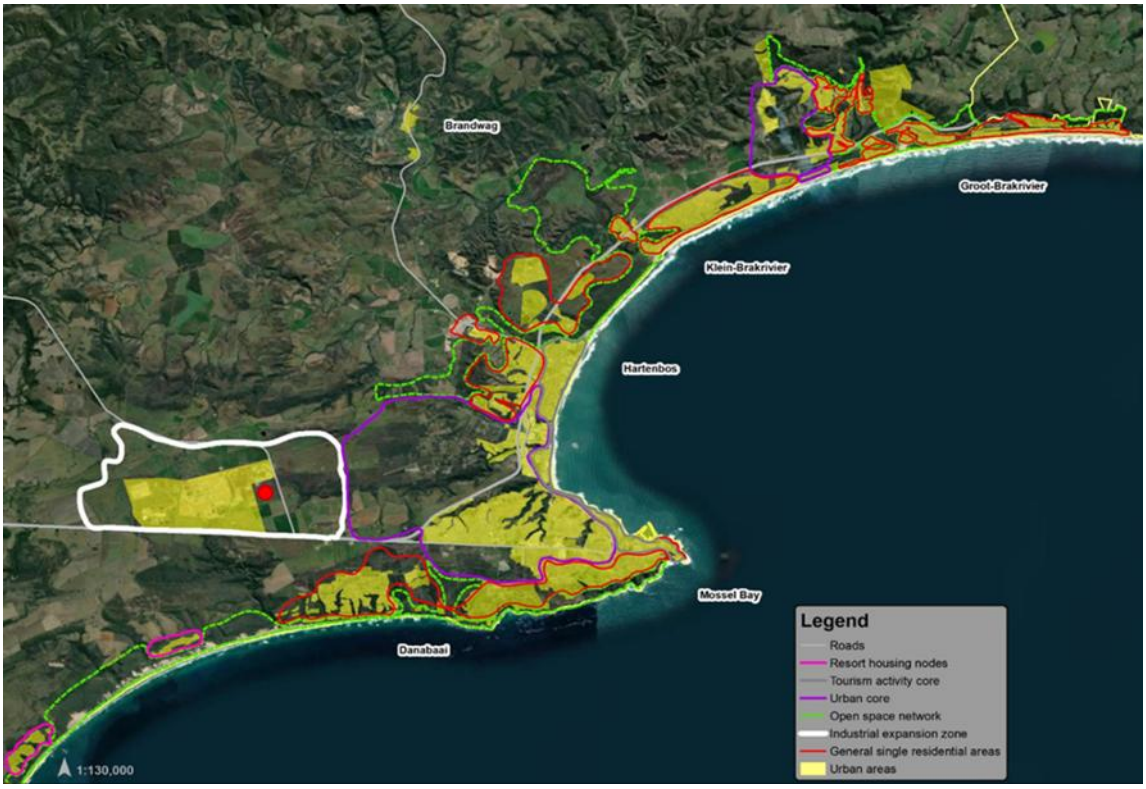

Figure 68: Proposed industrial expansion zone (Project site shown by the red dot) (MBLM, 2025)

13.3 Land Use Alternatives (Type of Activity)

No alternative land use options were considered for the proposed Project, as each of the four project components addresses a specific identified need and serves a distinct purpose within the broader development concept. The expansion of the existing Mossdustria industrial area is proposed in response to the shortage of available industrial stands within the MBLM, with the provision of additional industrial land expected to attract investment, stimulate economic growth and create long-term employment opportunities.

The proposed motorsport arena has been identified by the MBLM as a strategic project aimed at promoting tourism and supporting local economic development through the creation of both direct and indirect employment opportunities. Similarly, the renewable energy facility is proposed to contribute towards addressing the current national electricity generation constraints by providing a reliable PV energy source for the development, while also enabling the supply of electricity to the national grid.

In addition, a conservation area has been incorporated into the development layout to protect a remnant patch of critically endangered Mossel Bay Shale Renosterveld located within the northeastern portion of the site. Due to the ecological importance and conservation status of this vegetation, alternative land uses were not considered appropriate for this area. The conservation area will be managed in accordance with a site-specific management plan to ensure the long-term protection and appropriate management of this sensitive habitat.

13.4 Design / Layout Alternatives

Several layout alternatives were considered during the project planning phase and were refined through consultation with the relevant specialists and commenting authorities. The preferred layout has been designed to balance the financial viability of the proposed Project with the need to avoid and protect environmentally sensitive areas, particularly the critically endangered Mossel Bay Shale Renosterveld located on portions of the site.

The layout alternatives were developed in response to the environmental sensitivity profile of the site, as identified through specialist studies. The north-eastern portion of the site was identified as being highly sensitive, with sensitivity decreasing towards the west where the site becomes increasingly disturbed (Colloty, 2026b) (**Figure 69**). Consequently, the preferred layout seeks to avoid and protect the most sensitive areas while accommodating development within areas of lower environmental sensitivity.

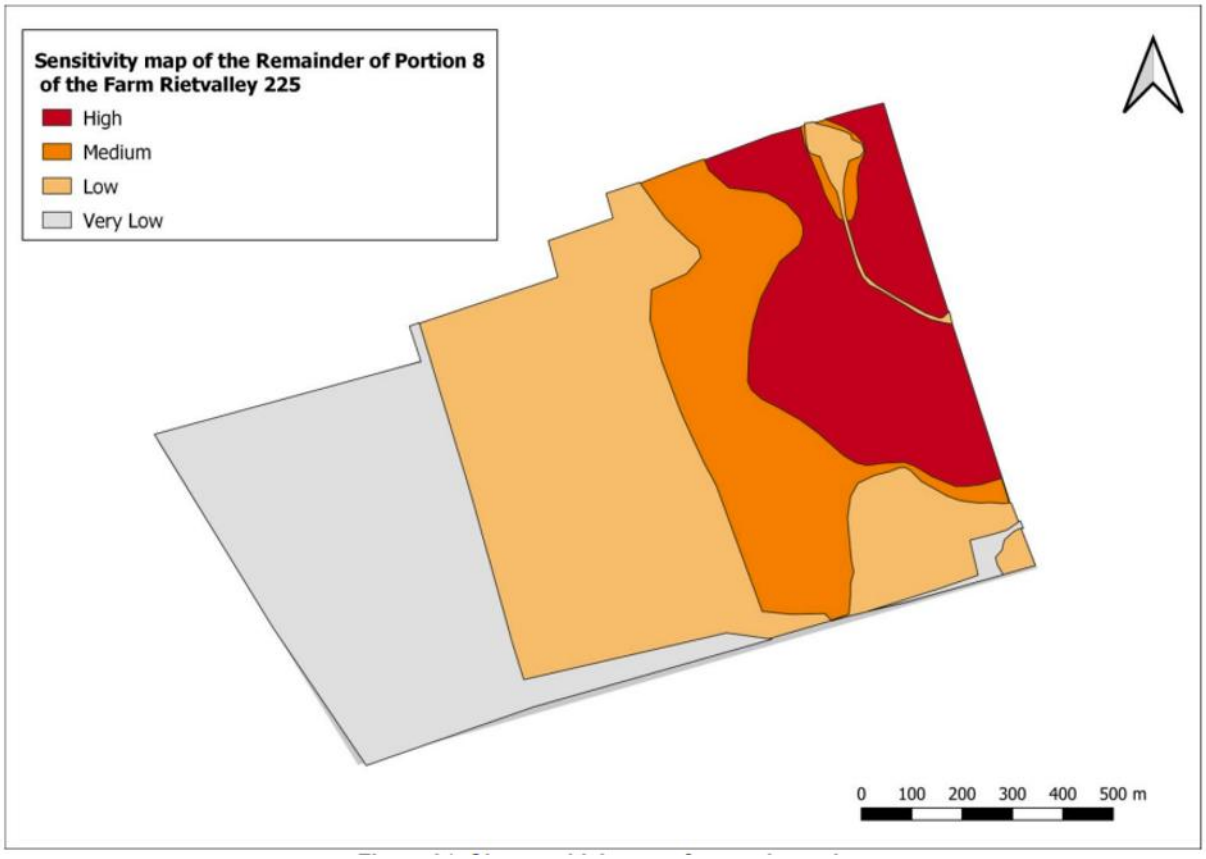

Figure 69: Terrestrial Biodiversity Site Sensitivity as confirmed through specialist studies (Colloty, 2026b)

13.4.1 Layout 1 (Not Preferred)

Layout 1 (refer to **Figure 70**) provides the largest area for the proposed motorsport arena and industrial development and is therefore considered the most favourable option from a development and financial viability perspective. However, this layout is the least preferred alternative from an environmental perspective, as it would result in the loss of a substantial

portion of the intact Mossel Bay Shale Renosterveld present on site. Under this layout, approximately 4.2 ha of Mossel Bay Shale Renosterveld would be retained within a designated conservation area. The associated loss of critically endangered vegetation was identified as having a significant environmental impact and was therefore not considered an acceptable development option.

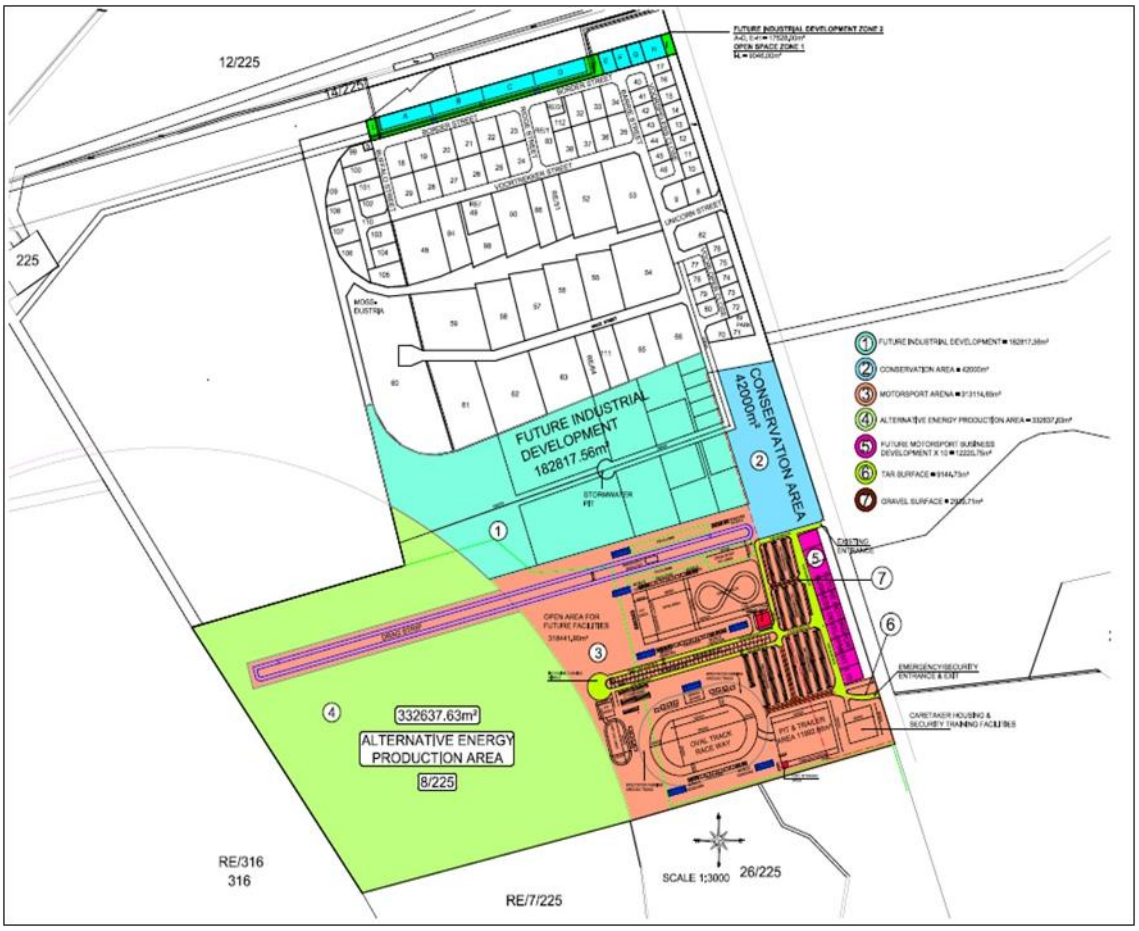

Figure 70: Layout 1 (not preferred for environmental reasons)

13.4.2 Layout 2 (Not Preferred)

Layout 2 (refer to **Figure 71**) increases the extent of the proposed conservation area to approximately 7.7 ha, compared to the 4.2 ha retained under Layout 1. Although this layout represents an improvement in terms of conserving a larger extent of Mossel Bay Shale Renosterveld, concerns remain regarding the long-term ecological viability of the retained vegetation patch if the surrounding areas are cleared and developed. The larger conservation area also results in a reduction in the land available for future industrial development. As a result, while environmentally preferable to Layout 1, Layout 2 was not considered the preferred layout alternative.

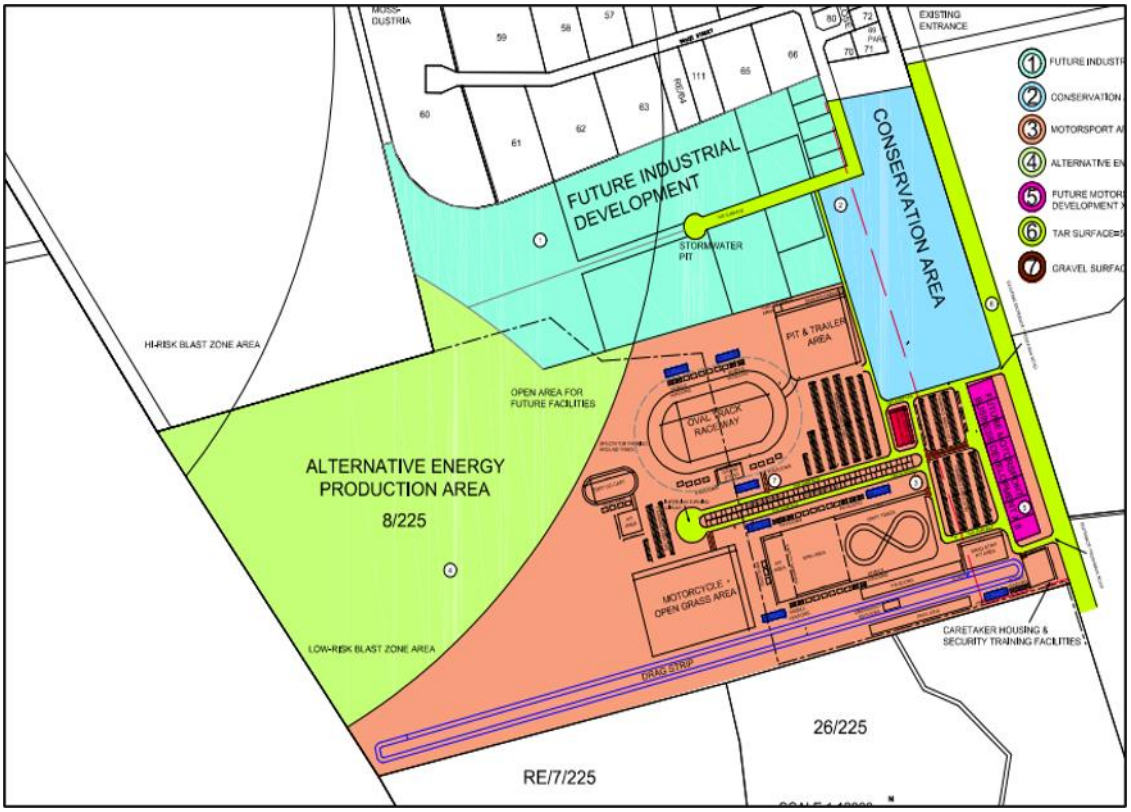

Figure 71: Layout 2 (not preferred for environmental reasons)

13.4.3 Layout 3 (Preferred)

Layout 3 (refer to **Figure 72**) was identified as the preferred layout alternative during the Scoping Phase and achieves the most favourable balance between development objectives and environmental considerations. Approximately 15 ha has been set aside as a conservation area, allowing the majority of the high-sensitivity Mossel Bay Shale Renosterveld to be retained and protected. To accommodate the larger conservation area, the footprints of the remaining development components have been reduced. Consultation undertaken during the planning process established that any further reduction in the area allocated to the motorsport arena would compromise the viability of the facility. Consequently, Layout 3 represents the maximum extent of conservation that can be achieved while maintaining the feasibility of the proposed Project.

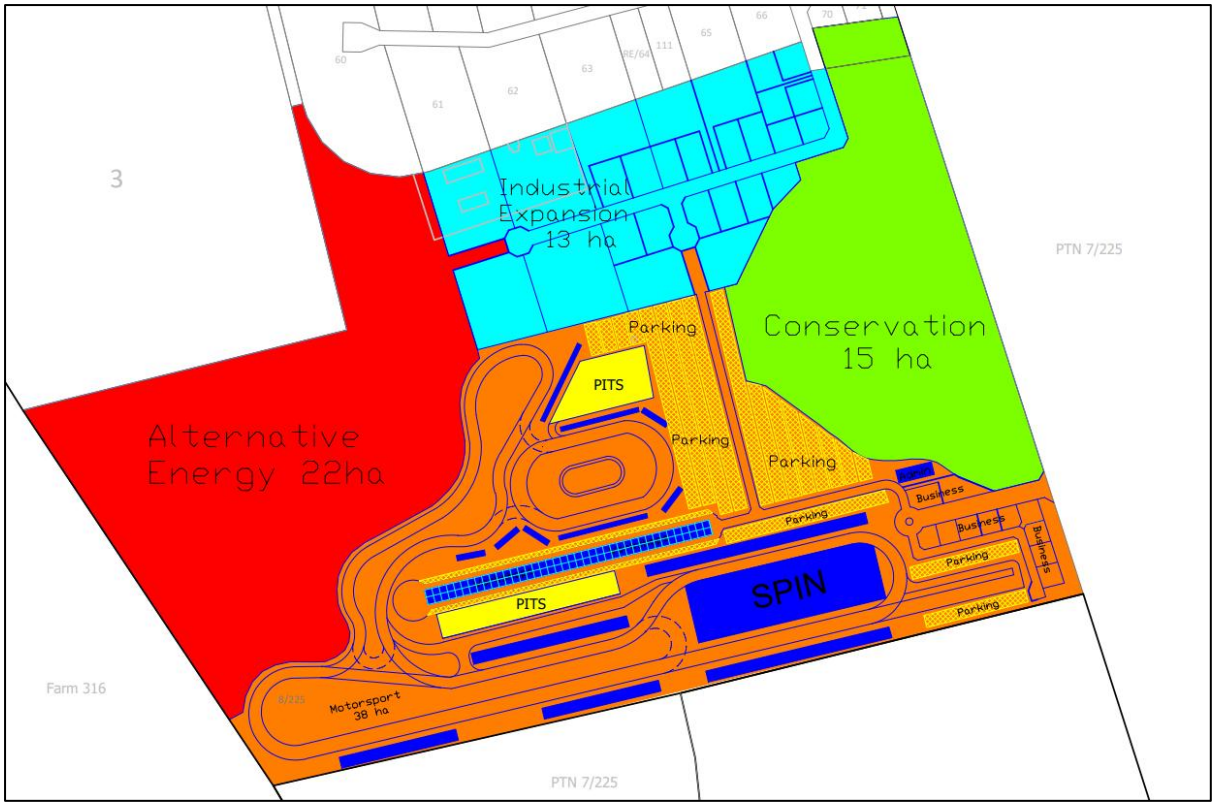

Figure 72: Layout 3 (Preferred Layout Identified During the Scoping Phase)

Following completion of the Scoping Phase, the preferred layout was further refined during the EIA Phase through amendment of the Site Development Plan (SDP). The revised SDP is presented in **Figure 73**. It should be noted that the development layout assessed during the Scoping Phase has not fundamentally changed. The amendment relates specifically to the alignment and configuration of the proposed raceway track, together with a reduction in the size of the proposed parking and pit areas and the realignment of the proposed pavilion.

The revised SDP remains within the broader development footprint assessed during the Scoping Phase and does not alter the overall development concept, land use composition or intended activities associated with the Motorsport Mecca, Alternative Energy and Industrial Expansion Area. The amendment was undertaken to improve the functionality and operational requirements of the motorsport facility through the provision of a slightly longer raceway track.

The revised raceway alignment introduces an additional slow-speed technical corner to complement the medium- and high-speed sections already incorporated into the circuit. This refinement provides a more varied and technically challenging track configuration, improves the suitability of the facility for a wider range of motorsport disciplines and events, and enhances the overall motorsport experience. The revised design further improves the competitiveness, marketability and long-term viability of the proposed motorsport facility and increases its potential to attract regional and national motorsport events, thereby supporting the broader economic and tourism objectives of the development.

The amended raceway alignment may marginally increase the area occupied by raceway-related infrastructure and require minor adjustments to associated infrastructure and operational planning. However, these changes are limited in extent and do not alter the overall development footprint or development concept. The revised track alignment and its implications were considered as part of the Noise Impact Assessment undertaken during the EIA process.

The Noise Impact Assessment (De Jager, 2026) assessed both the raceway alignment presented during the Scoping Phase and the refined alignment proposed during the EIA Phase. The assessment concluded that the same mitigation measures would apply to both alignments and confirmed that the recommended measures would effectively reduce potential noise impacts for either configuration. The refinement of the raceway alignment was therefore undertaken primarily to improve the functionality and operational performance of the motorsport facility rather than as a result of environmental constraints identified through the specialist studies.

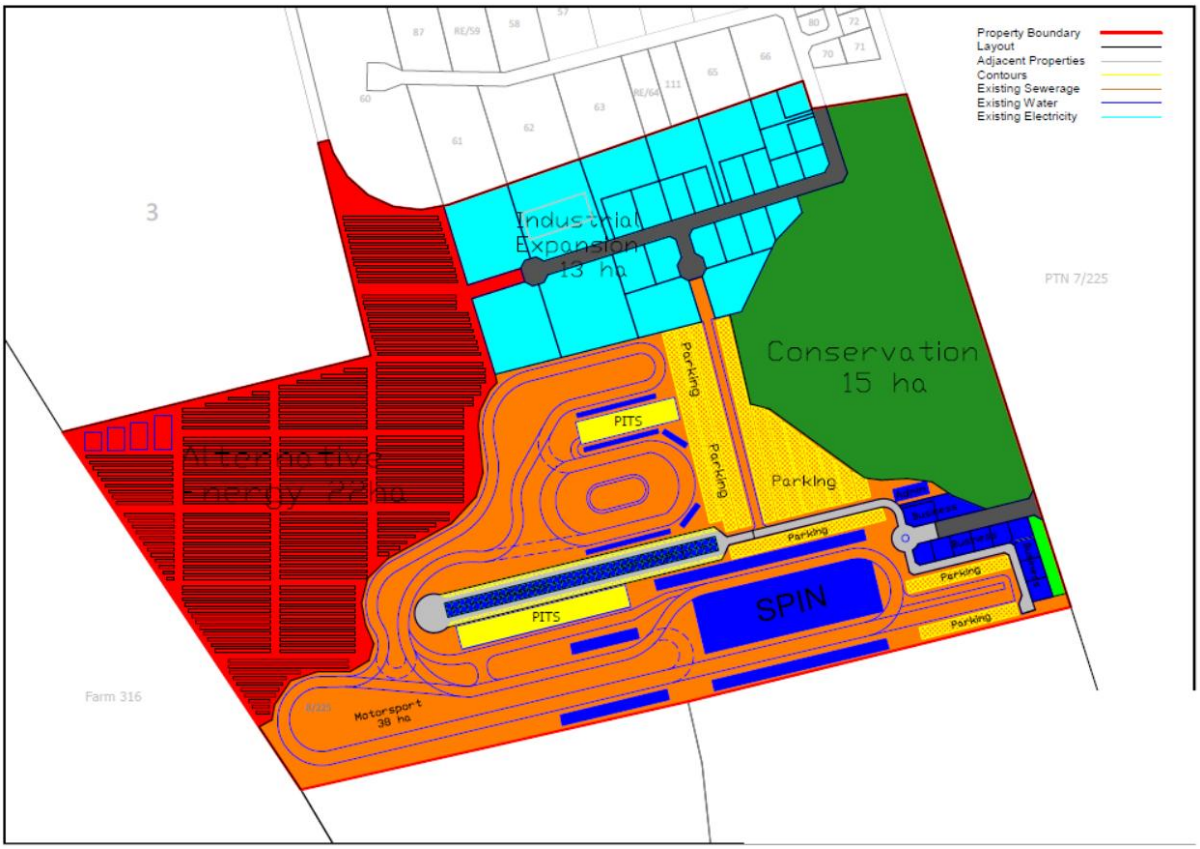

Figure 73: Layout 3 (Refined Preferred Layout Assessed During the EIA Phase)

Layouts 1 and 2 were not considered environmentally acceptable due to the extent of impacts associated with the loss of critically endangered Mossel Bay Shale Renosterveld. Layout 3, as refined through the amended SDP presented in **Figure 73**, is therefore the preferred layout alternative and the only layout carried forward for detailed assessment in the S&EIR process. The refined layout retains the environmental benefits associated with the preferred layout

identified during Scoping while improving the functionality, competitiveness and long-term operational viability of the proposed motorsport facility.

13.5 Technology Alternatives

No feasible or reasonable technology alternatives were considered for the proposed Project. The proposed infrastructure will be designed and constructed in accordance with applicable industry standards and engineering requirements, which prescribe the technologies to be utilised. Accordingly, technology alternatives were not assessed further.

13.6 No-Go Option

As standard practice and to satisfy regulatory requirements, the option of not proceeding with the Project is included in the evaluation of the alternatives. The no-go alternative can be regarded as the baseline scenario against which the impacts of the Project are evaluated. This implies that the current status and conditions associated with the proposed Project footprint will be used as the benchmark against which to assess the possible changes (impacts) associated with the Project.

In contrast, should the proposed Project not go ahead, any potentially significant environmental issues would be irrelevant, and the status quo of the local receiving environment would not be affected by the Project-related activities.

The implementation of the no-go alternative would avoid the environmental impacts associated with the construction and operation of the proposed Project. However, it would also result in the loss of the socio-economic benefits anticipated from the Project. These include the provision of additional industrial land within the MBLM, the attraction of new investment, the creation of employment opportunities, and the tourism and economic development benefits associated with the proposed motorsport arena. In addition, the opportunity to contribute towards electricity generation through the proposed PV facility would not be realised.

From an ecological perspective, the no-go alternative would retain the existing vegetation and associated ecological features within the development area. However, the preferred development layout incorporates a dedicated conservation area of approximately 15 ha that has been specifically designed to protect and manage the majority of the remaining high-sensitivity Mossel Bay Shale Renosterveld occurring on the site. The establishment of this conservation area would facilitate the long-term management and protection of this critically endangered vegetation type through the implementation of appropriate management measures.

The no-go alternative would therefore not achieve the identified objectives of the proposed Project, including the expansion of industrial land within the municipality, the promotion of economic growth and tourism, the creation of employment opportunities, the generation of

renewable energy, and the benefits associated with the establishment of the conservation area. While the no-go alternative would maintain the status quo, it would not realise the socio-economic benefits and formal conservation management measures associated with the proposed Project.

In light of the above, and the points raised in **Section 12.27**, the Project is preferred over the 'no-go option', provided that the management measures outlined in the EIA Report and EMPr are successfully implemented.

14 PUBLIC PARTICIPATION

14.1 Introduction

The purpose of public participation includes the following:

1. To provide I&APs with an opportunity to obtain information about the Project;
2. To allow I&APs to express their views, issues and concerns with regard to the Project;
3. To grant I&APs an opportunity to recommend measures to avoid or reduce adverse impacts and enhance positive impacts associated with the Project; and
4. To enable the Applicant to incorporate the needs, concerns and recommendations of I&APs into the Project, where feasible.

The public participation process that is being undertaken is governed by NEMA and the EIA Regulations. **Figure 74** outlines the public participation process for the Scoping Phase and EIA Phase. Note that the dates reflected in the diagram may change due to the dynamic nature of the S&EIR Process.

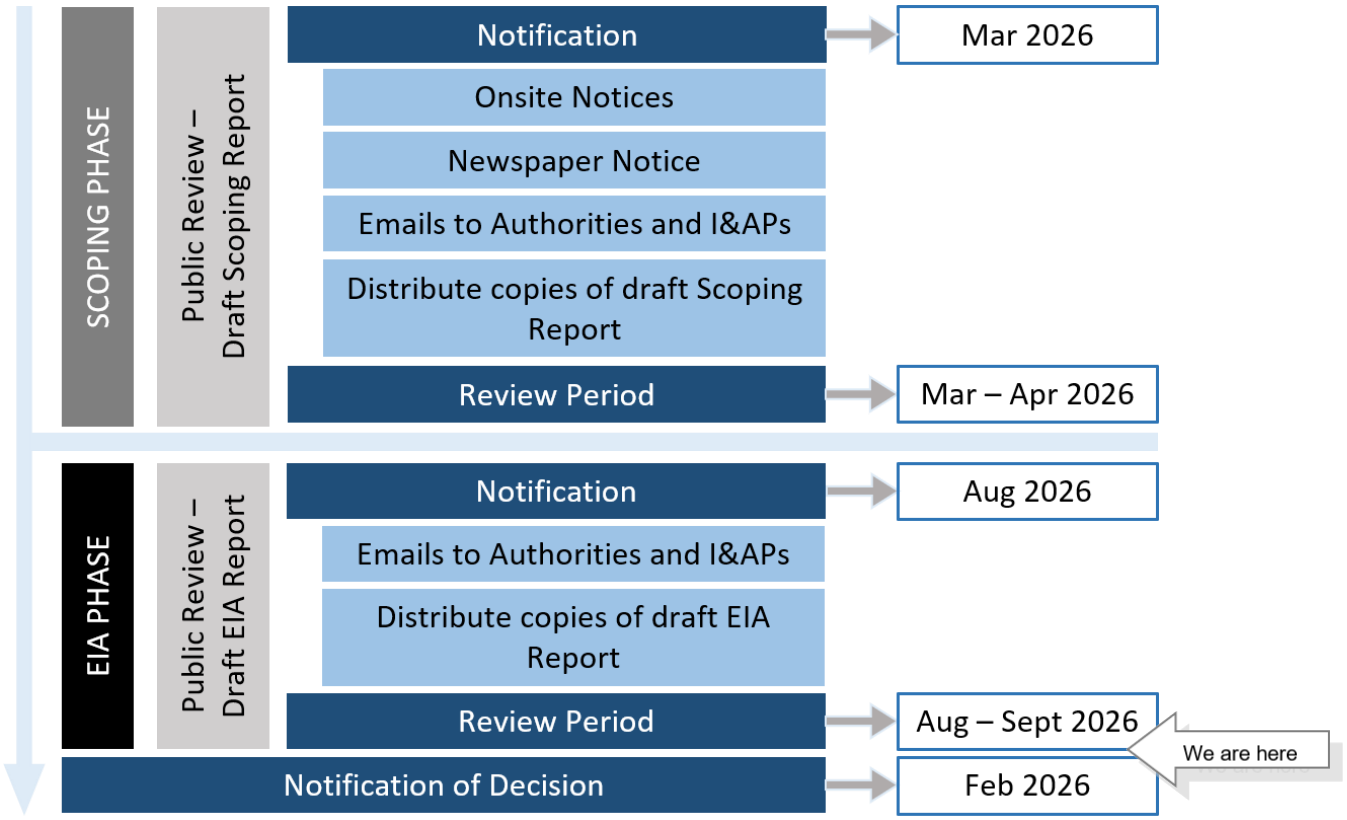

Figure 74: Outline of Public Participation Process (*note: dates are subject to change*)

14.2 Public Participation during the Scoping Phase

The primary tasks undertaken as part of public participation during the Scoping Phase include the following (details provided in the Scoping Report):

1. Compiling a database of organs of state and I&APs (contained in **Appendix K**);
2. Lodging the draft Scoping Report for public review by placing notices in newspapers, erecting site notices and emailing notifications to organs of state and I&APs; and
3. Compiling and maintaining a CRR (contained in **Appendix L3**).

14.3 Public Participation during the EIA Phase

14.3.1 Maintenance of I&APs Database

A database of I&APs, which includes authorities, different spheres of government (national, provincial and local), parastatals, Ward Councillors, stakeholders, landowners, interest groups and members of the general public, was maintained during the EIA phase and is contained in **Appendix K**.

14.3.2 Period to Review the draft EIA Report

In accordance with Regulation 43(1) of the EIA Regulations, I&APs were granted an opportunity to review and comment on the draft EIA Report from **28 August to 29 September 2026**.

14.3.3 Notification of Review of draft EIA Report

Authorities and I&APs contained in the database (refer to **Appendix K**) were notified of the review of the draft EIA Report. Proof of notification is contained in **Appendix L1**.

14.3.4 Accessing the draft EIA Report

During the review period, the draft EIA Report was accessible as follows:

- A hard copy of the report was placed at the Mossel Bay Public Library; and
- An electronic copy was uploaded to the following website, for downloading purposes: https://nemai.co.za/downloads/.

14.3.5 Commenting on the draft EIA Report

Comments on the draft EIA Report were required to be forwarded in writing to the contact person stated in **Table 93** within the review period stipulated in **Section 14.3.2** above.

Table 93: Public Participation Contact Person Details

Contact Person:	Donavan Henning
Telephone Number:	011 781 1730
Email Address:	DonavanH@nemai.co.za

Postal Address	PO Box 1673, Sunninghill, 2157

14.3.6 Comments received on the draft EIA Report

The CRR was updated to include all comments received from authorities and I&APs during the review period of the draft EIA Report. The updated CRR is contained in **Appendix L3** and the comments that were received verbatim are contained in **Appendix L4**.

14.3.7 Virtual Public Meeting to Present the draft EIA Report

A virtual public meeting was held during the review period to present the draft EIA Report and to provide I&APs with a platform for project-related discussions.

The details of the virtual public meeting are as follows:

- **Date:** 15 September 2026
- **Time:** 10:00am to 12:00pm
- **Venue:** Virtual Platform (MS Teams)

The minutes of the meeting are contained in **Appendix L5**.

14.4 Notification of DEADP Decision

Registered I&APs will be notified after receiving written notice from DEADP (in terms of NEMA) on the final decision for the Project. The notification will include the appeal procedure for the decision and key reasons for the decision.

15 CONCLUSIONS

15.1 Outcomes of the EIA Phase

The following key tasks were undertaken during the EIA phase for the proposed Project:

- The specialist studies identified in the Plan of Study for the EIA were undertaken, and the findings were incorporated into the EIA Report in terms of understanding the environmental status quo and sensitive features, assessing the potential impacts and establishing concomitant mitigation measures;
- Potentially significant impacts pertaining to the pre-construction, construction and operational phases of the Project were identified and assessed, and mitigation measures were provided; and
- Alternatives for achieving the objectives of the proposed activity were considered, and the preferred option was identified.

The outcomes of these tasks are captured below.

15.2 Sensitive Environmental Features

The following sensitive environmental features associated with the Project's receiving environment are highlighted, for which mitigation measures are included in the EIA Report and EMPr:

- Terrestrial Biodiversity –
  - The Project Area contains remnant areas of Fynbos-Renosterveld and thicket vegetation, including habitat associated with the Endangered Mossel Bay Shale Renosterveld ecosystem.
  - Portions of the site support intact natural habitat of higher ecological sensitivity, including areas containing SCC and protected plant species.
  - The site falls within a terrestrially sensitive biodiversity landscape and overlaps with biodiversity priority areas identified through national and provincial biodiversity planning tools.
  - Areas of higher ecological sensitivity were identified and informed the layout refinement process and designation of a dedicated conservation area.
  - Approximately 15 ha of the site has been allocated as a conservation area to protect ecologically important habitat, support biodiversity conservation and facilitate rehabilitation and alien invasive plant clearing.
- Aquatic Features –
  - Drainage features and aquatic habitats occur within the broader Project Area and contribute to ecological functioning within the receiving environment.

- Watercourses delineated by the aquatic specialist occur outside of the proposed development footprint and comprise three depression/pan features and two riverine systems classified as being of medium sensitivity.

❖ Avifaunal Sensitivity –
- Habitat suitable for a range of bird species, including SCC, occurs within the broader Project Area and surrounding agricultural landscape.
- The surrounding landscape provides foraging and movement habitat for avifauna and contributes to ecological connectivity within the area.

❖ Noise Sensitivity –
- Sensitive noise receptors occur within the broader Project Area, including nearby residential, tourism, hospitality and business-related land uses.
- The proposed motorsport arena has the potential to generate elevated noise levels during operational racing events, particularly higher-intensity motorsport events.
- The Noise Impact Assessment (De Jager, 2026) identified the need for operational controls, monitoring and mitigation measures to manage potential noise impacts at surrounding receptors.
- Existing industrial activities, road traffic and future development within the Mossdustria area contribute to the cumulative noise environment.

❖ Visual Character and Sense of Place –
- The Project Area occurs within a rural landscape that is influenced by agricultural activities, PetroSA, the Mossdustria Industrial Area and existing transport infrastructure.
- Sensitive visual receptors occur within the surrounding area, including adjacent tourism, recreational, commercial and agricultural land uses, specifically to the east of the Project site. The Visual/Landscape Impact Assessment (Marshall, 2023) recommended screening of the eastern border of the Project site to mitigate the effects of the proposed Project on this adjacent visual receptor.

❖ Sensitive receptors –
- Sensitive receptors occur in relation to traffic and socio-economic impacts, including surrounding businesses, tourism facilities, agricultural land uses and road users.
- The N2/R327 intersection was identified as a sensitive transportation receptor due to anticipated cumulative traffic growth associated with existing and future development within the Mossdustria node.
- Existing road users along the N2, R327 and surrounding access roads may be sensitive to increased traffic volumes associated with the construction and operational phases of the Project, including motorsport-related activities and future development within the broader Mossdustria area.

Combined sensitivity maps in terms of the terrestrial environment, water resources and noise receptors are provided in **Figure 75** to **Figure 78** below, respectively.

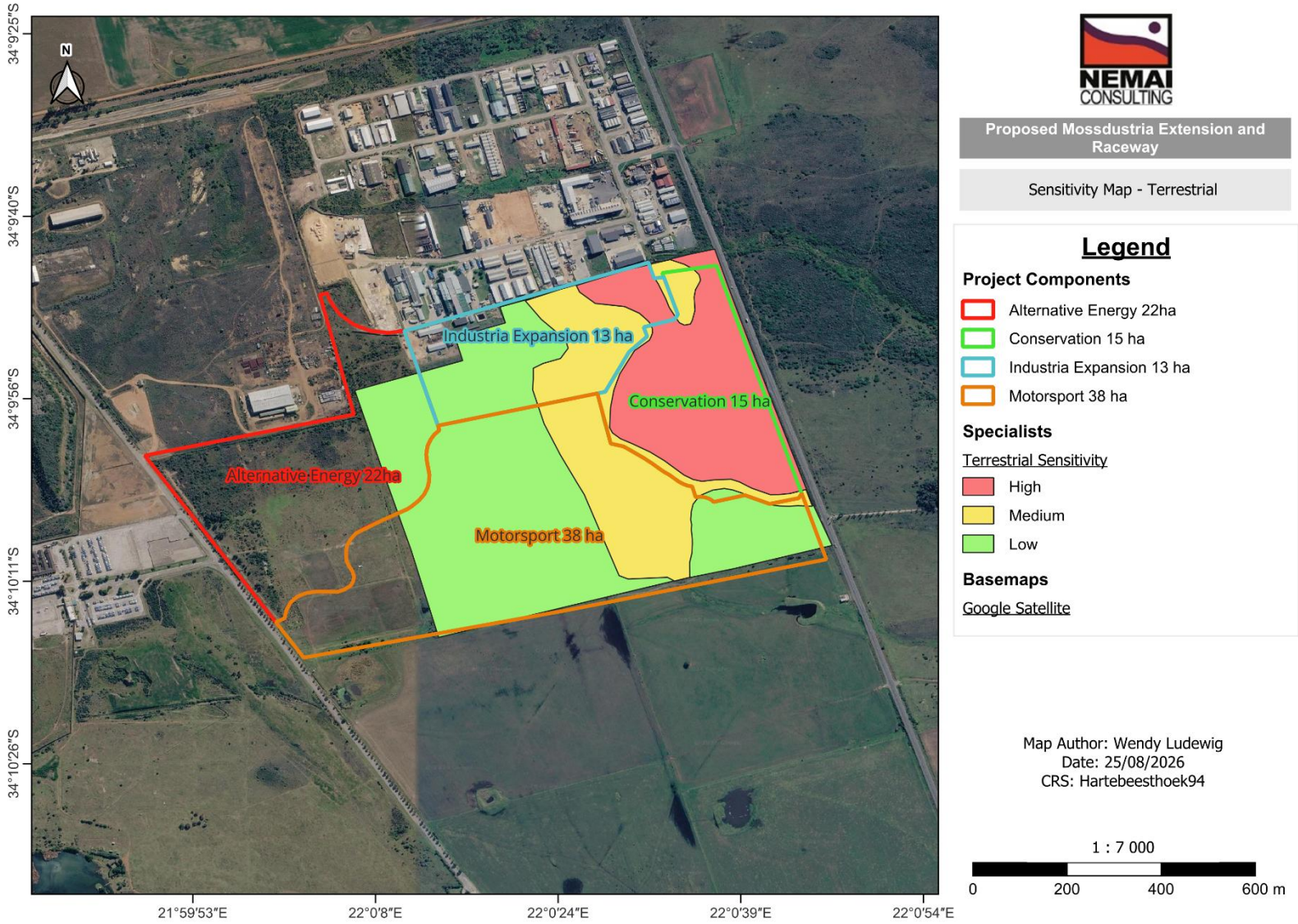

Figure 75: Combined Sensitivity Map – Terrestrial Environment

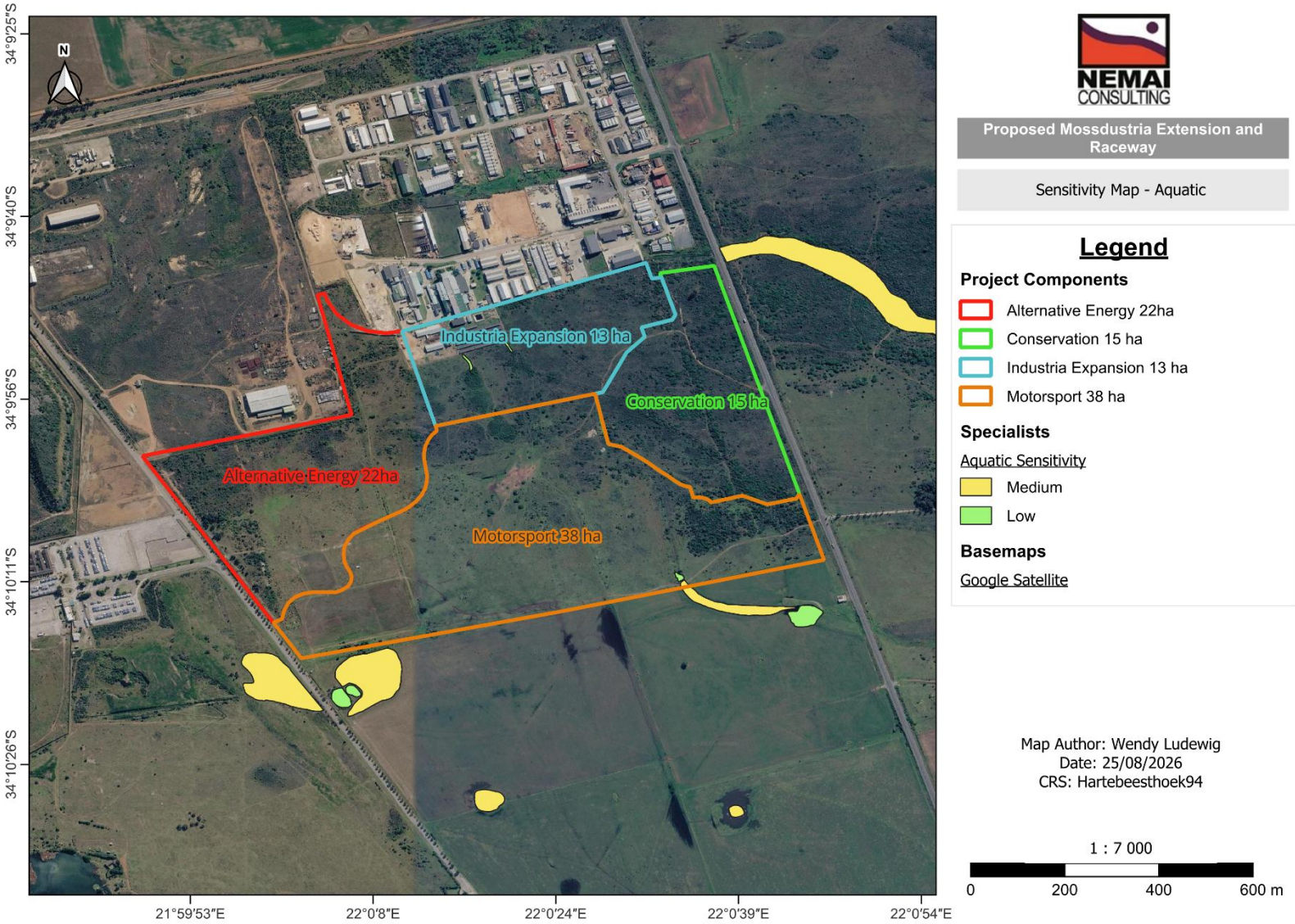

Figure 76: Combined Sensitivity Map - Water Resources

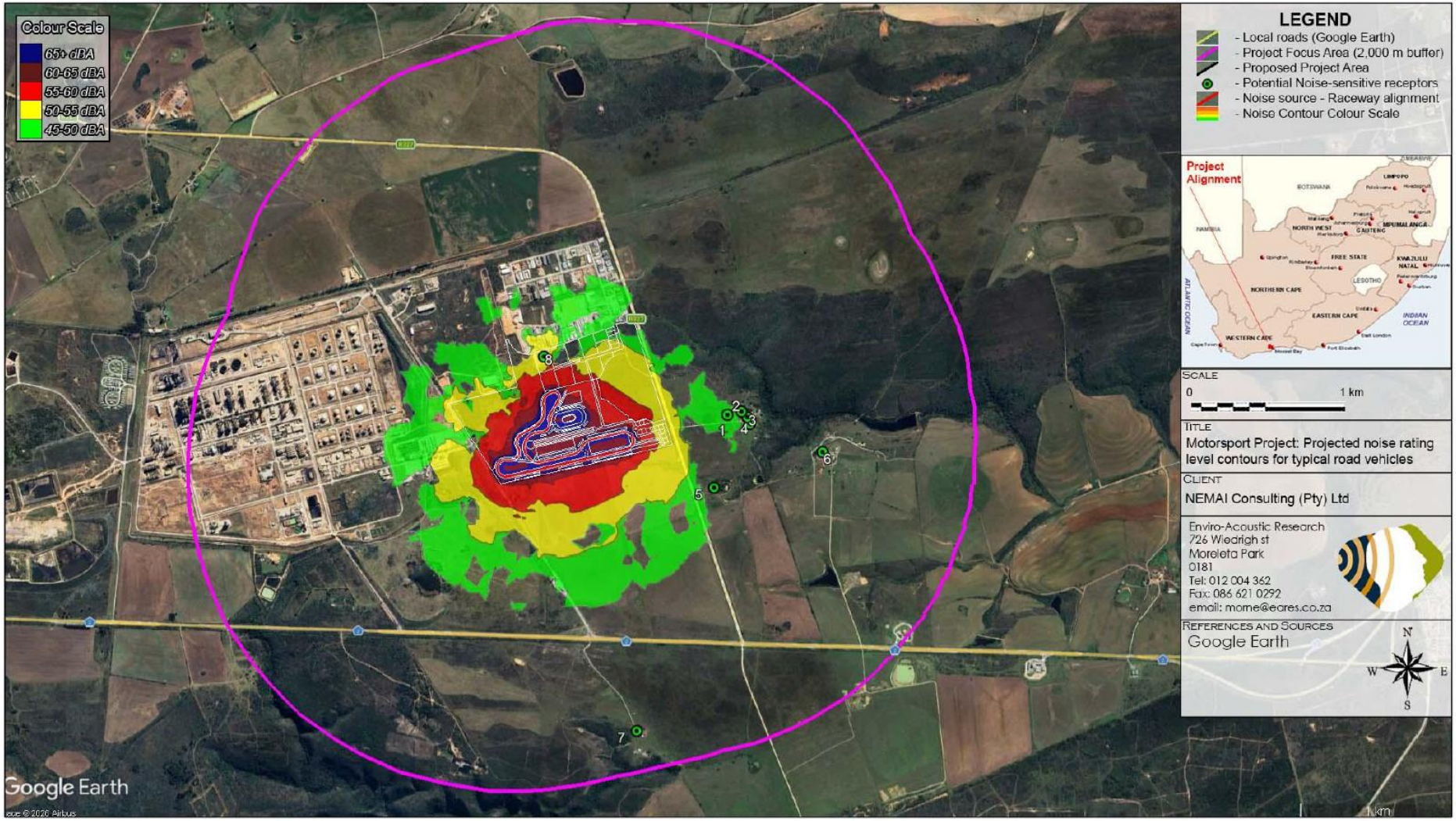

Figure 77: Combined Sensitivity Map - Noise Rating Level for a race with LMV

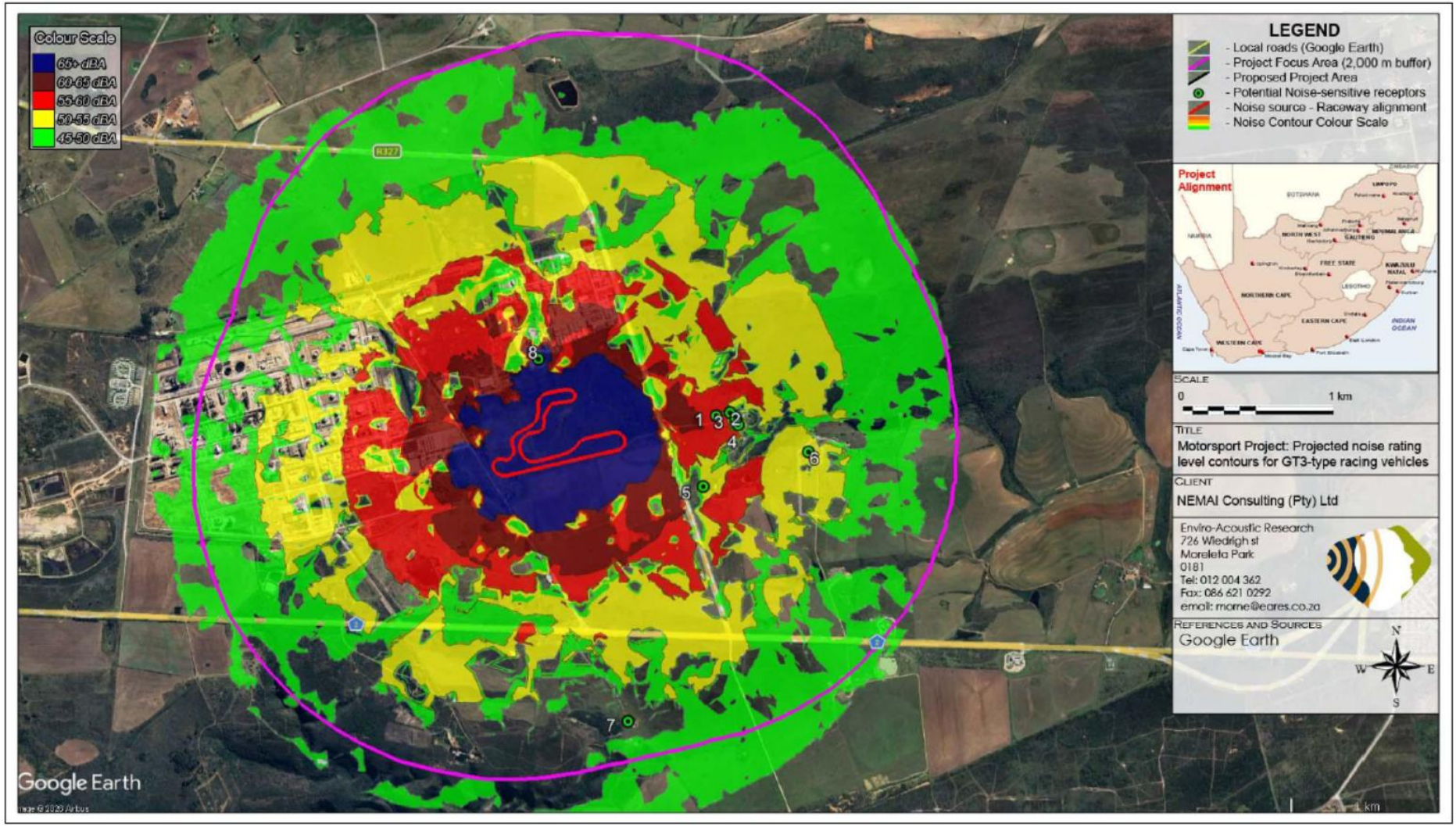

Figure 78: Combined Sensitivity Map - Noise Rating Level for a race with GT3-class vehicles

15.3 Environmental Impact Statement

The proposed Project comprises the expansion of the existing Mossdustria industrial area and includes four integrated development components, namely an industrial expansion area, motorsport arena, renewable energy facility and a dedicated conservation area. The Project is intended to address the shortage of industrial land within the MBLM, promote economic growth and tourism, support employment creation, contribute towards renewable energy generation and facilitate the long-term conservation of sensitive terrestrial biodiversity features occurring on the site.

The following specialist studies were undertaken as part of the S&EIR Process:

- Aquatic Ecology Impact Assessment;
- Geohydrology Impact Assessment;
- Terrestrial Ecology Impact Assessment;
- Noise Impact Assessment;
- Avifaunal Impact Assessment;
- Landscape/Visual Impact Assessment;
- Archaeological/Heritage Walkdown Report;
- Palaeontology Desktop Assessment;
- Socio-Economic Impact Assessment;
- Agricultural Compliance Statement;
- Land Use Planning Risk Assessment; and
- Traffic Study.

A range of alternatives were considered during the EIA process, including layout, technology and the no-go alternative. No feasible location alternatives were identified due to the requirement that the industrial expansion occur adjacent to the existing Mossdustria industrial area. Layout alternatives were refined through an iterative design process informed by specialist input and consultation with commenting authorities. Layout 3 was identified as the preferred alternative as it achieves the most appropriate balance between environmental protection and development objectives through the retention of approximately 15 ha as a conservation area and the avoidance of the majority of the site's sensitive terrestrial biodiversity features.

The EIA identified both positive and negative impacts associated with the Project. The principal positive impacts relate to employment creation, local economic development, tourism stimulation, business and investment opportunities, renewable energy generation and the establishment of a formally managed conservation area. The conservation area is expected to provide long-term biodiversity benefits through the protection and management of ecologically important habitat and remnant Mossel Bay Shale Renosterveld.

The principal negative impacts identified during the assessment include the loss and fragmentation of terrestrial habitat, disturbance to avifauna, potential impacts on aquatic

features, visual impacts, increased traffic volumes, increased noise associated with motorsport activities, and temporary construction-related impacts. Based on the findings of the specialist studies, the majority of impacts were assessed as being of low to moderate significance following the implementation of mitigation measures. Residual impacts that remain after mitigation are primarily associated with habitat transformation, habitat fragmentation, operational noise associated with motorsport activities, increased traffic volumes and the cumulative transformation of the broader Mossdustria landscape. These residual impacts were not considered by the specialists to constitute fatal flaws to the Project, provided that the mitigation measures outlined in the specialist studies, EIA Report and EMPr are implemented.

The EIA further found that the preferred layout incorporates avoidance measures and environmental safeguards. These include the protection of sensitive biodiversity areas through the establishment of the conservation area, implementation of specialist-recommended ecological buffers, rehabilitation and alien invasive plant management measures, traffic upgrades and management interventions, noise mitigation measures for motorsport activities, and the implementation of the EMPr including further mitigation measures.

The no-go alternative would avoid the environmental impacts associated with the Project but would not achieve the key project objectives, including industrial expansion within the municipality, economic growth, employment creation, tourism development, renewable energy generation and the implementation of formal conservation management measures for the retained renosterveld habitat. Consequently, the no-go alternative was not identified as the preferred option.

Based on the findings of the specialist studies and the outcomes of the EIA, it is concluded that Environmental Authorisation may be granted for the proposed Project, provided that all mitigation measures, management actions and monitoring requirements contained in the EIA Report and EMPr are implemented and complied with. It is further the opinion of the EAP that the S&EIR process was undertaken in an objective manner, that sufficient information is available to support informed decision-making, and that the assessment process complies with the requirements of the EIA Regulations.

15.4 Recommendations

The following key recommendations, which may also inform the conditions of the Environmental Authorisation (if granted), are highlighted:

- The Layout must retain the 15 ha conservation area identified during the EIA process.
- A Conservation Area Management Plan must be prepared and implemented to ensure the long-term protection, rehabilitation and management of the retained Mossel Bay Shale Renosterveld habitat and associated biodiversity features.

- Alien invasive vegetation within the conservation area and disturbed portions of the site must be removed and controlled on an ongoing basis in accordance with the EMPr and specialist recommendations.
- A pre-construction ecological walkdown must be undertaken by a suitably qualified specialist to confirm the final Project footprint and identify any sensitive biodiversity features requiring protection, demarcation or permitting.
- The Groundwater Management Plan must be implemented including the monitoring of groundwater to ensure no contamination is occuring.
- All ecological buffers and no-go areas identified by the specialist studies must be clearly demarcated prior to the commencement of construction activities and must remain protected throughout construction and operation.
- Traffic upgrades and associated traffic management measures recommended by the Traffic Study (GPL Consulting, 2023) must be implemented in consultation with the relevant road authorities to ensure the surrounding road network can accommodate future traffic demand. A Traffic Management Plan for race events must be prepared during the detailed engineering design phase and implemented during the operation phase.
- During detailed engineering design a tehnical team must work with the noise specialist to incorporate noise mitigation measures as listed in the Noise Impact Assessment (De Jager, 2026). Based on the detailed design, the noise specialist is to rerun the model to determine the effects of the mitigation measures incorporated into the detailed design on surrounding noise receptors. The detailed layout is to be included in the Final EMPr.
- Operational noise management measures, monitoring requirements and event-related controls recommended by the Noise Impact Assessment (De Jager, 2026) must be implemented throughout the operational phase of the motorsport facility.
- All mitigation and monitoring measures contained within the specialist studies and EMPr must be implemented throughout the construction and operational phases of the Project, with compliance monitored through an appropriate environmental auditing programme.
- Any permits, licences or approvals identified by the specialist studies, including biodiversity-related permits where required, must be obtained prior to the commencement of the relevant activities.
- The Applicant must ensure that all commitments made during the EIA process, including the protection of sensitive environmental features and implementation of the conservation area, are incorporated into project planning, detailed design, construction and operational management.

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APPENDICES