



Visual Impact Assessment for the Proposed Hartland Hospital and Educational Facilities, near Hartenbos, Western Cape Province

*SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT
ACT, 1998 (ACT NO. 107 OF 1998) (NEMA).*

Prepared for	Sharples Environmental Services CC
Telephone No.	+27 44 873 4923
Physical Address	17 Cathedral Square George Western Cape 6530

This report is provided solely for the purposes set out in it and may not, be used for any other purpose without Eco-Thunder Consulting written consent.

Eco Thunder Consulting (Pty) Ltd

11 Ruby Close, Witkoppen, Fourways,
Sandton, Johannesburg, South Africa,
2068

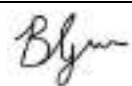
Phone: +27 64 655 2752

PO Box 2055, Fourways, Sandton,
Johannesburg, South Africa, 2191

Email: admin@eco-thunder.co.za

Website: www.eco-thunder.co.za

CONTROL SHEET

ETC Reference:	ETC0515	
Project Name:	Proposed Hartland Hospital and Educational Facilities	
Prepared For:	Sharples Environmental Services CC	
Prepared By:	Eco-Thunder Consulting (Pty) Ltd www.eco-thunder.co.za	
Address:	PO Box 2055 Fourways 2191	
Telephone Number:	+27 64 655 2752/	
Email Address:	admin@eco-thunder.co.za brogan@eco-thunder.co.za	
Report Compiled By:	Compiler:	Brogan Geldenhuys
	Signature:	
	Date:	27 th February 2026
Report Reviewed By:	Reviewer:	Siobhan Motley-Myburgh
	Signature:	
	Date:	5 th March 2026
Applicant:	Mere Group (Pty) Ltd	
Revision Number:	001	
Date Issued:	3rd August 2026	

COPYRIGHT INFORMATION

This document contains intellectual property and proprietary information that are protected by copyright in favour of Eco Thunder Consulting (Pty) Ltd (referred to as ETC) as the specialist consultants. The document may therefore not be reproduced, used or distributed to any third party without the prior written consent of ETC.

The document is prepared exclusively for submission to Sharples Environmental Services CC, in South Africa, and is subject to all confidentiality, copyright and trade secrets, rules intellectual property law and practices of South Africa.

This document should be cited as Eco Thunder Consulting, 2026. VIA for the Proposed Hartland Hospital and Educational Facilities, near Hartenbos, Western Cape Province.

EXECUTIVE SUMMARY

The proposed Hartland Hospital and Educational Facilities is intended to provide improved healthcare and educational infrastructure within the broader Hartland development node near Hartenbos, Western Cape. The site is located adjacent to the N2/R102 transport corridor within a predominantly agricultural landscape that is already influenced by major road infrastructure and peri-urban expansion.

The receiving environment comprises cultivated dryland fields on gently undulating terrain within a transformed agricultural and peri-urban corridor. Cultivation, farm tracks, fencing, utilities and the N2/R102 materially modify the visual baseline. Although the fields remain open and seasonal crops provide no permanent screening, an existing vegetation belt occurs along the R102-facing boundary. These conditions support a moderate VAC. The Klein Brak and Hartenbos Rivers, mapped wetlands and other natural corridors remain visually sensitive and contribute to the wider Garden Route setting.

A VIA was undertaken to evaluate how the proposed hospital and educational precinct may change landscape character and views experienced by key receptor groups. Primary receptors include road users on the N2 and R102, residents and visitors in Hartenbos, Bayview and Diazstrand to the south, and Riverside, Klein Brak River and Reebok to the north/north-east, as well as scattered rural dwellings and agricultural users in the hinterland.

The viewshed analysis indicates that the Potential visibility within the proposed development area is mostly medium, with high visibility in the south-western portion and low visibility in the north-eastern portion. The most visible areas are in the immediate vicinity of the site and from adjacent elevated slopes, with high to very high potential visibility along sections of the N2/R102 corridor and from elevated parts of the Hartenbos/Bayview settlement. Beyond these areas, intervening landforms and distance reduce visual exposure, with much of the wider inland landscape falling within low to very low visibility classes.

The impact assessment indicates that construction-phase visual impacts from earthworks, construction plant, dust and temporary night lighting, could be of medium significance before mitigation but can be reduced to medium and low significance through good construction management, dust suppression, temporary screening and progressive rehabilitation. During operation, the introduction of permanent building massing, parking areas, boundary treatments, and associated infrastructure will result in a long-term change in landscape character and may remain of medium significance after mitigation, given the openness of the receiving environment and the site's proximity to key receptor routes. Operational lighting impacts can be reduced from medium to low significance through lighting design, careful control of helipad/security/sports lighting, and ongoing monitoring and adjustment.

Cumulative visual impacts associated with continued development along the N2/R102 corridor are assessed as medium, reflecting the progressive shift from a rural agricultural landscape to a more urban/peri-urban character. Managing these cumulative effects will require consistent application of contextual design, retention and reinforcement of existing boundary vegetation buffers, and disciplined lighting and signage controls across developments.

From a visual specialist's perspective, there are no fatal flaws and no reason that the Hartland Hospital and Educational Facilities project cannot be authorised, provided that the recommended design responses and mitigation measures are implemented and carried into the detailed design and operational management of the facilities.

TABLE OF CONTENT

1	Background	15
1.1	Scope and Objective of the Specialist Study	15
1.2	Structure of the Report	15
1.3	Seasonal Change	15
1.4	Information Base	16
1.5	Terms of Reference	16
1.6	Level of Confidence.....	17
1.7	Limitations and Assumptions	18
2	Project Description	20
2.1	Project Location.....	21
2.2	Project Technical Details	23
2.3	Assessment Alternatives	28
2.4	Technology Identified.....	29
3	Requirement for a VIA	30
3.1	Components of Visual Studies.....	30
4	Legislation and Policy Review.....	32
4.1	International Good Practice	32
4.2	National Legislation and Guidelines.....	33
4.3	Policy Fit.....	35
5	Approach and Methodology	36
5.1	Purpose of the Study	36
5.2	Approach to Study	36
5.3	Site Verification and Specific VIA Approach	37
5.4	Significance of Visual Impact.....	37
5.5	Methodology.....	41
5.6	Project Phases and Activities.....	42

6	Baseline Environmental Profile	45
6.1	Character and Nature of Environment	45
6.2	Visual Resource	58
7	Viewshed Analysis	61
7.1	Overview of the Viewshed	61
7.2	Zones of Visual Influence	61
7.3	Visual Receptors and Sensitivity.....	62
7.4	Mitigation Measures	62
8	Impacts and Risks Assessment	65
8.1	Impacts and Risk Methodology.....	65
8.2	Impacts and Mitigation.....	68
9	Environmental Impact Statement and Conclusion	78
10	References.....	80

LIST OF FIGURES

Figure 1: Locality Map.....	22
Figure 2: Layout of the Proposed Hartland Hospital and Educational Facilities	27
Figure 3: VIA Process	38
Figure 4: North to South Elevation Profile	46
Figure 5: West to East Elevation Profile	47
Figure 6: Map of Topographical Profile of the Site	48
Figure 7: Protected Ecosystems Map.....	50
Figure 8: Land Use Map.....	55
Figure 9: Sensitive receptors for the broader study area	59
Figure 10: Viewshed Analysis for the Proposed Hartland Hospital and Educational Facilities ...	64

LIST OF TABLES

Table 1: Technical Details of the Proposed Hartland Hospital and Educational Facilities	23
Table 2: Typical Components of Visual Studies	31
Table 3: Categorisation of Approaches and Methods Used for Visual Assessment.....	37
Table 4: Potential Impacts during the Construction Phase.....	68
Table 5: Potential Impacts during the Operational Phase	71
Table 6: Potential Impacts during Decommissioning Phase.....	75

LIST OF APPENDICES

Appendix A: Specialist CV

Appendix B: VIA Best Practice Guideline

LIST OF ABBREVIATIONS

Abbreviation	Description
AfDB	African Development Bank
BAR	Basic Assessment Report
CA	Competent Authority
CBA	Critical Biodiversity Area
DFFE	Department of Forestry, Fisheries and Environment
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme Report
ESA	Ecological Support Area
ETC	Eco Thunder Consulting (Pty) Ltd
GIS	Geographical Information Systems
HA	Hectares
MEA	Millennium Ecosystem Assessment
NEMA	National Environmental Management Act
O&M	Operation and Maintenance
SACLAP	South African Council for the Landscape Architectural Profession
SES	Sharples Environmental Services CC
SLA	Service Level Agreement
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VAC	Visual Absorption Capacity
VIA	Visual Impact Assessment
WHC	World Heritage Convention

GLOSSARY LIST

Glossary Item	Description
Aesthetic Value	Aesthetic value is the emotional response derived from the experience of the environment with its natural and cultural attributes. The response can be either to visual or non-visual elements and can embrace sound, smell and any other factor having a strong impact on human thoughts, feelings, and attitudes (Ramsay, 1993). Thus, aesthetic value encompasses more than the seen view, visual quality, or scenery, and includes atmosphere, landscape character and sense of place (Schapper, 1993).
Aesthetically significant place	A formally designated place visited by recreationists and others for the express purpose of enjoying its beauty. For example, tens of thousands of people visit Table Mountain on an annual basis. They come from around the country and even from around the world. By these measurements, one can make the case that Table Mountain (a designated National Park) is an aesthetic resource of national significance. Similarly, a resource that is visited by large numbers who come from across the region probably has regional significance. A place visited primarily by people whose place of origin is local is generally of local significance. Unvisited places either have no significance or are "no trespass" places. (After New York, Department of Environment 2000).
Aesthetic impact	Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility, even startling visibility of a Project proposal, should not be a threshold for decision making. Instead, a Project, by its visibility, must clearly interfere with or reduce (i.e., visual impact) the public's enjoyment and/or appreciation of the appearance of a valued resource e.g., cooling tower blocks a view from a National Park overlook (after New York, Department of Environment 2000).
Cumulative Effects	The summation of effects that result from changes caused by a development in conjunction with the other past, present, or reasonably foreseeable actions.
Glare	The sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted, which causes annoyance, discomfort, or loss in visual performance and visibility. See Glint. (USDI 2013:314)
Glint	A momentary flash of light resulting from a spatially localised reflection of sunlight. See Glare. (USDI 2013:314)
Landscape Character	The individual elements that make up the landscape, including prominent or eye-catching features such as hills, valleys, woods, trees, water bodies, buildings, and roads. They are generally quantifiable and can be easily described.

Glossary Item	Description
Landscape Impact	Landscape effects derive from changes in the physical landscape, which may give rise to changes in its character and how this is experienced (Institute of Environmental Assessment & The Landscape Institute 1996).
Study area	For the purposes of this report this Project the study area refers to the proposed Project footprint/Project site as well as the 'zone of potential influence' (the area defined as the radius about the centre point of the Project beyond which the visual impact of the most visible features will be insignificant) which is a 5,0km radius surrounding the proposed Project footprint/site.
Project Footprint/Site	For the purposes of this report the Project site/footprint refers to the actual layout of the Project as described.
Sense of Place (genius loci)	Sense of place is the unique value that is allocated to a specific place or area through the cognitive experience of the user or viewer. A genius locus literally means 'spirit of the place'.
Sensitive Receptors	Sensitivity of visual receptors (viewers) to a proposed development.
Viewshed analysis	The two-dimensional spatial pattern created by an analysis that defines areas, which contain all possible observation sites from which an object would be visible. The basic assumption for preparing a viewshed analysis is that the observer eye height is 1,8m above ground level.
Visibility	The area from which Project components would potentially be visible. Visibility depends upon general topography, aspect, tree cover or other visual obstruction, elevation, and distance.
Visual Exposure	Visibility and visual intrusion qualified with a distance rating to indicate the degree of intrusion and visual acuity, which is also influenced by weather and light conditions.
Visual Impact	Visual effects relate to the changes that arise in the composition of available views because of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual amenity available views because of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual amenity.
Visual Intrusion	The nature of intrusion of an object on the visual quality of the environment resulting in its compatibility (absorbed into the landscape elements) or discord (contrasts with the landscape elements) with the landscape and surrounding land uses.
Visual Absorption Capacity (VAC)	VAC is defined as the landscape's ability to absorb physical changes without transformation in its visual character and quality. The landscape's ability to absorb change ranges from low- capacity areas, in which the location of an activity is likely to cause visual change in the character of the area, to high-capacity areas, in which the visual impact of development will be minimal (Amir & Gidalizon 1990).

Glossary Item	Description
Worst-case Scenario	Principle applied where the environmental effects may vary, for example, seasonally or collectively to ensure the most severe potential effect is assessed.
Zone of Potential Visual Influence	By determining the zone of potential visual influence, it is possible to identify the extent of potential visibility and views which could be affected by the proposed development. Its maximum extent is the radius around an object beyond which the visual impact of its most visible features will be insignificant primarily due to distance.

SPECIALIST CHECKLIST

No.	NEMA 2014 (as amended) Regs - Appendix 6(1) Requirement	Report Section
	A specialist report prepared in terms of these Regulations must contain -	
a	details of - - the specialist who prepared the report; and - the expertise of that specialist to compile a specialist report including a curriculum vitae.	Specialist Details and Appendix A
b	a declaration that the specialist is independent in a form as may be specified by the competent authority (CA);	Specialist Declaration
c	an indication of the scope of, and the purpose for which, the report was prepared;	Section 5.1
	an indication of the quality and age of base data used for the specialist report	Section 1.4
	a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change	Section 7 and Section 8
d	the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 5.4
e	a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Section 5
f	details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	Section 7
g	an identification of any areas to be avoided, including buffers;	Section 8
h	a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Section 6.2

No.	NEMA 2014 (as amended) Regs - Appendix 6(1) Requirement	Report Section
i	a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 0
j	a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	Section 9
k	any mitigation measures for inclusion in the EMPr;	Section 8
l	any conditions for inclusion in the EA;	Section 9
m	any monitoring requirements for inclusion in the EMPr or EA;	Section 8
n	a reasoned opinion - - whether the proposed activity, activities or portions thereof should be authorised; - regarding the acceptability of the proposed activity or activities; and - if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan.	Section 9
o	a description of any consultation process that was undertaken during the course of preparing the specialist report;	N/A
p	a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	N/A
q	any other information requested by the CA.	N/A

SPECIALIST DETAILS

ETC is a privately owned company fully owned by women. We specialise in a wide range of specialised studies, including Visual Impact Assessment (VIA), socio-economic research, economic development planning, development program design and implementation, as well as community trust management. Our expertise extends to conducting VIAs across Africa and optimising projects in the environmental sector. Our work encompasses landscape characterisation studies, end-use studies for quarries, and computer modelling and visualisation.

SPECIALIST DECLARATION

Full Name	Title/Position
Brogan Geldenhuys	Director

Telephone Number	Email Address
064 655 2752	brogan@eco-thunder.co.za
Qualification(s):	BEng
Registration(s):	ILASA, IAIAA, GISSA, IAP2

I, **Brogan Geldenhuys**, declare that: –

- I act as an independent specialist in this application;
- I will perform the work relating to the application objectively, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the CA all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken concerning the application by the CA; and - the objectivity of any report, plan or document to be prepared by myself for submission to the CA;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offense and is punishable by law.



Signature of the Specialist

06/03/2026

Date

Eco Thunder Consulting, acting as an independent specialist in the field of visual impact assessment within the renewable energy sector, hereby affirms its professional standing and expertise. Appointed by Sharples Environmental Services CC for the specific purpose of conducting an independent and unbiased assessment, our firm leverages approaches and methodologies that have been meticulously refined and successfully applied across various projects.

Our engagement with this project is characterised by a commitment to maintaining the highest standards of integrity and professionalism. The opinions and viewpoints expressed within this report are solely those of Eco Thunder Consulting and reflect our extensive experience and specialised knowledge in visual impact assessment within the renewable energy sector.

This assessment is conducted in accordance with the best practices and industry standards, ensuring a comprehensive and objective analysis. It is our firm belief that the methodologies

employed are robust and have established precedence in maintaining the quality and accuracy required for such evaluations.

In fulfilling our role as an independent specialist, we have adhered to all relevant legal and regulatory requirements, ensuring that our assessment is both transparent and accountable. We affirm that our relationship with Sharples Environmental Services and all other parties involved in this project is free from any conflict of interest or undue influence, thereby safeguarding the impartiality of our findings and recommendations.

Eco Thunder Consulting remains dedicated to providing an assessment that is not only thorough and precise but also contributes positively to the renewable energy sector, reflecting our ongoing commitment to environmental sustainability and responsible development.

The author of this report, however, accepts no liability for any actions, claims, demands, losses, liabilities, costs, damages, and expenses arising from or in connection with services rendered, and by the use of the information contained in this document.

No form of this report may be amended or extended without the prior written consent of the author and/or a relevant reference to the report by the inclusion of an appropriately detailed citation.

Any recommendations, statements, or conclusions drawn from or based on this report must cite or refer to this report. Whenever such recommendations, statements or conclusions form part of the main report relating to the current investigation, this report must be included in its entirety.

1 Background

1.1 Scope and Objective of the Specialist Study

Sharples Environmental Services CC (“SES”) has been appointed to oversee the Environmental Authorisation (EA) process for the proposed Hartland Hospital and Educational Facilities project, located near Hartenbos in the Western Cape, South Africa. As part of this process, SES has engaged Eco-Thunder Consulting (Pty) Ltd (“ETC”) to conduct a Visual Impact Assessment (VIA) for the proposed development.

The main aim of the study is to document the baseline and to ensure that the visual/aesthetic consequences of the proposed Hartland Hospital and Educational Facilities project are understood. The VIA therefore aims to identify scenic resources, and visually sensitive areas or receptors. It also aims to identify key concerns or issues relating to potential visual impacts arising from the Project, and which must be addressed in the assessment phase.

1.2 Structure of the Report

The report is organised into ten sections:

- Section 1: Background;
- Section 2: Project Description;
- Section 3: Requirement for a VIA;
- Section 4: Legislation and Policy Review;
- Section 5: Approach and Methodology;
- Section 6: Baseline Environmental Profile;
- Section 7: Viewshed Analysis;
- Section 8: Impacts and Risks Identified;
- Section 9: Environmental Impact Statement Conclusion; and
- Section 10: References.

1.3 Seasonal Change

In terms of Appendix 6 of the 2014 EIA Regulations, a specialist report must contain information on “the date and season of the site investigation and the relevance of the season to the outcome of the assessment”. The site visit was undertaken in **Late Winter (13 August 2024).** The seasonal variation in vegetation and landscape characteristics will be taken into consideration when evaluating the significance of the impacts identified, the mitigation measures, and the conclusions of the assessment.

1.4 Information Base

The following information was used to conduct the VIA:

- Documentation and KML files supplied by the client;
- ToR for the visual specialist;
- Photographs and information captured during the site visit;
- Google Earth software and data;
- Sentinel-2 Satellite Imagery;
- SRTM Digital Elevation Model;
- South African National Landcover dataset;
- Local zoning and planning documents;
- Historical maps and aerial photographs;
- Stakeholder input and feedback (if provided);
- Meteorological data;
- Landscape character assessments;
- Relevant Basic Assessment (BA) reports (if provided);
- Geographic Information System (GIS) data;
- Local biodiversity data; and
- Regulatory and policy documents.

1.5 Terms of Reference

A specialist study is required to establish the visual baseline and to identify and potential visual impacts arising from the proposed development based on the general requirements for a comprehensive VIA.

The following terms of reference were established:

- Data collected allows for a description and characterisation of the receiving environment;
- Describe the landscape character, and quality and assess the visual resource of the study area;
- Describe the visual characteristics of the components of the Project;
- Identify issues that must be addressed in the impact assessment phase; and

- Propose mitigation options to reduce the potential impact of the Project.

1.6 Level of Confidence

Level of confidence is determined as a function of:

The information available, and understanding of the study area by the practitioner:

- 3: A high level of information is available of the study area and a thorough knowledge base could be established during site visits, surveys etc. The study area was readily accessible.
- 2: A moderate level of information is available of the study area and a moderate knowledge base could be established during site visits, surveys etc. Accessibility to the study area was acceptable for the level of assessment.
- 1: Limited information is available of the study area and a poor knowledge base could be established during site visits and/or surveys, or no site visit and/or surveys were carried out.

The information available, understanding of the study area and experience of this type of project by the practitioner:

- 3: A high level of information and knowledge is available of the project and the visual impact assessor is well experienced in this type of project and level of assessment.
- 2: A moderate level of information and knowledge is available of the project and/or the visual impact assessor is moderately experienced in this type of project and level of assessment.
- 1: Limited information and knowledge are available of the project and/or the visual impact assessor has a low experience level in this type of project and level of assessment.

The level of confidence for this assessment is determined to be 9 and indicates that the author's confidence in the accuracy of the findings is high:

- The information available, and understanding of the study area by the practitioner is rated as 3, and
- The information available, understanding and experience of this type of project by the practitioner is rated as 3.

1.7 Limitations and Assumptions

The following assumptions and limitations are applicable to this Report:

Assumptions:

- The assessment has been based on the requirements of the Western Cape Department of Environmental Affairs & Development Planning Guidelines (WC DEDP)¹
- The assessment assumes that all necessary consultations with stakeholders, including local communities, authorities, and other interested parties, have been/will be conducted in accordance with legal requirements, and that their views and concerns have been duly considered.
- Whilst most homesteads and housing areas were visited during the site visit in order to confirm their nature and likely visibility of the development, it was not possible to visit all homesteads and housing areas.
- The information and analysis provided in this report is based on the details available during the undertaking of the VIA. As the VIA specialists, we have, to the best of our ability, analysed and interpreted the data provided.
- We operate under the assumption that all information supplied by the Applicant is accurate, current, and reflective of the agreements made with relevant landowners. Our assessments and recommendations are based on the information provided to us, and we rely on the client to ensure that this information is complete and up to date.
- The Project report uses the concept of 'worst case scenario' to identify issues and rate visual impacts. This scenario assumes that all facilities would be constructed at the same time.

Limitations:

- It was not possible to visit all homesteads and housing areas.
- The information and analysis are based on the details available during the undertaking of the VIA, and there is an inherent limitation in the data available at any given time.
- There is a reliance on the accuracy, currency, and completeness of the information supplied by the client. Any decisions regarding development on specific portions of land, including agreements on relocations, demolitions, or other alterations, should be confirmed and discussed directly with the relevant landowners.

¹ The WC DEDP Guidelines offer detailed directives on incorporating visual and aesthetic specialists into the EIA processes. These guidelines represent the primary legislative framework specifically pertaining to Visual Impact Assessments (VIA) in the region. While provincial insights and information will be integrated into the respective reports where feasible, it is important to note that the WC DEDP Guidelines are regarded as the definitive legislative standard for best practices in VIA.

- Regulation 11(3) of the EIA Regulations, which suggests that if more than one activity is part of the same development, a single application may be required, discourages the practice of splitting components or assessing them in isolation, thereby promoting a unified and integrated approach to cumulative impact assessment.
- The findings, assessments, and recommendations represent the professional judgment of the VIA practitioners at the time of the assessment. While every effort has been made to ensure accuracy and completeness, this report does not constitute legal, financial, or other specialised advice.
- The responsibility for implementing the recommendations, mitigation measures, and any other actions outlined in this report lies solely with the client or project proponent. The VIA practitioners are not responsible for monitoring, enforcing, or ensuring compliance with these measures.

2 Project Description

The Proposed Hartland Hospital and Educational Facilities project is a combined healthcare and education precinct proposed on an agriculturally zoned property near Hartenbos, within the Mossel Bay Local Municipality, Garden Route District Municipality, Western Cape. The proposal will transform ~26.831ha of a ~338ha property currently zoned Agriculture Zone I, to enable the establishment of a medical and education precinct together with the required public road and service infrastructure. The proposed land use framework includes provision for a Medical Clinic (Community Zone III), a Secondary School and a Tertiary Education Centre/University (Community Zone I), and associated Public Roads (Transport Zone II).

The proposed development is described as three primary components:

- The first is the school precinct, which includes a Secondary School with supporting facilities such as a school hostel, an administration building and main hall, together with a clubhouse and rugby fields/athletics track.
- The second is the tertiary precinct, comprising a Tertiary Education Centre with student accommodation and associated action sports fields and courts.
- The third is the hospital precinct, including the hospital building(s) and associated infrastructure, as well as provision for future staff accommodation and a helicopter landing pad.

These components are supported by internal circulation infrastructure and parking areas distributed across the precinct.

In addition to the primary built elements, the proposal includes internal and external auxiliary infrastructure. This includes the construction of internal roads and parking bays serving the different portions of the development. Access roads are indicated to range between ~5.2m and ~7.4m in width, with the widest road reserve indicated as ~20m. The proposal also includes wastewater servicing infrastructure, comprising a new sewer pump station on site and a new pressure line connecting the development to the Hartenbos Regional Wastewater Treatment Works (WWTW).

The VIA forms part of the EA process for the proposed development and evaluates the manner in which the introduction of institutional built form, road infrastructure, parking areas, and operational elements (including lighting and the helipad) may alter the visual environment and affect surrounding receptors.

The goal of the VIA is not to predict whether individual receptors will find the project attractive or not. Instead, the goal is to identify important visual characteristics of the surrounding landscape, especially the features and characteristics that contribute to scenic quality, as the basis for determining how and to what degree the proposed project will affect those scenic values.

The primary aim of the impact assessment phase is to ensure that visual impacts are adequately assessed and considered so that the relevant environmental authorities can decide

if the proposed project has unreasonable or undue visual impacts. The secondary aim is to identify effective and practical mitigation measures, where possible.

The VIA process involves several key steps, including:

- Identifying and mapping existing sensitive receptors, buffers, important viewpoints, and view corridors;
- Identifying and screening potential visual concerns;
- Ensuring that the visual assessment will be in compliance with relevant standards, policies, laws, and regulations; and
- Providing recommendations for the impact assessment phase.

The VIA is conducted in accordance with the guidelines provided by relevant authorities, and while there is little legislation relating directly to VIAs, there are guidelines that provide direction for visual assessment as well as a number of laws which aim to protect visual resources.

2.1 Project Location

The proposed Hartland Hospital and Educational Facilities footprint is located on a portion of the Remainder of the Farm Vaalevalley No. 219, near Hartenbos in the Western Cape. The development footprint is positioned immediately adjacent to the N2 Highway, and is located within the administrative area of the Mossel Bay Local Municipality (Garden Route District Municipality, Eden DC4), within Ward 4.

The site is situated between the established urban areas of Hartenbos and Klein-Brakrivier, with the N2 forming a highly prominent regional transport corridor along the site's edge. In straight-line terms, the footprint is located ~1.8km north of Hartenbos, ~2km south-west of Klein Brak River, and ~6km north of Mossel Bay.

Local access to the precinct is proposed from the R102, using two access points:

- the existing access to Remainder Farm 219, located opposite the current N2 subway connection to Hartland Lifestyle Estate; and
- a proposed new access positioned opposite the Swanns Nursery entrance on the R102.

These two access points are intended to be linked by an internal circular route that converges at a planned traffic circle, from which future access is also indicated to the remaining portion of Remainder Farm 219.

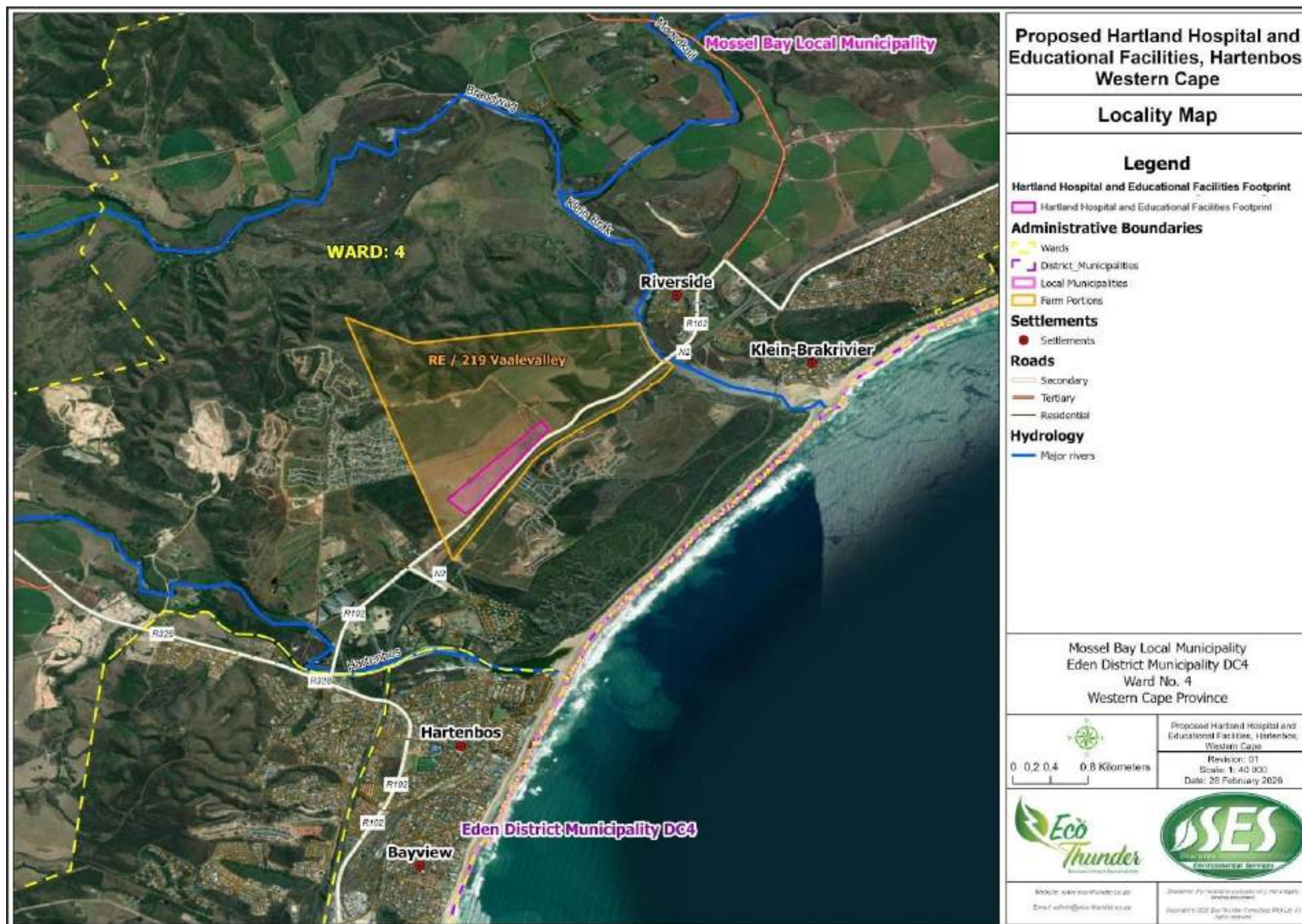


Figure 1: Locality Map

2.2 Project Technical Details

Table 1 and Figures 1 and 2 provide the details of the project, including the main infrastructure components and services that will be required during the project life cycle.

Table 1: Technical Details of the Proposed Hartland Hospital and Educational Facilities

Component	Description/Dimensions
Receiving Environment	- Agriculturally zoned property (Agriculture Zone I) near Hartenbos. - Footprint positioned immediately adjacent to the N2 Highway, with local access from the R102.
District Municipality	Garden Route District Municipality
Local Municipality	Mossel Bay Local Municipality
Ward Number(s)	Ward 4
Farm name(s) and number(s) of properties affected by the proposed development, incl SG 21 Digit Code(s)	Remainder of the Farm Vaalevalley No. 219 (C05100000000021900000)
Nearest Town(s)	Hartenbos (~1.8km south)
Current zoning	Agriculture Zone I
Site Coordinates (centre of development area)	Lat: 34° 5'57.38"S Long: 22° 6'57.17"E
Total extent of the Affected Properties, also referred to as the project site²	~338ha
Total extent of the Development area³	~ 26.831ha
Total extent of the Development footprint⁴	~ 26.831ha
Primary Land Uses Proposed (Planning Framework)	- Medical Clinic (Community Zone III) - Secondary School and Tertiary Education Centre/University

² The project site is that identified area within which the development area and development footprint are located. It is the broader geographic area assessed as part of the BA process, within which indirect and direct effects of the project may occur.

³ The development area is that identified area where the proposed project is planned to be located, within which indirect and direct effects of the project may occur. This area has been selected as a practicable option for the facility, considering technical preference and constraints.

⁴ The development footprint is the defined area (located within the development area) where the project and other associated infrastructure for the mixed-use development is planned to be constructed. This is the actual footprint of the facility, and the area which would be disturbed.

Component	Description/Dimensions
	(Community Zone I) Public Roads (Transport Zone II).
Main Infrastructure Components	- Education precinct: Secondary School, including school hostel, administration building and main hall, plus clubhouse and rugby fields/athletics track. - Tertiary precinct: Tertiary Education Centre, student accommodation, action sports fields and courts. - Hospital precinct: Hospital and associated infrastructure, including future staff accommodation and a helicopter landing pad (helipad).
Access roads and internal roads	Two access points proposed from the R102: - existing access to Remainder Farm 219 opposite the N2 subway connection to Hartland Lifestyle Estate; and - a new access opposite Swanns Nursery. Access points linked by an internal circular route converging at a planned traffic circle, with future access indicated from the traffic circle to the remaining portion of Remainder Farm 219.
Road Dimensions	- Access roads indicated to range between ~5.2m and ~7.4m in width. - Widest road reserve indicated as ~20m.
Parking and Circulation Infrastructure	Network of internal roads and parking bays distributed across the precinct, serving the school, tertiary, and hospital components
Bulk/Municipal Services and Associated Infrastructure	- New sewer pump station proposed on site. - New pressure line proposed from the development site to the Hartenbos Regional WWTW.
Additional Operational Infrastructure	Helipad (with associated operational requirements, which may include lighting and safety infrastructure, subject to final design and operational approvals)
Room Schedule (All Buildings)	Clubhouse: ~350m² - Ablutions: 60m² - B.O.H: 82.7m² - Clubhouse: 207.3m² Hostel Building: ~1314.2m² 2 Bed: 73.7m² 6 Bed: 243.2m² - Ablutions: 42.8m² - Circulation: 167.7m²

Component	Description/Dimensions
	• Covered Terrace: 38.2m² • Dining Room: 259.2m² • Entrance: 131.2m² • Kitchen: 77.8m² • Office: 8.8m² • Reception: 14.2m² • Staff Room: 38.6m² • Store: 14.4m² • Study Hall: 2.4.5m² Main Hall and Admin Building: ~1439.6m² • Admin: 39.1m² • AV Room: 17.5m² • Boardroom: 51.3m² • Classroom: 339.9m² • Coffee Space: 70.7m² • Entrance: 44.2m² • Female Bathroom: 33m² • Foyer: 63.5m² • Headmaster: 26.5m² • Main Hall: 518.6m² • Male Bathroom: 25m² • School Office: 57.1m² • School Reception: 41.3m² • Sick Bay: 9.7m² • Staff: 4.8m² • Stage: 87m² • Store: 5m² • WC: 5.5m² School Classrooms Building: ~7131.5m² • Ablutions: 577.2m² • Circulation: 1266.3m² • Classroom: 4622.9m² • Computer Sciences: 125.3m² • Covered Podium: 48.5m²

Component	Description/Dimensions
	• Hall: 125.3m² • Library: 172.1m² • Store: 193.7m²

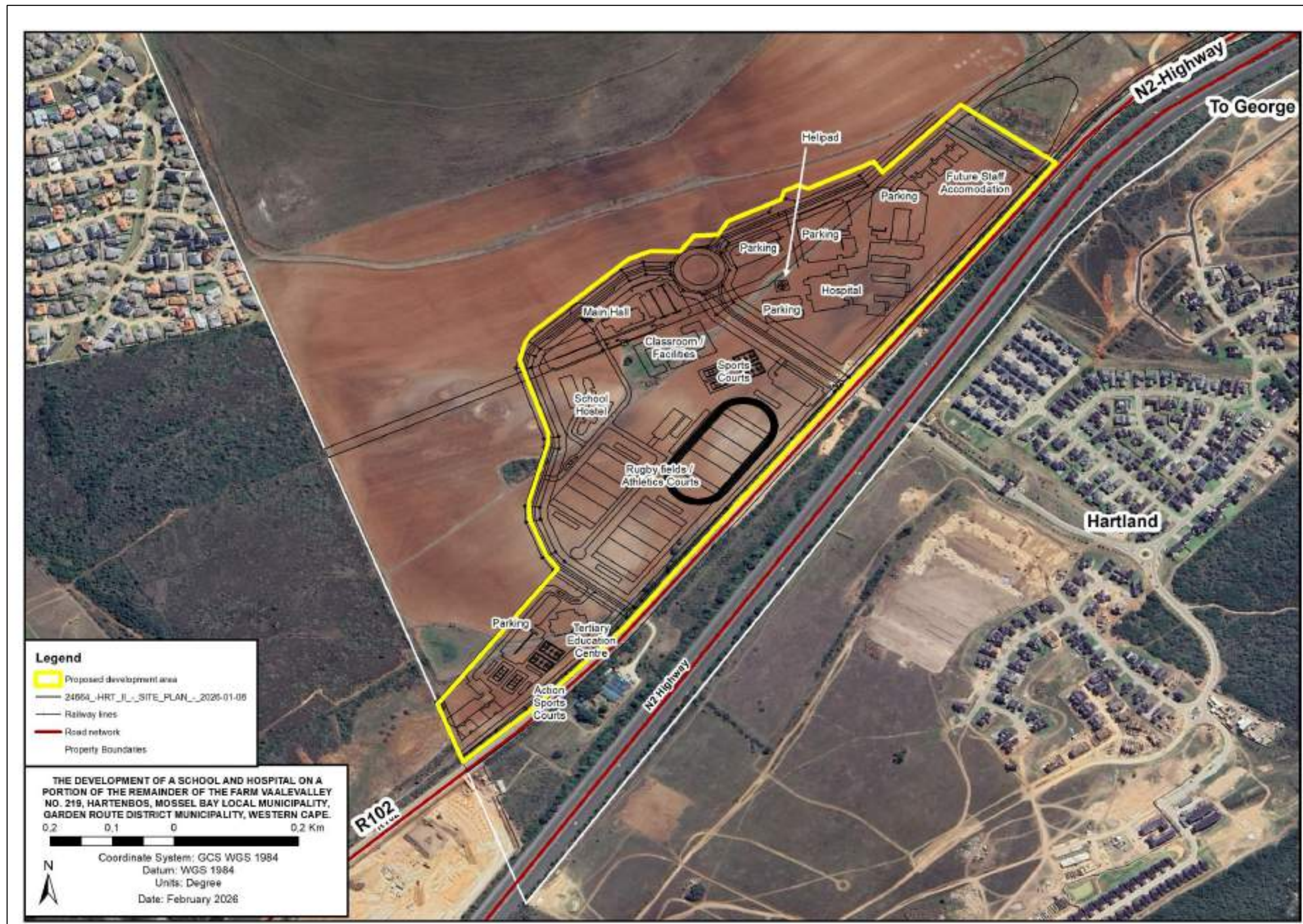


Figure 2: Layout of the Proposed Hartland Hospital and Educational Facilities

2.3 Assessment Alternatives

2.3.1 Location Alternatives

No alternative site locations for the proposed Hartland Hospital and Educational Facilities have been identified for assessment at this stage. The proposal is tied to an agriculturally zoned property near Hartenbos (Remainder of Farm Vaalevalley No. 219) and the development concept, access arrangement and service connections have been described by the Proponent for this specific locality.

2.3.2 Layout / Design Alternatives

At the time of assessment, no formally defined layout alternatives (e.g., alternative precinct configurations, alternative placement of key buildings, or alternative positioning of the helipad) have been provided. The assessment therefore considers the precinct arrangement described by the Proponent, comprising three functional components:

- the school precinct,
- the tertiary precinct, and
- the hospital precinct, supported by internal roads, parking areas and associated services.

2.3.3 Infrastructure / Access Alternatives

Two access points to the site from the R102 have been provided:

- an existing access opposite the N2 subway connection to Hartland Lifestyle Estate,
- and a new access opposite the Swanns Nursery entrance.

These access points are proposed to be linked by a circular internal route converging at a planned traffic circle, with future access also indicated to the remaining portion of Remainder Farm 219. No alternative access arrangements have been presented for assessment at this stage.

The proposal also includes a new sewer pump station and a new pressure line connecting to the Hartenbos Regional WWTW. No routing alternatives for this infrastructure have been provided for assessment. Where infrastructure routing is subsequently confirmed and/or revised, the VIA findings remain applicable at a precinct level, while any materially different routing through visually sensitive areas would require confirmation that the visual effects do not change materially.

2.3.4 No-Go Alternative

The “no-go” alternative refers to not proceeding with the proposed Hartland Hospital and Educational Facilities development. Under this alternative, the existing visual environment would remain largely unchanged, retaining the current agricultural zoning context and the prevailing

landscape character along the N2/R102 corridor edge. There would be no introduction of institutional built form, associated roads, parking areas, helipad infrastructure, or service-related structures such as the sewer pump station.

2.4 Technology Identified

The proposed facilities and infrastructure represent standard institutional development components intended to support education and healthcare functions at precinct scale. The inclusion of phased components such as future staff accommodation indicates that the layout allows for operational expansion over time, while the helipad forms part of the healthcare-support infrastructure associated with emergency and clinical access requirements.

3 Requirement for a VIA

As outlined in Table 2, the requirement for visual input may arise from the characteristics of both the receiving environment and the project itself. The following indicators are identified as potential signals for the necessity of visual input:

The nature of the receiving environment:

- Areas with protection status, such as national parks or nature reserves;
- Areas with proclaimed heritage sites or scenic routes;
- Areas with intact wilderness qualities, or pristine ecosystems;
- Areas with intact or outstanding rural or townscape qualities;
- Areas with a recognised special character or sense of place;
- Areas lying outside a defined urban edge line;
- Areas with sites of cultural or religious significance;
- Areas of important tourism or recreation value;
- Areas with important vistas or scenic corridors; and
- Areas with visually prominent ridgelines or skylines.

The nature of the project:

- High intensity type projects including large-scale infrastructure;
- A change in land use from the prevailing use;
- A use that is in conflict with an adopted plan or vision for the area;
- A significant change to the fabric and character of the area;
- A significant change to the townscape or streetscape;
- Possible visual intrusion in the landscape; and
- Obstruction of views of others in the area.

These indicators can help determine whether a visual impact assessment is necessary for a particular project. It's important to note that this list is not exhaustive and other factors may also suggest the need for visual input.

3.1 Components of Visual Studies

As per Western Cape Department of Environmental Affairs & Development Planning: Guideline for Involving Visual and Aesthetic Specialists in EIA Processes Edition 1 (CSIR, 2005), the typical components of visual studies according to Box 8 are as follows:

Table 2: Typical Components of Visual Studies

Box 8: Typical Components of Visual Studies
• Identification of issues and values relating to visual, aesthetic and scenic resources through involvement of I&APs and the public. • Identification of landscape types, landscape character and sense of place, generally based on geology, landforms, vegetation cover and land use patterns; • Identification of viewsheds, view catchment area and the zone of visual influence, generally based on topography; • Identification of important viewpoints and view corridors within the affected environment, including sensitive receptors; • Indication of distance radii from the proposed project to the various viewpoints and receptors; • Determination of the VAC of the landscape, usually based on topography, vegetation cover or urban fabric in the area; • Determination of the relative visibility, or visual intrusion, of the proposed project. • Determination of the relative compatibility or conflict of the project with the surroundings; • A comparison of the existing situation with the probable effect of the proposed project, through visual simulation, generally using photomontages.

The approach to visual assessment should be based on both quantitative and qualitative aspects. Quantitative aspects often make use of landscape resource classification methods. These may include combinations of landforms (geomorphology), vegetation cover, and land use mapping.

The actual approach and method used would depend on the level of visual input required in the BA process. Effective interaction with other specialists should be facilitated by the EIA practitioner to ensure that an integrated approach is adopted, where the various components of the environment are seen.

This visual guideline document is therefore an attempt to develop a 'best practice' approach for visual specialists, EIA practitioners and authorities involved in the BA process.

4 Legislation and Policy Review

A vital aspect of this process involves assessing the suitability of a proposed development in relation to key planning and policy documents.

Although there is limited legislation specifically addressing VIAs, there exist guidelines that offer guidance for conducting visual assessments. Additionally, several laws are in place to safeguard visual resources, as well as regulations applicable to specialists in various fields.

This report adheres to the following legal requirements and guideline documents:

- International Good Practice.
- National Legislation and Guidelines; and
- Policy Fit.

4.1 International Good Practice

The following documentation provides good practice guidelines, specifically:

- Guidelines for Landscape and VIA⁵.
- Millennium Ecosystem Assessment (MEA);
- United Nations Educational, Scientific and Cultural Organisation (UNESCO); and
- World Heritage Convention (WHC).

4.1.1 Guidelines for Landscape and Visual Impact Assessment, Second Edition

These guidelines establish principles that promote consistency, credibility, and effectiveness in landscape and VIA within the BA process. According to the guidelines, landscape encompasses the entirety of our external environment, whether in urban or rural areas, including buildings, streets, open spaces, trees, and their interconnected relationships. The guidelines highlight the importance of landscape for various reasons, including being a natural resource, containing archaeological and historical evidence, providing habitats for plants and animals (including humans), evoking sensual, cultural, and spiritual responses, and contributing to our quality of life in urban and rural settings. Additionally, landscapes offer valuable opportunities for recreation and resources.

4.1.2 Millennium Ecosystem Assessment

According to the Ecosystems and Human Well-being document compiled by the MEA in 2005, ecosystems play a vital role in supporting human well-being through their provisioning, regulating, cultural, and supporting services. The document highlights the increasing evidence

⁵ The Western Cape Guidelines are the only official guidelines for VIA reports in South Africa and can be regarded as best practice throughout the country.

of human activities negatively impacting ecological systems globally, raising concerns about the potential consequences of these ecosystem changes on human well-being.

The MEA defined the following non-material benefits that can be obtained from ecosystems.

- **Inspiration:** Ecosystems provide a rich source of inspiration for art, folklore, national symbols, architecture, and advertising.
- **Aesthetic values:** Many people find beauty or aesthetic value in various aspects of ecosystems, as reflected in the support for parks, scenic drives, and the selection of housing locations.
- **Sense of place:** Many people value the “sense of place” that is associated with recognised features of their environment, including aspects of the ecosystem.
- **Cultural heritage values:** Many societies place high value on the maintenance of either historically important landscapes (“cultural landscapes”) or culturally significant species; and
- **Recreation and ecotourism:** People often choose where to spend their leisure time based in part on the characteristics of the natural or cultivated landscapes in a particular area. (MEA, 2005)

The MEA Ecosystems and Human Well-being: Synthesis report indicates that there has been a “rapid decline in sacred groves and species” in relation to spiritual and religious values, and aesthetic values have seen a “decline in quantity and quality of natural lands”. (MEA, 2005).

4.2 National Legislation and Guidelines

To comply with the Visual Resource Management requirements, it is necessary to clarify which National and Regional planning policies govern the proposed development area to ensure that the scale, density and nature of activities or developments are harmonious and in accordance with the sense of place and character of the area.

4.2.1 National Environmental Management Act (Act 107 of 1998), EIA Regulations

The specialist report is in accordance with the specification on conducting specialist studies as per Government Gazette (GN) R 982 of the National Environmental Management Act (NEMA) (Act 107 of 1998). The mitigation measures as stipulated in the specialist report can be used as part of the EMP and will be in support of the BA and Appendix 6 of the EIA Regulations 2014, as amended on 7 April 2017.

Specialist Screening Protocols are also required by the 2014 EIA Regulations. These were taken into consideration for this project.

4.2.2 NEMA: Protected Areas Act (Act 57 of 2003)

- Management of declared World Heritage Sites (WHS) and buffer areas within South Africa;
- The purpose of the National Environmental Management: Protected Areas Act (Act 57 of 2003) (NEMPAA) is to, inter alia, provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes. To this end, it provides for the declaration and management of various types of protected areas;
- Section 39 of NEMPAA requires the preparation and submission of a management plan for a protected area declared in terms of the Act. The objective of a management plan, as stated in Section 41 of NEPAA, is to ensure the protection, conservation and management of the protected area concerned in a manner that is consistent with the objectives of NEMPAA and for the purpose it was declared;
- Section 50(5) of NEMPAA states that "no development, construction or farming may be permitted in a nature reserve or world heritage site without the prior written approval of the management authority;
- The management authority for a WHS is established through a NEMPAA process. The Management Authority (MA) is located within and funded by the DFFE; and
- The MA is tasked with ensuring that activities within the WHS and its buffer area comply with the approved Conservation Management Plan developed for the WHS.

4.2.3 Western Cape DEA: Guideline for Involving Visual and Aesthetic Specialists in EIA Processes Edition 1 (CSIR, 2005)

Although the guidelines were specifically compiled for the Province of the Western Cape, they provide guidance that is appropriate for any EIA process. According to the Western Cape Department of Environmental Affairs & Development Planning's guideline on involving visual and aesthetic specialists in EIA processes, the following information is relevant for our visual impact assessment report:

- Current South African environmental legislation governing the EIA process includes the National Environmental Management Act (NEMA) (Act No. 107 of 1998) and the EIA regulations under the Environment Conservation Act (Act No. 73 of 1989).
- The Protected Areas Act (NEMA) (Act 57 of 2003, Section 17) aims to protect natural landscapes.
- The National Heritage Resources Act (Act No. 25 of 1999) and associated provincial regulations provide legislative protection for listed or proclaimed sites, such as urban conservation areas, nature reserves, and scenic routes.

- Visual pollution is controlled, to a limited extent, by the Advertising on Roads and Ribbons Act (Act No. 21 of 1940), which deals mainly with signage on public roads.
- The Municipal Systems Act (Act 32 of 2000) requires municipalities to undergo an Integrated Development Planning (IDP) process, including the preparation of a five-year strategic development plan. The IDP process, particularly the spatial component known as the Spatial Development Framework, follows a bioregional planning approach in the Western Cape Province. Bioregional planning aims to achieve landscape continuity, protect natural areas, and integrate social, environmental, and economic criteria in local planning initiatives.

Specialists should refer to the relevant provincial or local authority to determine the existence of policies, by-laws, or other restrictions regarding visual impact or the protection of scenic, rural, or cultural resources.

4.3 Policy Fit

Policy fit refers to the extent to which the proposed changes to the landscape align with planning and policy at the International, National, Provincial, and Local levels.

Regarding international best practices, the proposed landscape modifications do not meet the criteria for triggering best practice guidelines, as there are no significant cultural or landscape resources within the site or its immediate surroundings.

ETC followed the United States Bureau of Land Management's Visual Resource Management method (USDI, 2004) to determine the significance of the landscape. This method, based on mapping and Geographical Information System (GIS) techniques, enhances objectivity and consistency by utilising standardised assessment criteria.

5 Approach and Methodology

5.1 Purpose of the Study

The purpose of the study is to document the baseline and to ensure that the visual/aesthetic consequences of the proposed Project are understood. The report therefore aims to identify scenic resources, and visually sensitive areas or receptors. It also aims to identify key concerns or issues relating to potential visual impacts arising from the Project, and which must be addressed in the assessment phase.

5.2 Approach to Study

Assessing the effects of the development on landscape resources and visual amenity involves a combination of quantitative and qualitative evaluations. Visual impact is evaluated based on the worst-case scenario, while landscape and visual assessments are distinct but interconnected processes. The landscape analysis and assessment of impacts contribute to the baseline for Visual Impact Assessment studies. The assessment of potential landscape impacts focuses on the physical landscape as an environmental resource. In contrast, visual impacts are evaluated as the effects on viewers when an object is introduced into a view or scene.

To conduct the study, Geographic Information System (GIS) software was utilised as a tool for generating viewshed analysis and applying relevant spatial criteria to the proposed infrastructure. A detailed Digital Terrain Model (DTM) of the study area was created using topographical data provided by the Japan Aerospace Exploration Agency (JAXA), specifically the ALOS Global Digital Surface Model "ALOS World 3D - 30m" (AW3D30) elevation model.

The scope of work for this report includes:

- Identify the scope of work/assessment required;
- Establish the baseline profile of the Environment;
- Identify potentially sensitive visual receptors within the receiving environment;
- Determine visual distance/observer proximity to the development;
- Determine viewer incidence/viewer perception;
- Determine the VAC of the landscape;
- Determine significance of identified impacts;
- Propose mitigation to reduce or alleviate potential adverse visual impacts;
- Conclude with an impact statement of significance and a project recommendation.

The VIA is determined according to the nature, extent, duration, intensity or magnitude, probability, and significance of the potential visual impacts, and will propose management

actions and/or monitoring programmes and may include recommendations related to the proposed Hartland Hospital and Educational Facilities.

The visual impact is determined for the highest impact-operating scenario (worst-case scenario). Varying climatic conditions (i.e., different seasons and day-to-day weather conditions) are not explicitly modelled; however, seasonal context and visibility considerations are addressed qualitatively based on the site visit and available baseline information.

The VIA considers potential cumulative visual impacts, or alternatively the potential to concentrate visual exposure/impact within the region.

5.3 Site Verification and Specific VIA Approach

Selecting the appropriate approach for a VIA is a crucial step in the process. The method and input for a VIA should be determined based on the expected level of visual impact, the nature of the project, and the characteristics of the receiving environment– that is the baseline landscape and visual conditions.

This in turn will form the basis from which the magnitude and significance of the landscape and visual effects of the development may be identified and assessed.

Table 3 provides the site verification report for an analysis of the existing landscape features, characteristics, the way the landscape is experienced, and the condition and the value or importance of the landscape and visual resources in the vicinity of the proposed development as well as the level of assessment deemed suitable for the Hartland Hospital and Educational Facilities development.

Based on the evaluation conducted, the findings from the site verification report indicate that a Level 4 Visual Assessment will be required.

Table 3: Categorisation of Approaches and Methods Used for Visual Assessment

Approach and Method	Type of Issue				
	Little or No Visual Impact Expected	Minimal Visual Impact Expected	Moderate Visual Impact Expected	High Visual Impact Expected	Very High Visual Impact Expected
Level of Visual Assessment Recommended	Level 1 Visual Assessment	Level 2 Visual Assessment	Level 3 Visual Assessment	Level 4 Visual Assessment	

5.4 Significance of Visual Impact

Having established the specific type of VIA required, it is now crucial to delve into the generic aspects and themes associated with a VIA. These elements will be examined at a site-specific

level within this report, enabling us to accurately identify and understand the unique impacts associated with the site under consideration⁶.

A combined quantitative and qualitative methodology, as supplied by the Environmental Practitioner, was used to describe the significance of impacts.

- **Significance** of impact is rated as consequence of impact multiplied by the probability of the impact occurring; and
- **Consequence** is determined using intensity, spatial scale, and duration criteria.

A summary of each of the qualitative descriptions along with the equivalent quantitative rating scale is given in Figure 3 below.

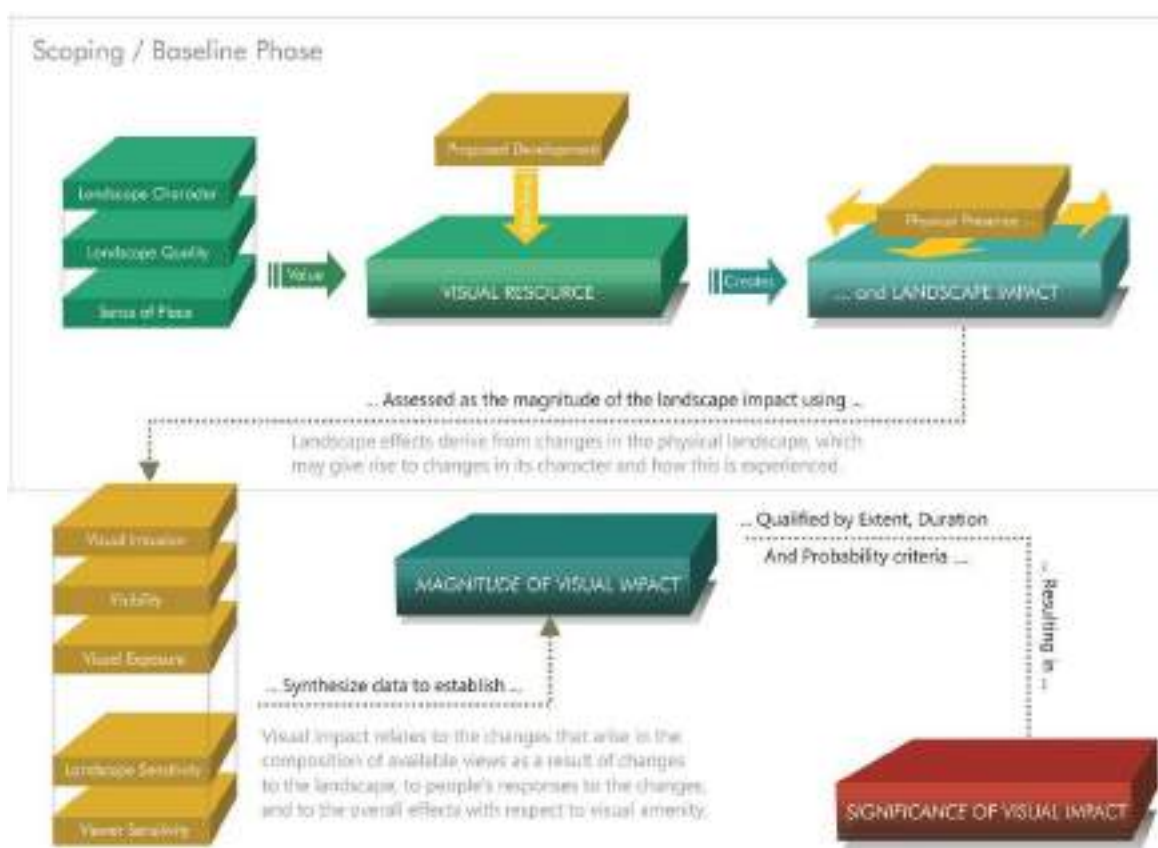


Figure 3: VIA Process

5.4.1 Landform (Topographical) and Micro-Topographical Context

The visibility of a feature within a landscape is significantly influenced by its landform context. Factors such as the feature's placement (e.g., valley bottom or ridge top), the viewer's location, and the slope's morphology can either enhance or obstruct visibility. Micro-topographical elements like buildings or vegetation can also screen views, potentially eliminating visual

⁶ Themes and Elements discussed in 5.4.1 to 5.4.9 will be site specifically addressed in Section 6.

impact. Therefore, a comprehensive understanding of the topographical context is crucial in assessing visual impact.

5.4.2 Landscape Development Context

The presence/existence of other anthropogenic objects associated with the built environment may influence the perception of whether a new development is associated with a visual impact. Where buildings and other infrastructure exists, the visual environment could be already altered from a natural context and thus the introduction of a feature into this setting may be considered to be less of a visual impact than if there was no existing built infrastructure visible.

5.4.3 Receptor Type and Nature of the View

Visual impacts can be perceived by various types of receptors, including individuals driving along roads or residing/working in the vicinity where the structural feature is visible. The type of receptor influences the typical "view" of a potential source of visual impact, with views being constant in the case of residences or permanent human habitats, and transient in the case of vehicles moving along a road. The nature of the view encountered directly influences the intensity of the visual impact experienced.

5.4.4 Presence of Receptors

It is important to note that visual impacts are only experienced when there are receptors present to experience the impact; thus, in a context where there are no human receptors or viewers present there are not likely to be any visual impacts experienced.

5.4.5 Viewing Distance

The distance between the viewer or receptor location and an object is the primary factor influencing the perception of visual impacts. Beyond a certain distance, even large structural features become less visible and blend into the surrounding landscape. The visibility of an object tends to decrease exponentially as the distance from the object increases. The maximum impact is typically felt by receptors within a distance of 500m or less.

As one moves away from the source of impact, the visual impact diminishes exponentially. At a distance of 1000m, the impact is approximately one-quarter of that experienced at 500m. At distances of 5000m or more, the impact becomes negligible.

5.4.6 Sense of Place

According to Lynch (1992), a sense of place is the extent to which a person can recognise or recall a place as being distinct from other places - as having a vivid, unique, or at least particular character of its own. The sense of place for the study area derives from a combination of the local landscape types described above, their relative 'intactness', and their impact on the senses.

Sense of place goes hand in hand with place attachment, which is the sense of connectedness a person/community feels towards certain places. Place attachment may be evident at different

geographic levels, e.g., site specific (e.g., a house, burial site, or tree where religious gatherings take place), area specific (e.g., Hartenbos), and physiography specific (e.g., wetlands). Territorial behaviour is viewed as a set of behaviours and cognition a group exhibits based on perceived ownership. The concept of sense of place attempts to integrate the character of a setting with the personal emotions and memories associated with it.

Much of what is valuable in a culture is embedded in place, which cannot be measured in monetary terms. It is because of a sense of place and belonging that people loath to be moved from their dwelling place, despite the fact that they will be compensated for the inconvenience and impact on their lives. Places/natural resources should be assessed in terms of its cultural value by studying visiting and consumption patterns, behaviour patterns, etc.

5.4.7 Viewer Perception

The perception of visual impact by viewers is subjective and influenced by various factors, including the aesthetic value, identity, and sense of place associated with a landscape. The way development is perceived can vary; it may be viewed positively if it is seen as linked to progress or human upliftment, or negatively if it disrupts a cherished landscape.

The character of the landscape, its scenic value, and the surrounding land use context all play a role in determining whether new developments are seen as unwelcome intrusions. Areas of natural conservation or scenic beauty are often more sensitive to visual impacts since the natural or scenic character of the landscape contributes to its overall appeal. In such areas, structural features like high voltage power lines may be perceived as incongruous within a natural setting, often resulting in a perceived visual impact.

5.4.8 Visual Character

Visual character is shaped by human perception and the observer's response to the relationships and composition of the landscape, including the land uses and identifiable elements within it. The assessment of visual character involves describing the scenic attractiveness of the landscape, considering the landscape attributes that hold aesthetic value and make significant contributions to the visual quality of the views, vistas, and viewpoints within the study area (ALA, 2013).

5.4.9 Weather and Visibility

Meteorological factors, such as weather conditions like haze or heavy mist, can influence the nature and intensity of a potential visual impact associated with a structural feature. These factors directly impact visibility, potentially altering the way the structural feature is perceived and affecting the extent of its visual impact.

Vegetation, particularly trees and shrubs, can serve as an effective visual screen for lower-level built elements (e.g., boundary treatments, parking areas, service yards and associated infrastructure), helping to mitigate visual impacts on surrounding receptors. By strategically retaining and/or planting indigenous vegetation along the development edges, views of built form can be filtered or softened, assisting the development to integrate more harmoniously into

the receiving landscape. However, it is crucial that screening vegetation is positioned and selected appropriately, considering root zones, maintenance requirements, safety sightlines and service corridors. Vegetation can therefore contribute meaningfully to visual mitigation, but its placement requires careful planning to balance aesthetic and operational considerations.

5.5 Methodology

The following methodology was employed for the assessment:

- A comprehensive field survey was conducted to accurately document and describe the receiving environment. **Refer to Section 6.**
- The physical characteristics of the project components were described and depicted based on information provided by SES. **See Section 2 and Section 6 for a detailed overview.**
- The visual resource general landscape characterisation, representing the receiving environment, was mapped using data from the field survey, Google Earth imagery, and Mucina and Rutherford's (2006) reference book, *"The Vegetation of South Africa, Lesotho, and Swaziland"*. The landscape description focused on the natural features of the land rather than subjective viewer responses.
- The landscape's character was evaluated and rated based on its aesthetic appeal, utilising established research in perceptual psychology as the foundation, and its sensitivity as a landscape receptor. **See Section 6 for a detailed overview.**
- The unique and distinct sense of place in the study area was described, considering the spatial form and character of the natural landscape, as well as the cultural transformations associated with the historical and current land use. **Section 6.1 for a detailed overview.**
- Viewshed analysis was conducted from the proposed project site to determine visual exposure and assess the topography's capacity to absorb potential visual impacts. The analysis considered the dimensions of the proposed structures and activities. **See Section 7 for a detailed overview.**
- The potential impacts of the proposed projects on the visual environment were identified and rated using SES significance rating criteria. **More information can be obtained in Section 8.1.**
- Recommendations were provided for mitigating the negative impacts of the proposed projects. **See Section 8.2 for a detailed overview.**

5.6 Project Phases and Activities

Activities to be undertaken during each of the phases are described in the following sections.

5.6.1 Environmental Authorisation and Public Participation

The stakeholder consultation process is an essential component of this VIA. Rather than conducting a separate consultation, we have integrated this process with the public participation for the environmental authorisation documents. This integrated approach provides stakeholders, government authorities, and other interested parties with a 30-day period to review the VIA document and provide feedback.

All comments received during this consultation period will be carefully considered and incorporated into the final VIA report. This ensures that the assessment is comprehensive, accurate, and addresses stakeholder concerns effectively.

5.6.2 Design Phase

This phase would include the clearance of vegetation, installation of perimeter fencing and levelling of the site and preliminary earthworks. Thereafter the Project site will be marked out, a construction camp set up and the access road to the site is constructed. The clearance of vegetation is not anticipated to be site wide and will depend on the detailed layout of the proposed project⁷.

5.6.3 Construction Phase

Final design refinement and micro-siting of infrastructure (where applicable), informed by topographical conditions and any relevant environmental approvals.

- Site establishment, including demarcation of construction areas, establishment of temporary laydown/stockpile areas, and installation of temporary construction services (where required).
- Vegetation clearance and site preparation, including clearing within approved development areas and the formation or upgrading of access routes (where required).
- Earthworks, including cut-and-fill (as required), excavation for foundations, and the preparation of building platforms.
- Construction of internal roads, access points, and associated stormwater management infrastructure.
- Construction of buildings and associated structures for the education precinct (secondary school, hostel, administration building, main hall, clubhouse and associated sports facilities) and tertiary precinct (education facilities and student accommodation, including courts/fields).

⁷ During the design phase it is advisable that landowners and occupiers be engaged to ensure structures are adequately avoided

- Construction of the hospital precinct and associated infrastructure, including provision for future staff accommodation and the helipad (as applicable to the approved design).
- Installation of services and reticulation, including water, electrical, telecommunications, and wastewater infrastructure, including the sewer pump station and pressure line connection to the Hartenbos Regional WWTW.
- Construction of parking areas, sidewalks/pedestrian routes, boundary treatments (where applicable), and associated external works.
- Site rehabilitation and stabilisation of disturbed areas not required for permanent infrastructure (where required), including erosion control and reinstatement/landscaping where applicable.
- Testing, inspection and commissioning of completed infrastructure and services.
- De-establishment of construction areas and removal of construction equipment and temporary infrastructure no longer required.

The construction phase programme will be confirmed by the appointed contractor and may be implemented in phases. For the purposes of this VIA, construction is assumed to extend over a period of months, with the most pronounced visual effects being temporary and largely confined to the construction period. The programme may be influenced by factors such as procurement lead times, weather conditions, programme sequencing, and unforeseen construction constraints.

5.6.4 Operational Phase

The proposed Hartland Hospital and Educational Facilities project is anticipated to operate on a continuous basis, with healthcare functions requiring 24-hour, seven-day-a-week operation, and education-related functions operating primarily during normal institutional hours, with extended hours associated with residences/hostels, sport and extracurricular activities, security, and facility management. The operational phase of the proposed project will comprise activities typically associated with institutional healthcare and education precincts, including:

- Day-to-day operation of the hospital/medical facilities, including patient services, clinical support functions, and associated administrative activities;
- Day-to-day operation of the secondary school and tertiary education facilities, including teaching, learning, administration, and management of hostel/student accommodation;
- Routine cleaning and housekeeping for all buildings and external areas, including periodic cleaning of façades, paved surfaces, and public circulation areas;
- Ongoing maintenance of buildings and associated infrastructure, including roofs, façades, internal services, and external works (roads, parking areas, sidewalks and stormwater infrastructure);

- Maintenance and management of landscaped and open areas, including vegetation management, irrigation (where applicable), and upkeep of sports fields, tracks and courts;
- Operation and maintenance of precinct services and reticulation infrastructure, including electricity supply and backup systems (if applicable), water supply, and wastewater conveyance infrastructure, including the sewer pump station and pressure line;
- Management of exterior and security lighting in accordance with operational requirements and applicable standards;
- Continuous site security and access control, including monitoring of access points, patrols and surveillance where required;
- Operational waste management, including collection, temporary storage and removal of general waste and recyclables, and the management of healthcare-related waste streams in accordance with applicable regulatory requirements and contracted service arrangements;
- Water use for sanitation and general cleaning, and for irrigation and dust suppression where required during dry periods; and
- Operation of the helipad (where applicable), including compliance with safety and operational requirements and the management of associated infrastructure.

5.6.5 Decommissioning Phase

The proposed Hartland Hospital and Educational Facilities project is intended to operate as a long-term institutional precinct. Should the development, or any component thereof, be discontinued or replaced in future, decommissioning would be undertaken in accordance with the relevant statutory requirements and any conditions of approval applicable at the time.

Decommissioning would typically include the phased closure of facilities, removal of movable equipment, and the demolition and removal of buildings and associated infrastructure where these are not required for an alternative use. Services would be safely isolated and made safe, including decommissioning of the sewer pump station and associated on-site infrastructure, as well as securing the pressure line connection in accordance with municipal requirements.

Disturbed areas would then be stabilised and rehabilitated as appropriate to the intended post-closure land use, with feasible materials salvaged for reuse or recycling and the remainder disposed of at licensed facilities in accordance with applicable regulations and good industry practice.

6 Baseline Environmental Profile

6.1 Character and Nature of Environment

The proposed Hartland Hospital and Educational Facilities footprint is located near Hartenbos in the Western Cape, within the Mossel Bay Local Municipality (Garden Route District Municipality, Eden DC4; Ward 4). The development footprint is positioned immediately adjacent to the N2 Highway, between the established urban areas of Hartenbos and Klein-Brakrivier.

The area surrounding the site is characterised by a mix of coastal urban development and expanding residential/estate-type development, together with remaining agricultural and open land. The N2 and R102 form dominant linear transport features in the area, and settlements in the broader receiving environment include Hartenbos and Bayview to the south and south-west, and Klein-Brakrivier, Riverside and Reebok to the north-east.

The local landscape is further influenced by the Klein Brak River system and associated wetlands and drainage features, as well as natural vegetation remnants within the broader area. The mapped ecological setting includes threatened ecosystem types in the wider vicinity, including Mossel Bay Shale Renosterveld and Hartenbos Dune Thicket, among other coastal and fynbos-related units. Together, these developed and natural components define the character of the receiving environment within which the proposed institutional precinct will be established.

6.1.1 Climate Conditions

The proposed Hartland Hospital and Educational Facilities project is located near Hartenbos within the Mossel Bay area of the Western Cape. The local climate is influenced by the coastal setting, resulting in generally moderate conditions, periodic strong winds, and seasonal variation in temperature and rainfall that affects vegetation condition, ground cover, and typical atmospheric conditions across the year.

Summer: Summers in the Mossel Bay area are typically warm and dry, with daytime temperatures ranging between 24°C and 27°C. Rainfall is infrequent, averaging around 18mm per month, contributing to drier conditions and arid landscapes, particularly during heatwaves. These conditions result in longer days and clear skies, which are prominent features of the summer landscape.

Winter: Winters in Mossel Bay are cooler and wetter, with temperatures typically ranging between 11°C and 19°C. Rainfall is more prevalent, with monthly averages between 25mm and 34 mm, especially in the coastal and higher-altitude areas. The cooler temperatures and increased rainfall result in a greener, more verdant landscape during this season, though the weather can also be windy.

The area surrounding the proposed Hartland Hospital and Educational Facilities is visually diverse, with a combination of residential development and natural landscapes. The region's

climate, characterised by distinct seasonal variations in temperature and precipitation, plays a significant role in shaping the visual experience of the landscape. During the dry summer months, the landscape takes on a more arid appearance, while the wetter winter months result in a greener, more lush visual environment.

6.1.2 Topography and Landscape

The proposed Hartland Hospital and Educational Facilities site is located within a coastal landscape characterised by a transition from gently rising inland terrain to lower-lying coastal plains and river-associated areas. The broader area includes undulating slopes, localised drainage features, and low-lying wetland/floodplain areas associated with the Klein Brak River system and its tributaries. This pattern is reflected in the topo-hydrological mapping, which shows higher ground inland and more extensive wetland and river-related features in the broader receiving environment.

The North-to-South elevation profile indicates a clear change in elevation over the measured transect. The profile starts at ~55.24m and declines to ~13.88m over a distance of ~1,322.9m, representing an overall decrease of ~41.36m. The profile shows a generally consistent downward gradient, with a short localised rise early in the transect, followed by a gradual but sustained decline toward the southern end. The maximum recorded slope values along this profile are approximately 11.05% (positive) and -28.03% (negative), indicating that while much of the transect comprises moderate gradients, there are sections of steeper change.

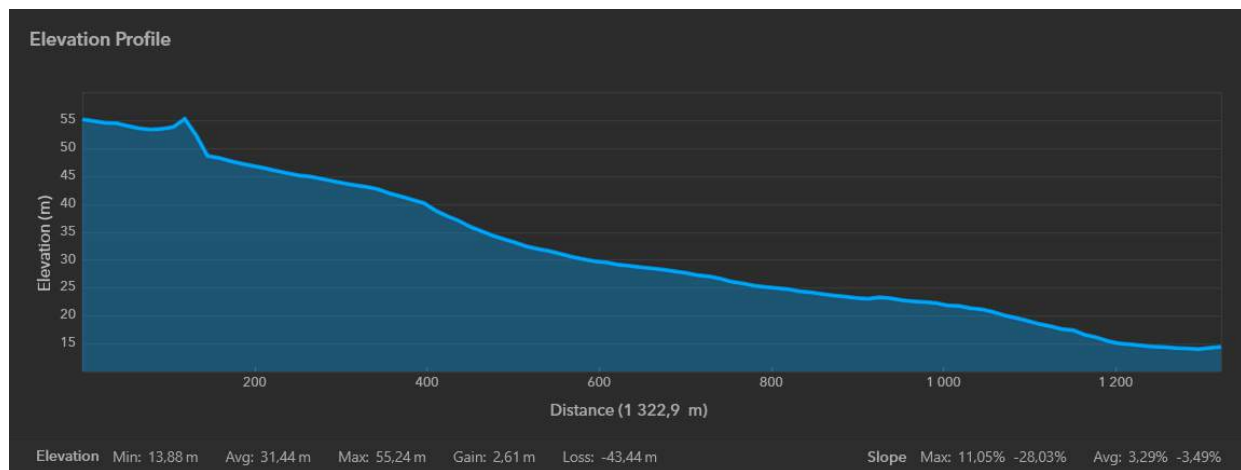


Figure 4: North to South Elevation Profile

The west-to-east elevation profile presents a shorter transect but similarly indicates a change in elevation across the site context. The profile begins at ~47.39m, declines to a minimum of ~28.59m, and then rises slightly toward the end of the transect. This change occurs over a distance of ~368.1m, reflecting an overall elevation range of ~18.80m between the highest and lowest points. The profile suggests a general west-to-east descent into a shallow low point (around the mid-to-late portion of the transect), followed by a gentle rise. The maximum recorded slope values along this profile are ~7.24% (positive) and -16.30% (negative), indicating generally moderate gradients with a few steeper short sections.

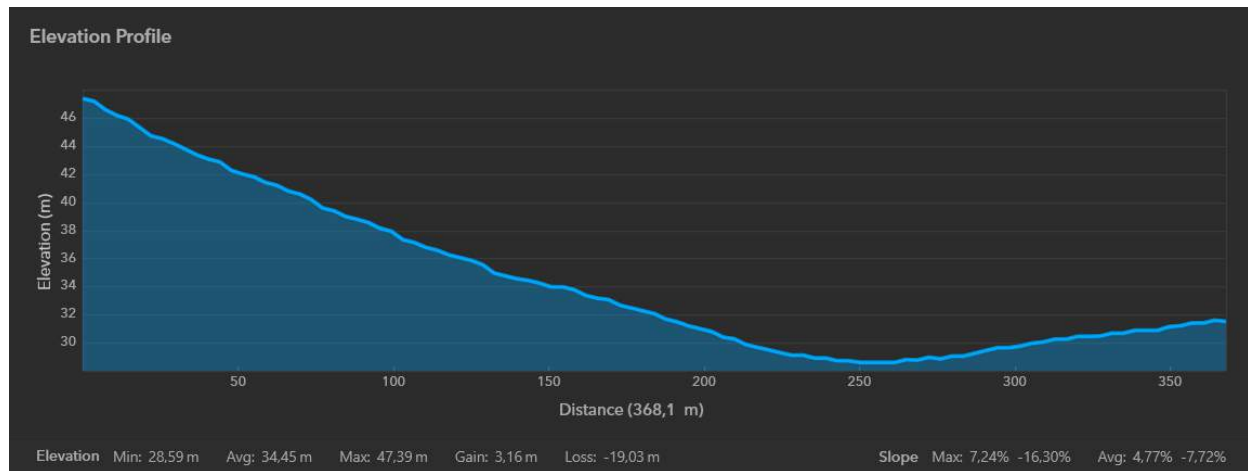


Figure 5: West to East Elevation Profile

At a broader scale, the landscape around the proposed footprint is shaped by the interaction between topography and hydrology. The proximity of the N2 transport corridor and the presence of river and wetland features in the surrounding area contribute to a landscape where higher inland ground, drainage lines, and lower-lying plains occur in close proximity. This setting forms the topographic and landscape context within which the proposed institutional precinct will be developed.

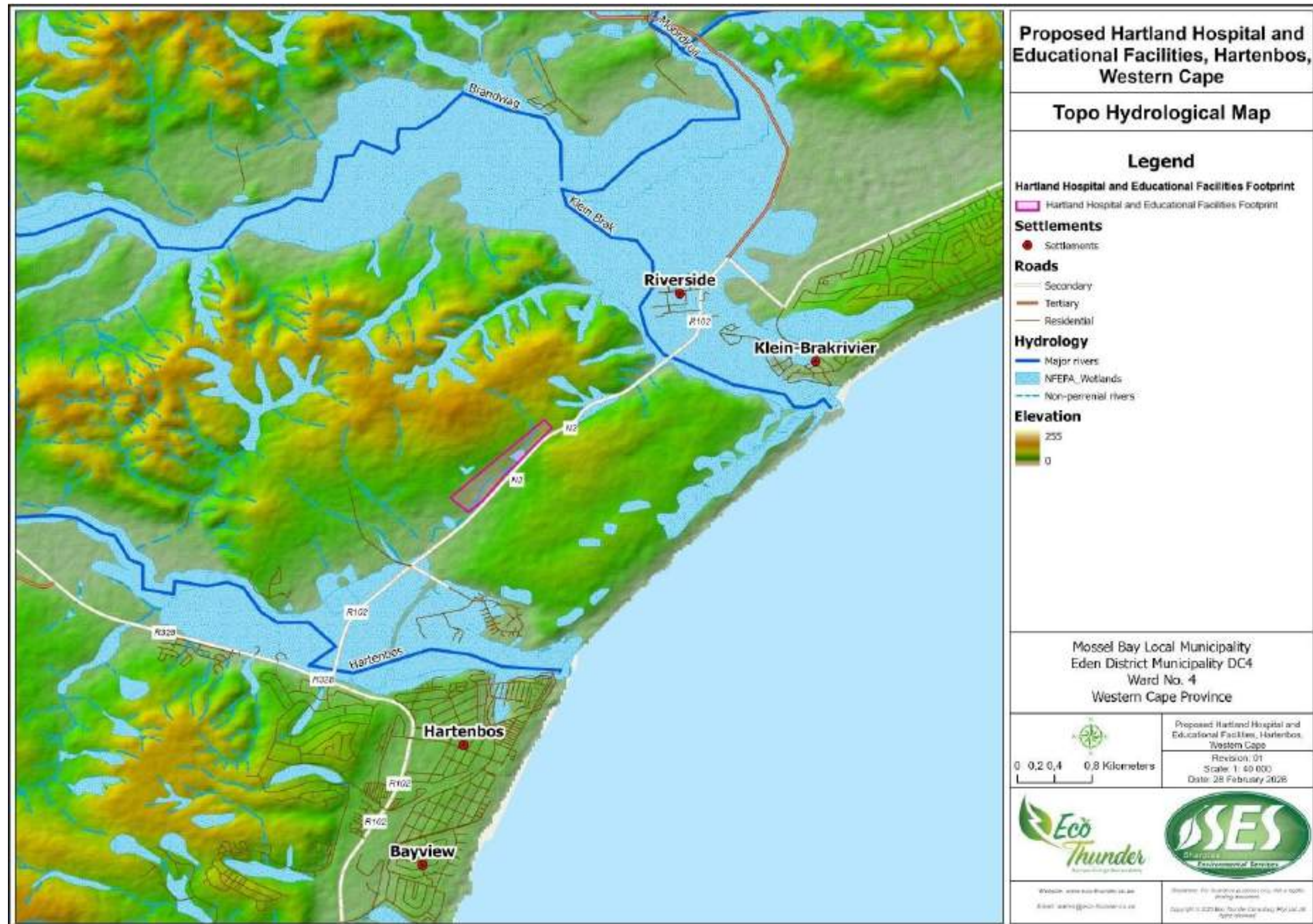


Figure 6: Map of Topographical Profile of the Site

6.1.3 Natural Landscapes

The area surrounding the proposed Hartland Hospital and Educational Facilities includes a combination of natural and semi-natural features that contribute to the broader ecological and landscape character of this part of the Garden Route. The proposed development footprint falls within the Gouritz Cluster Biosphere Reserve, which forms part of a wider conservation landscape that incorporates river corridors, wetland systems, and remaining natural vegetation within a matrix of transformed land uses.

Several river systems occur within the broader receiving environment and provide the main natural drainage structure for the area. The Klein Brak River is located ~1.4km north of the proposed development area, the Brandwag River ~3.5km north-west, and the Hartenbos River ~1.2km south. These rivers, together with associated riparian areas and drainage features, function as ecological corridors and are important in shaping the pattern of natural habitat and open space in the wider landscape.

Wetlands mapped as NFEPA wetlands occur around the proposed development area, with at least one wetland feature indicated within the proposed development footprint. Wetland areas typically represent sensitive landscape elements due to their ecological function, groundwater/surface water interactions, and the role they play in supporting biodiversity. Their presence in and around the footprint indicates that the natural landscape in the immediate vicinity includes hydrologically influenced features that warrant careful consideration in planning and design.

The ecosystems map indicates that the broader area includes a range of mapped ecosystem types, including Mossel Bay Shale Renosterveld and Hartenbos Dune Thicket, as well as other coastal and fynbos-related ecosystem units in the wider vicinity. These ecosystem units contribute to the remaining natural vegetation pattern within a landscape that is otherwise influenced by settlement expansion, transport infrastructure, and agricultural land uses.

To safeguard the integrity and functioning of these natural features, it remains important that appropriate buffers and exclusion areas are confirmed and applied in accordance with specialist inputs (particularly aquatic/wetland recommendations) and relevant regulatory requirements. These measures assist in maintaining river and wetland functioning and in retaining natural landscape elements within and adjacent to the proposed development footprint.

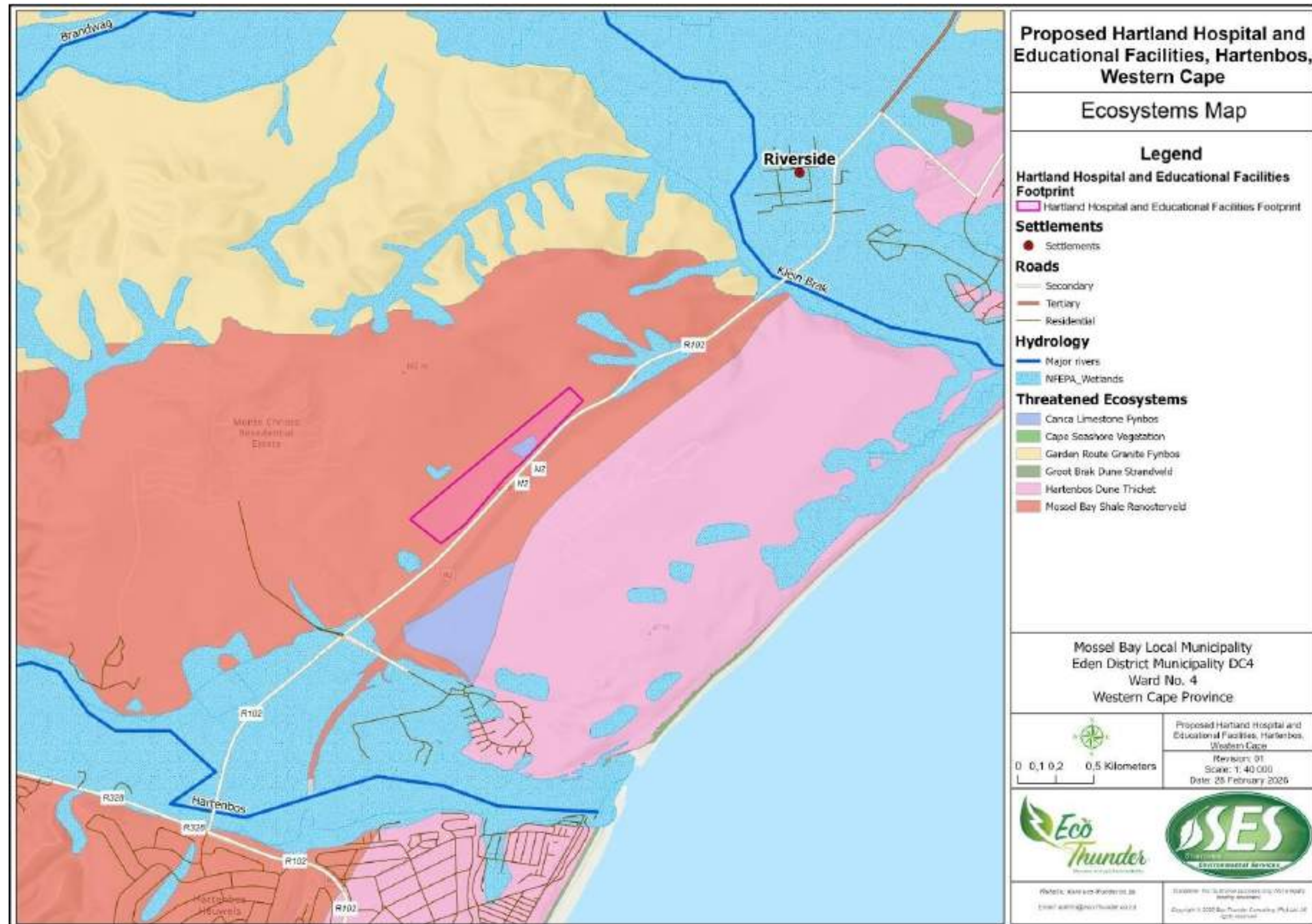
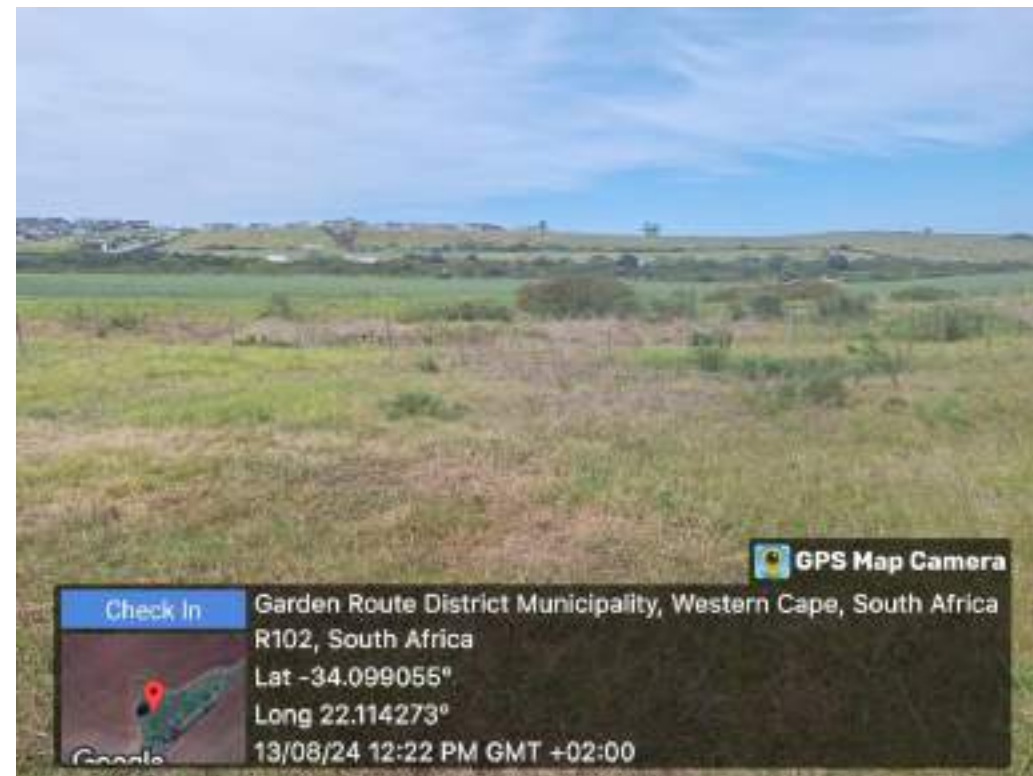


Figure 7: Protected Ecosystems Map



Photograph 1: Existing agricultural landscape within the proposed development area: View 1



Photograph 2: Existing agricultural landscape and isolated mature tree within the proposed development area



Photograph 3: Cultivated annual crop fields within the proposed development area: View 1



Photograph 4: Cultivated annual crop fields within the proposed development area: View 2

6.1.4 Cultural and Tourism Resource

The proposed Hartland Hospital and Educational Facilities is located within the broader Hartenbos–Klein Brak River coastal corridor, which forms part of the Garden Route tourism region. Hartenbos, located approximately 3 km south of the site, is an established holiday destination characterised by beaches, an estuary/lagoon environment and associated resort and recreational facilities. The N2 and R102 routes provide the principal movement corridor through this landscape and are heavily used by both local residents and tourists.

Within this tourism context, cultural resources are mainly associated with the coastal settlements and their institutions, including local museums, places of worship and community facilities in Hartenbos and Klein Brak River. The ATKV Hartenbos Museum, situated within the Hartenbos tourism node, is a notable local cultural attraction and contributes to the area's heritage character.

Key tourism and recreation resources in the receiving environment include the Hartenbos beachfront and associated recreational facilities, the Hartenbos Lagoon/estuary environment, and the Klein Brak River estuary and river corridor. These resources are valued for their scenic qualities and outdoor recreation opportunities (beach use, boating, birding, walking and fishing) and contribute to the local tourism economy. The visual character of the rural-agricultural hinterland, experienced from the N2/R102 and from elevated viewpoints, forms part of the broader scenic setting.

Although the proposed development is not located within a formally designated heritage precinct, it is situated in a landscape that supports tourism and recreation and where sense of place is strongly influenced by coastal scenery, open rural views and proximity to natural corridors. The cultural and tourism resource is therefore best described as a combination of settlement-based heritage assets and a wider scenic landscape resource that should be considered in subsequent visual impact assessment steps.

6.1.5 Land Use

The land use pattern in the vicinity of the proposed Hartland Hospital and Educational Facilities reflects a transitional landscape between the coastal urban/tourism settlements and the rural agricultural hinterland. Land use is dominated by commercial agriculture, with pockets of remaining natural vegetation and drainage corridors, and urban development concentrated in the coastal strip.

The proposed development footprint is located on transformed land adjacent to the N2/R102 transport corridor and is largely mapped as dryland (rainfed) commercial annual crop cultivation. Site inspection and 2026 Google Earth imagery show cultivated fields, farm tracks, fencing, existing accesses, road signage, utility poles/powerlines and associated agricultural and transport infrastructure within and around the footprint. The site therefore forms part of a materially modified working landscape rather than an intact or pristine natural landscape.

Residential and tourism-related land uses occur to the south around Hartenbos, Bayview and Diazstrand, and to the north and north-east around Riverside, Klein Brak River and Reebok. Natural and semi-natural land uses are associated primarily with the Klein Brak River corridor, mapped wetlands and remaining fynbos/thicket patches, which form part of the open space and biodiversity network in the wider landscape refer to Figure 8

6.1.5.1 Agricultural Land Use

Agriculture is the dominant land use in the immediate receiving environment. The land use mapping indicates that the proposed development footprint falls largely within areas of commercial annual crops (rainfed/dryland), with smaller patches of fallow/old fields and mixed agricultural mosaics occurring in the broader surroundings.

The surrounding agricultural landscape comprises large, open fields on gently undulating terrain. Site photographs show actively cultivated annual crops and exposed soil along farm tracks. Because the crop cover is seasonal, it is not treated as permanent visual screening; it nevertheless confirms the longstanding agricultural transformation of the footprint. The cultivated areas remain visually open, allowing long-distance views across the rural hinterland.

Agricultural activities contribute to the existing “working landscape” character and represent a transformed baseline condition. An existing linear vegetation belt occurs along the R102-facing boundary, and established dense vegetation on the opposite side of the R102 demonstrates that a screening belt of meaningful height and density can be maintained in the local context. The proposed institutional use will nevertheless constitute a localised change in land use and rural visual character.

6.1.5.2 Residential Land Use

Residential land use is concentrated in the coastal settlements to the south (Hartenbos, Bayview and Diazstrand) and to the north and north-east (Klein Brak River, Riverside and Reebok), as shown on the Sensitive Receptor Map (Figure 9). These settlements comprise a mix of permanent residential neighbourhoods, holiday homes and retirement-oriented development typical of the Garden Route coastal strip.

In addition to the urban nodes, scattered rural dwellings and farmsteads occur within the agricultural matrix, particularly along the R102 and local access roads. Tourism accommodation facilities and associated services within the Hartenbos and Klein Brak River tourism nodes are also key land uses within the broader area.

Residential and accommodation land uses represent sensitive receptors from a visual perspective, as residents and visitors may experience changes to rural and coastal views from homes, public spaces and movement routes. These land uses also indicate ongoing development pressure along the N2/R102 corridor, where rural land is increasingly influenced by settlement expansion and associated infrastructure.

6.1.5.3 Natural and Conservation Areas

Natural and conservation-related land uses within the receiving environment are associated with remaining fynbos/thicket vegetation patches, river corridors, wetlands and the coastal dune/strandveld environment. The land use mapping indicates areas of contiguous low forest and thicket, dense forest/woodland and low shrubland (fynbos), particularly along drainage lines and towards the coastal zone.

The Klein Brak River corridor to the north and the Hartenbos River corridor to the south form key natural open space features within the broader landscape and are likely to support riparian habitat and wetland functions. These corridors, together with mapped wetland systems (including wetland features indicated in or near the footprint), are important both ecologically and visually, providing linear natural elements within an otherwise transformed agricultural setting.

Natural open space areas also support recreation and contribute to scenic qualities experienced from the N2/R102 and from nearby settlements. The proximity of these natural features increases the visual sensitivity of the receiving environment and should be considered in the design and layout of the proposed institutional precinct.

6.1.5.4 Roads

The road network forms a dominant land use and visual corridor in the receiving environment. The N2 national route runs immediately adjacent to the proposed development area and is the principal regional movement route along the Garden Route. The R102 provides a parallel regional route along the coastal settlements and connects Hartenbos with Klein Brak River and Reebok.

Local access to the agricultural areas is provided by secondary roads, local residential streets and farm tracks that link to the R102 and N2 interchanges. Further west, regional routes such as the R328 provide access to inland settlements and agricultural areas. These routes collectively influence access arrangements for the proposed hospital and educational facilities.

Because the N2 and R102 carry high volumes of local and tourism traffic, they are also primary visual receptor routes. The combination of open agricultural land and gently undulating topography means that new built elements associated with the proposed development may be visible from extended sections of these road corridors.

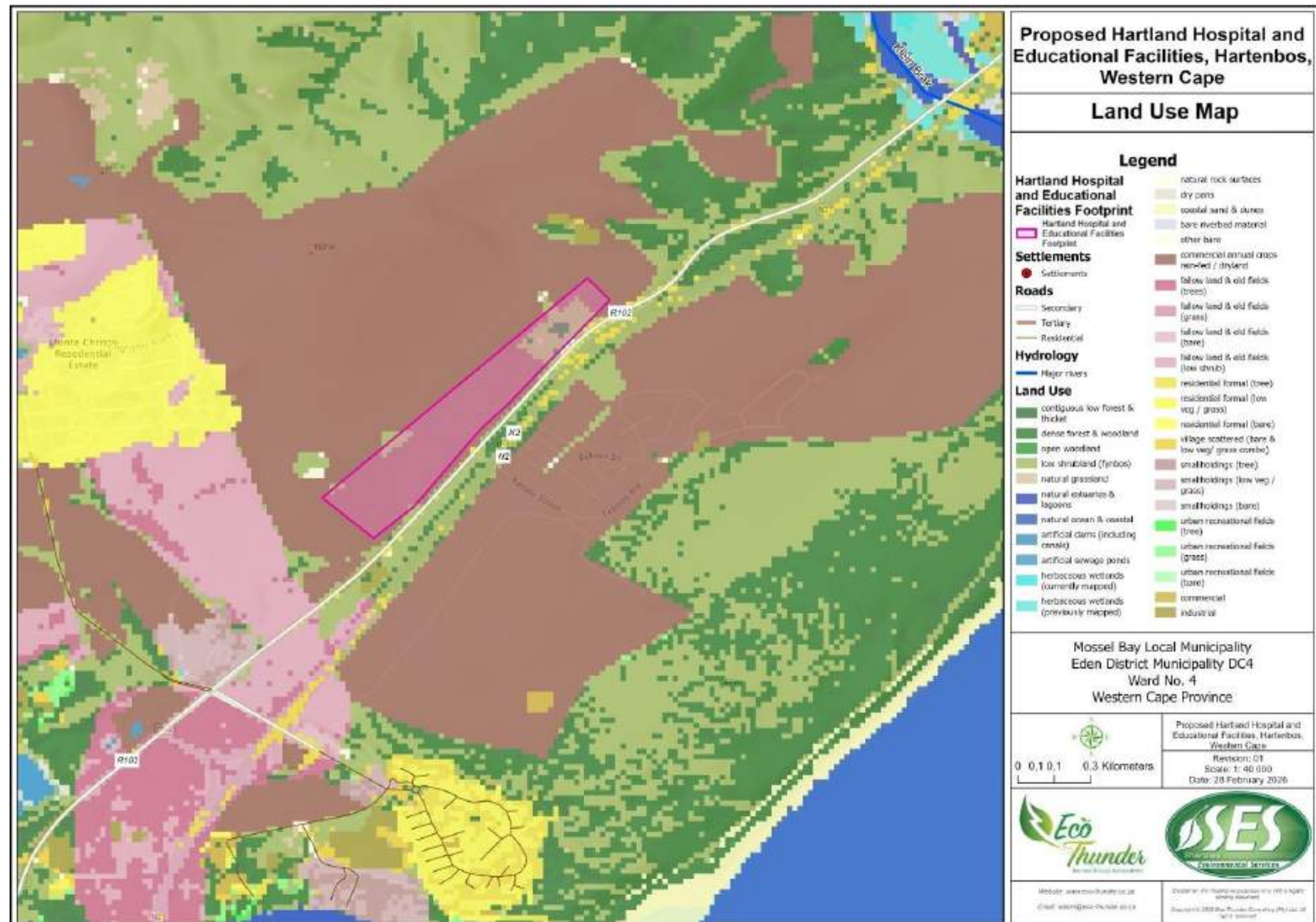
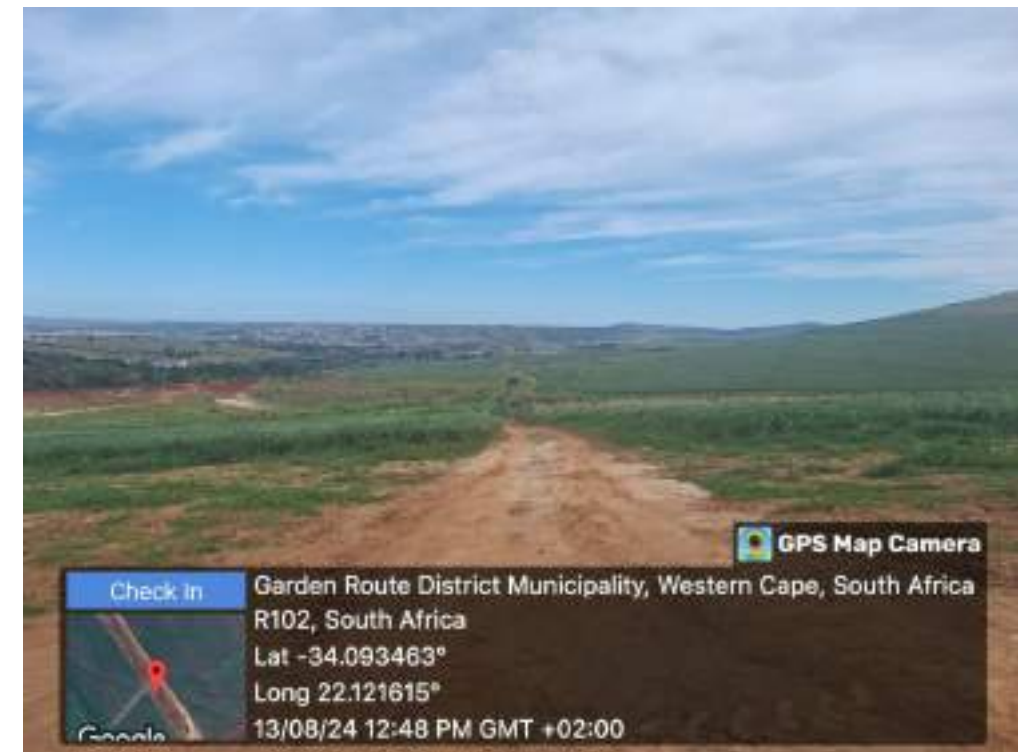


Figure 8: Land Use Map



Photograph 5: Agricultural fields within the Proposed Development Area



Photograph 6: Gravel Road and Landscape View within close proximity to the Proposed Development Area



Photograph 7: Established dense roadside vegetation opposite the R102 (Google Earth Street View, 2026)



Photograph 8: Existing vegetation belt along the R102-facing site boundary (highlighted; Google Earth, 2026)



6.2 Visual Resource

6.2.1 Visual Receptors

Visual receptors (viewer groups) are individuals or groups who have the potential to view or perceive the proposed development. The identification of visual receptors is a key step in a Visual Impact Assessment, as it determines who may experience changes in visual character and assists in establishing receptor sensitivity.

For the Hartland Hospital and Educational Facilities, potential beneficiaries include local communities and future users (patients, staff, students and visitors) who will benefit from improved healthcare and educational infrastructure, as well as businesses that may benefit indirectly from construction and operational expenditure. Potential adverse visual effects (“losers”) may include nearby residents, tourism and recreation users who value the scenic qualities of the coastal and rural landscape, and protected/open space areas where naturalness contributes to sense of place.

Based on the sensitive receptor mapping and the receiving environment context, the primary visual receptor groups are summarised below and illustrated in Figure 9.

- Local residents and visitors within the coastal settlements of Hartenbos, Bayview and Diazstrand (south), and Riverside, Klein Brak River and Reebok (north/north-east), as well as scattered rural dwellings and farmsteads within the agricultural hinterland.
- Road users travelling along the N2 national route and the R102 regional route, including daily commuters and tourists moving along the Garden Route corridor, as well as users of local access roads and farm tracks in the immediate vicinity.
- Tourists and recreational users associated with coastal and estuarine attractions (beaches, lagoons and river corridors), hiking/walking routes and public open spaces, as well as users of accommodation facilities within the Hartenbos and Klein Brak River tourism nodes.
- Farmers and agricultural workers operating within the commercial annual crop landscape surrounding the footprint, who may experience changes to the rural working landscape character from fields and access routes.
- Users of other sensitive land uses mapped within the wider area, including community facilities (e.g., places of worship), cemeteries, and educational and commercial nodes within the surrounding settlements.

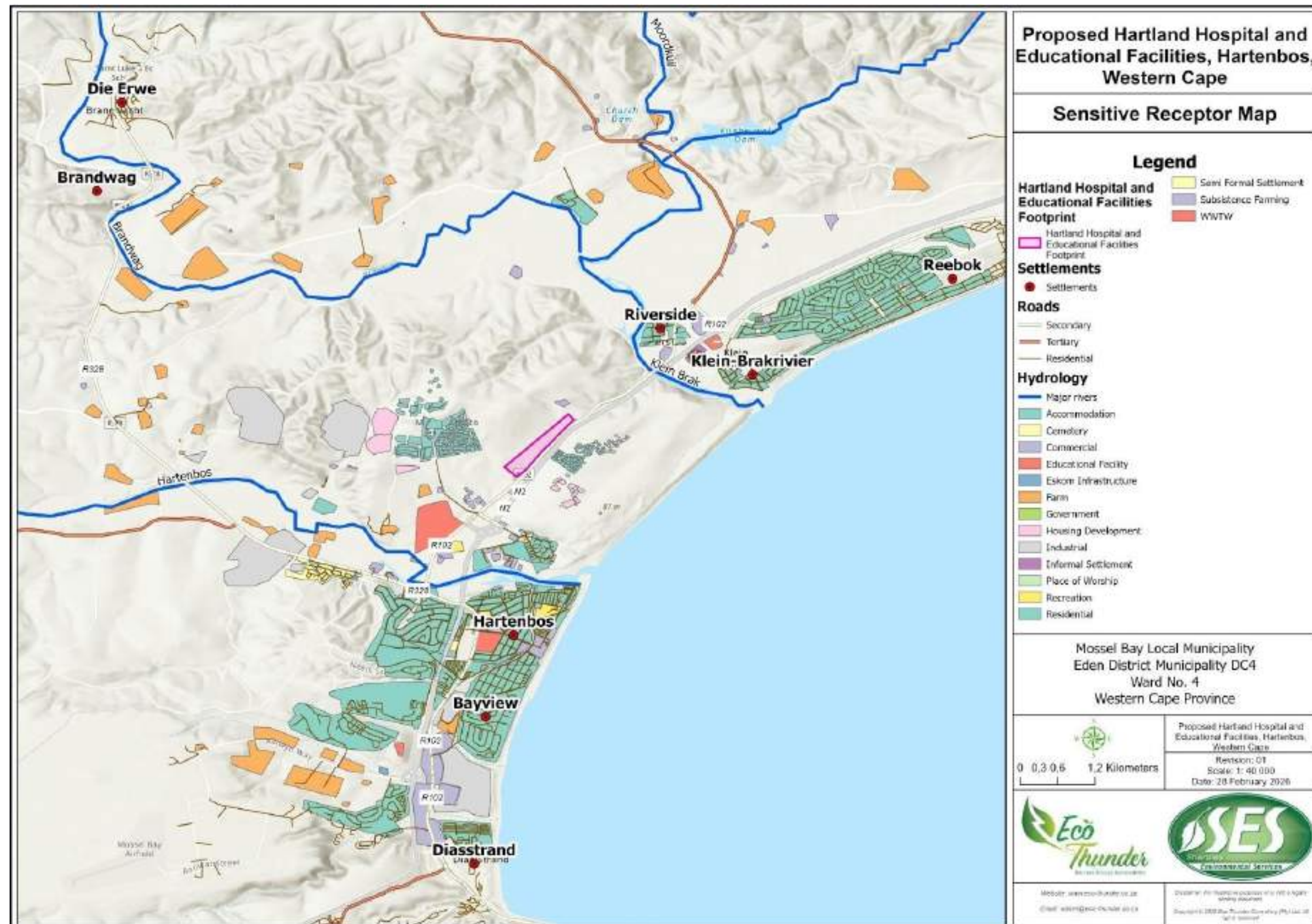


Figure 9: Sensitive receptors for the broader study area

6.2.2 Visual Absorption Capacity

The Visual Absorption Capacity (VAC) of a landscape refers to its ability to accommodate visual change without a substantial reduction in scenic quality or sense of place. VAC is influenced by factors such as topography, vegetation structure, land use pattern and the extent of existing anthropogenic modification.

The footprint lies within an open, cultivated agricultural landscape with gently undulating topography. Current and historical cultivation, farm tracks, fencing and agricultural infrastructure, together with the N2/R102 corridor, road signage, utility poles/powerlines, existing accesses and nearby peri-urban development, form a materially modified visual baseline. The site is therefore not an intact or pristine natural landscape, and these existing anthropogenic influences increase its capacity to accommodate additional change.

The cultivated fields remain comparatively open, and seasonal crops are not relied upon as permanent screening. The scale and massing of the proposed institutional buildings may therefore remain visible from nearby roads and elevated viewpoints. However, an existing linear vegetation belt occurs along the R102-facing boundary, while established dense roadside vegetation opposite the R102 demonstrates that vegetation of meaningful height and density can establish in the local context. Nearby wetlands, river systems and coastal tourism settlements retain visual sensitivity and prevent the VAC from being rated high.

Overall, the VAC of the immediate site and surroundings is considered moderate. This balanced rating reflects the materially transformed agricultural and peri-urban context, moderated by the openness of the cultivated terrain and the sensitivity of surrounding receptors. Successful visual integration should focus on building height and massing, recessive colours and non-reflective materials, and the retention, gap planting and reinforcement of the existing R102-facing vegetation belt to achieve appropriate mature height, density, continuity and layered structure.

7 Viewshed Analysis

7.1 Overview of the Viewshed

The viewshed analysis for the proposed Hartland Hospital and Educational Facilities was undertaken to identify areas from which elements of the development may be visible and to provide a spatial representation of potential visual exposure across the receiving environment. The analysis was generated in a GIS environment using a digital elevation model, with conservative assumptions applied regarding the presence of vegetation and built screening. The viewshed output therefore reflects potential line-of-sight visibility and should be interpreted in conjunction with receptor sensitivity and on-site observations.

7.2 Zones of Visual Influence

The primary tool used for this analysis was GIS software, which, coupled with Digital Elevation/Terrain Models (DEMs/DTMs), allowed for the generation of a Zone of Visual Influence (ZVI). The ZVI output was classified into relative visibility categories (Figure 10):

- **Very Low Visibility:** Areas where the proposed development is unlikely to be visible due to screening by intervening landforms and/or distance.
- **Low Visibility:** Areas where only limited or partial views of built elements may occur and where visual change is likely to be minor.
- **Medium Visibility:** Areas where parts of the development may be visible, but where the development is not expected to dominate the view.
- **High Visibility:** Areas where the development is likely to be a noticeable element in the view and may contribute to a moderate level of visual intrusion.
- **Very High Visibility:** Areas where the development may be clearly visible and prominent, particularly from elevated viewpoints and/or where the footprint is close to receptors.

Figure 10 illustrates the ZVI for the proposed Hartland Hospital and Educational Facilities. Potential visibility within the proposed development area is mostly medium, with high visibility in the south-western portion and low visibility in the north-eastern portion. The highest potential visibility (high to very high classes) is concentrated within the immediate vicinity of the footprint and on adjacent elevated slopes, with particular exposure along the N2 and R102 where road users traverse sections of direct line-of-sight. Medium visibility extends into parts of the surrounding settlements, notably within elevated portions of Hartenbos and Bayview and localised areas near Riverside/Klein Brak River, depending on topographic position. Extensive areas of the wider hinterland, including areas towards Die Erwe and Brandwag, fall predominantly within low to very low visibility classes due to intervening landforms and increasing distance.

7.3 Visual Receptors and Sensitivity

The receptors most likely to be affected by the proposed development are those located within the medium to very high visibility classes. These include road users along the N2 and R102, where visibility occurs at close range and for extended travel lengths, nearby residents within Hartenbos, Bayview and Diazstrand, and residents within Riverside, Klein-Brakrivier and Reebok, where elevated positions provide clearer line-of-sight. Tourism and recreation receptors associated with coastal/estuarine environments may also experience intermittent views, particularly where viewpoints are elevated or where vegetation cover is limited.

For receptors located within low to very low visibility areas, including much of the inland landscape towards Die Erwe and Brandwag, views are expected to be restricted by intervening landforms and distance, and visual effects are likely to be low or negligible. It should be noted that temporary construction elements (e.g., cranes, stockpiles and night lighting) may locally increase visibility during the construction phase relative to the operational built form.

7.4 Mitigation Measures

Mitigating the visual impact of the hospital and educational facilities is particularly important in areas where potential visibility is rated as high or very high. Key mitigation principles include:

- **Siting and massing:** Keep taller elements and service infrastructure central to the site, step building heights down towards the perimeter, and avoid creating a strong ridgeline silhouette when viewed from the N2/R102 and nearby settlements.
- **Architectural treatment:** Use recessive colours and non-reflective materials, limit highly reflective glazing where it could cause glare, and screen rooftop plant/equipment to reduce visual clutter.
- **Boundary vegetation and edge treatment:** Retain and protect the existing R102-facing vegetation belt where it falls within land under the applicant's control, and reinforce gaps with locally appropriate indigenous species, subject to confirmation by the terrestrial/botanical specialist. The enhanced belt should provide a continuous, layered screen of appropriate mature height and density while maintaining road sightlines and accommodating services, stormwater and fire-management requirements.
- **Lighting:** Develop and implement a lighting plan that minimises light spill and skyglow through full cut-off luminaires, appropriate mounting heights, and curfews/motion controls where feasible. Avoid unnecessary high-intensity or high-mast lighting that could increase night-time visual prominence.
- **Signage and wayfinding:** Limit signage to what is operationally necessary, avoid oversized or highly illuminated advertising elements, and integrate wayfinding with building architecture and landscape design to reduce visual clutter.

The viewshed analysis indicates that the proposed Hartland Hospital and Educational Facilities will be visible from a range of receptor locations, particularly along the N2/R102 corridor and from elevated parts of the Hartenbos/Bayview settlement. The site is nevertheless situated within a materially transformed agricultural and peri-urban corridor, and the combined influence of existing infrastructure, development and boundary vegetation supports a moderate capacity to absorb additional built form. The remaining openness of the cultivated terrain means that design controls and screening remain necessary. A comprehensive site-wide landscaping plan is not considered necessary solely for visual mitigation at the environmental-authorisation stage; instead, a focused boundary vegetation retention, enhancement and management specification should be included in the EMPr. This specification should address protection of the existing belt, gap planting, establishment maintenance, replacement of failed plants, and achievement of suitable mature height, density, continuity and layered structure. Together with lighting and signage controls, these measures will reduce contrast and assist the development to align with the evolving character of the area.

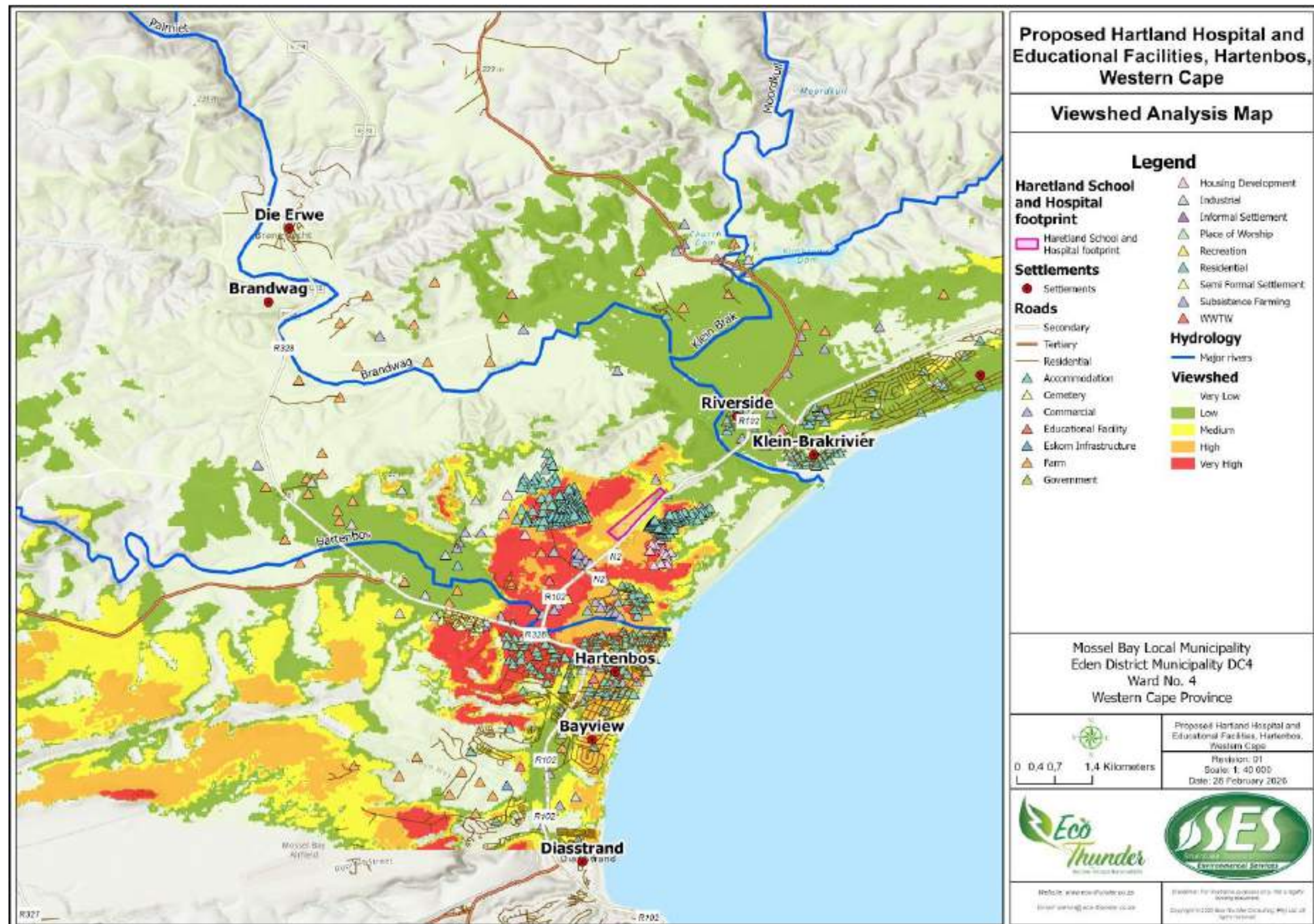


Figure 10: Viewshed Analysis for the Proposed Hartland Hospital and Educational Facilities

8 Impacts and Risks Assessment

This section rates the significance of the potential visual impacts associated with the proposed Hartland Hospital and Educational Facilities, both before and after mitigation. Potential impacts are identified by considering the interaction between the source of change (project activities and infrastructure), the pathways through which the change may occur, and the visual receptors and landscape resources that may be affected.

The potential impacts are discussed per project phase (Construction, Operational and Decommissioning/Post-closure). The significance, probability and duration of these impacts have been assessed based on the sensitivity of the receiving environment described in Section 6 and the visual baseline described in Section 7.

8.1 Impacts and Risk Methodology

The SES impact assessment methodology assists in evaluating the overall effect of a proposed activity on the environment. Determining the significance of an environmental impact is achieved through a systematic analysis of the likely change to the receiving environment and the effectiveness of mitigation measures.

8.1.1 Determination of Significance of Impacts

Significance is determined through a synthesis of impact characteristics which include context and intensity. Context refers to the geographical scale (i.e., site, local, regional or national), whereas intensity is defined by the severity of the impact (e.g., the magnitude of deviation from the baseline, the size of the area affected, the duration of the impact and the overall probability of occurrence).

Significance provides an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

8.1.2 Impact Rating System

The impact assessment takes account of the nature, scale and duration of effects on the environment and whether such effects are positive (beneficial) or negative (detrimental). Each issue/impact is assessed according to the various project stages, as follows:

- Planning;
- Construction;
- Operation; and
- Decommissioning.

The rating system is applied to the potential impact on the receiving environment and includes an objective evaluation of the possible mitigation of the impact. The impact assessment for the proposed Hartland Hospital and Educational Facilities was undertaken in accordance with the SES methodology and is summarised below:

- The nature, which shall include a description of what causes the effect, what will be affected and how it will be affected.
- The extent, wherein it will be indicated whether:
 - Site specific - On site or within 100 m of the site boundary, but not beyond the property boundaries (1).
 - Local - The impacted area includes the whole or a measurable portion of the site and property, but could affect the area surrounding the development, including the neighbouring properties and wider municipal area (2).
 - Regional - The impact would affect the broader region (e.g., neighbouring towns) beyond the boundaries of the adjacent properties (3).
 - National - The impact would affect the whole country (if applicable) (4).
- The duration, wherein it will be indicated whether:
 - Temporary - The impact will be limited to the construction phase (1).
 - Short term - The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than 8 months after the completion of the construction phase (2).
 - Medium term - The impact will last up to the end of the construction phase, where after it will be entirely negated in a period shorter than 3 years after the completion of construction activities (3).
 - Long term - The impact will continue for the entire operational lifetime of the development but will be mitigated by direct human action or by natural processes thereafter (4).
 - Permanent - This is the only class of impact that will be non-transitory. Such impacts are regarded to be irreversible, irrespective of what mitigation is applied (5).
- The consequence of significance (magnitude), wherein it will be indicated whether:
 - Negligible - The impact would result in negligible to no consequences (2).
 - Low - The impact would result in insignificant consequences (4).
 - Medium - The impact would result in minor consequences (6).

- High - The impact would result in significant consequences (8).
- The probability of occurrence, which shall describe the likelihood of the impact actually occurring:
 - Improbable - The possibility of the impact occurring is very low, due either to the circumstances, design or experience (1).
 - Probable - There is a possibility that the impact will occur to the extent that provisions must therefore be made (3).
 - Highly probable - It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up to mitigate the activity before the activity commences (4).
- the significance, which shall be determined through a synthesis of the characteristics described above and can be assessed as no significance, low, medium or high; and
- the status, which will be described as either positive, negative or neutral.
- the degree to which the impact can be reversed.
- the degree to which the impact may cause irreplaceable loss of resources.
- the degree to which the impact can be mitigated.

The significance is calculated by combining the criteria in the following formula:

$$S=(E+D+M)P$$

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The significance weightings for each potential impact are as follows:

- < 30 points: Low (i.e. where this impact would not have a direct influence on the decision to develop in the area),
- 30-60 points: Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),
- > 60 points: High (i.e. where the impact must have an influence on the decision process to develop in the area).

8.2 Impacts and Mitigation

8.2.1 Construction Phase

Table 4 to Table 6 summarise the consequence and significance of the visual impacts associated with the proposed Hartland Hospital and Educational Facilities. These results are presented for a worst-case scenario where the construction of buildings, internal roads, parking areas, bulk services and associated infrastructure occurs concurrently. Consequence of impact is a function of magnitude, duration and spatial extent. Magnitude of impact is taken from the worst-case situation.

Table 4: Potential Impacts during the Construction Phase

Impact: Altered Landscape and Sense of Place during Construction		
Nature: The introduction of site clearance, earthworks, construction plant, cranes, temporary laydown areas, stockpiles and partially completed structures will temporarily alter the visual character of the site and its immediate surroundings. The current agricultural/peri-urban landscape will appear as a construction environment, which may be perceived by nearby receptors (including residents and road users) as a landscape in transition.		
	Before Mitigation	After Mitigation
Extent	Local (2)	Local (2)
Duration	Short-Term (2)	Short-Term (2)
Magnitude	Medium (6)	Low (4)
Probability	Definite (5)	Highly Probable (4)
Significance	Medium (50)	Medium (32)
Status: Negative - The construction phase will introduce temporary visual disturbance and reduce local visual amenity.		
Reversibility: Partly Reversible - The impact is temporary and largely reversible once construction is complete and rehabilitation/landscaping is implemented.		
Loss of resources? Marginal loss of resource - Short-term loss of visual quality within the construction footprint.		
Can impacts be mitigated? Can be partly mitigated - The scale of construction cannot be fully concealed, but good practice mitigation can substantially reduce visual effects.		
Mitigation Measures:		

- Minimise land disturbance: Limit the construction footprint to the minimum required for the hospital and educational facilities, including laydown areas and access routes.
- Progressive rehabilitation: Re-contour and stabilise disturbed areas as soon as practicable and implement progressive landscaping/planting.
- Retain and protect existing vegetation: Maintain and supplement existing vegetation buffers where practicable.
- Temporary screening: Use site hoarding/shade-cloth or temporary screens along sensitive boundaries where required.
- Site housekeeping: Keep the site tidy to reduce perceived visual clutter.
- Limit night-time construction activities: Where night works are unavoidable, use low-glare, down-directed lighting.

Cumulative Impact: Medium - Temporary construction disturbance may be more noticeable when combined with other development/construction activities in the area.

Residual Risk: Low to Medium - With mitigation, residual construction-phase visual impacts are expected to be localised and temporary, but some disturbance is unavoidable.

Impact: Visual Intrusion and Disturbance to Nearby Receptors during Construction

Nature: Construction activities associated with the hospital and educational facilities (including cranes, plant movement, temporary structures, construction traffic and partially completed buildings) will be visible from surrounding properties and from road corridors such as the N2 and R102. This may result in temporary visual intrusion, perceived disruption and a reduction in visual amenity for receptors.

	Before Mitigation	After Mitigation
Extent	Local (2)	Local (2)
Duration	Short-Term (2)	Short-Term (2)
Magnitude	Medium (6)	Low (4)
Probability	Definite (5)	Highly Probable (4)
Significance	Medium (50)	Medium (32)

Status: Negative - Temporary reduction in visual amenity for nearby receptors and road users.

Reversibility: Fully Reversible - The impact will cease once construction activities, temporary infrastructure and stockpiles are removed.

Loss of resources? Marginal loss of resource - Temporary loss of view quality during construction.

Can impacts be mitigated? Can be mitigated - Good construction planning and screening can reduce exposure of receptors to the most visually intrusive activities.

Mitigation Measures:

- Construction layout planning: Locate temporary site offices, storage areas and laydown zones away from sensitive boundaries where practicable.
- Maintain orderly stockpiles: Keep stockpiles low and compact and avoid placing them on visually prominent edges.
- Boundary treatment: Install and maintain appropriate construction hoarding/screens on sensitive edges and at access points.
- Manage construction plant: Where practicable, limit the duration of crane use and avoid leaving large plant stationed on prominent edges.
- Construction traffic management: Control delivery times, routes and on-site circulation to reduce congestion and visual clutter at entrances.
- Complaints management: Implement a communication channel for neighbouring receptors and respond to visual-related complaints timeously.

Cumulative Impact: Medium - Construction-related visual intrusion could be amplified if multiple developments in the area are under construction simultaneously.

Residual Risk: Low - With screening and good site management, residual visual intrusion during construction should remain manageable.

Impact: Dust and Construction Impact during Construction

Nature: Earthworks, vehicle movement on unpaved surfaces, stockpiles and material handling may generate dust and track-out/mud onto adjacent roads. Dust deposition on vegetation, boundary fencing, nearby structures and road surfaces can reduce visual amenity and contribute to a perception of poor site management, particularly for sensitive receptors and road users.

	Before Mitigation	After Mitigation
Extent	Local (2)	Local (2)
Duration	Short-Term (2)	Short-Term (2)
Magnitude	Medium (6)	Low (4)
Probability	Highly Probable (4)	Probable (3)
Significance	Medium (40)	Low (24)

Status: Negative - Dust and soiling can temporarily reduce visual amenity and affect view quality for nearby receptors.

Reversibility: Reversible - The impact is temporary and can be reversed through cleaning and the cessation of dust-generating activities.

Loss of resources? No significant loss of resources - The impact is limited to temporary visual nuisance/soiling.

Can impacts be mitigated? Can be mitigated - Dust and track-out can be effectively reduced through standard construction controls.

Mitigation Measures:

- Dust suppression: Implement active dust control on exposed surfaces, haul routes and stockpiles.
- Surface stabilisation: Stabilise or cover stockpiles and disturbed areas; re-vegetate or gravel exposed areas where practicable.
- Vehicle controls: Enforce speed limits on site and along unpaved access routes to reduce dust generation.
- Housekeeping: Regularly sweep/clean access points and maintain a neat site appearance.
- Monitoring: Monitor dust conditions during dry/windy periods and escalate suppression measures when required.

Cumulative Impact: Low to Medium - If other construction activities are occurring nearby, cumulative dust effects could increase overall nuisance.

Residual Risk: Low - With effective dust management and housekeeping, residual visual nuisance should remain low.

8.2.2 Operational Phase

Table 5: Potential Impacts during the Operational Phase

Impact: Altered Landscape and Sense of Place during Operation		
Nature: The completed hospital and educational facilities will introduce a substantial new built element into the local landscape. The development will change the site from an agricultural/peri-urban landscape to an institutional precinct comprising buildings, parking areas, internal roads, sports facilities and associated service infrastructure. This permanent change may alter the perceived sense of place and visual character of the area, particularly from nearby receptors and the N2/R102 corridors.		
	Before Mitigation	After Mitigation
Extent	Local (2)	Local (2)

Duration	Long-Term (4)	Long-Term (4)
Magnitude	Medium (6)	Low (4)
Probability	Highly Probable (4)	Probable (3)
Significance	Medium (48)	Medium (30)
Status: Negative - The operational precinct will permanently change local landscape character.		
Reversibility: Partly Reversible - The change is long-term and would only be reversed through decommissioning and rehabilitation.		
Loss of resources? Marginal loss of resource - The impact represents a change in visual character rather than loss of a unique visual resource.		
Can impacts be mitigated? Can be partly mitigated - The development will remain visible, but contextual design and targeted boundary vegetation enhancement can reduce visual prominence and improve visual fit.		
Mitigation Measures: • Landscape Integration: Use materials, textures, and colours that reflect the local architectural styles to harmonise with the surrounding environment and maintain a sense of place. • Height and massing control: Keep building heights to the minimum required and step down heights towards sensitive edges. • Boundary vegetation enhancement: Retain and reinforce the existing R102-facing vegetation belt using locally appropriate indigenous species, subject to specialist confirmation, to soften built form and screen parking and lower-level infrastructure. • Ongoing maintenance: Maintain the enhanced boundary vegetation, replace failed plants and control invasive growth until the required screening height, density and continuity are achieved.		
Cumulative Impact: Medium - The project contributes to the broader pattern of development along the N2/R102 corridor, which may incrementally reduce rural character.		
Residual Risk: Medium - Even with mitigation, a noticeable change in sense of place is expected due to the scale and permanence of the development.		

Impact: Visibility and Visual Intrusion of Built Form and Associated Infrastructure

Nature: The hospital and educational buildings, parking areas, internal roads, boundary treatments, signage and supporting infrastructure (including any roof plant and the helipad) will be visible from various viewpoints, including nearby properties and road corridors. Depending on viewpoint and distance, the development could appear visually prominent and introduce urban form into views

currently characterised by open land and dispersed development.		
	Before Mitigation	After Mitigation
Extent	Local (2)	Local (2)
Duration	Long-Term (4)	Long-Term (4)
Magnitude	Medium (6)	Low (4)
Probability	Highly Probable (4)	Probable (3)
Significance	Medium (48)	Medium (30)
Status: Negative - Increased visual intrusion for receptors with direct views of the development.		
Reversibility: Partly Reversible - The visibility is linked to the presence of permanent built form and would only be reversed through decommissioning.		
Loss of resources? Marginal loss of resource - Potential reduction in view quality for some receptors.		
Can impacts be mitigated? Can be partly mitigated - Screening and design measures can reduce prominence, but the development will remain a permanent visual element.		
Mitigation Measures: • Layout optimisation: Position the tallest/most visually prominent elements centrally on the site and avoid placing large building masses on visually sensitive edges, where feasible. • Vegetative buffer: Retain, protect and supplement the existing R102-facing vegetation belt with locally appropriate indigenous species, subject to specialist confirmation, to provide a continuous layered screen of parking, boundary treatments and lower-level infrastructure. • Parking screening: Break up large parking areas with planting islands and perimeter tree screening. • Signage control: Limit the number, size, and brightness of signs; avoid large digital or high-contrast signage visible from the N2, where practicable. • Glare reduction: Avoid highly reflective glazing/finishes; use matte finishes and design glazing orientation to minimise glare to receptors, where feasible.		
Cumulative Impact: Medium - Combined visibility of multiple developments may create a more continuous built edge along the transport corridor.		
Residual Risk: Medium - With mitigation, visibility and prominence are reduced, but residual visual intrusion remains for receptors with direct lines of sight.		

Impact: Visual Impact of Operational, Safety and Security Lighting

Nature: Operational lighting associated with the hospital and educational facilities (including building lighting, parking lighting, access road lighting, security lighting, sports facility lighting and helipad lighting) may increase night-time light levels in the area. Poorly designed or unshielded lighting can result in light spill and glare, reducing night-time visual amenity for nearby receptors and contributing to skyglow along the N2/R102 corridor.

	Before Mitigation	After Mitigation
Extent	Local (2)	Site specific (1)
Duration	Long-Term (4)	Long-Term (4)
Magnitude	Medium (6)	Low (4)
Probability	Probable (3)	Probable (3)
Significance	Medium (36)	Low (27)

Status: Negative - Increased night-time light and potential glare may reduce visual amenity.

Reversibility: Reversible - Lighting impacts can be reversed or reduced through adjustment, shielding, dimming or switching off.

Loss of resources? No significant loss of resources - The impact relates to night-time visual nuisance rather than irreversible loss.

Can impacts be mitigated? Can be mitigated - Appropriate lighting design and management can substantially reduce light spill and glare.

Mitigation Measures:

- Lighting design: Use full cut-off, down-directed luminaires and appropriate shielding to prevent upward light spill.
- Limit pole heights and brightness: Keep lighting structures as low as practicable and design lighting levels to the minimum required for safety and security.
- Control operating hours: Use timers, dimmers and motion sensors; apply curfews for sports facility lighting where applicable.
- Helipad lighting management: Ensure helipad lighting is activated only during operations/testing and is compliant with aviation safety requirements while minimising spill.
- Avoid façade up-lighting: Do not use architectural up-lighting or unnecessary floodlighting.
- Night-time audit and maintenance: Undertake periodic lighting audits at night and adjust luminaires/shields if light spill or complaints are recorded.

Cumulative Impact: Medium - Cumulative lighting from multiple developments can increase skyglow

and reduce the perception of darkness in the broader area.

Residual Risk: Low - With dark-sky compliant lighting design and operational controls, residual lighting impacts are expected to remain low.

8.2.3 Decommissioning Phase

Table 6: Potential Impacts during Decommissioning Phase

Impact: Altered Landscape and Sense of Place during Decommissioning		
Nature: Decommissioning (demolition and removal of buildings, hardstand areas and services infrastructure) will temporarily reintroduce construction-like activity, including demolition plant, rubble stockpiles, haulage trucks and exposed soil surfaces. These activities may temporarily reduce visual amenity and create visual disturbance for nearby receptors and road users.		
	Before Mitigation	After Mitigation
Extent	Local (2)	Local (2)
Duration	Short-Term (2)	Short-Term (2)
Magnitude	Medium (6)	Low (4)
Probability	Highly Probable (4)	Probable (3)
Significance	Medium (40)	Low (24)
Status: Negative - Decommissioning activities will cause temporary visual disturbance.		
Reversibility: Fully Reversible - The impact will cease once demolition is complete and rehabilitation is implemented.		
Loss of resources? Marginal loss of resource - Temporary reduction in visual amenity during demolition activities.		
Can impacts be mitigated? Can be mitigated - Good demolition management and screening can reduce receptor exposure to visually intrusive activities.		
Mitigation Measures: • Demolition planning: Implement a phased demolition plan to minimise the duration and extent of exposed/derelict areas. • Temporary screening: Erect and maintain hoarding/screens on sensitive boundaries where demolition activities are close to receptors. • Dust and rubble control: Control dust emissions and keep rubble stockpiles orderly and covered		

where practicable. • Limit night-time works: Avoid night-time demolition activities; where unavoidable, use low-glare, down-directed task lighting. • Site housekeeping: Remove waste promptly and keep the site tidy to reduce perceptions of neglect. • Progressive rehabilitation: Commence re-grading and rehabilitation as soon as demolition areas are cleared.
Cumulative Impact: Low to Medium - If other demolition/construction activities occur nearby, cumulative disturbance may be more noticeable.
Residual Risk: Low - With mitigation, decommissioning-phase visual impacts should be localised and temporary.

Impact: Site Restoration and Rehabilitation		
Nature: If decommissioning is undertaken, the removal of infrastructure and implementation of site rehabilitation can restore visual amenity and reduce the long-term visual footprint of the development. Rehabilitation may include re-contouring, stabilisation, re-vegetation and the reinstatement of open space or an alternative compatible land use.		
	Before Mitigation	After Mitigation
Extent	Site specific (1)	Site specific (1)
Duration	Long-Term (4)	Long-Term (4)
Magnitude	Negligible (2)	Low (4)
Probability	Probable (3)	Highly Probable (4)
Significance	Low (21)	Medium (36)
Status: Positive - Rehabilitation can improve visual amenity and reinstate a more natural/open character post-decommissioning.		
Reversibility: Beneficial and Reversible - The rehabilitation outcome is beneficial and can be sustained through ongoing maintenance.		
Loss of resources? No loss of resources - Rehabilitation restores visual quality and reduces long-term scarring.		
Can impacts be mitigated? Can be enhanced - Effective rehabilitation measures increase the beneficial outcome.		

Enhancement Measures:

- Remove redundant infrastructure: Remove all buildings, foundations, hardstand areas, lighting poles, signage and services not required for the post-closure land use.
- Re-grade and stabilise: Re-contour disturbed areas to blend with the surrounding landform; stabilise soils to prevent erosion and scarring.
- Replace topsoil and re-vegetate: Reinstates topsoil and establish indigenous vegetation (or agricultural cover, where appropriate) in accordance with an approved rehabilitation plan.
- Invasive alien control: Monitor and control invasive alien plant establishment during rehabilitation.
- Rehabilitation monitoring: Monitor rehabilitation success and implement corrective actions (re-seeding, erosion repair) where required.
- Handover and maintenance: Assign responsibility for rehabilitation maintenance until agreed success criteria are met.

Cumulative Impact: Low - Rehabilitation reduces the cumulative visual footprint of built development over the long term.

Residual Risk: Medium (positive) - If implemented effectively, rehabilitation will result in a measurable improvement in post-closure visual conditions.

9 Environmental Impact Statement and Conclusion

The proposed Hartland Hospital and Educational Facilities is intended to provide improved healthcare and educational infrastructure within the broader Hartland development node near Hartenbos, Western Cape. The site is located adjacent to the N2/R102 transport corridor within a predominantly agricultural landscape that is already influenced by major road infrastructure and peri-urban expansion.

The receiving environment comprises cultivated dryland fields on gently undulating terrain within a transformed agricultural and peri-urban corridor. Cultivation, farm tracks, fencing, utilities and the N2/R102 materially modify the visual baseline. Although the fields remain open and seasonal crops provide no permanent screening, an existing vegetation belt occurs along the R102-facing boundary. These conditions support a moderate VAC. The Klein Brak and Hartenbos Rivers, mapped wetlands and other natural corridors remain visually sensitive and contribute to the wider Garden Route setting.

A VIA was undertaken to evaluate how the proposed hospital and educational precinct may change landscape character and views experienced by key receptor groups. Primary receptors include road users on the N2 and R102, residents and visitors in Hartenbos, Bayview and Diazstrand to the south, and Riverside, Klein Brak River and Reebok to the north/north-east, as well as scattered rural dwellings and agricultural users in the hinterland.

The viewshed analysis indicates that the Potential visibility within the proposed development area is mostly medium, with high visibility in the south-western portion and low visibility in the north-eastern portion. The most visible areas are in the immediate vicinity of the site and from adjacent elevated slopes, with high to very high potential visibility along sections of the N2/R102 corridor and from elevated parts of the Hartenbos/Bayview settlement. Beyond these areas, intervening landforms and distance reduce visual exposure, with much of the wider inland landscape falling within low to very low visibility classes.

The impact assessment indicates that construction-phase visual impacts from earthworks, construction plant, dust and temporary night lighting, could be of medium significance before mitigation but can be reduced to medium and low significance through good construction management, dust suppression, temporary screening and progressive rehabilitation. During operation, the introduction of permanent building massing, parking areas, boundary treatments, and associated infrastructure will result in a long-term change in landscape character and may remain of medium significance after mitigation, given the openness of the receiving environment and the site's proximity to key receptor routes. Operational lighting impacts can be reduced from medium to low significance through lighting design, careful control of helipad/security/sports lighting, and ongoing monitoring and adjustment.

Cumulative visual impacts associated with continued development along the N2/R102 corridor are assessed as medium, reflecting the progressive shift from a rural agricultural landscape to a more urban/peri-urban character. Managing these cumulative effects will require consistent application of contextual design, retention and reinforcement of existing boundary vegetation buffers, and disciplined lighting and signage controls across developments.

From a visual specialist's perspective, there are no fatal flaws and no reason that the Hartland Hospital and Educational Facilities project cannot be authorised, provided that the recommended design responses and mitigation measures are implemented and carried into the detailed design and operational management of the facilities.

10 References

- Australian Government Department of Infrastructure, Transport, Regional Development and Communications. (n.d.). Environmental Assessments.*
- Civil Aviation Authority, UK. (n.d.). Visual Impact.*
- Department of Agriculture, Land Reform and Rural Development (n.d.). Department of Agriculture, Land Reform and Rural Development.*
- Department of Environmental Affairs (DEA), South Africa. (2010). Environmental Impact Assessment Regulations.*
- Department of Environmental Affairs (2017). Environmental Impact Assessment Regulations, 2017.*
- Department of Environmental Affairs (2017). Environmental Impact Assessment Regulations Listing Notice 1, 2017.*
- Department of Environmental Affairs (2017). Environmental Impact Assessment Regulations Listing Notice 2, 2017.*
- Department of Environmental Affairs (2017). Environmental Impact Assessment Regulations Listing Notice 3, 2017.*
- Department of Environmental Affairs (DEA), South Africa. (2017). Environmental Impact Assessment Guideline for Renewable Energy Projects.*
- Department of Environmental Affairs and Development Planning. (2005). Guidelines for Involving Visual & Aesthetic Specialists in EIA Processes: Edition 1. Western Cape Government.*
- Federal Highway Administration. (n.d.). Visual Impact Assessment for Highway Projects.*
- Garden Route District Municipality (n.d.). Garden Route District Municipality.*
- Landscape Institute and Institute of Environmental Management and Assessment. (2013). Guidelines for Landscape and Visual Impact Assessment. 3rd Edition.*
- Ministry for the Environment, New Zealand. (n.d.). Quality Planning - Landscape.*
- Mossel Bay Local Municipality (n.d.). Mossel Bay Local Municipality.*
- Scottish Government. (n.d.). Landscape and Visual Impact Assessment.*
- South African Civil Aviation Authority (n.d.). South African Civil Aviation Authority.*

South African Council for the Landscape Architectural Profession (SACLAP). (n.d.). Guidelines and Policies.

South African Heritage Resources Agency (n.d.). South African Heritage Resources Agency.

South African National Biodiversity Institute (n.d.). Vegetation Map of South Africa.

South African National Parks (n.d.). GIS Data.

South African National Parks (n.d.). South African National Parks.

South African National Parks (SANParks). (n.d.). GIS Data.

U.S. Environmental Protection Agency. (n.d.). National Environmental Policy Act (NEPA) Review Process.

UK Government. (n.d.). Environmental Impact Assessment.

Appendix A: Specialist CV

Appendix B: VIA Best Practice Guideline