GEORGE
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CAPE TOWN
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DRAFT
BASIC ASSESSMENT REPORT

in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the 2014 NEMA Environmental Impact Assessment Regulations, as Amended

THE PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT ON ERF 266 AND A PORTION OF ERF 21 IN RIVERSDALE, HESSEQUA LOCAL MUNICIPALITY, GARDEN ROUTE DISTRICT MUNICIPALITY, WESTERN CAPE PROVINCE.

APPLICANT:	Belladonna (Pty) Ltd
ENVIRONMENTAL CONSULTANT:	Sharples Environmental Services cc Responsible EAP: Madeleine Knoetze (EAPASA Reg: 2021/3230) Overseeing EAP: Betsy Ditcham (EAPASA Reg: 2020/1480)
DEA & DP PROJECT REFERENCE:	16/3/3/1/D5/8/0021/25
SES REFERENCE NUMBER:	CT18/RDH/DBAR/10/25
DATE:	1 October 2025

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BASIC ASSESSMENT REPORT

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APRIL 2024

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

(For official use only)	
Pre-application Reference Number (if applicable):	16/3/3/6/7/1/D5/8/0425/24
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number)

THE PROPOSED MIXED-USE RESIDENTIAL DEVELOPMENT ON ERF 266 AND A PORTION OF ERF 21 IN RIVERSDALE, HESSEQUA LOCAL MUNICIPALITY, GARDEN ROUTE DISTRICT MUNICIPALITY, WESTERN CAPE PROVINCE.

Sharples Environmental Services cc (hereafter referred to as SES) has been appointed by Hessequa Consulting Engineers, on behalf of Belladonna (Pty) Ltd, to oversee the environmental assessment process for the proposed development of a mixed-use residential development on Erf 266 and the Remaining extent of Erf 21 in Riversdale Settlement, Hessequa Local Municipality, Garden Route District Municipality, Western Cape Province.

The development has the centre-point coordinates of 34° 5'11.32"S 21°13'55.94"E and is located in the Quaternary Degree Grid Cell (QDGC) 3421AA. The proposed development is currently accessible via the N2-Highway. However, once developed, access into the proposed development site will only be attainable through the extension of three existing roads (Erica Drive, Lobelia Street and Lanoria Street).

The proposed mixed-use development will see to the provision of the following topologies:

- Agricultural Zone II;
- Single Residential Zone I;
- General Residential Zone II;
- Business Zone III;
- Transport Zone II;
- Transport Zone III;
- Utility Zone; and
- Open Space Zone I.

The total development footprint will be 56.4 ha on properties is currently used in its entirety as Agricultural. Erf 266 is currently zoned as Business Zone VI and the Remainder of Erf 21 is zoned as Agricultural Zone I. Please note, both properties are within the Urban Edge as demarcated in the Hessequa Local Municipality's Spatial Development Framework (SDF), (2024/25, adopted on 3 June 2025). Furthermore, the proposed development forms part of the Municipality's Human Settlement Development Areas (Local Town-Based Spatial Proposals).

The Application for Environmental Authorisation also includes the installation of the external services associated with the proposed development. This includes the external roads and associated upgrades required to the existing roads to accommodate the proposed development, the stormwater infrastructure, water infrastructure and the electric infrastructure (these upgrades are conditional to the Municipality's services confirmation requirements).

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.

2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 19998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".

3. *Submission of documentation, reports and other correspondence:*

   The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant Competent Authority must be consulted.

   The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

   DEADPEIAAdmin@westerncape.gov.za
   Directorate: Development Management (Region 1):
   City of Cape Town; West Coast District Municipal area;
   Cape Winelands District Municipal area and Overberg District Municipal area.

   DEADPEIAAdmin.George@westerncape.gov.za
   Directorate: Development Management (Region 3):
   Garden Route District Municipal area and Central Karoo District Municipal area

   General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

   All correspondence, comments, requests and decisions in terms of applications, will be issued to either the applicant/requester in a digital format via email, with digital signatures, and copied to the Environmental Assessment Practitioner ("EAP") (where applicable).

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.

5. All applicable sections of this BAR must be completed.

6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.

7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za to check for the latest version of this BAR.

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.

11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.

12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.

13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.

14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-
    Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

    Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS	
CAPE TOWN OFFICE: **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)** (City of Cape Town, West Coast District, Cape Winelands District & Overberg District)	**GEORGE REGIONAL OFFICE:** **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)** (Central Karoo District & Garden Route District)
The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	The completed Form must be sent via electronic mail to: DEADPEIAAdmin.George@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 3) at: E-mail: DEADPEIAAdmin.George@westerncape.gov.za Tel: (044) 814-2006 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.*, 1:100 year, 1:50 year and 1:10 year where applicable);

	○ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): ○ Ridges; ○ Cultural and historical features/landscapes; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
GRDM	Garden Route District Municipality
HLM	Hessequa Local Municipality
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

Note: The Appendices must be attached to the BAR as per the list below. Please use a ✓ **(**tick) or a **x** (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	×
	Appendix A3:	**Map with the GPS co-ordinates for linear activities**	✓
Appendix B:	**Appendix B1a:**	**Site development plan – Preferred Layout**	✓
	Appendix B1a:	**Site development plan – Alternative Layout**	✓
	Appendix B2	**A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;**	✓
Appendix C:	**Photographs**		✓
Appendix D:	**Biodiversity overlay map**		
	Appendix D1:	**Western Cape Biodiversity Spatial Plan (2023) and National Biodiversity Assessment (2018; 2022)**	✓
	Appendix D2:	**Freshwater Resources Map**	✓
	Appendix D3:	**Land Use Classification, Land Type and Capability Map**	✓
	Appendix D4:	**Geotechnical Evaluation Map**	✓
	Appendix D5:	**Terrestrial, Plant and Animal Biodiversity Map**	✓
	Appendix D6:	**Combined site sensitivity map**	✓
	Appendix D7:	**Site Sensitivity Verification Report**	✓
Appendix E:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix E1:	**Final comment/ROD from HWC**	✓ Please note an initial comment has been obtained and included as an appendix of the Draft BAR.

	Appendix E2:	**Copy of comment from Cape Nature**	TBC
	Appendix E3:	**Final Comment from the DWS**	TBC
	Appendix E4:	**Comment from the DEA: Oceans and Coast**	TBC
	Appendix E5:	**Comment from the DAFF**	TBC
	Appendix E6:	**Comment from WCG: Transport and Public Works**	✓ SANRAL provided comments on the proposal during the pre-Application phase. Comment will be sought from WCG: Infrastructure
	Appendix E7:	**Comment from WCG: DoA**	TBC
	Appendix E8:	**Comment from WCG: DHS**	TBC
	Appendix E9:	**Comment from WCG: DoH**	TBC
	Appendix E10:	**Comment from DEA&DP: Pollution Management**	TBC
	Appendix E11:	**Comment from DEA&DP: Waste Management**	TBC
	Appendix E12:	**Comment from DEA&DP: Biodiversity**	TBC
	Appendix E13:	**Comment from DEA&DP: Air Quality**	TBC
	Appendix E14:	**Comment from DEA&DP: Coastal Management**	N/A
	Appendix E15:	**Comment from the local authority**	TBC
	Appendix E16:	**Confirmation of all services (water, electricity, sewage, solid waste management)**	✓
	Appendix E17:	**Comment from the District Municipality**	TBC
	Appendix E18:	**Copy of an exemption notice**	N/A
	Appendix E19	**Pre-approval for the reclamation of land**	N/A
	Appendix E20:	**Proof of agreement/TOR of the specialist studies conducted.**	N/A

			All relevant specialist studies were conducted
	Appendix E21:	**Proof of land use rights**	✓ In the form of title deeds
	Appendix E22:	**Proof of public participation agreement for linear activities**	N/A
Appendix F:	**Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.**		
	Appendix F1:	**List of pre-identified Interested and Affected Parties**	✓
	Appendix F2:	**Site notices and newspaper adverts placed as part of the Public Participation Process**	✓
Appendix G:	**Specialist Report(s)**		
	Appendix G1a:	**Terrestrial Biodiversity and Plant Species Compliance Statement - 2023**	✓
	Appendix G1b:	**Terrestrial Biodiversity and Plant Species Compliance Statement – 2025 Addendum**	✓
	Appendix G2:	**Animal Species Compliance Statement - 2025**	✓
	Appendix G3:	**Agricultural Agro-Ecosystem Assessment - 2025**	✓
	Appendix G4a:	**Freshwater Impact Assessment and DWS Risk Assessment - 2023**	✓
	Appendix G4b:	**Freshwater Impact Assessment and DWS Risk Assessment Addendum – 2025**	✓
	Appendix G5:	**Heritage Impact Assessment – 2025**	✓
	Appendix G6a:	**Visual Impact Assessment - 2023**	✓
	Appendix G6b:	**Visual Impact Assessment Addendum - 2025**	✓
	Appendix G7:	**Geotechnical Assessment – 2023 (no addendum required as assessment proposed development layouts)**	✓
	Appendix G8:	**Traffic Impact Assessment – 2023 (no addendum required as assessment informed external infrastructure upgrades proposed)**	✓
Appendix H:	**EMPr**		✓
Appendix I:	**Screening tool report**		✓
Appendix J:	**The impact and risk assessment for each alternative**		Included in BAR
Appendix K:	**Need and desirability for the proposed activity or development in terms of this Department's guideline on Need**		Included in BAR

	and Desirability (March 2013)/DEA Integrated Environmental Management Guideline		
Appendix L:	**Engineering Services Information and Town Planning**		
	Appendix L1:	**Civil Engineering Report**	✓
	Appendix L2:	**Electrical Engineering Report**	✓
	Appendix L3:	**Town Planning Submission Motivation Report**	✓
	Appendix L4:	**Inclusion of Erf 21 into Urban Edge and rezoning of Erf 266**	✓
	Appendix L5:	**Stormwater Management Plan**	✓
Appendix M:	**Correspondence with Competent Authority**		
	Appendix M1:	**DEADP Response to Notice of Intent to Develop**	✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE: REGION 1		**GEORGE OFFICE: BEGION 3**
	(City of Cape Town, West Coast District	(Cape Winelands District & Overberg District)	**(Central Karoo District & Garden Route District)**

Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Belladonna (Pty) Ltd	
Name of contact person for Applicant/Proponent (if other):	Gideon Pepler (Duly Appointed Representative)	
Company/ Trading name/State Department/Organ of State:	Belladonna (Pty) Ltd	
Company Registration Number:	1965/003575/07	
Postal address:	P.O. Box 577, Riversdale	
		Postal code: 6670
Telephone:	028 713 4030	Cell: 083 447 9297
E-mail:	pepler.hri@wispernet.co.za	Fax: ( )
Company of EAP:	Sharples Environmental Services CC	
EAP name:	Madeleine Knoetze	
Postal address:	P.O. Box 443, Milnerton	
	Cape Town	Postal code: 7435
Telephone:	021 554 5195	Cell: 079 028 1218
E-mail:	madeleine@sescc.net	Fax: ( )
Qualifications:	BSc Environmental Sciences	
EAP registration no:	2021/3230	
Duplicate this section where there is more than one landowner Name of landowner:	Same as Applicant	
Name of contact person for landowner (if other):		
Postal address:		
		Postal code:
Telephone:	( )	Cell:
E-mail:		Fax: ( )
Name of Person in control of the land:	Same as Applicant	
Name of contact person for person in control of the land:		
Postal address:		
		Postal code:
Telephone:	( )	Cell:
E-mail:		Fax: ( )

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	Hessequa Local Municipality	
Contact person:	Mr. Shagon Carelse (Head of Environmental Services)	
Postal address:	van den Bergh Street, Riversdale	
		Postal code: 6670
Telephone	028 713 8000	Cell:
E-mail:	shagon@hessequa.gov.za	Fax: ( )

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INLCUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New	✓	Expansion	
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				

There are no existing buildings or infrastructure on site.

The site does have two existing farm roads leading through the proposed development site. These tracks lead adjacent to fence lines sectioning off the various agricultural portions of the properties. The site is further bordered by a farm track and an associated fence line.

Due to lack of established infrastructure on site, the proposed development area is considered a greenfield site.

3.	**For Linear activities or developments**
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:

Following the Pre-Application Meeting held with the Western Cape Department of Environmental Affairs and Development Planning (DEADP), it was indicated that external infrastructure upgrades must be considered (if required). As per the Services Confirmation agreement with the Hessequa Local Municipality (HLM), services can be made available should certain requirements be met. This section addresses requirements of both the HLM and the development itself to provide a coherent services delivery plan for the project.

(1) External Access Roads:
The proposed development will see to the construction of three access roads (extensions of existing access roads). None of the extensions would constitute listed activities as all extensions are proposed in the urban area of Riversdale.

- Access road 1: Extension of Labolia Street (Erf 4485 and the Remainder of Erf 4595, Riversdale)
- Access road 2: Extension of Lanoria Street (Remainder of Erf 22)
- Access road 3: Extension of Erica Drive (Remainder of Erf 22)

All access roads form part of the preferred and alternative layout plans and are located within the Urban Area of Riversdale.

(2) External Stormwater Layout Plan:
- Remainder of Erf 22, Riversdale Settlement
- Remainder of Erf 5770, Riversdale
- Portion A of Erf 21, Riversdale Settlement

(3) External Water Connection:
- Portion A of Erf 21, Riversdale Settlement
- Remainder of Erf 4485, Riversdale
- Remainder of Erf 4084, Riversdale
- Erf 14, Riversdale
- Remainder of erf 214, Riversdale
- Remainder of Erf 2015, Riversdale

(4) External Electrical Connection:
- Remainder of Erf 22, Riversdale Settlement
- Remainder of Erf 4485, Riversdale
- Erf 14, Riversdale
- Erf 7204, Riversdale
- Remainder of Erf 2015, Riversdale
- Erf 257, Riversdale
- Portion A of Erf 21, Riversdale Settlement

(5) External Sewer Connection:
- Remainder of Erf 22, Riversdale Settlement
- Remainder of Erf 4485, Riversdale
- Erf 7208, Riversdale
- Portion A of Erf 21, Riversdale Settlement (proposed development area)

3.2.	Development footprint of the proposed development for all alternatives.	26 700 m²

The following areas will be associated with the respective access roads:
- Access road 1: Extension of Labolia Street (considered a Class 4b road) - total footprint of the expansion will be approximately 0.7 ha.
- Access road 2: Extension of Lanoria Street (Remainder of Erf 22) (considered a Class 5 road) - total footprint of the expansion will be approximately 1.2 ha.
- Access road 3: Extension of Erica Drive (Remainder of Erf 22) (considered a Class 5 road) - total footprint of the expansion will be approximately 0.8 ha.

A 5 m working corridor will be applicable to the external infrastructure associated with the project. However, a 3 m working corridor shall apply in proximity to any watercourses.

Therefore, the proposed development footprint of the external infrastructure will be approximately:

- Electrical: 1,1 ha
- Water: 0,9 ha
- Sewer: To be located within the footprint of the external access roads
- Stormwater: 1,5 ha

The total combined footprint of the external infrastructure will therefore be approximately 6.2 ha.

3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.

The following project descriptions are applicable to the proposed development's external infrastructure as per the requirements of the project's civil engineering and electrical services reports (Appendix L1 and L2, respectively):

(1) External Roads Infrastructure

The proposed roads infrastructure will have the following lengths, widths and reserve widths:

- Access road 1: Extension of Labolia Street (considered a Class 4b road)
  Please note, the reserve associated with the extension of Labolia Street is located within properties earmarked for the future extension of the road. The reserve is 16 m in width (allowing for multidirectional traffic with a minimum lane width of 3.4 m per lane). The portion the road to be formalised as part of the proposed development will be 494 m. The total footprint of the expansion will be approximately 0.68 ha.
- Access road 2: Extension of Lanoria Street (Remainder of Erf 22) (considered a Class 5 road)
  The proposed reserve is 16 m in width (allowing for multidirectional traffic with a minimum lane width of 3.4 m per lane). The portion the road to be formalised as part of the proposed development will be 724 m. The total footprint of the expansion will be approximately 1.17 ha.
- Access road 3: Extension of Erica Drive (Remainder of Erf 22) (considered a Class 5 road)
  The reserve is 16 m in width (allowing for multidirectional traffic with a minimum lane width of 3.4 m per lane). The portion the road to be formalised as part of the proposed development will be 468 m. The total footprint of the expansion will be approximately 0.82 ha.

According to the Traffic Assessment for the proposed development, traffic counts at the following intersections were undertaken:

- Intersection of Erica Street and Protea Street,
- Intersection of Bauhinia Street and Protea Street,
- Intersection of Lobelia Street and Erica Street,
- Intersection of Protea Street and Langezicht access road.

It was found that the following interventions would be required from a traffic impact perspective to accommodate the traffic to be associated with the proposed development:

- Short Term (Immediate Implementation): Conversion of the current 4-way STOP at intersection of Bauhinia Street and Protea Street, to a new 2-way STOP controlled intersection with priority movement along the Bauhinia approaches to the intersection.
- Long Terms (5 to 15 year period): Formalisation of the gravel jeep track road currently situated within the Lobelia Street road reserve. Please note this intervention has been incorporated into the proposed development layout.

(2) External Stormwater Layout Plan:

- Graeme McGill Consulting Engineers was appointed to prepare a Storm Water Management Plan (SWMP) for the proposed development as well the drainage through the lower lying areas.
- The following measures are proposed to mitigate the impact of post development stormwater runoff on the existing infrastructure downstream from the proposed development:
  - Installation of 5 000 kℓ water tanks on each residential erf will contribute to the attenuation of initial runoffs.
  - Public Open Spaces will be utilised as recreation areas as well as stormwater detention areas where the concentration of stormwater runoff will be minimised through the application of landscaping techniques, i.e. by creating grass lined swales, undulations and depressions.
  - Post development runoffs will be attenuated with the construction of stilling basins and energy dissipating structures at outlet structures.
  - As indicated in the image below, the proposed development will be equipped with four attenuation ponds (as detailed in Appendix L5):
    - Pond 1: Located within a General Residential Zone II plot will have an area of approximately 4 110 m^2 with a capacity of approximately 4 570 m^3.
    - Pond 2: Located within a Open Space Zone I plot will have an area of approximately 1 390 m^2 with a capacity of approximately 2 130m^3.
    - Pond 3: Located within a General Residential Zone II plot will have an area of approximately 3 030 m^2 with a capacity of approximately 4 040 m^3.
    - Pond 4: Located within a General Residential Zone II plot will have an area of approximately 860 m^2 with a capacity of approximately 730 m^3.

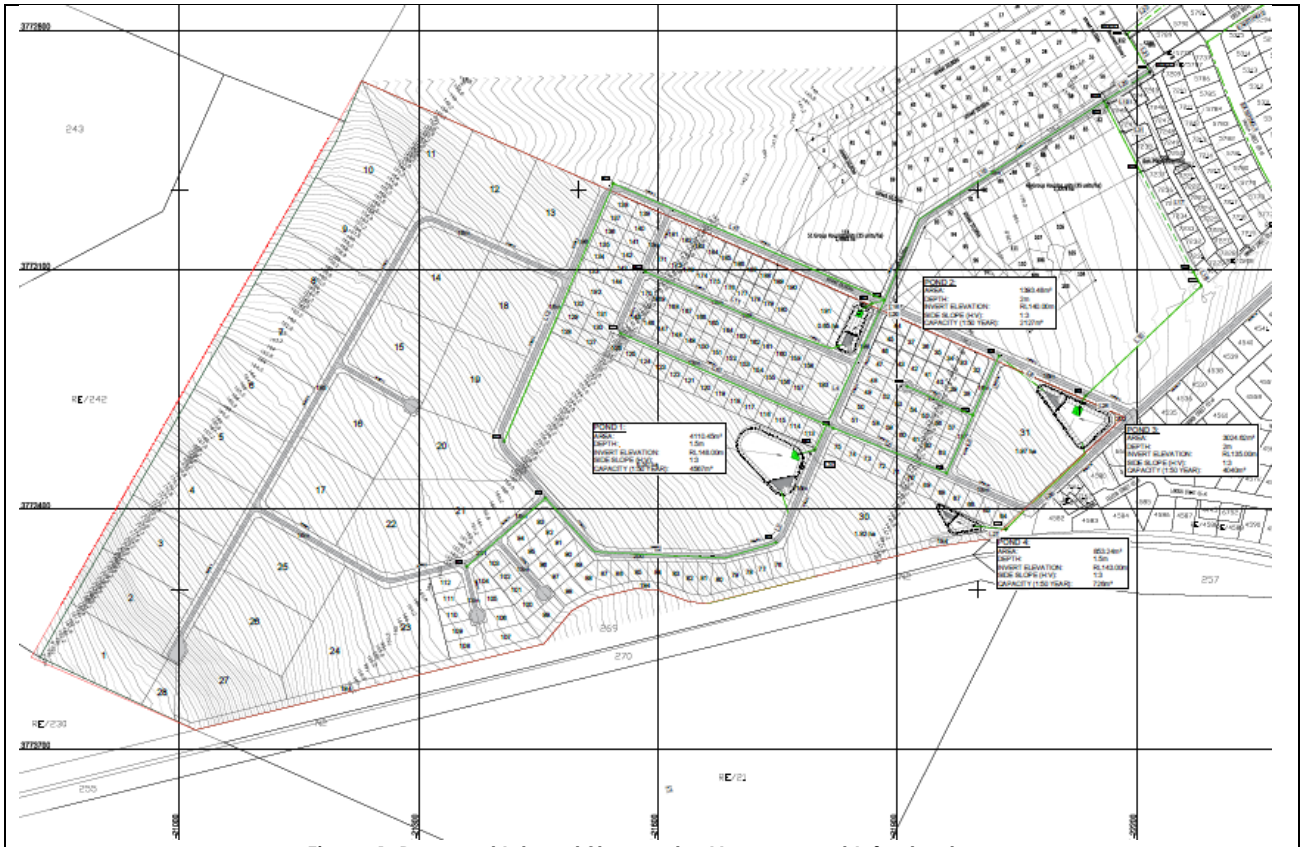


Figure 1. Proposed Internal Stormwater Management Infrastructure.

(3) External Water Connection:

- Hessequa Municipality confirmed on 30 July 2024, through the Municipal Manager Mr. A. de Klerk, reference 17/7/5/9, that Hessequa Municipality (Riversdale) consists of sufficient water sources to accommodate the development of Erf 21.
- The proposed development falls within the High-Level Reservoir Zone and require storage capacity of 1 Mℓ that represent 48 hours of the AADD. The existing storage capacity at the High-Level Reservoir Zone is 5,64 Mℓ with a Full Water Level (FWL) of 213,02m.
- The proposed development has an elevation range between 135,5 and 183,5 m a.s.l. All erven will have a minimum of 24m water pressure.
- In accordance with the GLS Report, dated June 2015, the following Link Water Main will be required to accommodate the proposed development in the existing High-Level Zone 1,855m Long, 200mm Ø, uPVC Water Link between existing 200mm High Level pipe network, at the northwestern corner of the Cemetery (adjacent to the N2) and Erf 21. It is proposed that the pipeline be upsized to an 250mm Ø, uPVC to accommodate the future developments in the area. Blue line in the image below.

Figure 2. Proposed External Water Infrastructure (indicated in blue)

(4) External Electrical Connection:

- When the load requirement of this development and the adjacent Erf RE/22 exceeds the available capacity of 856 kVA of the aforementioned 35mm² Cu x 3 core MV cable, a new 11kV feeder, indicated in green on Drawing No. 19076/E/01, Rev.1, must be supplied and installed from the existing 11kV overhead line between the "Main Intake Substation" and "SS-Main". The 11kV feeder will consist of a ring main unit, 11kV underground cable, and 11kV overhead line.
- The Municipality indicated that they will take-over:
    - The external 11kV electrical reticulation to the two group housing developments on Erven 29 and 30, i.e the 4-way Ring Main Unit "RMU-Lanoria", 11kV underground cable from said ring main unit to the aforementioned private developments, including the 11kV bulk supply points each consisting of a 11kV ring main unit and metering unit.
    - The LV connections to the erf boundaries of the group housing developments on Erf 31 and the Business Zone II erf, including the LV bulk supply points each consisting of a tariff circuit breaker and kVA/kWh bulk meter.
    - The MV reticulation and LV reticulation to the 27 Agricultural Zone II Erven and 155 single Residential Erven up to the erf boundary of each erf, i.e. MV underground cable, miniature substations, LV kiosks, LV underground cables and streetlights.
    - The 11kV underground / overhead line feeder between the Main Intake Overhead line and the aforementioned 4-way ring main unit.
- For this reason, the external electrical installations mentioned above would have to comply with the technical requirements of the Municipality and their supply conditions.
- The internal 11kV installations on the load side of the MV Supply Points at the private developments, the LV installations on the load side of the LV tariff breakers inside the LV compartment of the miniature substations at Erven 31 and 191 and the LV installation inside each of the single residential and Agricultural Zone II erven, will be taken over by the Developer/ Body Corporate/home owners.

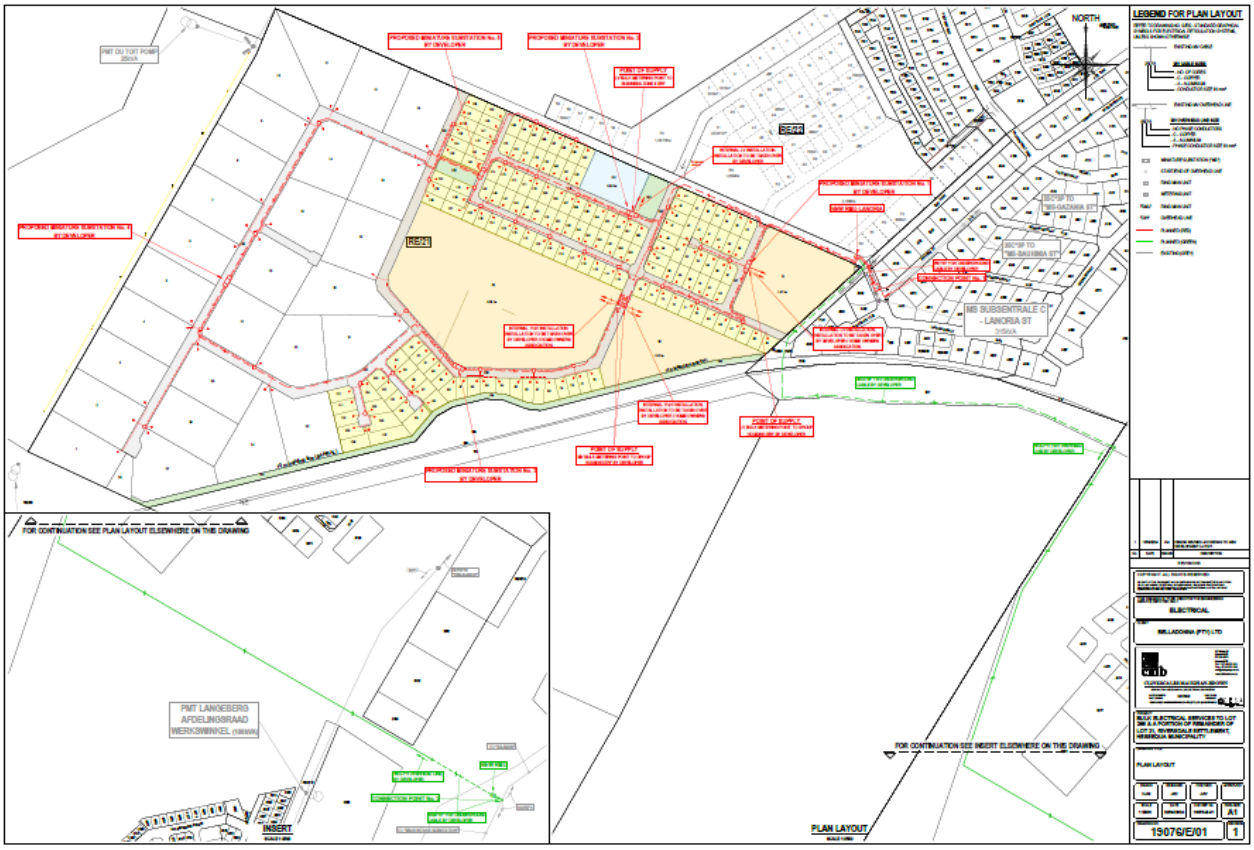


Figure 3. Proposed Internal (red) and External Electrical (green) Reticulation.

(5) External Sewer Connection:

- The existing WWTW has a design capacity of 4,0 Mℓ/d. Hessequa Municipality confirmed on 30 July 2024, through the Municipal Manager Mr. A. de Klerk, reference 17/7/5/9, that the WWTW in Hessequa Municipality (Riversdale) consists of sufficient capacity to accommodate the proposed development.

- In accordance with the Guidelines for the Provision of Engineering Services and Amenities in Residential Township Development it is expected that 70% of the Average annual water daily demand will end up in the wastewater system. The annual average dry weather flow (AADWF) equals 70% of 500 kℓ/d = 350 kℓ/d = 4,05 ℓ/s. To determine the Peak Wet Weather Flow (PWWF) a peak factor of 2,32 were taken in consideration with an expected stormwater infiltration of 15%. The PWWF equals 10,8 ℓ/s.
- Design specifications:
  - Design parameters: Average daily flow as per Red Book for the different housing categories Peak factor – Harmon formula: Extraneous flow – 15% : Minimum velocity – 0.7m
  - Minimum cover to pipes: 0.80m
  - Minimum pipe size: 110mm diameter for house connections : 160mm diameter for sewer mains
  - House connection depth shall generally be 1.0m but at least be able to drain 80% of an erf.
  - Maximum manhole spacing of 80m.

Figure 4. Proposed External Sewer Infrastructure (indicated in green)

3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.

Please note that the three access roads serve as extensions of Labolia Street, Lanoria Street and Erica Drive, respectively. Therefore, access will be obtained from the beforementioned roads.

3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives

External Road Infrastructure:																					
Erf 4485, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	4	4	8	5	0	0	0	0	0
Remainder of Erf 4595, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	4	5	9	5	0	0	0	0	0
Remainder of Erf 22, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	2	0	0	0	0	0
External Stormwater Infrastructure:																					
Remainder of Erf 22, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	2	0	0	0	0	0
Remainder of Erf 5770, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	5	7	7	0	0	0	0	0	0
Portion A of Erf 21, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	1	0	0	0	0	0
External Water Connection:																					
Portion A of Erf 21, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	1	0	0	0	0	0
Remainder of Erf 4485, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	4	4	8	5	0	0	0	0	0
Remainder of Erf 4084, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	4	0	8	4	0	0	0	0	0
Erf 14, Riversdale	C	0	6	4	0	0	0	4	0	0	0	0	0	0	1	4	0	0	0	0	0

Remainder of erf 214, Riversdale	C	0	6	4	0	0	0	4	0	0	0	0	0	2	1	4	0	0	0	0	0
Remainder of Erf 2015, Riversdale	C	0	6	4	0	0	0	4	0	0	0	0	2	0	1	5	0	0	0	0	0
External Sewer Connection																					
Remainder of Erf 22, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	2	0	0	0	0	0
Remainder of Erf 4485, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	4	4	8	5	0	0	0	0	0
Erf 7208, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	7	2	0	8	0	0	0	0	0
Portion A of Erf 21, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	1	0	0	0	0	0
External Electrical Connection																					
Remainder of Erf 22, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	2	0	0	0	0	0
Remainder of Erf 4485, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	4	4	8	5	0	0	0	0	0
Erf 14, Riversdale	C	0	6	4	0	0	0	4	0	0	0	0	0	0	1	4	0	0	0	0	0
Erf 7204, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	7	2	0	4	0	0	0	0	0
Remainder of Erf 2015, Riversdale	C	0	6	4	0	0	0	4	0	0	0	0	2	0	1	5	0	0	0	0	0
Erf 257, Riversdale	C	0	6	4	0	0	0	3	0	0	0	0	0	2	5	7	0	0	0	0	0
Portion A of Erf 21, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	1	0	0	0	0	0

6.6.	**Starting point co-ordinates for all alternatives**			
	Extension of Lobelia Street			
	Latitude (S)	**34°**	**5'**	**4.51"**
	Longitude (E)	**21°**	**14'**	**35.15"**
	Extension of Lanoria Street			
	Latitude (S)	**34°**	**5'**	**11.80"**
	Longitude (E)	**21°**	**14'**	**25.80"**
	Extension of Erica Drive			
	Latitude (S)	**34°**	**4'**	**57.49**
	Longitude (E)	**21°**	**14'**	**26.77"**
	External Sewer Infrastructure – Connection Point 1			
	Latitude (S)	**34°**	**5'**	**7.10"**
	Longitude (E)	**21°**	**14'**	**13.58"**
	External Sewer Infrastructure – Connection Point 2			
	Latitude (S)	**34°**	**5'**	**11.38"**
	Longitude (E)	**21°**	**14'**	**25.34"**
	External Stormwater Infrastructure – Connection Point 1			
	Latitude (S)	**34°**	**5'**	**2.38"**
	Longitude (E)	**21°**	**14'**	**0.24"**
	External Stormwater Infrastructure – Connection Point 2			
	Latitude (S)	**34°**	**5'**	**10.78"**
	Longitude (E)	**21°**	**14'**	**23.23"**
	External Water Infrastructure			
	Latitude (S)	**34°**	**5'**	**15,18"**
	Longitude (E)	**21°**	**14'**	**20.30"**

	External Electrical Infrastructure			
	Latitude (S)	**34°**	**5'**	**11.15"**
	Longitude (E)	**21°**	**14'**	**25.29"**
	Middle point co-ordinates for all alternatives			
	Extension of Lobelia Street			
	Latitude (S)	**35°**	**5'**	**8.58"**
	Longitude (E)	**21°**	**14'**	**29.47"**
	Extension of Lanoria Street			
	Latitude (S)	**34°**	**57'**	**7.29"**
	Longitude (E)	**21°**	**14'**	**14.60"**
	Extension of Erica Drive			
	Latitude (S)	**34°**	**5'**	**1.85"**
	Longitude (E)	**21°**	**14'**	**18.28"**
	External Sewer Infrastructure – Connection Point 1			
	Latitude (S)	**34°**	**5'**	**1.93"**
	Longitude (E)	**21°**	**14'**	**18.44"**
	External Sewer Infrastructure – Connection Point 2			
	Latitude (S)	**34°**	**5'**	**12.45"**
	Longitude (E)	**21°**	**14'**	**25.94"**
	External Stormwater Infrastructure – Point where two connection points meet			
	Latitude (S)	**34°**	**4'**	**58.63"**
	Longitude (E)	**21°**	**14'**	**24.25"**
	External Water Infrastructure			
	Latitude (S)	**34°**	**5'**	**25.90"**
	Longitude (E)	**21°**	**14'**	**44.00"**
	External Electrical Infrastructure			
	Latitude (S)	**34°**	**5'**	**28.28"**
	Longitude (E)	**21°**	**14'**	**35.50"**
	End point co-ordinates for all alternatives			
	Extension of Lobelia Street			
	Latitude (S)	**34°**	**5'**	**15.23"**
	Longitude (E)	**21°**	**14'**	**20.79"**
	Extension of Lanoria Street			
	Latitude (S)	**34°**	**5'**	**2.08"**
	Longitude (E)	**21°**	**14'**	**0.02"**
	Extension of Erica Drive			
	Latitude (S)	**34°**	**5'**	**6.92"**
	Longitude (E)	**21°**	**14'**	**13.50"**
	External Sewer Infrastructure – Connection Point 1			
	Latitude (S)	**34°**	**4'**	**58.57"**
	Longitude (E)	**21°**	**14'**	**24.58"**
	External Sewer Infrastructure – Connection Point 2			
	Latitude (S)	**34°**	**5'**	**13.50**
	Longitude (E)	**21°**	**14'**	**26.56"**
	External Stormwater Infrastructure			
	Latitude (S)	**34°**	**4'**	**52.71"**
	Longitude (E)	**21°**	**14'**	**32.41"**
	External Water Infrastructure			
	Latitude (S)	**34°**	**5'**	**34.90"**
	Longitude (E)	**21°**	**14'**	**58.90"**
	External Electrical Infrastructure			
	Latitude (S)	**34°**	**5'**	**51.41"**
	Longitude (E)	**21°**	**15'**	**0.11"**

Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.

4.	**Other developments**	
4.1.	Property size(s) of all proposed site(s):	564 166 m²
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):	N/A
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:	564 166 m² (excluding extent of access roads)
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).	

The Applicant, Belladonna (Pty) Ltd proposes the development of the Erf 266 and a portion of Erf 21 from the current land use (Agriculture) to a mixed-use residential development. It has been confirmed that the two properties have been included in the Urban Edge defined by the Hessequa Municipality. As indicated by both Appendix L4 and the adoption of the 2024/2025 Spatial Development Framework (SDF) of the Hessequa Local Municipality (HLM). Please refer to Section

The proposed development site is located North of the N2-Highway. The remaining portion of Erf 21 (located toward the south of the N2-Highway) will retain its current land use and Zoning. Please see the figure below.

Figure 1. Locality map of the proposed development.

The preferred site development plan comprises the development of the following topologies:

- 27 Agricultural Zone II erven with a combined extent of 27.5 ha
- 159 Single Residential erven with a combined extent of 10.4 ha
- 3 Pockets of General Residential Zone II areas with a combined extent of 10.4ha
- 1 Business Zone with an extent of 0.7 ha;

Additionally, several ancillary land uses are also proposed which include the internal and access roads,

- Transport Zone II erven with a combined extent of 3.8 ha
- Transport Zone III erf with an extent of 1.9 ha
- Utility Zone with an extent of 0.2 ha; and
- 3 Open Space Zone 1 erven with a combined extent of 1.5 ha.

The above can further be elaborated on:

- Smallholdings / 1ha lifestyle erven forming a gated community with restricted agricultural land uses such as equestrian use – Proposed zoning Agricultural Zone II
- Low density single residential erven – Proposed zoning Residential Zone II
- Medium density general residential erven – Proposed zoning General Residential Zone II
- Retirement village / frail care unit – Proposed zoning General Residential Zone II

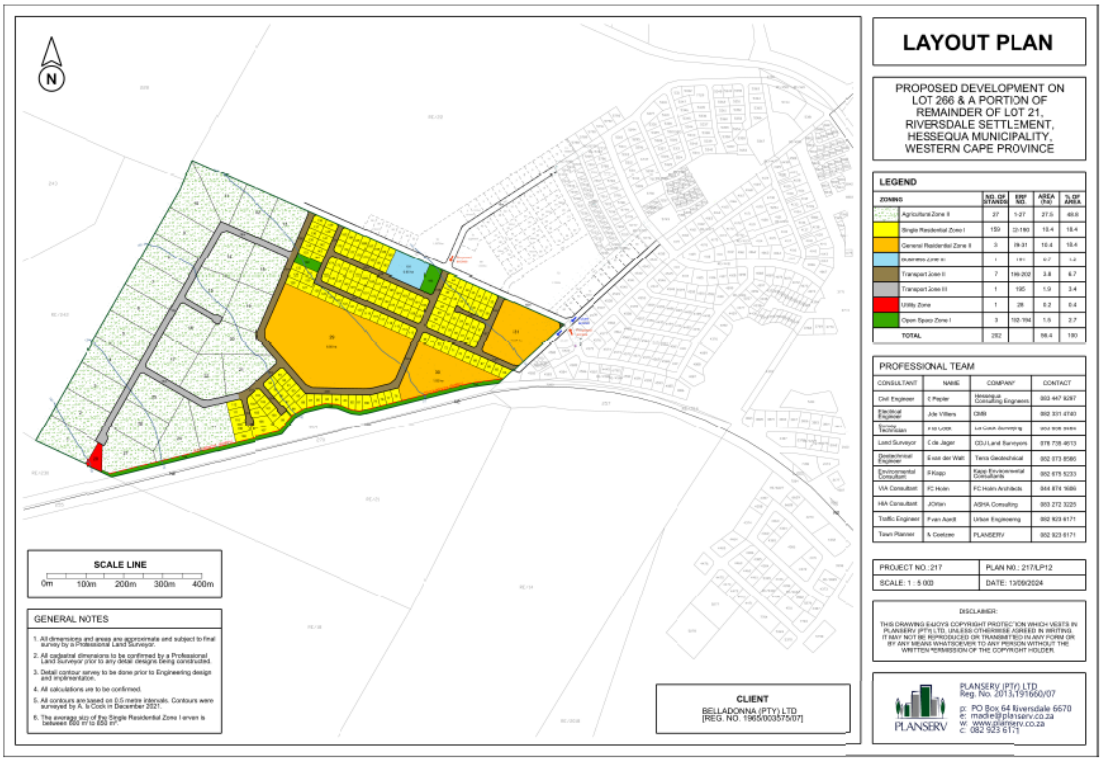


Figure 2. Proposed preferred site development plan.

The total development footprint comprises approximately 56.4ha.

The proposed development will also entail the establishment of both internal and external services, including sewer, water, electricity and roads infrastructure. The latter has been described in Section 6 above.

The following land use descriptions are applicable to the respective topologies (As extracted from the Town Planning Report in line with the Hessequa Town Planning Scheme):

Land Use	Description
Agricultural Zone II	The intention is to develop 27 smallholdings within a gated estate to provide exclusive lifestyle properties, including a dwelling unit that is primarily a place of residence, on which limited small scale agricultural activities may take place. The smallholdings will obtain access from a private road. The rules and restrictions will be laid down in the Architectural Guidelines and Home Owners Association Constitution. The architectural style will contribute to the country town's character. Smallholding unit sizes of between 1 and 1,5 hectares are proposed. The proposed smallholdings will be located on the urban fringe in a tranquil environment with farming or country life characteristics. Agricultural landscaping and a view of the Sleeping Beauty mountain peak will contribute to the rustic ambiance.
Single Residential Zone I	A total number of 159 single residential erven is proposed. The average erf sizes of the single residential erven range between 600 m² to 850 m². The proposed density is 15 dwelling units per hectare. These erven will obtain access from public roads and will not form part of the gated estate.
General Residential Zone II	Three group housing sites are proposed. The purpose of the two smaller group housing sites is to provide opportunities for residential development of a medium density, with a coordinated design, and to accommodate group housing where special attention is given to aesthetics, architectural form and the interrelationship between components of the group housing scheme. Application is made for consent use for a retirement resort on the largest General Residential Zone II erf, shown as Erf no. 29 on the layout plan (Plan No. 217/P4), in order to provide group housing for retirees/ pensioners/a family of which at least one member is a retiree or pensioner, with a full spectrum of frail care and other facilities reasonably associated with a retirement resort. The proposed density of all three group housing sites is 35 dwelling units per hectare.
Business Zone III	A neighbourhood shop is proposed for the retail sale, principally, of convenience goods to the public and providing service almost exclusively to the inhabitants of a specific neighbourhood and its surrounding area. The main purpose of the proposed neighbourhood shop is to provide a shop or convenience store that serve the needs for daily fresh produce for the surrounding residential areas. The business erf is centrally located at the main entrance to the proposed new development. Application is made for consent use for a supermarket in order to provide a shop having a total floor space in excess of 400 m², in which a range of goods, including foodstuff and

	household goods, is offered for sale on a predominantly self-service basis. The spacious erf size of approximately 6 500 m² is proposed in order to develop a neighbourhood shop with supplementary land uses, if needed, and also provide sufficient parking bays to the satisfaction of the local municipality.
Open Space Zone I	Three public open spaces are proposed, including a park or public garden of approximately 2 400 m² next to the proposed business site, to enhance the aesthetic appearance of the area and/or provide recreational areas. Portions of the open spaces may be improved with soft and hard landscaping, including street furniture such as benches. The parks may also have recreational equipment such as children's swings, jungle gyms and a kick-about area. A 10 m wide green belt is proposed along the N2 road reserve to provide space for vegetated buffers to reduce visual intrusion from the N2.
Transport Zone II	Seven public street parcels, including infrastructure associated with such streets, are proposed as public throughways for vehicles and pedestrians. These street parcels will be transferred to the Hessequa Municipality.
Transport Zone III	One private road is proposed to provide vehicle access to the smallholding erven in the gated estate. A private road includes a gatehouse, guardhouse, refuse room and utility room. This road will be privately owned and managed by the Home Owners Association and will not vest in the Hessequa Municipality.
Utility Zone	One Utility Zone erf is proposed to reserve land for infrastructure that is required to provide engineering and associated services for the proper functioning of urban development. The erf will be used to develop a water reservoir and also provide a communal refuse area for the gated estate. The refuse will be transported from this erf to the municipal landfill site.

4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.
As detailed in Section 5.1 above, there is no existing infrastructure on site as the entirety of the proposed development site was previously and currently used for Agricultural practices (dryland farming).	

4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:																				
Portion A of Erf 21, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	0	2	1	0	0	0	0	0
Erf 266, Riversdale Settlement	C	0	6	4	0	0	0	4	0	0	0	0	0	2	6	6	0	0	0	0	0

4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	**34°**	**05'**	**10.92"**
	Longitude (E)	**21°**	**13'**	**56.77"**

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	YES	**NO**

2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	YES	**NO**
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	**YES**	NO
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	**YES**	NO
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	YES	**NO**
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	YES	**NO**
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	**YES**	NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	**YES**	NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	**YES**	NO

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.

- The National Environmental Management: Laws Amendment Act (Act no. 2 of 2022)
- The National Environmental Management Act, 1998, as amended (Act No. 107 of 1998):
    - Environmental Impact Assessment (EIA) Regulations of 2014, as amended (Government Notice Regulations (GNR) 326 of 2017).
    - Listing Notice 1 of 2014, as amended (GNR 327 of 2017)
    - Listing Notice 3 of 2014, as amended (GNR 324 of 2017);
    - Please note the following legislation have been considered, but based on the feedback from the specialists, the nature and extent of the proposed development, have been deemed as not applicable:
        - Listing Notice 2 of 2014, as amended (GNR 325 of 2017);
        - National Biodiversity Offset Guidelines, 2023;
- Western Cape Land Use Planning Act Regulations, 2015;
- Western Cape Land Use Planning Guidelines – Rural Areas, 2019;
- General Authorisation in terms of Section 21 (c) and (i) of the National Water Act, 1998 (GN 509 of 2016).
- Western Cape Biodiversity Act, 2021 (Act No. 6 of 2021).
- Preservation and Development of Agricultural Land Act, 2024 (Act No. 39 of 2024).
- National Environmental Management: Biodiversity Act (Act No. 10 of 2004): Alien and Invasive Species Regulations (GNR 1020 of 2020)

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.

National Policies

National Development Plan 2030

The National Development Plan (NDP) emphasizes that education, training, and innovation are fundamental to South Africa's long-term progress. These elements are critical in tackling poverty, reducing inequality, and laying the foundation for a more equitable society. Education enables individuals to shape their identity, take charge of their lives, support healthy families, actively participate in building a fair society, and engage confidently in the politics and governance of their communities.

The NDP provides a comprehensive framework for addressing poverty and inequality through six interconnected priorities:

- Building safer communities;
- Promoting environmental sustainability;
- Encouraging faster and more inclusive rural and urban economic growth;
- Strengthening economic infrastructure;
- Promoting public health; and
- Transforming human settlements and the urban space economy

The NDP outlines objectives and actions to achieve South Africa's vision for 2030. Several policies from the NDP are directly relevant to the proposed development:

- *NDP Chapter 3: Economy and Employment*
  Key policies for economic development focus on removing constraints to growth, investment, and job creation, including energy distribution and urban planning. These policies include:
    - Encouraging private investment: Improved policy certainty, infrastructure delivery, and efficient public services will enhance labour quality and attract private investment to the area.
    - Enhancing spatial dynamics and rural employment: Developing areas close to rural townships will stimulate local economies through investments in agriculture and tourism.
    - Establishing economic and growth clusters: Strategic decisions are needed in sectors that can drive new growth trajectories.
    - Developing tourism clusters: Increasing tourism and related spending can transform regions into international tourist destinations, enriching the local economy.
- *NDP Chapter 5: Environmental Sustainability*
  This chapter establishes guiding principles for the transition from policy to action, focusing on creating a regulatory framework to ensure the conservation and restoration of natural environments. Key guidelines include:
    - Strategic planning: A systems-based, dynamic approach that allows flexibility in addressing emerging risks and opportunities.
    - Transformative thinking: Addressing societal and economic needs through innovative planning and visionary approaches.
    - Managing transitions: Building on existing processes to implement gradual changes.
    - Focusing on opportunities: Creating business growth, competitiveness, and employment that will contribute to equality and prosperity.
    - Full-cost accounting: Ensuring that externalities are internalized to reflect the true costs of development.

- Effective social participation: Engaging social partners in dialogue, seeking consensus, and making compromises where needed.

- *NDP Chapter 8: Transforming Human Settlement and the National Space Economy*
  This chapter emphasizes the importance of aligning provincial land use management systems with local municipalities to prevent conflicts. Key principles outlined for spatial development include adherence to Section 42 of the Spatial Planning and Land Use Management Act (SPLUMA), which became the primary spatial and land use management legislation in July 2015.
- *Housing, Densification, and Health Objectives in the NDP:*
  Promote mixed housing strategies and more compact urban development to improve access to public facilities, work, and business opportunities.
  - Implement new spatial norms and standards to densify cities, improve transportation, and upgrade informal settlements.
  - Develop strategies for city densification and better-located housing.
  - Provide affordable, high-quality healthcare while promoting overall health and wellness.

The proposed development aligns with the above-mentioned objectives and policies as during the construction phase of the development, numerous temporary (2-5 years) employment opportunities will be provided. These employment opportunities will require skilled, semi-skilled and unskilled labourers. The construction phase of the proposed development also makes allowance for individuals to gain additional skills. The planning phase of the proposed development sees to the strategic undertaking of the proposed development, as the needs of the developer, the town planning unit and environmental managers are integrated to provide the best practicable outcome. The proposed development will provide market-related housing during the operational phase. Due to the provision of a small commercial property within the preferred site development plan and the gated security estate, there will also be a limited window for employment opportunities in the operational phase of the proposed development.

National Environmental Management Act (Act 107 of 1998)

The National Environmental Management Act, 1998, as amended (NEMA; Act No. 107 of 1998) aims to provide for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment. The law develops a framework for integrating good environmental management into all development activities. The social, economic, and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment. The NEMA also provides for the promulgation of regulations pertaining to the management of the environment. Therefore, as highlighted in Section 3 above, the EIA Regulations and associated Listing Notices (providing triggers for environmental activities) have been adopted.

As the proposed development falls within the ambit of triggers of the Regulations (As stipulated in Section D below) these policies would apply to the proposed development.

The following National Environmental Management Acts are also applicable to the proposed development:

- National Environmental Management: Biodiversity Act (NEMBA; Act No. 10 of 2004) – due to the proposed development being located within the mapped Critically Endangered Ecosystem, the Eastern Ruens Shale Renosterveld. The remaining portions of the ecosystem type has been delineated as Critical Biodiversity Areas (CBA) in terms of the 2023 Western Cape Biodiversity Spatial Plan adopted in 2024 under the Western Cape Biodiversity Act.
- National Environmental Management: Protected Areas Act (NEMPAA; 2003 (Act No. 57 of 2003) – The proposed development is located within the Gouritz Cluster Biosphere Reserve as delineated in the South African Protected Areas Database and was declared as such in 2015.

Other Acts falling within the Environmental Realm with applicability to the proposed development:

- Conservation of Agricultural Resources Act (CARA; Act No. 43 of 1983) – The proposed development is located on properties historically and currently used for rainfed agriculture.

- Preservation and Development of Agricultural Land Act, 2024 (Act No. 39 of 2024) – As per the findings of the Agricultural Impact Assessment and the National Screening Tool, the proposed development is located within a Protected Agricultural Area.

- National Heritage Resources Act, 1999 (NHRA; Act No. 25 of 1999) – As part of the NHRA it is required that all heritage resources, that is, all places or objects of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance are protected. Section 38 (1) of the NHRA identifies numerous triggerable activities that would require approval from the Heritage Resources Agency for an area.

  The triggerable activities that relates to the proposed development are:
  - Any development or other activity which will change the character of a site;
  - The re-zoning of a site exceeding 10 000 m² in extent; or
  - Any other category of development is provided for in regulations by the South African Heritage Resources Agency (SAHRA) or a Provincial Heritage Resources Agency (PHRA).

A NID was submitted to HWC on the 28 of November 2022 and comment was received on the 8th of December 2023 which stipulated that a Heritage Impact Assessment is required prior to approval which will determine whether the development footprint contains any archaeological and palaeontological materials, and, or if it has any cultural significance. Alongside the latter a visual impact assessment is also required to ensure the visual intrusion from the N2 is management accordingly. Dr. Jayson Orton was appointed to undertake the Heritage Impact Assessment for the proposed development. His report included the findings and conclusions of the Visual Impact Assessment (compiled by FC Holm Architects and Landscape Architects).

- National Water Act, 1998 (NWA; Act No. 36 of 1998) – The purpose of the National Water Act (Act 36 of 1997) is to provide for the management and protection of water resources. Chapter 5 of the NWA states that the NWA is founded on the principle that National Government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest. Therefore, a person can only be entitled to use water if the use is permissible under the NWA. Section 21 of the NWA provides for eleven water use activities that require authorisation from the Department of Water and Sanitation, or where operational, the applicable Catchment Management Agency.

  The following Section 21 water use activities are applicable to the proposed development:
  - (c) Impeding or diverting the flow of water in a watercourse
  - (i) Altering the bed, banks, course or characteristics of a watercourse.

  Water Use Application (WUA) must be undertaken in accordance with Sections 40 and 41 of the NWA. Debbie Fordham (Upstream Consulting) has been appointed as the consultant overseeing the NWA process.

Other provincial and local policies and guidelines to be considered and have been included in Section E of this Basic Assessment Report (BAR):

- Western Cape Spatial Development Framework;
- Garden Route Spatial Development Framework;
- Garden Route Environmental Management Framework;
- Hessequa Integrated Development Plan (2022 – 2027);
- Hessequa Spatial Development Framework;
- Hessequa Zoning Scheme By-Law; and
- Riversdale Local Spatial Development Framework

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.
The following guidelines from the various spheres of government have been used to inform the impact assessment process of the proposed development: • Guideline on Need and Desirability published by the National Department of Environmental Affairs, 2017 (DEA, 2017); • Guideline for Environmental Management Plans (WC DEADP, 2005); • Guideline for Determining the scope of specialist involvement in EIA processes (WC DEADP, 2005) • Guideline for involving biodiversity specialists in the EIA process (WC DEADP, 2005); • Guideline for involving hydrogeology specialists in the EIA process (WC DEADP, 2005); • Guideline for involving visual and aesthetic specialists in the EIA process (WC DEADP, 2005); • Guideline for involving heritage specialists in the EIA process (WC DEADP, 2005); • Guideline for involving social assessment specialists in the EIA Process (WC DEADP, 2007); • Western Cape Provincial Spatial Development Framework (WC DEADP. 2005); and • Western Cape Land Use Planning Guidelines – Rural Areas (WC DEADP, 2019).

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form
Regarding the protocols applied to proposed development. All specialist studies were undertaken following the promulgation of the 2020 protocols and were done in line thereof. The screening tool report extracted on 25 March 2025 indicated the following specialist assessments would be required for the proposed development: • Agricultural Impact Assessment; • Landscape/Visual Impact Assessment; • Archaeological and Cultural Heritage Impact Assessment; • Palaeontology Impact Assessment; • Terrestrial Biodiversity Impact Assessment;

- Aquatic Biodiversity Impact Assessment;
- Hydrology Impact Assessment;
- Socio-Economic Assessment;
- Plant Species Assessment; and
- Animal Species Assessment.

Following site verification done by both the EAP and the respective specialists, as required, it was determined (and summarised in the Site Sensitivity Verification Report (SSVR) included as Appendix G9 of this Basic Assessment Report) that the following specialist undertakings would be included in the Basic Assessment Report:

- Agricultural Compliance Statement*
- Visual Impact Assessment;
- Heritage Impact Assessment;
- Terrestrial Biodiversity and Plant Species Compliance Statement;
- Aquatic Biodiversity (including Hydrology) Impact Assessment and Department of Water and Sanitation (DWS) Risk Assessment);
- Animal Species Compliance Statement.
- Other assessments to be included:
    - Traffic Impact Assessment;
    - Geotechnical Assessment (including hydrology considerations).

*Following the submission of the Notice of Intent to the Department of Environmental Affairs and Development Planning (DEADP) (14 March 2025), it was concluded in the comments provided by the DEADP (24 March 2025) that an Agricultural Agro-Ecosystem Assessment would be required.

The following protocols have relevance to the proposed development (promulgated in terms of the EIA Regulations 2014, as amended (GNR 326 of 2017)):

- Government Notice (GN) 320 of March 2020:
    - Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Agricultural Resources.
    - Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Biodiversity.
    - Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Aquatic Biodiversity.
    - Site Sensitivity Verification Requirements where a specialist assessment is required but no specific assessment protocol has been prescribed.
- Protocols published through GN 1550 of October 2020:
    - Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Plant Species.
    - Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Animal Species.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
9	The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or stormwater – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where - (a) such infrastructure is for bulk transportation of water or stormwater or stormwater drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.	According to the Civil Services Report, the proposed development layout makes allowance for water and stormwater infrastructure. The water infrastructure provisions in the civil services report falls below the triggerable thresholds for the proposed development. However, regarding the stormwater infrastructure, most designs are focused on managing runoff through localized measures like water tanks and detention areas, rather than large bulk transport systems. This could potentially be required during detailed design phase of the civil infrastructure. Therefore, the activity **will be** triggered by the proposed development.
12	The development of (ii) infrastructure or structures with a physical footprint of 100 square metres or more, where such development occurs (a) within a watercourse or (b) if no development setback line	According to the aquatic biodiversity specialist, there is a small (0.25 ha) seep wetland located within the boundaries of the proposed development site. The wetland is situated in an

	exists, within 32 metres of a watercourse, measured from the edge of a watercourse.	area where, as per the preferred SDP for the project, there will be General Residential housing. In accordance with the recommendations of the aquatic specialist, the Applicant envisions to incorporate the feature into the stormwater management of the proposed development. No buffer was suggested for the wetland by the specialist. There is a likelihood that infrastructure may be located within 32 m of the watercourse. The proposed development is not located within the Urban edge under the definition of the 2012 Circular. Therefore, the activity **will be** triggered by the proposed development.
19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse.	There is a small (0.25 ha) seep wetland located within the boundaries of the Remainder of Erf 21. It has been indicated in the SDP that this wetland will be absorbed in the General Residential Zone II topology. The Applicant indicated that the watercourse will be preserved as part of the stormwater attenuation features of the site as suggested by the appointed specialist. Therefore, the activity **will be** triggered by the proposed development.
24	The development of a road (ii) with a reserve wider than 13.5 metres, or where no reserve exists, whether the road is wider than 8 metres.	As per Section C.6 above, the proposed development will see to the extension of three existing roads within an urban area. Therefore, the activity does not apply for the external access roads. It should be noted that the proposed development itself will include internal roads that varies to having a reserve of up to 16 m. Therefore, it is anticipated that the road width will be wider than the threshold for this activity (as each lane will be at least 3.4 m in width where the road reserve is 16 m). The proposed development is not located within the Urban edge under the definition of the 2012 Circular. Therefore, the activity **will be** triggered by the proposed development.
27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.	The terrestrial biodiversity specialist indicated that the proposed development site consists of 97 % agricultural transformation, with the remnant vegetation associated with the critical biodiversity areas being severely modified. Based on the site observations by the EAP (due to disturbed nature of the vegetation as described in the SSVR) no indigenous vegetation remains on site. The impact of the proposed development on the mapped CBAs and the remaining mapped extent of the Endangered Ecosystem (Eastern Ruens Shale Renosterveld) will exceed the minimum threshold of this activity. Based on the description provided by the terrestrial specialist, the activity has been included as a triggerable activity. Therefore, this activity **will be** triggered by the proposed development.
28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or	The proposed development will see to the transformation of land currently used and zoned as agriculture (with a total extent of 54.6 ha) to mixed use development. Therefore, the activity **will be** triggered by the proposed development.

	(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	
Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
4	The development of a road wider than 4 metres with a reserve less than 13,5 metres. (i) Western Cape: ii. Areas outside urban areas: (aa) Areas containing indigenous vegetation.	The proposed development will see to the construction of internal roads with a width ranging between 13 m and 16 m. The terrestrial biodiversity specialist indicated that the proposed development site consists of 97 % agricultural transformation, with the remnant vegetation associated with the critical biodiversity areas being severely modified. Based on the site observations by the EAP (as described in the SSVR) no indigenous vegetation remains on site. Further to this, the portion of the road impacted by the CBA (adopted boundary for vegetation) will exceed the threshold of this activity. Therefore, the activity **will not be** triggered by the proposed development.
12	The clearance of an area of 300 square metes or more of indigenous vegetation. i. Western Cape i. Within any critically endangered or endangered ecosystem listed in terms of Section 52 of the NEMBA. ii. Within critical biodiversity areas identified in bioregional plans	The terrestrial biodiversity specialist indicated that the proposed development site consists of 97 % agricultural transformation, with the remnant vegetation associated with the critical biodiversity areas being severely modified. Based on the site observations by the EAP (due to disturbed nature of the vegetation as described in the SSVR) no indigenous vegetation remains on site. The impact of the proposed development on the mapped CBAs and the remaining mapped extent of the Endangered Ecosystem (Eastern Ruens Shale Renosterveld) will exceed the minimum threshold of this activity. Based on the description provided by the terrestrial specialist, the activity has been included as a triggerable activity. Therefore, this activity **will be** triggered by the proposed development.
14	The development of (ii) infrastructure or structures with a physical footprint of 10 square metres or more where such development is (a) within a watercourse; or (c) if no development setback has been adopted, within 32 metres of a watercourse measured from the edge of a watercourse. (i) Western Cape: i. Outside urban areas: (ff) Critical biodiversity areas or ecosystem services areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.	According to the aquatic biodiversity specialist, there is a small (0.25 ha) seep wetland located within the boundaries of the proposed development site. The wetland is situated in an area where, as per the preferred SDP for the project, there will be General Residential housing. In accordance with the recommendations of the aquatic specialist, the Applicant envisions to incorporate the feature into the stormwater management of the proposed development. No buffer was suggested for the wetland by the specialist. There is a likelihood that infrastructure may be located within 32 m of the watercourse. The watercourse was mapped as an ESA in terms of the 2017 BSP, however the 2023 BSP (adopted through the Western Cape Biodiversity Act (Act 6 of 2022), this feature was not included as part of the mapping. Furthermore, the proposed external infrastructure is located within the urban area, therefore, **this activity is not triggered** by the services infrastructure either.

Note:

- The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.
- Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.

List the applicable waste management listed activities in terms of the NEM:WA

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Category A**	Describe the portion of the proposed development to which the applicable listed activity relates.
No activities applicable		

List the applicable listed activities in terms of the NEM:AQA

Activity No(s):	Provide the relevant **Listed Activity(ies)**	Describe the portion of the proposed development to which the applicable listed activity relates.
No activities applicable		

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

The Applicant, Belladonna (Pty) Ltd proposes the development of the Erf 266 and a portion of Erf 21 from their current land use (Agriculture) to a mixed-use residential development.

The preferred site development plan comprises the development of the following:

- 27 Agricultural Zone II erven with a combined extent of 27.5 ha
- 159 Single Residential erven with a combined extent of 10.4 ha
- 3 Pockets of General Residential Zone II areas with a combined extent of 10.4ha
- 1 Business Zone with an extent of 0.7 ha;

Additionally, several ancillary land uses are also proposed which include the internal and access roads,

- Transport Zone II erven with a combined extent of 3.8 ha
- Transport Zone III erf with an extent of 1.9 ha
- Utility Zone with an extent of 0.2 ha; and
- 3 Open Space Zone 1 erven with a combined extent of 1.5 ha.

The above can further be elaborated on:

- Smallholdings / 1ha lifestyle erven forming a gated community with restricted agricultural land uses such as equestrian use – Proposed zoning Agricultural Zone II
- Low density single residential erven – Proposed zoning Residential Zone II
- Medium density general residential erven – Proposed zoning General Residential Zone II
- Retirement village / frail care unit – Proposed zoning General Residential Zone II

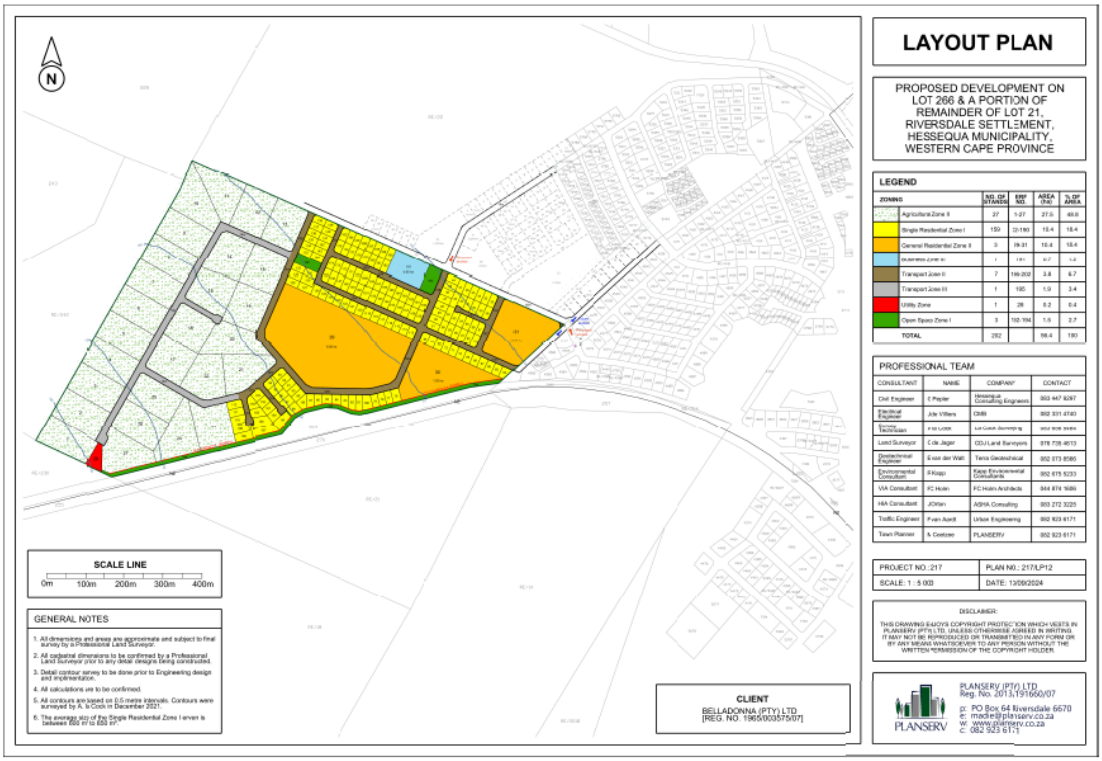


Figure 2. Proposed preferred site development plan.

The total development footprint comprises approximately 56.4ha (excluding the external services infrastructure)..

2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.

As indicated in the NOI submitted for the proposed development, the proposed development has been included into the urban edge as defined by the Hessequa Local Municipality. Please refer to Appendix L4 of the BAR for a letter of confirmation thereof.

The current land use zoning of the respective properties are Agricultural Zone I (Erf 21) and Business Zone IV (Erf 266).

The following is noted:

- Erf 266 – Filling station rights are associated with this property, as highlighted by the Town Planning Report (Appendix L2 of the BAR). These rights were however never exercised, and it is confirmed that the Applicant has submitted a Town Planning Application relinquishing these rights

The majority of the proposed SDF therefore does not align with the existing land use rights and the appropriate applications in terms of the By-Law on Municipal Land Use Planning will be required.

Planserv (Pty) Ltd has been appointed by the Directors of Belladonna (Pty) Ltd [Reg. No. 1965/003575/07], the registered owner of Erf 266 and Remainder of Erf 21 Riversdale Settlement to submit a land use application to the Hessequa Municipality for the following:

1. Subdivision of Remainder of Lot 21 Riversdale Settlement in terms of Section 15(2)(d) of the Hessequa Municipality: By-Law on Municipal Land Use Planning, 2015.
2. Consolidation of Lot 266 and Portion A (a portion of Remainder of Lot 21 Riversdale Settlement) in terms of Section 15(2)(e) of the Hessequa Municipality: By-Law on Municipal Land Use Planning, 2015;
3. Rezoning of the consolidated Lot 266 and Portion A (a portion of Remainder of Lot 21 Riversdale Settlement) from Agricultural Zone I to Subdivisional Area in terms of Section 15(2)(a) of the Hessequa Municipality: By-Law on Municipal Land Use Planning, 2015;
4. Phased subdivision of the Subdivisional Area in terms of Section 15(2)(d) of the Hessequa Municipality: By-Law on Municipal Land Use Planning, 2015, as shown on Plan No. 217/P3,
5. Consent Use in terms of Section 15(2)(o) of the Hessequa Municipality: By-Law on Municipal Land Use Planning, 2015, for a retirement resort on the General Residential Zone II erf (shown as Erf no. 29 on Plan No. 217/P3);
6. Consent Use in terms of Section 15(2)(o) of the Hessequa Municipality: By-Law on Municipal Land Use Planning, 2015, for a supermarket on the Business Zone III erf (shown as Erf no. 191 on Plan No. 217/P3);
7. Removal of restrictive conditions in respect of the land units in terms of Section 15(2)(f) of the Hessequa Municipality: By-Law on Municipal Land Use Planning, 2015,

The town planning application has been submitted to the Hessequa Local Municipality and is currently under review.

3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

There are no existing approvals associated with the proposed development site.

4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.

The Provincial Spatial Development Framework (PSDF) published in 2014 explains that the overall policy objective of the PSDF is to secure environmentally sustainable development and the use of natural resources while promoting socio-economic development in the Western Cape Province.

The aim of the Western Cape PSDF is to:

- Give spatial expression to the National (i.e. NDP) and Provincial (i.e. OneCape 2040) development agendas;
- Serve as basis for coordinating, integrating and aligning 'on the ground' delivery of national and provincial departmental programmes;
- Support municipalities to fulfil their Municipal Planning mandate in line with the national and provincial agendas; and
- Communicate government's spatial development intentions to the private sector and civil society.

The PSDF provides a basis for coordination, planning and implementation of government's spatial development intentions. In doing this, the PSDF has essentially created a platform for developments within the province to ensure that the identified guiding principles are met.

The proposed development is supported by the PSDF (2014) by noting that access to housing as a key guiding principle identified to be implemented in order to achieve the Western Cape PSDF's (2014) spatial agenda. Housing development is considered important to improve human health, livelihood, and environmental health.

The PSDF promotes an integrated approach to housing delivery which includes housing and social services. The proposed development supports this promotion as multiple topologies have been included in the SDP for the development. Thereby providing market-related housing solutions to various age classes. The PSDF aligns with OneCape 2040 which proposes "sustainably upgrading the built environment to directly respond to community needs through shifting from a focus on housing to one on accessible and integrated service delivery." Improving access to services is essential to achieving the settlement transitions identified by the National Development Plan 2030.

The PSDF places emphasis on the importance on sustainability and resilience. Through the environmental assessment process that was followed, it is ensured that sustainable use of natural resources is well incorporated into to development of the project.

4.2	The Integrated Development Plan of the local municipality.

Hessequa Integrated Development Plan (2022-2027; Approved 2024 Revision)

The integrated development plan (IDP) for the local municipality identifies five key performance areas (KPA) including:

1. Affordable & quality service delivery
2. Good governance & performance driven organisation
3. Safe communities & environment
4. Socio-economic development
5. Sustainable financial management

The establishment of the proposed development would aim to align with three of the five KPAs. As part of the proposed Development, the community would be provided with market related housing solutions. The Hessequa Local Municipality (HLM) has confirmed the capacity to carry the proposed development without placing strain on the existing infrastructure. Where Infrastructure would be required to be installed (external) to further carry the proposed development, the HLM indicated it as such (KPA1). Upon completion of the construction phase, the proposed development will aim to provide a safe, environmentally sound neighbourhood for all residents (kpa3). Due to the introduction of the business zone on the north-eastern boundary of the proposed development, the proposed development would contribute to economic upliftment following the completion of the construction phase of the project. During the construction phase of the project, there will be socio-economic benefits seen through the provision of jobs (manual labour associated with construction works) and in turn this would see to an improved home life for employees garnering income during this time.

In addition to the achievement of the abovementioned KPAs, the IDP identifies that there is a need for housing solutions within the Local Municipality. The existing housing backlogs in the municipality is considered a critical concern. The proposed development will aim to alleviate a portion of the strain on the housing market in Riversdale specifically.

4.3.	The Spatial Development Framework of the local municipality.

Draft Spatial Development Plan for the Hessequa Local Municipality

The Municipal Spatial Development Plan (SDP) was drafted (in line with the requirements of the Spatial Planning and Land Use Management Act) and distributed for public commenting purposes in 2024. According to the SDF, the proposed development will be in alignment with the Strategic Planning for the expansion of built environment of the Hessequa Local Municipality as it has been included in the Urban edge of the local

municipality. The Remainder of Erf 21 and Erf 266 have both been earmarked for Housing Development in the spatial planning. Please see the image below for reference.

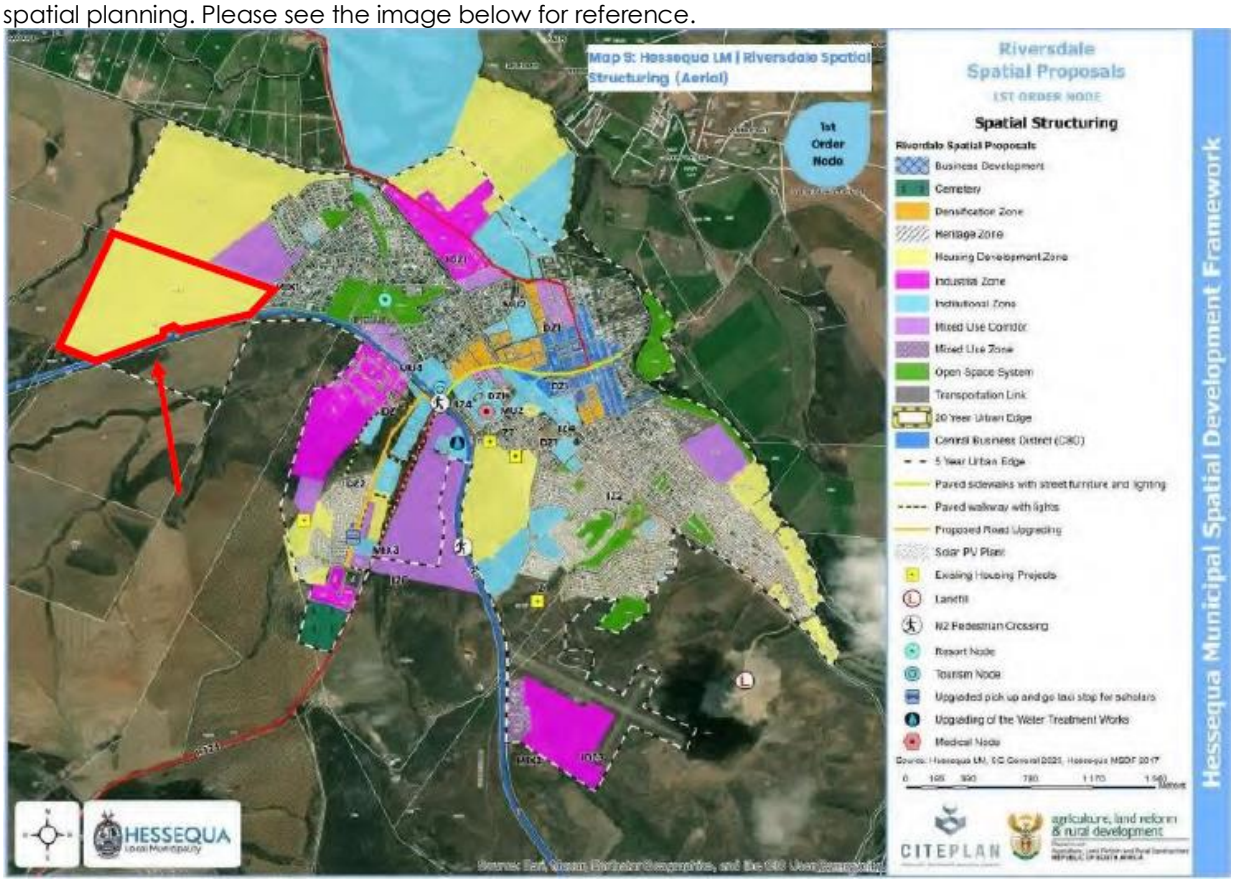


Figure 5. **Draft SDF for the Hessequa Local Municipality (the proposed development site has been indicated in red).**

4.4.	The Environmental Management Framework applicable to the area.

It is contended that the proposed development is, after recent legislative updates, in line with the provisions of the SDF which is currently being updated and revised in line with the Integrated Environmental Management Framework by Hessequa Municipality.

5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.

The proposed development has not yet been distributed for public participation, however comments or feedback from the following entities have been received regarding the project:

- The South African National Roads Agency – The Agency indicated that no access from the N2-Highway will be permitted during the operational phase of the proposed development. Therefore, the internal roads of Riversdale were evaluated and recommendations were made accordingly. These recommendations form part of the proposed activities assessed in this report.
- The Hessequa Local Municipality has provided services confirmation for the proposed development. It should be noted that a series of additional installations (to the proposed development site in terms of sewer, water, electricity and stormwater) will be required. These requirements form part of the proposed activities assessed in this report.
- Heritage Western Cape: Indicated that a Heritage Impact Assessment inclusive of a Visual Impact Assessment will be required to assess the impacts associated with the proposed development.

In terms of the specialist assessments undertaken:

- In light of the comments received on the proposed development by HWC, a visual impact assessment was undertaken. Following the conclusion of the assessment, the development layout (Alternative SDP) was amended to incorporate the recommendations of the specialist (Preferred SDP). The specialist has expressed support for the revised proposed development layout.
- The aquatic specialists identified and delineated a seasonal seep depression wetland located in the centre of the proposed development footprint. To mitigate potential impacts, they recommended that this area be integrated as part of the stormwater management system. Specifically, the seep wetland will form a critical component of a stormwater detention structure, helping to manage runoff and prevent flooding during periods of heavy rainfall. This natural feature will be preserved and incorporated into the overall Stormwater Management Plan (SWMP) for the development.
    - The relevant civil engineers must be consulted to ensure the design of this structure is both practical and feasible, considering the unique hydrological conditions of the site. Their input

will guide the integration of the seep wetland into the stormwater infrastructure, ensuring it functions effectively while maintaining the ecological integrity of the area. The SWMP, together with the confirmed wetland-based stormwater detention system, must be submitted for approval by the competent authority and local municipality.
    - Moreover, the seep wetland area must be formally demarcated and zoned as Open Space within the proposed Spatial Development Plan (SDP). This zoning will ensure the long-term preservation of the wetland, while enhancing the environmental sustainability of the development.
    - The inclusion of this natural feature not only aligns with ecological best practices but also contributes to the overall aesthetic and functional quality of the development. The SDP, incorporating these considerations, will be submitted to the relevant authorities for final approval.

6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.

The Western Cape CBA classified areas within the province on the basis of its contribution to reach the conservation targets within the province. The C-Plan uses the following terms to categorise the various land used types according to their biodiversity and environmental importance:

- Critical Biodiversity Area (CBA);
- Ecological Support Area (ESA);
- Other Natural Area (ONA); and
- Protected Area (PA).

As per the descriptions presented in the Western Cape Biodiversity Spatial Plan (BSP) Handbook CapeNature, 2023), the following descriptions have been provided for the respective components:

- Protected Areas: Must be kept in a natural state, with a management plan focused on maintaining or improving the state of biodiversity. A benchmark for biodiversity. Management activities must be in line with at least CBA: Irreplaceable category – This unit is not present within the proposed development area.
- Critical Biodiversity Areas 1: Terrestrial & Forest: Maintain in a natural or near natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate. Ideally, development should be avoided in these areas. If they cannot be avoided, it must be shown that the mitigation hierarchy has been applied if there is a proposal within a CBA. If the impact cannot be avoided or reduced to a residual low significance, a biodiversity offset may be considered as a last resort.
- Critical Biodiversity Area 1: Aquatic: Maintain in a natural or near natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate. This category is not present on site.
- Ecological Support Areas: Terrestrial (Water Recharge Protection): A water recharge area not selected for meeting targets, but which is essential for delivering ecosystem services, and may support the functioning of PAs or CBAs.
- Ecological Support Areas: Aquatic (Watercourses): A water recharge area not selected for meeting targets, but which is essential for delivering ecosystem services, and may support the functioning of PAs or CBAs. Consists of areas overlying aquifers, fulfilling the role of feeding the aquifers.
- Other Natural Areas: Areas not currently identified as a priority, but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. Although not prioritised, they are still an important part of the natural ecosystem.

As indicated in the image below, there are two CBA areas of concern (one located toward the western boundary and another located toward the eastern boundary). According to the 2023 BSP, the proposed development is located in an area with two small patches of CBA and CBA: Degraded (intertwined) located towards the western and eastern borders of the site, respectively. The bypass area located adjacent to the N2-Highway, has also been identified earmarked as CBA. The proposed development will be located within an area identified as CBA 2 (Degraded): Terrestrial as well as in CBA 1: Terrestrial area. According to the 2023 BSP (adopted in December 2024) there are no ESA 2 areas within the proposed development property and, inherently, the proposed development site. The ESA 2 identified was done so through the 2017 BSP and the Screening Tool Database has yet to be updated accordingly.

However, it is acknowledged that a ESA2: Restore from other land use had been identified in the proposed development site as part of the 2017 BSP. This delineation aligns with the NWM5 delineation. This has ESA has been removed from the 2023 BSP.

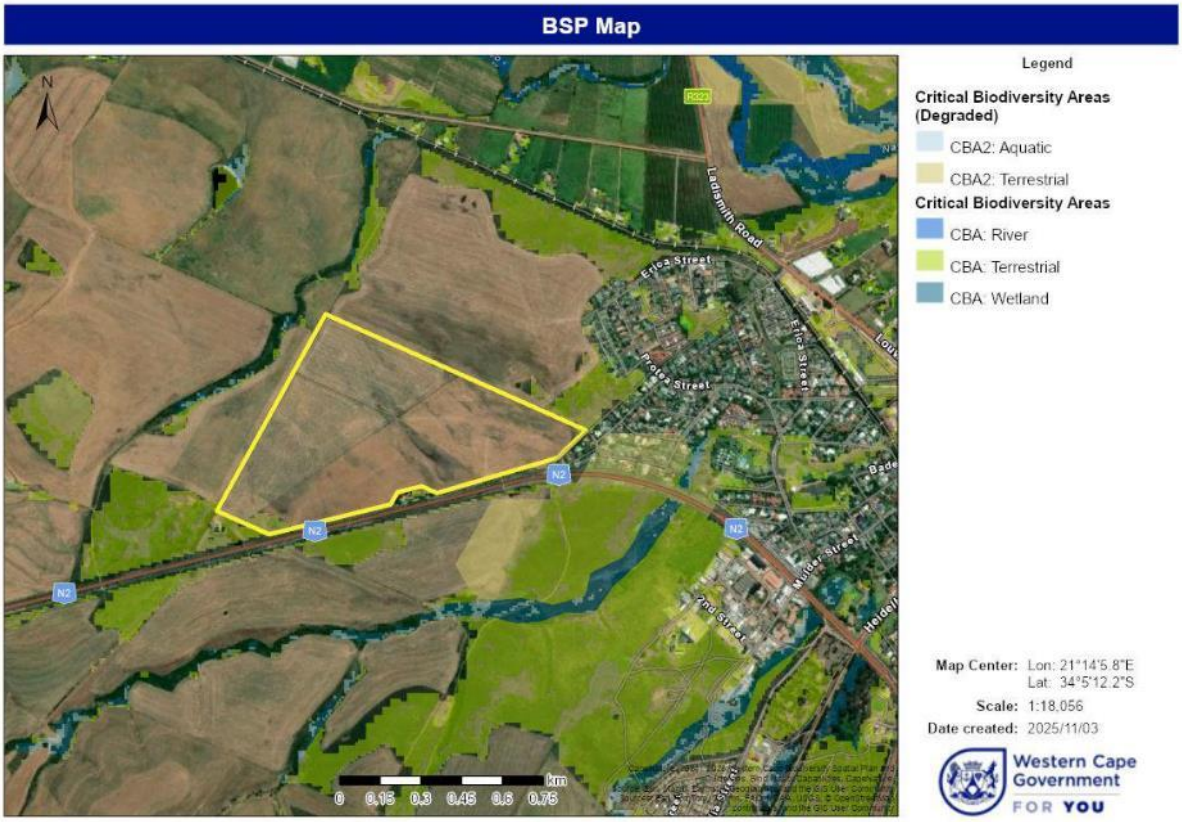


Figure 6. 2023 WC BSP map of the proposed development area.

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
The ICMA does not relate to the proposed development area.	
8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.
No changes to the screening tool report have been noted by the EAP. Should the Screening tool report change following the submission of this document, this will be recorded in this section.	
9.	Explain how the proposed development will optimise vacant land available within an urban area.
In terms of the definition of 'urban area' presented in the Department's Circular 1 of 2012, a property is regarded to be within the urban area where such property has been lawfully developed as urban development or already rezoned as such beforee5 March 2012. Therefore, the proposed development is not located within the Department's definition of Urban Area, albeit included in the urban edge of the Municipality. Vacant land will however be utilised as either open space areas, alleviating the visual impacts associated with the proposed development, will be incorporated into the stormwater management plan for the proposed development or will be designated as Agricultural Zone I areas (Small holdings).	
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.
Riversdale is one of the two towns with the largest contribution in terms of population and economic activity within the Hessequa region. According to the IDP as adopted by the Hessequa Municipality, Riversdale has been identified as an area where infrastructure and services upgrades and expansions are necessary for the future economic corridor to remain sustainable. The proposed residence will contribute to the economic growth and sustainable development within the Riversdale area along with the provision of employment opportunities and long-term municipal revenue for the upgrade of municipal structures within the area (services and infrastructure).	
11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
Please see Appendix E16 for the services confirmation letter provided by the Municipality. Therein, it is confirmed that all	
12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated

	Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.
Please refer to Appendix K of the BAR for a description of the Need in Desirability of the proposed development in line with the Guidelines, taking the cumulative impacts of the proposed development into consideration.	

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

Not Applicable

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

The Public Participation Process (PPP) for the proposed development will be undertaken in line with Regulations 39, 40, 41, 42, 43 and 44 of the EIA Regulations of 2014, as amended (GNR 326 of 2017). The following PPP actions will be followed:

- Site Notice – As the demographics of the area indicated that a large portion of the population is Afrikaans speaking, Afrikaans and English Notices will be placed on site (in accordance with Regulations 41(2)(a), 41(3) and 41(4) of the EIA Regulations of 2014, as amended). These site notices will be to the specifications of Regulation 41(4) of the EIA Regulations of 2014, as amended.
- Newspaper Advert – As the project is only located in one Municipal jurisdiction, an advert (Afrikaans and English) will be placed in the Suid-Kaap Forum on the 17th of April 2025. The adverts will be placed in accordance with Regulation 41(2)(c) of the EIA Regulations of 2014, as amended. Please note that due to the extent and location of the proposed development, Regulation 41(2)(d) of the EIA Regulations of 2014, as amended, does not apply.
- Written Notice – Email notifications will be distributed to all pre-identified Interested and Affected Parties (I&APs) on 17 April 2025. Furthermore, where required digital copies (flash drives) will be sent to Stakeholders who utilises this means of document handling. This will be done in accordance with Regulation 41(2)(b) of the EIA Regulations of 2014, as amended.
- I&AP database – The I&AP database (included in Appendix F) will be maintained during the PPP (in accordance with Regulation 42 of the EIA Regulations of 2014, as amended). The reports will be made available to registered and pre-identified I&APs for reviewing purposes (in accordance with Regulation 43 of the EIA Regulations of 2014, as amended).
- Comments and Responses Report (CRR) – In line with Regulation 44 of the EIA Regulations of 2014, as amended, a CRR will be compiled for the proposed development. This CRR will include all comments and the responses thereto received during the legislated 30-day PPP period.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

State Department/Organ of State	Contact Person	Contact Details
Western Cape Department of Environmental Affairs and Development Planning (Region 3)	DEADP Admin	DEADPEIAAdmin.George@westerncape.gov.za
	Steve Kleinhans (Case Officer)	Steve.Kleinhans@westerncape.gov.za
Hessequa Local Municipality	Shagon Carelse (Environmental Manager)	shagon@hessequa.gov.za
	Werner Mahno (Technical Services)	rhuschan@hessequa.gov.za
	Hendrik Visser (Development Planning)	hendrik@hessequa.gov.za
Garden Route District Municipality	Vernon Gibbs (Environmental Management)	gibbs@edendm.co.za
Cape Nature	Megan Simons	msimons@capenature.co.za
Breede-Olifants Catchment Management Agency	Rudzani Makahane	rmakahane@bocma.co.za
Heritage Western Cape	Natalie Kendrick (Case Officer/Enquiries)	natalie.kendrick@westerncape.gov.za
Department of Agriculture	Cor van der Walt	Cor.VanderWalt@westerncape.gov.za
	Brandon Layman	Brandon.Layman@westerncape.gov.za
South African National Roads Agency SOC Ltd	C Runkel / R de Kock	runkelc@nra.co.za dekockr@nra.co.za

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

Once the Public Participation Process for the proposed development concludes, this section will be updated.

5. if any of the State Departments and Organs of State did not respond, indicate which.

Once the Public Participation Process for the proposed development concludes, this section will be updated.

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

Once the Public Participation Process for the proposed development concludes, this section will be updated.

Note:

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that *"Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."*

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
  - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
  - if a facsimile was sent, a copy of the facsimile Report;
  - if an electronic mail was sent, a copy of the electronic mail sent; and
  - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

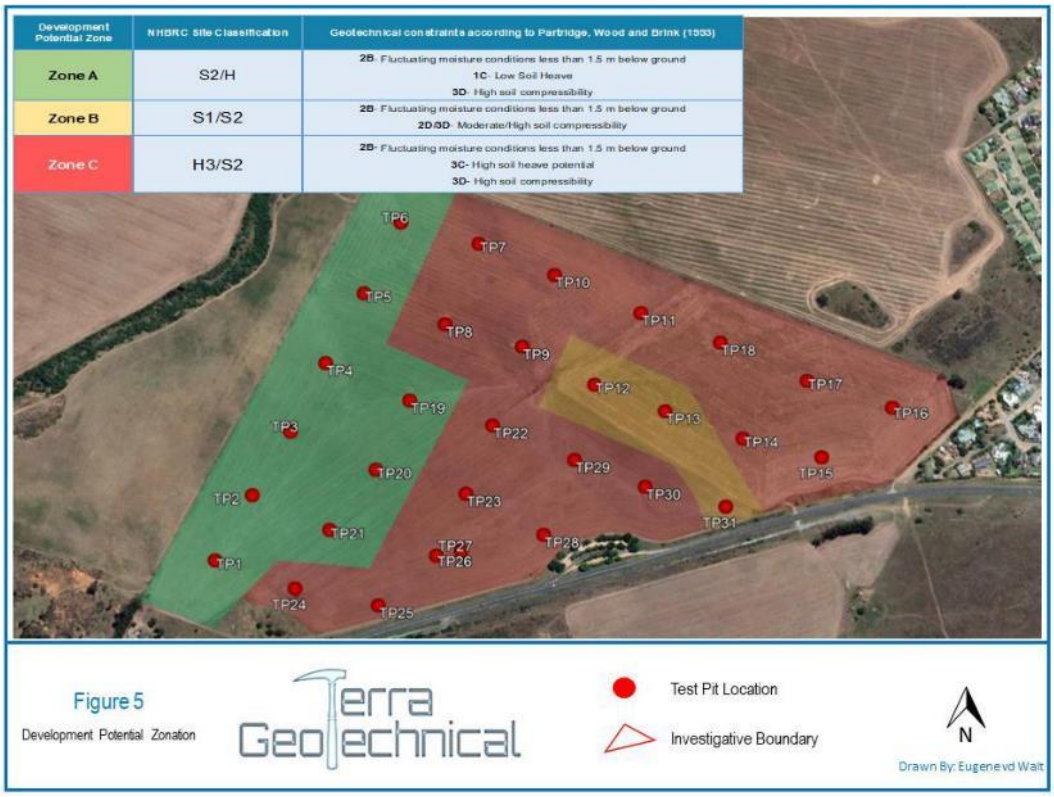
All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?	**YES**	NO
1.2.	Provide the name and or company who conducted the specialist study.		
Please note that an Engineering Geological Assessment of the proposed development area was undertaken. As part thereof, the specialist considered the Groundwater conditions of the proposed development site. The specialist details are as follow: • Terra Geotechnical: Mr. Eugene van der Walt (SACNASP, SAIEG and NHBRC registered)			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
Not applicable.			
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		
Pas per the findings of the specialist assessment, the site is characterised by the presence of a perched groundwater table at a shallow depth. Groundwater seepage was encountered throughout the study area in many of the test pits excavated.			

Pedogenic material (ferricrete nodules) was also identified across the site at shallow depth, indicating the occurrence of a fluctuating water table or soil moisture evaporation. Groundwater seepage was generally encountered at the contact of the boulder alluvium and the underlying less permeable clayey horizon.

A total of 31 test pits were excavated across the development site. Groundwater seepage was encountered at varying depths at Test Pits 4, 5, 7, 8, 10, 16, 17, 18, 26, 27, 29 and 31. Following the field investigation undertaken, three zones were demarcated in terms of the development potential of the site. This, together with the test pit locations have been mapped in the figure below.



Please refer to Appendix B2 for the overlay of the proposed development zones and test pits overlain by the proposed development layout. Furthermore, please refer to Appendix G7 for the Geological Assessment undertaken for the proposed development.

2. Surface water

2.1.	Was a specialist study conducted?	**YES**	NO
2.2.	Provide the name and/or company who conducted the specialist study.		
Dietmar de Klerk (DDK Consulting), who later joined FEN Consulting, was appointed to undertake the aquatic biodiversity assessment as well as the further investigation and updates to the Aquatic Impact Assessment (through FEN Consulting) for the proposed development. Following the conclusion of his assessment, a full impact assessment and Risk Assessment Matrix was done for the project.			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		

During the site visit and investigation conducted by the Freshwater specialist, it was confirmed that a seasonal seep wetland does occur on-site.

Additionally, a tributary of the H90C – 09211 (Naroo River) is not situated on the concerned properties but is located approximately 100 metres from the western edge of the Portion of the Remainder of Erf 21 associated with the proposed mixed-use development. These natural water resources will be located within the Legislative Regulation Zone of natural water resources.

The identified and delineated relatively small (approximately 2500 m^2) seep wetland area situated on a gently sloping hillside of the concerned development area was assessed to be in a Seriously Modified natural state due to the continuous cultivations and other anthropogenic activities on-site.

Furthermore, the intensive agricultural activities within the local upstream catchment together with the associated water abstraction additionally result in significant subsurface flow-related changes negatively impacting hydrology and geomorphology, along with the complete removal of indigenous vegetation. Given the assessment results above, this small and ecologically isolated seep wetland area is expected to only provide limited functional aquatic habitat and has therefore a LOW ecological impact.

Figure 7. Proposed development area including the delineated watercourse (orange polygon).

Per the above, the Freshwater specialist suggests that the delineated seep wetland area is to form part of a stormwater management structure (stormwater detention area). The relevant civil engineers are to be consulted to provide input regarding the practicable/feasible design of this structure. This structure is to be incorporated into the Stormwater Management Plan for the proposed development which is to be approved by the competent authority and local municipality. Additionally, this area is to be demarcated and zoned for Open Space within the proposed Spatial Development Plan (SDP) which is to be submitted to the Competent Authority and Local Municipality for approval. The latter recommendation will not be incorporated into the SDP for the project, during the design phase, the delineated watercourse will be excluded from the layout of the General Residential Area. Please refer to Section I of the BAR.

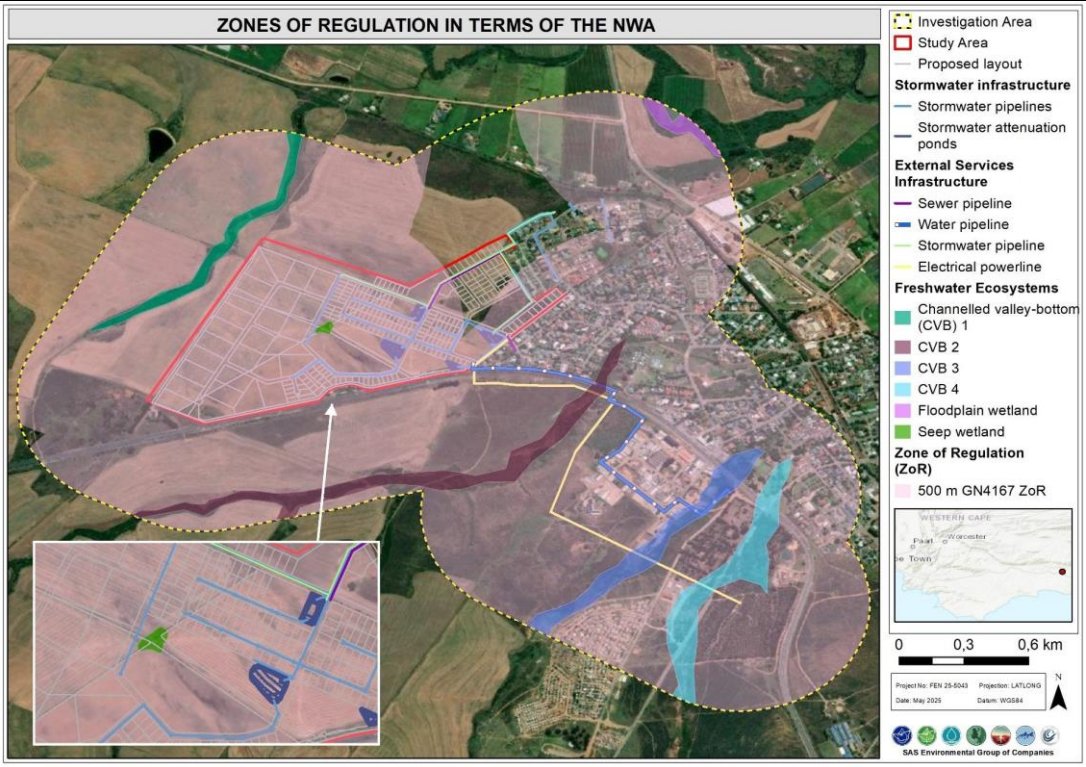


Figure 8. Watercourses along the external infrastructure routes.

Based on the outcome of the Section 21(c) & (i) Risk Assessment, the proposed activities associated with the establishment of the mixed-use development on Erf 266 and a Portion of the Remainder of Erf 21 in Riversdale, on the identified water resources have been assessed to have a LOW-RISK Significance (post mitigation).

Please refer to Appendix G4 of this report for the Aquatic Biodiversity Impact Assessment and Risk Assessment Matrix (in terms of the requirements of the Breede-Olifants Catchment Management Agency (BOCMA) by proxy of the Department of Water and Sanitation (DWS).

3. Coastal Environment

3.1.	Was a specialist study conducted?	YES	**NO**
3.2.	Provide the name and/or company who conducted the specialist study.		
N/A – the proposed development is located approximately 34 km from the coastal environment.			
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
N/A – the proposed development is located approximately 34 km from the coastal environment.			
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
N/A – the proposed development is located approximately 34 km from the coastal environment.			
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		
N/A – the proposed development is located approximately 34 km from the coastal environment.			

4. Biodiversity

4.1.	Were specialist studies conducted?	**YES**	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
This section will report on the findings of the desktop assessment undertaken by the EAP and the finding of the assessments undertaken by the following specialists: • Terrestrial Biodiversity and Plant Species: Mr. Nick Helme Botanical Surveys (Nick Helme – SACNASP – 400045/08) • Animal Species: Nelson Mandela University: Mr. Willem Matthee and Prof. Jan Venter (SACNASP – 400111/14). • Agriculture: Johann Lanz: Johann Lanz (SACNASP – 400268/12).			
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		

For the purpose of the proposed development, as the specialist studies were undertaken prior to the appointment of the, it should be noted that the following systematic conservation planning was taken into consideration:

- 2017 Western Cape Biodiversity Spatial Planning (BSP) (CapeNature 2017);
- National Freshwater Ecosystem Priority Area (NFEPA) (SANBI, 2011);
- National Biodiversity Assessment (2018, with the 2022 Ecosystem Protection Statuses considered);
- National Wetland Map 5 (SANBI, 2018)
- Protected Agricultural Areas (DARDLR, 2020);
- iNaturalist;
- South African Protected Areas (DFFE, 2024);

It should be noted that following the conclusion of the specialist assessments, the following changes to the schematic planning were implemented and will henceforth be considered as part of the assessment of the impacts of the proposed development:

- In December 2024, the 2023 WCBSP was adopted in terms of the Western Cape Biodiversity Act. Therefore, although mentioned, the 2017 WCBSP will not be considered the primary tool for informing the sensitivity of the site.
- In January 2025, the Protected Agricultural Areas (DARDLR, 2020) were formally adopted in terms of the Preservation & Development of Agricultural Areas Act (Act No. 39 of 2024).

4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.

The Western Cape CBA classified areas within the province on the basis of its contribution to reach the conservation targets within the province. The C-Plan uses the following terms to categorise the various land used types according to their biodiversity and environmental importance:

- Critical Biodiversity Area (CBA);
- Ecological Support Area (ESA);
- Other Natural Area (ONA); and
- Protected Area (PA).

As per the descriptions presented in the Western Cape Biodiversity Spatial Plan (BSP) Handbook CapeNature, 2023), the following descriptions have been provided for the respective components:

- Critical Biodiversity Areas 1: Terrestrial & Forest: Maintain in a natural or near natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate. Ideally, development should be avoided in these areas. If they cannot be avoided, it must be shown that the mitigation hierarchy has been applied if there is a proposal within a CBA. If the impact cannot be avoided or reduced to a residual low significance, a biodiversity offset may be considered as a last resort.
- Critical Biodiversity Area 1: Aquatic: Maintain in a natural or near natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate. This category is not present on site.

As indicated in the image below, there are two CBA areas of concern (one located toward the western boundary and another located toward the eastern boundary). According to the 2023 BSP, the proposed development is located in an area with two small patches of CBA and CBA: Degraded (intertwined) located towards the western and eastern borders of the site, respectively. The bypass area located adjacent to the N2-Highway, has also been identified earmarked as CBA. The proposed development will be located within an area identified as CBA 2 (Degraded): Terrestrial as well as in CBA 1: Terrestrial area. According to the 2023 BSP (adopted in December 2024) there are no ESA 2 areas within the proposed development property and, inherently, the proposed development site. The ESA 2 identified was done so through the 2017 BSP and the Screening Tool Database has yet to be updated accordingly.

However, it is acknowledged that a ESA2: Restore from other land use had been identified in the proposed development site as part of the 2017 BSP. This delineation aligns with the NWM5 delineation. This ESA has been removed from the 2023 BSP.

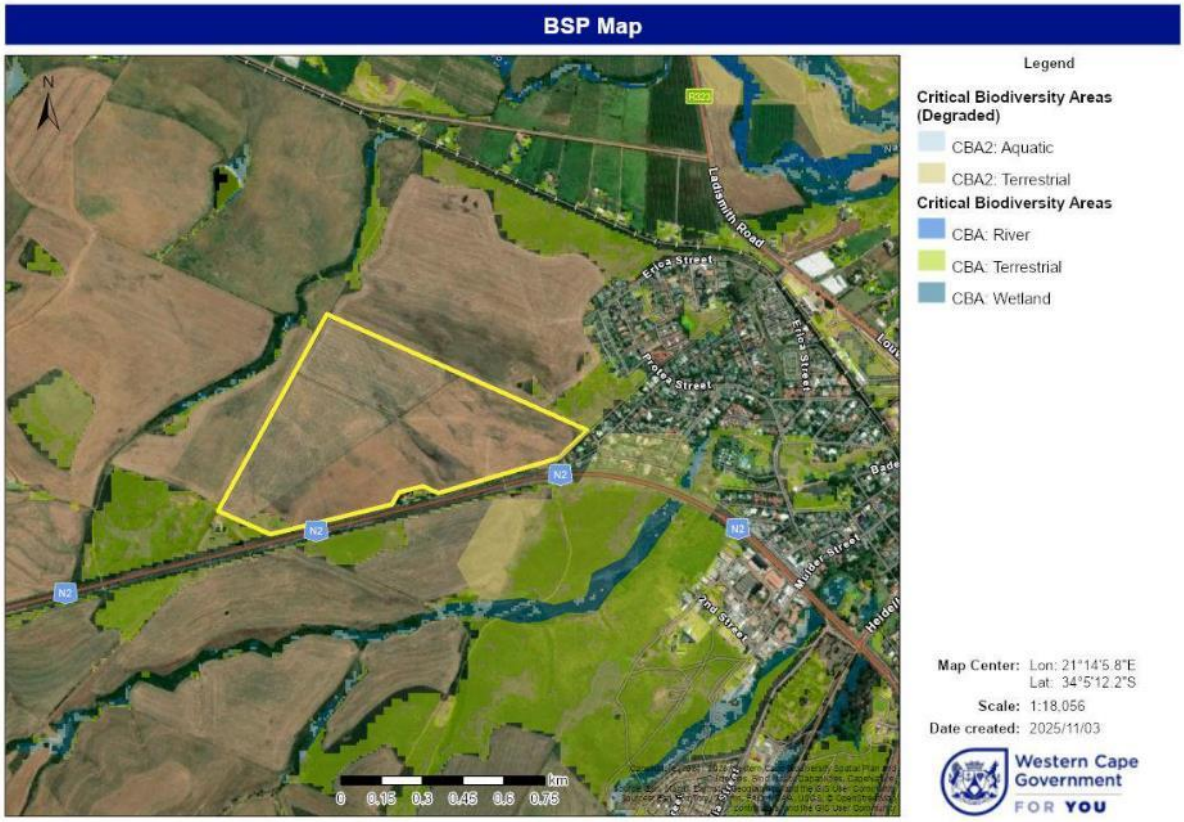


Figure 9. 2023 WC BSP map of the proposed development area.

The reason for the CBA delineations is the overlap with the remaining extent of the protected ecosystem. As indicated by the specialist, the following evaluation of the WCBSP was made:
Eastern Ruens Shale Renosterveld is gazetted as Critically Endangered on a national basis (Government of South Africa 2022), with less than 19% of its total original extent remaining intact, less than 1% conserved, and a national conservation target of 27% (Rouget et al 2004). The unit supports a very high number of threatened and endemic plant species, and occurs on nutrient rich, shale derived soils in the lowland area between Swellendam and Albertinia, and the vegetation type needs fire for optimal ecological functioning (Helme and Rebelo 2016).

There is essentially no natural vegetation remaining on site, as >97% of the site is regularly cultivated.

The two small patches of CBA2 may support some low diversity, partly natural vegetation, one on the eastern corner and on the western corner, but have both clearly been moderately to heavily disturbed, and were used as dumping grounds for rocks, equipment, animal feed and storage areas for farm implements over many years. The areas also each support a few alien trees, probably for livestock shade, in the form of gums (Eucalyptus sp.) and rooikrans (*Acacia cyclops*).

The vegetation in the study area is deemed to be of Very Low sensitivity, with the two small, partly natural remnants of Low sensitivity at a regional scale.

The CBA areas will therefore not be excluded from the proposed development area.

4.5.	Explain what impact the proposed development will have on the site-specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.

Terrestrial Biodiversity and Plant SCCs

The proposed development will have a low to negligible impact on the site-specific features and functions of the BSP categories, specifically the CBA2 and ESA2 (only in the 2017 BSP) identified on the site. The CBA2 areas, although mapped as important for biodiversity, have been heavily degraded by past agricultural activities, limiting their ecological function. The ESA2, associated with a watercourse, will ideally form part of a natural stormwater detention area to mitigate runoff and further ecological damage to the seep depression wetland.

The degradation of the CBA2 areas means that the development will result in minimal biodiversity loss, as these patches no longer contribute significantly to ecosystem processes. Nonetheless, mitigation measures, such as maintaining buffer zones and controlling runoff, will be applied to prevent further damage to the already disturbed areas. This finding influenced the proposed development by allowing construction to proceed with minimal ecological constraints, while still adhering to conservation principles where possible From a botanical/terrestrial biodiversity standpoint the primary cumulative impacts in the region are loss of natural vegetation and faunal habitat and threatened plant species to ongoing agriculture, urban development and alien plant invasion (Mucina & Rutherford 2012; Helme et al 2016).

There is a low possibility of SCCs to occur on site as the proposed development has been historically used for agricultural activities.

The overall cumulative ecological impact of development of this site at the local and regional scale is Low negative, as there is essentially no natural vegetation or faunal habitat currently on site. In terms of construction impacts, the primary construction phase direct ecological impact of the proposed subdivision and development would be permanent loss of any of the existing natural and partly natural vegetation and faunal habitat in the development footprints (essentially the two areas mapped as CBA2; gazetted as a Critically Endangered vegetation type).

The proposed sewer connection will also be through disturbed land of no botanical conservation value, and hence has no further botanical impact.

The overhead powerline will cross about 420m of Moderate to High sensitivity Renosterveld vegetation (south of the N2; see Figure 1), with most of the rest being disturbed and degraded vegetation of Low sensitivity. The Low sensitivity areas are of no significance in terms of placing of poles, but the estimated 8-10 poles that will be needed in these Moderate to High sensitivity sections will of course cause some loss of vegetation and hence have some negative impact. The estimated loss and/or degradation for each pole will be about 3m2. The total area of disturbance will thus probably be a maximum of about 30m2. This is likely to have a Low negative botanical impact at a local scale. The likelihood of these poles impacting on any plant Species of Conservation Concern (SoCC) is deemed Low to Moderate.

The excavations required for the underground electrical connection could cause significant botanical loss and disturbance, but fortunately the indicated route will run through previously disturbed areas (roads and old lands), so that the expected significance of the disturbance of the vegetation in the actual footprint is Low negative. However, it is important to note that the section of underground cabling south of the N2 (and within the N2 servitude) borders on a High sensitivity area (to the south of the servitude) for much of its length that can and should be avoided (this divide is presumably marked by a fence on the ground).

Animal Species

During the site visit, a total of 22 animal species were recorded (Appendix 2), with one amphibian, 14 bird species, one gastropod, five insect species, and one mammal species being recorded. Notable observations included a total of four Blue Cranes (Grus paradisea) feeding in the harvested fields on the property, Common Quail (Coturnix coturnix) calling from the cultivated fields, and the dung of Steenbok (Raphicerus campestris) in the harvested fields. These cultivated fields (both while under cultivation, and after being harvested) provide a habitat for the species recorded, but there is an abundance of similarly suitable habitat for these species in surrounding areas, and the development is unlikely to have a major impact on the continued survival of these species in this area.

Based on the results of the desktop study and the site visit, the sensitivity of the study site in terms of animal species can be regarded as LOW. This assessment is based on the following:

- The absence of georeferenced records of SCC at the site of the proposed development;
- The lack of suitable habitat for the SCC at the study site; and
- The lack of observations of the SCC at the study site during the site visit.

The overall ecological significance of this direct vegetation and faunal habitat loss for the proposed layout is Low negative before and after mitigation.

Agricultural

The classified land capability of the site ranges from 6 to 9. The specialist verifies that most of the site is within crop boundaries and verifies the classified land capability, based on the assessment of the cropping potential of the site. This verification therefore confirms the high sensitivity rating by the screening tool. The following parameters were identified as relevant to the agricultural production potential of the site:

- Geology – Conglomerate, sandstone and mudstone of the Uitenhage Group as well as shale of the Bokkeveld Group, occasionally overlain by Tertiary silcrete.
- Land type – Dc32 and Fb31
- Description of soils – Shallow to deep, medium textured, imperfectly drained soils with a high stone content, on underlying, dense clay.
- Dominant soil forms – Klapmuts, Sepane
- Soil capability classification (out of 9) – 3 (low to 5 (moderate)

- Soil limitations – High stone content, drainage limitations, shallow depth in places
- Agricultural land use in the surrounding area – Predominantly small grain farming, but
- Agricultural land use on the site – Small grain cultivation
- Land capability classification (out of 15) – 6 (low-moderate) to 9 (moderate-high)
- Within a Protected Agricultural Area - Yes

Cropping potential is considered Factor 2 because the threshold, above which it is a priority to conserve land for agricultural production, is determined by the scarcity of arable crop production land in South Africa and the relative abundance of land that is only good enough to be used for grazing. If land can support viable and sustainable crop production, then it is considered to be above the threshold and is a priority for being conserved as agricultural production land. If land is unable to support viable and sustainable crop production, then it is considered to be below the threshold and of much lower priority for being conserved.

In this case the impact of the development will be the permanent exclusion of agriculture from 56 hectares of viable cropland. The loss of this amount of scarce cropland is a loss of agricultural production potential in terms of national food security. The agricultural impact of the proposed development is therefore assessed as being of medium significance.

The projects acceple and ultimate approval requires the weighing of all relevant factors, only a few of which are agricultural, against each other. The weighing of these different factors is far beyond the scope of an agricultural impact assessment. It should however be noted that, from a town planning perspective, the municipality have approved the development of the site and the Spacial Development Framework considers it desirable to expand Riversdale in a westerly direction to include Erf RE/21 within the urban edge.

Please refer to Sections I and J below for the impact considerations and the cumulative considerations of the impacts.

4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.

Terrestrial Biodiversity

The proposed development is located in the Gouritz Cluster Biosphere Reserve (in terms of the South African Protected Areas Database (SAPAD – Conservation Areas), which has been identified as an UNESCO as a Biosphere Reserve.

Agricultural

Additionally, the site is located within a Protected Agricultural Area, which is a designated region where the climate, terrain, and soil are generally favourable for agricultural activities. Historically, these areas have played a key role in contributing to South Africa's crop production. The preservation of arable land within these regions is prioritized to safeguard the country's food security.

The soils on this site have developed on an old alluvial terrace, with the upper layers containing a significant amount of rounded river stones of varying sizes. The soil is predominantly sandy loam, with a topsoil clay content ranging between 10 and 20 percent. While the high stone content, drainage limitations, and shallow depth in some areas present challenges, the soils are still suitable for grain production. There is minimal variation in the agricultural potential across the site, which is deemed suitable for cropping. In the Western Cape's ten-point soil capability system, the soils are rated between 5 and 6.

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.

A Terrestrial Animal Species Compliance Statement was carried out for the proposed development. Based on the results of the desktop study and the site visit conducted the following is concluded. The site visit confirmed that the majority of the property has been used for intensive cereal cultivation. The southwestern corner had a remnant of semi-natural vegetation present, including *Aloe ferox* (but also had exotic black wattle, *Acacia mearnsii* present), while the eastern corner of the study site consisted mostly of grasses and weedy plant species. Neither area had vegetation representative of the natural vegetation in this area (Eastern Rûens Shale Renosterveld), though the southwestern corner of the property was more natural than the eastern corner.

The supposed presence of Denham's Bustard (*Neotis denhami*), Yellow-winged Agile Grasshopper (*Aneuryphymus montanus*), and African Marsh-harrier (*Circus ranivorus*) proved unlikely due to their habitat preferences that that observed during the site visit.

During the site visit, a total of 22 animal species were recorded, with one amphibian, 14 bird species, one gastropod, five insect species, and one mammal species being recorded. Notable observations included a total of four Blue Cranes (*Grus paradisea*) feeding in the harvested fields on the property, Common Quail (*Coturnix coturnix*) calling from the cultivated fields, and the dung of Steenbok (*Raphicerus campestris*) in the harvested fields. These cultivated fields (both while under cultivation, and after being harvested) provide a habitat for the species recorded, but there is an abundance of similarly suitable habitat for these species in surrounding areas, and the development is unlikely to have a major impact on the continued survival of these species in this area.

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.

According to the 1:250 000 scale geology map 3420 Riversdale, the site is predominantly underlain by Tertiary aged River Terrace Gravels, with the western edge underlain by sediments of the Kirkwood Formation consisting of Reddish and Greenish Mudstone and Sandstone with subordinate Conglomerate lenses forming part of the Uitenhage Group as well as shale of the Bokkeveld Group, occasionally overlain by Tertiary silcrete.

The majority of the proposed development site is flat with a slope percentage between 0-10%. 5m contours crosses the site with no evidence of erodibility. According to Cape Farm Mapper groundwater depth is evident to be approximately 10 mbgl. The natural topography of the study site has been altered by the establishment of drainage contours when the area was used for agricultural activities.

Soil classification towards the northeast of the site include marked clay accumulation, strongly structured and a non-reddish colour. In addition, one or more of vertic, melanic and plinthic soils may be present, whereas towards the southwest of the site, soils with minimal development, usually shallow on hard or weathering rock, with or without intermittent diverse soils are present. Within this area, lime is generally present in part or most of the landscape

6. Heritage Resources

6.1.	Was a specialist study conducted?	**YES**	NO
6.2.	Provide the name and/or company who conducted the specialist study.		

- Jayson Orton, from ASHA Consulting (Pty) Ltd, conducted a Heritage Impact Assessment
- HC Holm conducted the Visual Impact Assessment
- Dr. John Almond commented on the Palaeontology impact of the proposed development

6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.

In terms of Section 38 (1) of the NHRA, subject to the provisions of subsections (7), (8) and (9), the following activities trigger the need for a HIA:

- Any development or other activity which will change the character of a site;
- The re-zoning of a site exceeding 10 000 m² in extent; or
- Any other category of development is provided for in regulations by the South African Heritage Resources Agency (SAHRA) or a Provincial Heritage Resources Agency (PHRA).

A NID was submitted to HWC on the 28 of November 2022 and comment was received on the 8th of December 2023 which stipulated that a Heritage Impact Assessment is required prior to approval which will determine whether the development footprint contains any archaeological and paleontological materials, and, or if it has any cultural significance.

Heritage Impact

The Heritage Assessment identified Early Stone Age (ESA) artifacts on the site, though the density of wheat made it difficult to evaluate fully. Despite some scattered artifacts, their significance is considered LOW, and mitigation should be straightforward. The landscape is of medium cultural significance, particularly the adjacent N2 highway, while the historically important Garcia Pass lies further north. The town of Riversdale has been heavily altered and lacks significant cultural heritage value.

The Archaeological Desktop Study revealed no prior projects in the immediate area, though the Southern Cape is known for significant archaeological sites. A number of Early Stone Age artifacts were observed during the survey, including handaxes, suggesting a higher artifact density than previously assumed, though visibility was poor due to the wheat.

During the site visit, the following was observed:

- Although they cannot be properly understood due to the poor ground visibility at the time of the survey, indications are that archaeological materials are present on the site. A key concern is that the density of such materials cannot be determined. These archaeological resources are most likely to have low cultural significance at the local level for their scientific value and could potentially be graded IIIC with the implication that mitigation can be implemented and the material would not prevent development. It is also possible that their density may be too low for meaningful research and that a grade of NCW may apply with no mitigation required. The chances of a higher significance and grade are considered very small.
- There are no graves or historical/built environment resources on or close to the site.
- On site the landscape does not have much intrinsic cultural significance. The local urban landscape has no heritage value and the few remaining historical structures in the core area of Riversdale lie far from the proposed development, more than 1 km away, and engulfed by modern buildings. However, the wider region spanning the Agulhas Plain from the mountains to the coast does have cultural significance for its aesthetic value and is rated as having at least medium cultural significance at the local level. It can be graded at least IIIB. Included in this landscape is the N2 as a scenic route. It, too, is thus graded IIIB.
- Other than the wider landscape and N2 scenic route, there are no specific graded heritage resources to be mapped on or close to the site. As such, no grade map is provided.

Palaeontological Considerations

The area is part of a larger scenic cultural landscape, with rolling wheat fields and indigenous vegetation bordered by the Cape Fold Belt mountains. The N2, a significant scenic route, runs adjacent to the site. However, the proposed development will have minimal visual impact on the N2 due to natural screening and topography. In terms of palaeontology, although the SAHRIS map indicates high sensitivity, no specialist assessment was required due to the weathered nature of the bedrock. However, there

remains a slight possibility of subsurface fossil finds, such as dinosaur bones or petrified wood, which will be managed through a Chance Fossil Finds protocol.

Visual Impact Considerations

FC Holm CC was appointed to undertake a Visual Impact Assessment for the proposed rezoning and development. It is expected that the proposed development site will have some impact on views from the adjacent properties, as well as a change in visual character as observed from the N2. Although the proposed development will alter the landscape, it is similar in scale and nature to nearby developments. It will mainly feature single- and double-storey residential buildings, blending into the existing skyline and adjacent land use. The site is located along the N2, a significant scenic route connecting Cape Town to George, frequently used by tourists. Residents and tourists in the area are considered highly sensitive visual receptors, and tourism is a key economic driver in the Southern Cape. While there are direct views of the site from the N2, the proximity of existing residential land use helps the new development blend into the townscape from a distance. Vegetation and trees along the N2 also provide a buffer, reducing visibility from certain viewpoints.

Five (5) viewpoints were identified for the proposed development site:

- Viewpoint 1 is situated at the northwestern corner of the Langezicht residential complex located along Erica Street – Site exposure is expected to be high at this point.
- Viewpoint 2 is situated at the Oakdale High School's entrance gate on the R323 – Site exposure is expected to be moderate at this point.
- Viewpoint 3 is situated on the corner of the Ou Meul Restaurant located along the N2 highway – Site exposure is expected to be moderate to high at this point.
- Viewpoint 4 is situated on the N2 highway leading to George, looking in an easterly direction towards the site – Site exposure is expected to be moderate at this point.
- Viewpoint 5 is situated in the industrial area along Fritz Grub Crescent – Site exposure is expected to be moderate to high at this point.

The visual absorption capacity of the site is low due to limited screening vegetation, but the sloping terrain and undulating surroundings offer partial screening. The layout of the development is designed to minimize visual intrusion, with lower-density agricultural lifestyle erven positioned along the western edge, transitioning smoothly into neighbouring agricultural land. Medium-density group housing and single residential units are organized towards the eastern part of the site, maintaining a balance between rural and urban areas. A 10-meter building setback along the road edge will allow for vegetated buffers, further reducing the development's visual impact from the N2.

To better integrate the development into its surroundings, a more organic layout has been proposed, with internal roads and residential erven following the natural contours of the landscape. Communal green spaces have been introduced along the access roads and within the development, contributing to the overall visual harmony with Riversdale's existing character. While the development will be visible from various viewpoints, particularly along the N2, its design ensures that changes to the visual environment will be absorbed into the broader landscape.

The revised layout incorporates the mitigation

1. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
According to Fransen (2004, 2006), Riversdale was laid out on a farm called Doornkraal, part of which was bought in 1837 by Dr William Robertson of Swellendam on behalf of the Dutch Reformed Church. The homestead of the farm was converted into a church and later, after another church was built in 1844, it served as the parsonage until 1945. The town was named after Harry Rivers, who was landdrost of Swellendam from 1825 to 1841. Until some 50 years ago there were still many historical structures in the town but Fransen (2004) notes that since then there has been massive and large-scale destruction of the historical buildings of Riversdale so that the historical town centre is now completely lacking in character. Nonetheless, for the surviving historical buildings and historical town layout, Winter and Oberholzer (2013) still see the old portion of the town as worthy of Grade III. The aerial photographs show the development of the town through the latter half of the 20th century and early 21st century. The earliest image, from 1954, shows the edge of town still some distance from the site. The study area itself was as yet uncultivated (Figure 28). By 1966 some new streets had been developed on the western edge of Riversdale but the town was still the same distance away from the study area. By 1983 urban development had moved closer to the study area with new roads constructed on the adjacent property. The study area was as yet uncultivated which means that even wheat farming is not an historical land use on the property. The 1983 image also shows that the uncultivated land to the west of the site was a sand and/or gravel mine at that time. It was presumably not properly rehabilitated with topsoil and is no longer fit for cultivation. The bushy areas appear to be indigenous vegetation. By the early 21st century the remaining gaps in the area immediately east of the study area had been filled and the town was now contiguous with the study area. As such, it is evident that there are no historical concerns in terms of visual impacts to the western part of the town which is all modern. The aerial photographs also show that there have never been any historical structures or other features on the site. Although an access road to the property immediately to the southwest of the study area is visible in 1954 and the gum tree line along the road was in place by 1966, it appears as though the house was first visible in the 1984 image. Some structures in Riversdale are declared Provincial Heritage Sites (PHSs) as is one farmhouse (Zeekoegat) a short way to the north of the town. All are more than 2 km from the study area.

Prior to being renumbered Lot 21 of Riversdale Settlement, the study area was known as Lot J of Oakdale Estate and granted to J.J. van Rensburg on 29th March 1949. Lot 266 was subdivided off the property in 2009 and registered in 2018. Lots 269 and 270 were subdivided in 2012 and registered in 2015. These latter comprise the N2 road reserve through the property.

Cultural Landscape

The study area slopes downhill towards the northeast which means that it is not visible from the N2 to the west of the study area but, traveling eastwards, becomes visible only once one is adjacent to it. Adjacent to the study area there is intermittent screening vegetation in the road reserve, but the proposed new development would be visible. From a short distance east of the study area the proposed development would not be visible at all due to screening vegetation and the modern westernmost part of Riversdale.

Further east the N2 runs south-eastwards through a low area and then runs uphill towards the south. In this latter area the site is largely screened by adjacent gum trees and road cuttings but intermittent visibility would be possible at distances of greater than about 1.8 km. Beyond 2.4 km from the site it is completely obscured by topography. It can thus be concluded that the N2 will only be minimally affected by the proposed development, since visibility of the site is fleeting with views of the development only likely to be possible from immediately adjacent to the study area.

To the north of Riversdale, the R323 Garcia Pass has been rated as a Grade II route by Winter and Oberholzer (2013). However, the historically significant part of this route lies far to the north and will not be affected by the proposed development.

2. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.

The economy of Riversdale is primarily driven by farming which includes wildflowers for export, honeybush tea, dairy, wool, fruit, grapes and grain. Riversdale is a popular motorcycle and cycling destination within the Western Cape and Garden Route, with the town connecting with the R62 using the well-maintained Garcia's Mountain Pass.

Riversdale is well known for its abundance of indigenous Fynbos. During the colder winter months, the landscape becomes a floral displays of bright fynbos colours. This has earned the town recognition as being the Floral Paradise of the Garden Route. Proteas and Ericas are harvested here for export. Every September a popular flower show is hosted which contributes to Riversdale's economy and social characteristics.

According to the IDP of Hessequa Municipality, Riversdale functions as a massive economic corridor, but is in dire need of services infrastructure upgrades and low-middle income housing opportunities. The proposed development site is adjacent to the town of Riversdale with the majority of adjacent land-uses as either farming practices or residential areas.

8.2.	Explain the socio-economic value/contribution of the proposed development.

The proposal aims to support an efficient, convenient and affordable urban structure. The proposed development will contribute to the objective as set out in the National Development Plan to decrease poverty and foster economic growth within the larger area.

Since the proposed development shall contain a business area along with the permanent need for management and maintenance, the proposed development will have a positive socio-economic impact in providing employment opportunities during both the construction and operational phase.

The proposed development will be mainly aimed to create more affordable housing in an ever-growing town with a high housing demand and that has been earmarked for development. This will increase residential opportunities as well as employment opportunities within the area, bringing about faster economic growth, higher investment and greater labour absorption. Additionally, the proposed development will contribute towards upgrading of infrastructure services such as roads, stormwater systems and electrical units and generate additional capital income for the municipality.

8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.

The proposed development will be mainly aimed to create more affordable housing in an ever-growing town with a high housing demand and that has been earmarked for development. This will increase residential opportunities as well as employment opportunities within the area, bringing about faster economic growth, higher investment and greater labour absorption. Additionally, the proposed development will contribute towards upgrading of infrastructure services such as roads, stormwater systems and electrical units and generate additional capital income for the municipality.

8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.

Construction phase

During the construction phase of the proposed development, temporary impacts to people's health and well-being would be expected as a result of increased movement within proximity of the proposed development footprint. This will lead to a temporary (short-medium) negative impact on the 'sense of place' of place. Concerns regarding the security and safety impact to be seen as a result of the construction phase can be partially mitigated by on-site management measures.

Operational phase

Following the construction phase, the visual aspect of the site will no longer be of concern, should the mitigation measures provided by the visual impact specialist be implemented on site and as part of the design and pre-construction activities. The proposed development aligns with the SDF and IDP of the Municipality.

The mitigation measures toward the anticipated visual impacts associated within the report has been included in the mitigation measures of the in the Impact Assessment section of this Basic Assessment Report.

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred property and site alternative.

The development is proposed on Erf 266 and the Remaining Portion of Erf 21, Riversdale Settlement. The proposed development is located to the west of the existing town of Riversdale, separated partly by Erf 22 located along the North-Eastern boundary of the proposed development site. Please refer to Appendix A1 for a map indicating all adjacent properties.

The proposed development area is currently used for rainfed agriculture (as assessed by the Agricultural Specialist) and the properties are zoned Agriculture Zone I (RE/21) and Business VI (Erf 266),

Provide a description of any other property and site alternatives investigated.

No other site/property alternatives were considered for the proposed development.

Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.

The proposed development location has been selected based on its alignment with multiple planning and sustainability goals.

The outcome of the site selection matrix considered various factors such as economic viability, infrastructure availability, environmental sustainability, and alignment with local planning frameworks, including the Hessequa Integrated Development Plan (IDP) and the Spatial Development Framework (SDF).

Motivation for Preferred Property and Site Alternative:
Location within the Urban Edge: The preferred site is located within the urban edge of Riversdale, as confirmed by the letter included in Appendix L4 of the BAR. This ensures that the development will promote infill development and prevent urban sprawl, in line with the WCPSDF's policy (S3), which supports compact and mixed-use settlements. This location maximizes the use of existing infrastructure and encourages efficient land use, aligning with smart growth principles that prioritize the revitalization of urban spaces.

Infrastructure and Economic Growth: The site's inclusion within the urban edge also facilitates the development of necessary infrastructure, including electricity, water, and sanitation services, as outlined in the Hessequa Municipality's IDP. As indicated in the services confirmation letter and in the Civil Engineering Report submitted as part of this BAR, the Municipality has indicated that there are sufficient resources to support this development, however the onus will rest on the developer to install the necessary connections and support infrastructure. This expansion of municipal services will strengthen Riversdale's role as an economic hub and transport node along the N2 corridor, while also supporting the town's economic growth through job creation in both construction and long-term operations.

Diverse Housing Needs: The preferred site will accommodate a variety of housing typologies, catered towards varies age classes, from market-related residences, addressing Riversdale's urgent need for housing due to population growth and migration trends. This diversity is crucial to meeting the socio-economic needs of different income groups, as highlighted by the SDF and IDP, and supports the goal of a more integrated and sustainable housing market (WCPSDF S5). By offering options for first-time buyers, families, and retirees, the project fosters community cohesion and inclusivity.

Environmental Sustainability: The development incorporates measures for low-carbon and climate-resilient growth, including the integration of renewable energy solutions such as solar panels. This aligns with WCPSDF policy R4, which promotes a transition to renewable energy and emphasizes the need for energy efficiency in urban development. The site's strategic location and the design's focus on sustainability make it well-suited for long-term resilience, reducing its environmental impact and enhancing the town's capacity to address climate change challenges (highlighted below).

Strategic Alignment with Development Frameworks: The selected site and proposed development aligns with the long-term visions established in the Riversdale Local Spatial Development Framework (LSDF). This site is located within a designated expansion area west of the established Riversdale Town, which has been earmarked for residential development. It meets the recommendations for promoting higher density within new residential areas, contributing to the densification and compaction goals of the region. Additionally, the development will preserve surrounding agricultural land, maintaining the rural character of Riversdale and protecting its agricultural assets.

Outcome of the Site Selection Matrix:

- Economic Viability: The site offers high potential for economic investment, particularly given its location along the N2 and its proximity to existing infrastructure, making it a cost-effective choice.
- Infrastructure Availability: Municipal infrastructure improvements are already underway, enabling the development to proceed without significant additional costs for utilities, while the existing capacity can be expanded as needed.
- Environmental Suitability: The site minimizes environmental impact by being located within an already urbanized area, thus preserving agricultural land and reducing sprawl. Renewable energy integration further strengthens its sustainability credentials.

- Socio-Economic Benefits: The project's mix of housing types and its potential to create both short- and long-term employment opportunities directly address the urgent housing and job creation needs in Riversdale.
- Alignment with Planning Policies: The development aligns with to key policies in the WCPSDF, Hessequa IDP, and SDF, supporting the strategic growth and development of Riversdale as an administrative, economic, and transport hub.

Provide a full description of the process followed to reach the preferred alternative within the site.

The proposal conforms to all guidelines and frameworks set forth by the Riversdale Municipality. The preferred alternative was selected from an economic viability perspective whilst taking these policies and guidelines into consideration.

Provide a detailed motivation if no property and site alternatives were considered.

No property or site alternative has been considered since the applicant has acquired the site based on relevant market research, as the site is strategically located for the proposed development.

List the positive and negative impacts that the property and site alternatives will have on the environment.

Positive Impacts

- Given the disturbed nature of the site, the impact on the existing vegetation and biodiversity is of low concern.
- Infill development within the urban edge reduces urban sprawl and preserves open spaces.
- Protects high-potential agricultural areas around Riversdale with the placement of the 1 ha lifestyle smallholdings on the outer edge of the development footprint.
- Utilizes existing municipal services, minimizing resource demand.

Negative Impacts

- Potential visual impacts (visual intrusion) associated with both the construction and operational phases.
- The loss of highly sensitive arable land as a result of the proposed development.

1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred activity alternative.

The preferred activity involved the development of a mixed-use development, comprising of lifestyle erven, business zones, and small to large residential areas.

Provide a description of any other activity alternatives investigated.

No activity alternatives have been proposed for this development.

Provide a motivation for the preferred activity alternative.

A mixed-use development offers a variety of housing options (low-, medium-, and high-density), which caters to different income levels, family sizes, and life stages, including first-time buyers, small families, and retirees. Additionally, mixed-use developments stimulate the local economy by integrating residential, commercial, and community spaces. This approach encourages job creation not only during the construction phase but also through the ongoing demand for goods and services within the development. From a services perspective, integrating commercial and residential spaces maximizes the use of existing municipal infrastructure, such as roads, water, and electricity. Finally, Riversdale's Spatial Development Framework (SDF) and Integrated Development Plan (IDP) emphasize the need for densification, economic diversification, and sustainable growth. A mixed-use development aligns with these strategies by fostering a resilient local economy and reducing pressure on surrounding agricultural land.

Provide a detailed motivation if no activity alternatives exist.

The current preferred alternative is deemed appropriate and conforms to all guidelines and frameworks provided by the Hessequa Local Municipality.

List the positive and negative impacts that the activity alternatives will have on the environment.

Positive Impacts

- Prevents urban sprawl by promoting compact, mixed-use development.
- Reduces travel needs and promotes walkability between residential and business zones.
- Maximizes the use of existing roads, water, and electricity systems.
- Potential for renewable energy integration (e.g., solar power).

Negative Impacts

- Noise and dust generation during the building phase.
- Higher consumption of water and electricity due to mixed-use elements.
- More waste from both residential and commercial activities

1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts

Provide a description of the preferred design or layout alternative.

The Proponent wishes to develop the site as a larger residential development comprising several different residential offerings. The proposed mixed-use residential development will take place on Erf 266 and a portion of the remainder of Erf 21 which is located immediately north of the N2 before the town of Riversdale. The remaining portion of Erf 21 to the south of the N2 will not be currently developed and will remain under Agricultural zoning.

The preferred site development plan comprises the development of the as follows:

- 27 Agricultural Zone II offerings comprising 27.5ha
- 159 Single Residential erven comprising 10.4ha
- 3 Pockets of General Residential Zone II offerings for a total of 10.4ha
- 1 Business Zone of 0.7ha;

Additionally, several ancillary land uses are also proposed which include the internal and access roads,

- 7 Transport Zone II erven comprising 3.8ha
- 1Transport Zone III erf of approximately 1.9ha
- 1 Utility Zone; and
- 1 Open Space Zone 1 erf comprising 1.5ha.

The above can further be elaborated on;

- Smallholdings / 1ha lifestyle erven forming a gated community with restricted agricultural land uses such as equestrian use – Proposed zoning Agricultural Zone II
- Low density single residential erven – Proposed zoning Residential Zone II
- Medium density general residential erven – Proposed zoning General Residential Zone II
- Retirement village / frail care unit – Proposed zoning General Residential Zone II

The total development footprint comprises approximately 56.4ha.

Provide a description of any other design or layout alternatives investigated.

During the design phase of the Site Development Plan (SDP), multiple layout options were considered, each incorporating recommendations from specialists to mitigate impacts, particularly aquatic and visual concerns. In consultation with heritage and visual specialists, the visual integrity of the site and its ability to seamlessly "fit into the natural flow of the landscape" were prioritized. Based on these consultations, adjustments were made, including the repositioning of rezoned nodes and the adoption of a more organic layout that complements the natural contours of the terrain.

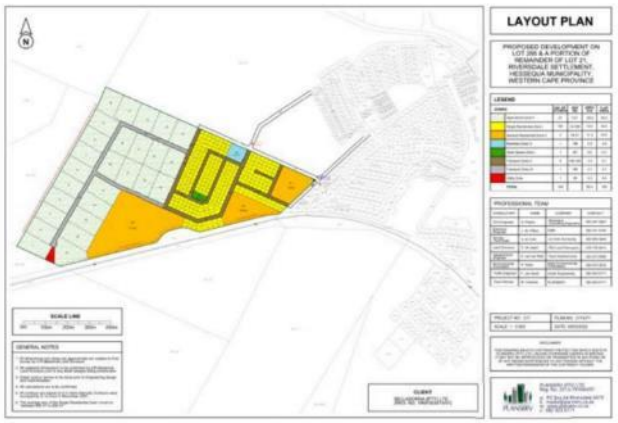
217/D1 of 28 June 2021

217/D2 of 28 June 2021

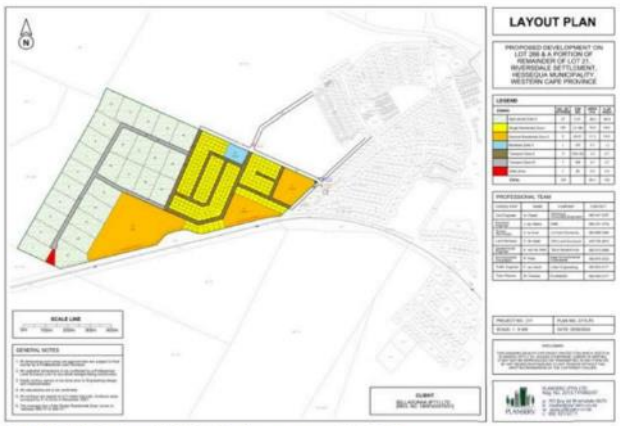
217/D4 of 13 July 2021

217/D5 of 13 July 2021

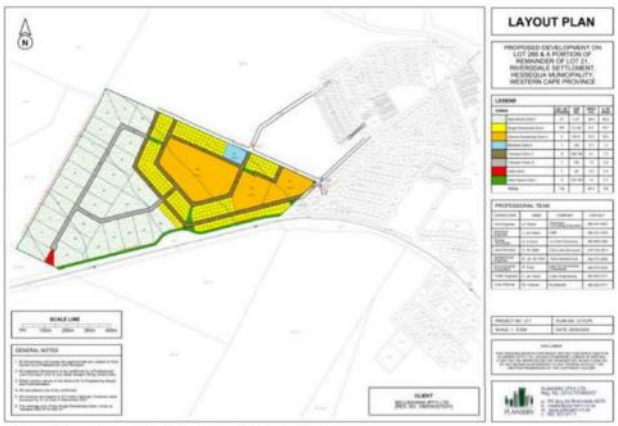
217/D6 of 13 July 2021



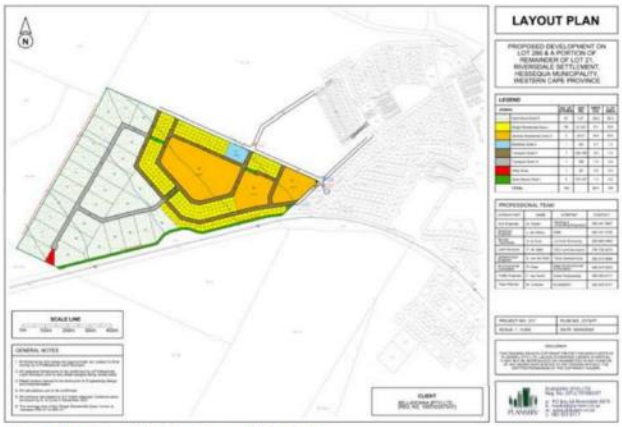
2017/LP1 of 02 March 2022



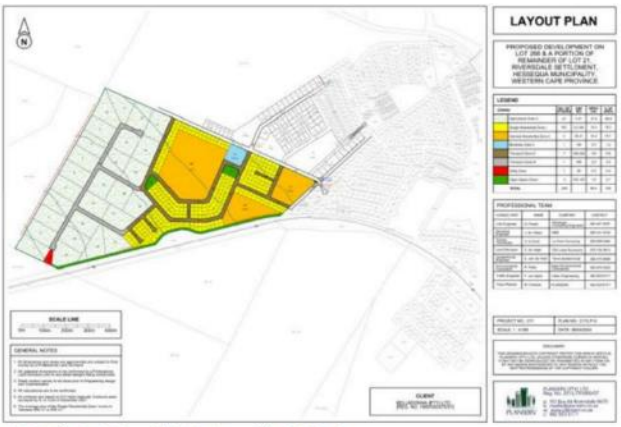
2017/LP4 of 02 February 2024



217/LP5 of 02 April 2024



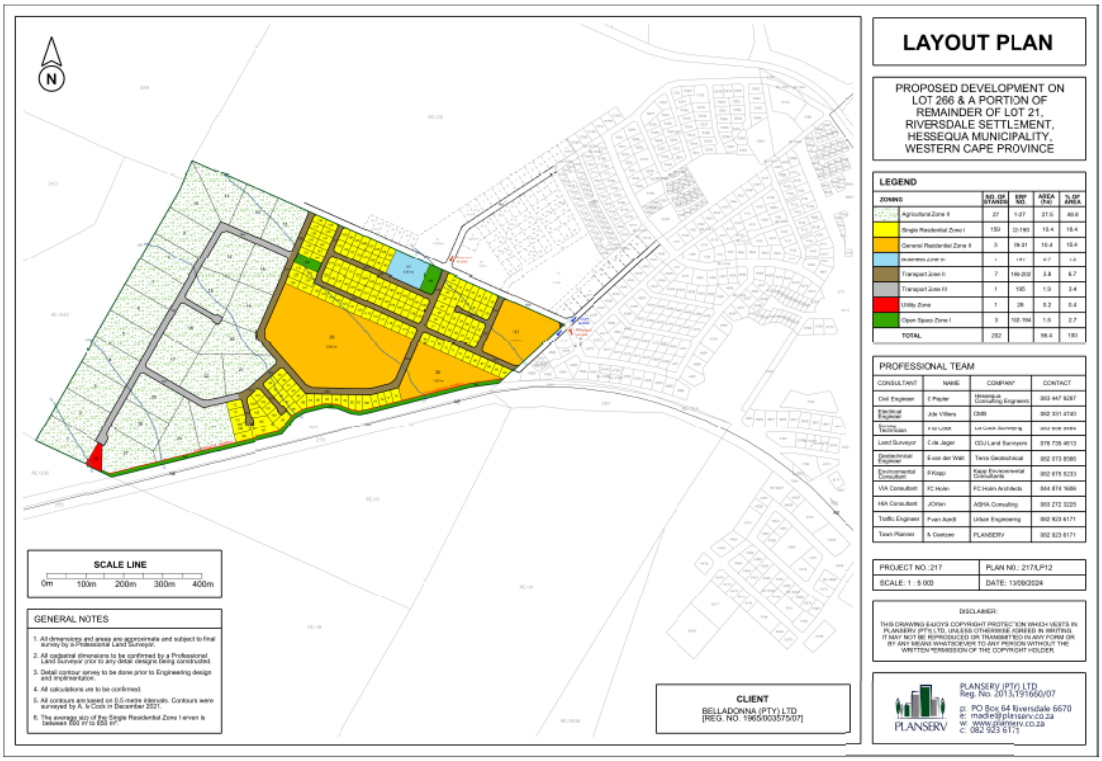
217/LP7 of 02 April 2024



217/LP10 of 08 April 2024

The revised design integrates the development into its surroundings by following the landscape's natural contours, with internal roads and residential plots arranged accordingly. Communal green spaces are strategically placed along access roads and within the development to enhance the visual harmony with Riversdale's existing character. While the development will be visible from various vantage points, especially along the N2, its design aims to minimize the visual impact by blending with the broader landscape.

Mitigation measures outlined in the visual impact assessment have been incorporated, including a gradual transition in building densities from east to west. Medium-density group housing is located closer to town, while low-density erven and agricultural land are placed further west, creating a smoother visual flow. Green belts along the N2 and changes to the road layout further reduce the development's visual impact by acting as natural buffers. Additionally, evergreen trees and shrubs will be planted to soften the visual intrusion from elevated areas and along key routes like the N2, ensuring the development integrates sensitively with its surroundings.



Provide a motivation for the preferred design or layout alternative.

The preferred layout prioritizes fitting into the natural landscape, as guided by heritage and visual specialists, with organic road and plot arrangements that follow the land's natural contours. Strategic placement of green spaces and low-density areas creates a seamless transition from the natural environment to the built area. Additionally, visual mitigation measures, such as evergreen tree planting and gradual density transitions, help minimize the visual impact from key vantage points like the N2. This design not only promotes sustainable land use but also ensures that the development blends harmoniously with Riversdale's existing character.

Provide a detailed motivation if no design or layout alternatives exist.

Not applicable to the proposed development.

List the positive and negative impacts that the design alternatives will have on the environment.

Positive Impacts

- Given the disturbed state of the site, the impact on the existing vegetation and biodiversity is of low concern.
- Construction phase job opportunities for the surrounding low-income areas.
- Operational long-term job opportunities.
- Additional investment and rates and taxes to the area and municipality.
- Incorporating various land uses, such as residential and agricultural zones, maximizes land utilization while aligning with urban edge boundaries.
- Organic layout design minimizes visual impact, blending the development with the natural contours of the landscape.
- The affected seep wetland is already seriously modified and has limited ecological functionality, making the development's impact relatively low.
- Mitigation recommendations, like integrating the seep wetland into a stormwater management system, could help control water flow and reduce flooding risks (though this was not fully incorporated into the final design).

Negative Impacts

- The final design results in the infilling of the small seasonal seep wetland, leading to the potential loss of this ecologically isolated habitat.
- Despite visual mitigation efforts, the development will still be visible from key vantage points, potentially altering the natural landscape's aesthetic.
- Rezoning agricultural land for residential purposes may lead to the loss of land previously available for agricultural activities, affecting local farming.
- Without proper stormwater management, the development may lead to increased surface runoff, especially in areas where natural water resources exist nearby (e.g., tributaries of Naroo River).
- Potential visual impacts (visual intrusion) associated with both the construction and operational phases;
- Potential noise impacts associated with the use of machinery during the construction phase;
- Potential traffic impacts during the construction phase.

1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred technology alternative:	
Not applicable to the proposed development.	
Provide a description of any other technology alternatives investigated.	
Not applicable to the proposed development.	
Provide a motivation for the preferred technology alternative.	
Not applicable to the proposed development.	
Provide a detailed motivation if no alternatives exist.	
Not applicable to the proposed development.	
List the positive and negative impacts that the technology alternatives will have on the environment.	
Not applicable to the proposed development.	
1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred operational alternative.	
Not applicable to the proposed development.	
Provide a description of any other operational alternatives investigated.	
Not applicable to the proposed development.	
Provide a motivation for the preferred operational alternative.	
Not applicable to the proposed development.	
Provide a detailed motivation if no alternatives exist.	
Not applicable to the proposed development.	
List the positive and negative impacts that the operational alternatives will have on the environment.	
Not applicable to the proposed development.	
1.6.	The option of not implementing the activity (the 'No-Go' Option).
Provide an explanation as to why the 'No-Go' Option is not preferred.	
If the project were not implemented, the site would remain in its current state, resulting in a neutral impact. While the heritage impacts from development would be greater than those existing, the loss of significant socioeconomic benefits makes the No-Go option less desirable in terms of heritage preservation. Ecologically, the No-Go alternative would have a slightly lower impact than the proposed development, rated as neutral. However, the proposed layout's overall ecological significance is assessed as low negative both before and after mitigation. Therefore, while the No-Go option might be marginally preferred from an ecological standpoint, it would result in missed economic and social benefits. If the project were not implemented, then the site would stay as it currently is, so the loss of socio-economic benefits is more significant and suggests that the No-Go option is less desirable.	
1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.
No other alternatives exist other than the recommendations provided by the specialists below.	
1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.
It is recommended that the Preferred Site Development Alternative is authorized as this is the more viable alternative to the opinion of the EAP and will result in significant and long term positive socio-economic impacts with limited environmental impacts. Additionally, the layout should once again be revised to ensure that the delineated seep wetland area not be developed and should, preferably, be incorporated into the stormwater management plan as part of a stormwater management structure (stormwater detention area). Additionally, this area is to be demarcated as Open Space and utilised for the management of stormwater runoff associated with the proposed development.	

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).
For the proposed development, only one designated No-Go area was identified for the proposed development: • Aquatic Biodiversity – A small depression wetland is located within the area to be zoned as part of the General Residential Zone. As per the recommendation of the aquatic biodiversity specialist, this area should be incorporated into the stormwater management plan for the proposed development site. Please see Appendix L5 of the BAR for the Stormwater Management Plan, including the incorporation of the depression wetland into the stormwater management of the site. The centre point co-ordinates of the depression wetland are 34° 5'10.17"S 21°13'57.93"E. Additionally, in order to curtail impacts on surrounding agricultural, terrestrial biodiversity and infrastructural (N2-Highway) resources, all areas beyond the construction footprint identified in this BAR (and further transferred into the EMPr compiled for the proposed development) are considered No-Go areas.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.

The assessment criteria utilized in this environmental impact assessment is based on, and adapted from, the *Guideline on Impact Significance, Integrated Environmental Management Information Series 5* (Department of Environmental Affairs and Tourism (DEAT), 2002) and the *Guideline 5: Assessment of Alternatives and Impacts in Support of the Environmental Impact Assessment Regulations* (DEAT, 2006).

Determination of Extent (Scale):

Site specific	On site or within 100 m of the site boundary.
Local	The impacted area includes the whole or a measurable portion of the site, but could affect the area surrounding the development, including the neighbouring properties and wider municipal area.
Regional	The impact would affect the broader region (e.g. neighbouring towns) beyond the boundaries of the adjacent properties.
National	The impact would affect the whole country (if applicable).

Determination of Duration:

Temporary	The impact will be limited to the construction phase.
Short term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than 2 years.
Medium term	The impact will last up to the end of the construction phase, where after it will be entirely negated.
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.
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.

Determination of Probability:

Improbable	The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
Probable	There is a possibility that the impact will occur to the extent that provisions must therefore be made.
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.
Definite	The impact will take place regardless of any prevention plans.

Determination of Significance (without mitigation):

No significance	The impact is not substantial and does not require any mitigation action.
Low	The impact is of little importance but may require limited mitigation.
Medium	The impact is of sufficient importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
Medium-High	The impact is of high importance and is therefore considered to have a negative impact. Mitigation is required to manage the negative impacts to acceptable levels.
High	The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.
Very High	The impact is critical. Mitigation measures cannot reduce the impact to acceptable levels. As such the impact renders the proposal unacceptable.

Determination of Significance (with mitigation):

No significance	The impact will be mitigated to the point where it is regarded to be insubstantial.
Low	The impact will be mitigated to the point where it is of limited importance.
Medium	Notwithstanding the successful implementation of the mitigation measures, the impact will remain of significance. However, taken within the overall context of the project, such a persistent impact does not constitute a fatal flaw.
High	Mitigation of the impact is not possible on a cost-effective basis. The impact continues to be of great importance, and, taken within the overall context of the project, is considered to be a fatal flaw in the project proposal.

Determination of Reversibility:

Completely Reversible	The impact is reversible with implementation of minor mitigation measures
Partly Reversible	The impact is partly reversible but more intense mitigation measures
Barely Reversible	The impact is unlikely to be reversed even with intense mitigation measures
Irreversible	The impact is irreversible and no mitigation measures exist

Determination of Degree to which an Impact can be Mitigated:

Can be mitigated	The impact is reversible with implementation of minor mitigation measures
Can be partly mitigated	The impact is partly reversible but more intense mitigation measures
Can be barely mitigated	The impact is unlikely to be reversed even with intense mitigation measures
Not able to mitigate	The impact is irreversible and no mitigation measures exist

Determination of Loss of Resources:

No loss of resource	The impact will not result in the loss of any resources
Marginal loss of resource	The impact will result in marginal loss of resources
Significant loss of resources	The impact will result in significant loss of resources
Complete loss of resources	The impact will result in a complete loss of all resources

Determination of Degree to which an Impact can be avoided:

High	The impact is completely avoidable
Medium	The impact is avoidable with moderate mitigation
Low	The impact is difficult to avoid and will require significant mitigation
Unavoidable	The impact cannot be avoided

Determination of Degree to which an Impact can be managed:

High	The impact is completely manageable
Medium	The impact is manageable with moderate mitigation
Low	The impact is difficult to manage and will require significant mitigation
Unmanageable	The impact cannot be managed

Determination of Cumulative Impact:

Negligible	The impact would result in negligible to no cumulative effects
Low	The impact would result in insignificant cumulative effects
Medium	The impact would result in minor cumulative effects
High	The impact would result in significant cumulative effects

4. Assessment of each impact and risk identified for each alternative

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

CONSTRUCTION PHASE IMPACTS

CONSTRUCTION PHASE			
	Terrestrial Biodiversity Impacts – Impacts on Critical Biodiversity Areas and Plant Species of Conservation Concern		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	It can safely be assumed that the primary construction phase ecological impact of the proposed subdivision and development would be permanent loss of any of the existing natural and partly natural vegetation and faunal habitat in the development footprints (essentially the two areas mapped as CBA2; gazetted as a Critically Endangered vegetation type). No plant or faunal Species of Conservation Concern are likely within the actual site. The site presents no significant ecological constraints to the proposed subdivision and development.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Permanent	Local / Permanent	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	Low	Low	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low	Low	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Low**	**Low**	**-N/A**
Degree to which the impact can be avoided:	Medium	Medium	-N/A
Degree to which the impact can be managed:	High	High	-NA
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Mitigation measures provided by the specialist:

Due to the degraded nature of the proposed development area, no specific ecological mitigation measures were proposed by the specialist.

General Mitigation measures:

- During the construction phase of the proposed development, the contractor must manage alien invasive plant species in line with the Alien Invasive Management Programme included in the Environmental Management Programme (EMPr).
- Stockpiled alien invasive species cleared from site, should be contained and removed from site as soon as possible, so as to not allow dispersal.
- Be mindful of rainfall events, and plan construction works during dry season.
- Ensure the landscaping to be done as part of the proposed development is completed as sections of works are completed, this would be to avoid bare surfaces remaining exposed for extended periods of time.
- Indigenous vegetation must be utilized where possible for landscaping purposes.
- All construction works and activities must remain within the approved working areas.
- No surface should be left exposed for extended periods of time.
- Suitable measures must be implemented in areas that are susceptible to erosion.

- Where clearance is to occur in the Critical Biodiversity Areas, topsoil must be removed and stockpiled separately from subsoil.
- When backfilling, ensure subsoils are backfilled first, and top-soil thereafter. If topsoil is of poor-quality purchase new topsoil to ensure rehabilitation will be successful.
- The stockpiled topsoil shall be protected from being blown away or being eroded. The use of a suitable grass seed/runner mix will facilitate soil protection and minimise weeds/weed growth.
- The Contractor must ensure that an emergency preparedness plan is in place in order to fight accidental fires or veld fires, should they occur.
- Enclosed areas for food preparation should be provided and the Contractor must strictly prohibit the use of open fires for cooking and heating purposes.
- Fires and "hot work" must be restricted to demarcated areas.
- The Contractor must take precautions when working with welding or grinding equipment near potential sources of combustion. Such precautions include having a suitable, tested and approved fire extinguisher immediately at hand and the use of welding curtains.

CONSTRUCTION PHASE			
	Terrestrial Animal Impacts – Impacts Faunal Species of Conservation Concern		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	During the site visit, a total of 22 animal species were recorded. Notable observations included a total of four Blue Cranes (*Grus paradisea*) feeding in the harvested fields within the proposed development area. These cultivated fields (both while under cultivation, and after being harvested) provide a habitat for the species recorded, but there is an abundance of similarly suitable habitat for these species in surrounding areas, and the development is unlikely to have a major impact on the continued survival of these species in this area.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Permanent	Local / Permanent	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low	Low	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Low**	**Low**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Mitigation measures provided by the specialist:

Due to the absence of georeferenced records of SCCs, the lack of suitable habitat for the SCC on site and the lack of SCCs observed within the proposed development area, no mitigation measures were proposed.

The following mitigation measure was proposed specifically for the underground portion of the proposed external electrical route:

- Remove all woody invasive alien vegetation from within 20m of the installed service routes, during the construction phase, using appropriate methodology (no soil disturbance; see Martens et al 2021).

General mitigation measures:

- Blanket clearing of proposed development site must be limited.
- Clearance of vegetation of the proposed development site must be done in a phase manner, if possible. This allows any smaller animal species to move into safe areas and prevents wind and water erosion of the cleared areas.
- No animals are to be harmed or killed if intersected.
- Workers are NOT allowed to collect any flora or snare any faunal species. All flora and fauna remain the property of the landowner and must not be disturbed, upset or used without their expressed consent.
- No domestic animals are permitted to be introduced to the proposed development area during the construction phase. This excludes the use of security dogs, when required.

CONSTRUCTION PHASE			
	Agricultural Impacts – Impact on Agricultural Resources		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	The assessed site is classified almost entirely as High agricultural sensitivity by the screening tool. This has been confirmed by the specialist assessment, because of the agricultural production potential and current agricultural land use. An agricultural impact is a change to the future agricultural production potential of land. This is primarily caused by the exclusion of agriculture from the footprint of a development. In this case the impact of the development will be the permanent exclusion of agriculture from 56 hectares of viable cropland. The loss of this amount of scarce cropland is a loss of agricultural production potential in terms of national food security.		
Nature of impact:	Negative	Negative	Positive
Extent and duration of impact:	Local / Permanent	Local / Permanent	Local / Permanent
Probability of occurrence:	Definite	Definite	Definite
Degree to which the impact can be reversed:	Reversible	Reversible	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	High	High	High
Cumulative impact prior to mitigation:	High	High	High
Significance rating of impact prior to mitigation	**High**	**High**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Can be partly managed	Can be partly managed	-N/A
Degree to which the impact can be mitigated:	Low	Low	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Medium (-)**	**Medium (-)**	**Medium (+)**

Mitigation measures provided by the specialist:

No mitigation measures were proposed by the appointed specialist.

General mitigation measures:

- No activities are allowed beyond the boundaries of the approved development area.
- Where construction works are required beyond the boundaries of Erf 21 and Erf 266, these areas must be demarcated in accordance with the layout (once approved).
- No workers may be permitted to enter into areas beyond the demarcated boundaries of the construction footprint.

CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Damage to instream and riparian habitats of identified water resource as a direct result of construction activities.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short-term	Local / Short-term	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low-Medium	Low-Medium	-N/A
Significance rating of impact prior to mitigation	**Low-Medium**	**Low-Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Pollution of identified water resources as a direct result of contaminated runoff from construction areas.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short-term	Local / Short-term	-N/A
Probability of occurrence:	Highly Probable	Highly Probable	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low-Medium	Low-Medium	-N/A
Significance rating of impact prior to mitigation	**Low-Medium**	**Low-Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A

CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts – Impact to Geomorphological Processes (Sediment Balance and Sedimentation)		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Soil and Groundwater Contamination as a result of infiltration of construction-related pollutants.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short-term	Local / Short-term	-N/A
Probability of occurrence:	Highly Probable	Highly Probable	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low-Medium	Low-Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Low**	**Low**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Very Low	Very Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts –Altered Freshwater Habitat and impacts to Biota		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Disturbance to aquatic and terrestrial fauna within the identified water resources as a result of construction activities.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short-term	Local / Short-term	-N/A
Probability of occurrence:	Highly Probable	Highly Probable	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low-Medium	Low-Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium-Low**	**Medium-Low**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A

CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Very Low	Very Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Mitigation measures provided by the specialist (according to memorandum):

- Clearing of indigenous vegetation within the study area should be kept to a minimum and only within areas under active construction;
- All cleared vegetation must be disposed of at a licensed refuse facility and may not be mulched or burned on site;
- No stockpiling, equipment storage or construction laydown areas may be planned within 15 metres of the freshwater ecosystem(s);
- Dust suppression measures must be implemented throughout construction to prevent excessive dust which may smother freshwater ecosystem(s) and alter water quality;
- All vehicles must remain at least 15 metres from the delineated extent of the freshwater ecosystem(s), unless required as part of a specific construction activity and then only for a short period of time; and
- Any AIPs within the study area should ideally be removed prior to soil stripping to reduce seed loads within the topsoil. This will assist in reducing the long-term AIP management requirements.
- Excavated materials may not be contaminated, and the stockpiles may not exceed 2 metres in height;
- Topsoil should be stockpiled separately from deeper soil layers to ensure that topsoil gets backfilled last which will facilitate growth of new vegetation;
- All exposed soils must be protected for the duration of the construction phase with a suitable geotextile (e.g. hessian sheeting) to prevent potential sedimentation into the freshwater ecosystem(s);
- Adequate sediment/erosion protection measures such as silt traps and silt fences is to be installed downstream of all construction works to further reduce the potential impacts on freshwater ecosystem(s).
- The delineated extent of the freshwater ecosystems outside the construction footprint areas are to be strictly treated as a no-go areas and demarcated as such.
- The construction works are to be audited for compliance by a suitably qualified Environmental Control Officer (ECO) in accordance with an approved Environmental Management Plan (EMP) which is to be approved by the Competent Authority.
- Concrete and cement-related mortars can be toxic to aquatic life due to the high alkalinity associated with cement which can contaminate both soil, surface and groundwater.
- The following recommendations must be adhered to:
- Proper handling and disposal should minimise or eliminate discharges into the freshwater ecosystem(s);
- Fresh concrete and cement mortar may only be mixed within the authorized construction footprint (limited to the study area). Mixing of cement may be done within the construction camp, may not be mixed on bare soil, and must be within a lined, bound or bunded portable mixer. Consideration must be given to the use of ready mix concrete;
- No mixed concrete shall be deposited directly onto the ground. A batter board or other suitable platform/mixing tray is to be provided onto which any mixed concrete can be deposited whilst it awaits placing;
- Cement bags must be disposed of in the demarcated hazardous waste receptacles and the used bags must be suitably disposed of;
- Spilled or excess concrete must be disposed of at a suitable registered landfill site.
- It is highly recommended that construction activities are limited to the dry summer months to avoid potential wet concrete runoff directly into the freshwater ecosystem(s);
- It is highly recommended that excavation activities occur during the dry summer months as far as feasibly possible to limit erosion, sedimentation, freshwater contamination/collection and thereby flow manipulation and the potential for the slumping of the trench walls on site. Trench walls must be stabilised if necessary.
- Excavated soil to be stockpiled to a height no greater than 2 metres to minimize dust generation and be deposited on the upgradient side of the trench as far as possible as a failsafe to catch sedimentation should it become mobilized to avoid deposition into downgradient freshwater ecosystems;
- Excavated materials to be safeguarded from all forms of contamination;
- Topsoil to be stored separately from deeper soil and all soil protected from weathering and wind transport by covering with a suitable geotextile such as hessian sheeting and stockpiling period to be minimized to effect backfilling;
- Excess soil and waste generated through the construction process must be disposed of at an appropriate and registered waste disposal facility;

- The duration of impacts within the freshwater ecosystems should be minimised as far as possible by ensuring that the duration of time in which flow alteration and sedimentation will take place is minimised. Therefore, the construction period should be kept as short as possible;
- Protect exposed soils and stockpiles from wind, and limit the time in which soils are exposed, by covering with a suitable geotextile such as hessian sheeting; and
- All excavated trenches must be compacted to natural soil compaction levels to prevent the formation of preferential surface flow paths and subsequent erosion. Conversely, areas compacted as a result of construction activities.
- Backfilling to take place as soon as construction activities have been completed, ensuring that topsoil is backfilled last according to the last-out-first-in backfilling principle;
- Soil must be appropriately compacted according to the natural soil characteristics of the area to preserve future surface and subsurface drainage through the previously trenched areas – this will require supervision by a suitably competent individual; and
- The topsoil must be ripped for reestablishment of vegetation. However, to account for subsidence of the soil level over time, allowance for a slightly higher soil level within backfilled trench (depending on the soil type) may be made. Therefore, monitoring post construction activities is required.

General mitigation measures:

- Suitable measures must be implemented in areas that are susceptible to erosion. Areas must be rehabilitated, and a suitable cover crop planted once construction is completed.
- Topsoil must be stripped and stockpiled separately and replaced on completion.
- Be mindful of weather conditions that may cause runoff.
- Utilize silt fences, if necessary, at demarcated working corridor fence line, to capture runoff.
- If feasible, chemical toilets must be kept at the site camp. Chemical toilets must be placed on a level surface and secured from blowing over.
- Toilets may not be linked to the storm water drainage system in any way.
- Chemical toilets must be regularly emptied, and the waste disposed of at an appropriately registered waste water disposal/ treatment site. Care must be taken to prevent spillages when moving or servicing chemical toilets.
- **Pollution Management – Hazardous Substances**
    - Vehicles and machinery must be in good working order and must be regularly inspected for leaks.
    - If a vehicle or machinery is leaking pollutants it must, as soon as possible, be taken to an appropriate location for repair. The ECO has the authority to request that any vehicle or piece of equipment that is contaminating the environment be removed from the site until it has been satisfactorily repaired.
    - Repairs to vehicles/ machinery may take place on site, within a designated maintenance area at the site camp. Drip trays, tarpaulin or other impermeable layer must be laid down prior to undertaking repairs.
    - Refuelling of vehicles/ machinery may only take place at the site camp or vehicle maintenance yard. Where refuelling must occur, drip trays should be utilised to catch potential spills/ drips.
    - Drip trays must be utilised during decanting of hazardous substances and when refilling chemical/ fuel storage tanks.
    - Drip trays must be placed under generators (if used on site) water pumps and any other machinery on site that utilises fuel/ lubricant, or where there is risk of leakage/spillage.
    - Any hazardous substances (materials, fuels, other chemicals etc.) that may be required on site must be stored according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure.
    - Material Safety Data Sheets (MSDSs) must be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases.
    - Hazardous chemicals and fuels should be stored on bunded, impermeable surfaces with sufficient capacity to hold at least 110% of the capacity of the storage tanks.
    - Where feasible, fuel tanks should be elevated so that leaks are easily detected.
    - A spill kit to neutralise/treat spills of fuel/ oil/ lubricants must be available on site, and workers must be educated on how to utilise the spill kit.
    - Soil contaminated by hazardous substances must be excavated and disposed of as hazardous waste.
    - If cement is to be mixed, ensure this is done on a bunded impermeable surface, and transferred so that there is no interaction with natural ground.
    - No contaminated soil may be utilized during backfilling.
- **Pollution Management – Cement handling**
    - Cement batching must take place on an impermeable surface large enough to retain any slurry or cement water run-off. If necessary, plastic/ bidem lined detention ponds (or similar) should be constructed to catch the run-off from batching areas. Once the water content of the cement water/ slurry has evaporated the dried cement should be scraped out of the detention pond and disposed of at an appropriate disposal facility authorised to deal with such waste
    - Cement batching must take place on already transformed areas within the footprint of the facility.
    - Unused cement bags must be stored in such a way that they will be protected from rain. Empty cement bags must not be left lying on the ground and must be disposed of in the appropriate waste bin.

- Washing of excess cement/concrete into the ground is not allowed. All excess concrete/ cement must be removed from site and disposed of at an appropriate location.

- **General Waste Management**
  - Dedicated waste bins or skips must be provided on site and kept in a demarcated area on an impermeable surface.
  - Separate waste bins/skips must be provided for recyclable waste, general waste and hazardous waste. Recovered builder's rubble & green waste may be stockpiled on the ground within the site camp, or in separate skips until removal.
  - Waste must be placed in the appropriate waste bins/skips/ stockpiles.
  - Hazardous waste bins must be kept on an impermeable bunded surface capable of holding at least 110% of the volume of the bins.
  - Skips/ bins must be provided with secure lids or covering that will prevent scavenging and windblown waste or dust.
  - Waste bins/skips must be regularly emptied and must not be allowed to overflow.
  - Construction workers must be instructed not to litter and to place all waste in the appropriate waste bins provided on site.
  - The Contractor must ensure that all workers on site are familiar with the correct waste disposal procedures to be followed.
  - Waste generated on site must be classified and managed in accordance with the National Environmental Management: Waste Act – Waste Classification and Management Regulations (GN No. R. 634 of August 2013).
  - Disposal of waste to landfill must be undertaken in accordance with the National Environmental Management: Waste Act – National Norms and Standard for the Assessment of Waste for Landfill Disposal (GN No. R. 635 of August 2013).
  - All waste, hazardous as well as general, which result from the proposed activities must be disposed of appropriately at a licensed Waste Disposal Facility (WDF).

CONSTRUCTION PHASE			
	Heritage Impacts – Impacts on Palaeontological Resources		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Direct impacts to palaeontological resources would occur during the construction phase when excavations for foundations and services are made. While fossil wood fragments could be found, they would be difficult for lay people to recognise. However, fossil bones (potentially dinosaur) would be more recognisable and are of significant research value. The potential impact intensity is thus regarded as high, but it is improbable that they would be found.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Regional / Permanent	Regional / Permanent	-N/A
Probability of occurrence:	Improbable	Improbable	-N/A
Degree to which the impact can be reversed:	Low	Low	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	High	High	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Mitigation measures provided by the specialist:

- Implement Chance Finds Procedure such that isolated fossils can be collected during development and safeguarded for future research.

CONSTRUCTION PHASE			
	Heritage Impacts – Impacts on Archaeological Resources		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Direct impacts to archaeological resources would occur during the construction phase when construction equipment is brought onto site and grubbing and excavation begins. It is currently unknown how much archaeology is present on the site which means that intensity cannot be accurately estimated. The probability of impacts occurring is rated probable because enough evidence exists to suggest that there is some archaeology present.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Permanent	Local / Permanent	-N/A
Probability of occurrence:	Probable	Probable	-N/A
Degree to which the impact can be reversed:	Low	Low	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	High	High	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Mitigation measures provided by the specialist:

- Pre-construction survey during dry season to determine true density of ESA materials and recommend mitigation if required.

CONSTRUCTION PHASE			
	Heritage Impacts – Impacts on Cultural Landscape		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Direct impacts to the cultural landscape would occur during the construction phase when construction equipment enters the site and work begins. The equipment and activity will not be compatible with the current rural environment and will cause a visual disruption. The new development will also result in a change of character of the study area from rural to urban. The construction phase is envisaged to be short term, although it is possible that some plots may not be sold and developed within five years.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Permanent	Local / Permanent	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	High	High	-N/A
Degree to which the impact may cause	Low	High	-N/A

CONSTRUCTION PHASE			
	Heritage Impacts – Impacts on Cultural Landscape		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
irreplaceable loss of resources:			
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	Low	Low	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Mitigation measures provided by the specialist:

- As per the VIA but key measures include:
  - Develop in phases
  - Rehabilitate and revegetate as soon as possible
  - Plant trees within the development at the earliest opportunity

CONSTRUCTION PHASE			
	Visual Impacts – Visibility of construction vehicles and activities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Visibility of construction vehicles, temporary structures, scaffolding, site storage of materials during construction.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Medium	Medium	-N/A
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**
CONSTRUCTION PHASE			
	Visual Impacts – Visibility of construction vehicles and activities		

CONSTRUCTION PHASE			
	Visual Impacts – Visibility of construction vehicles and activities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Visibility of construction vehicles, temporary structures, scaffolding, site storage of materials during construction.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Medium	Medium	-N/A
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**
	Visual Impacts – Visual scarring		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Visual scarring due to cut and fill operations to accommodate roadways and building platforms.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Medium	Medium	-N/A
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A

CONSTRUCTION PHASE			
	Visual Impacts – Visibility of construction vehicles and activities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**
	Visual Impacts – Wind-blown dust during construction		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Wind-blown dust during construction		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	High	High	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High	Medium-High	-N/A
Cumulative impact prior to mitigation:	Medium	Medium	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low**	**Low**	**No significance**

Mitigation measures provided by the specialist:

- Screening the construction site with visually appropriate site hoarding.
- Rehabilitate and revegetate disturbed areas on site immediately following construction.
- Limit disturbance to the least possible area needed for construction.
- Developing the proposed developments in phases to reduce the overall construction effect to a smaller portion of the site.
- Locate site camp and temporary structures within an appropriate area that is not visible from the most
- prominent views from neighbouring properties and prominent tourist routes.
- Signage must be managed not to be excessive and must be maintained in a neat and tidy condition throughout the construction period.
- Disturbance area and hoarding must be limited to the smallest area possible needed for construction.
- Erosion control measures must be put in place as required to reduce visual scarring during extreme rainfall events.
- The site is exposed to the predominantly south-easterly and south-westerly breezes during summer months and dust control measures must be implemented during the construction phase.
- Temporary site lighting, if required, must be kept to a minimum and must not be flood lighting.
- The construction site must be kept clean and in a neat condition at all times during the construction period.
- Make good and rehabilitate all areas disturbed during the construction period within 3 months after completion of the building works.
- Re-vegetation on site must be undertaken as soon as possible after completion of civil engineering- and building works to provide dust control and visually integrate new developments with the greater landscape. All new landscaping must be maintained until it is fully established.
- (Altered, please see Section I below): During the construction phase, the proposed construction activities (of the mixed-use development specifically) must be screened by the best practicable measures, to the satisfaction of both the Engineer and the ECO).

General Mitigation measures:

- **Dust Management:**

- Where possible, land clearing and earthmoving activities must not be undertaken during strong winds.
- Cleared areas must be provided with a suitable cover as soon as possible, and not left exposed for extended periods of time.
- Stockpiles of topsoil, spoil material and other material that may generate dust must be protected from wind erosion (e.g. covered with netting, tarpaulin or other appropriate measures. Note that topsoil should not be covered with tarpaulin as this may kill the seedbank).
- The location of stockpiles must take into account the prevailing wind direction, and should be situated so as to have the least possible dust impact to surrounding residents, road-users and other land-users.
- Speed of construction vehicles and other heavy vehicles must be strictly controlled to avoid dangerous conditions for other road users.
- A 20-40km/h speed limit must be enforced within the construction site.
- Dust must be suppressed on access roads and the construction site during dry periods by the regular application of water or a biodegradable soil stabilisation agent. Water used for this purpose must be used in quantities that will not result in the generation of excessive run off.
- Dust suppression measures such as the wetting down of sand heaps as well as exposed areas around the site must be implemented especially on windy days.
- All vehicles transporting sand need to have tarpaulins covering their loads which will assist in any windblown sand occurring off the trucks.
- Work on site must be well-planned and should proceed efficiently so as to minimise the handling of dust generating material.
- Dust levels specified in the National Dust Control Regulations (GN 827 of November 2013) may not be exceeded. i.e. dust fall in residential areas may not exceed 600mg/m2/day, measured using reference method ASTM D1739.
- A Complaints Register must be available at the site office for inspection by the ECO of dust complaints that may have been received.

- **Housekeeping**
  - Ensure a 'Clean house policy' is maintained on site.
  - Implement all General pollution management mitigation measures detailed above.
  - Ensure all structures (including barricades, fencing, netting etc) is neat. Where deteriorated, these structures must be replaced.
- **Light interferences**
  - During the construction phase of the proposed development, no offensive lighting (such as beams) may be used.
  - Lights within the site camp should be positioned in a manner so as to face toward the ground – thereby limiting visual interference with the N2 and neighbouring properties.

CONSTRUCTION PHASE			
	Traffic Impacts associated with the construction phase		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	During the construction phase of the proposed development, there will be many trucks and construction vehicles will be required to access the site. Beyond that, workers will be required to and from the proposed development area.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low	Low	-N/A
Cumulative impact prior to mitigation:	Medium	Medium	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	High	High	-N/A

CONSTRUCTION PHASE			
	Traffic Impacts associated with the construction phase		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**

Specialist recommendations:
No specific recommendations were provided by the specialist regarding the construction phase of the proposed development.

General mitigations:

- A traffic management plan must be compiled by the Contractor for the construction phase of the proposed development.
- This management plan must be submitted to both SANRAL and the Municipality for approval prior to the commencement of works.
- Construction vehicles must remain on designated routes and only access points into the site, as permitted by the Contractor, may be used.
- All construction vehicles must be in good working condition.

CONSTRUCTION PHASE			
	Socio-Economic Impact – Sense of Place and Security		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	During the construction phase of the proposed development, the proposed development would likely have an impact on the sense of place of the resident living and commuting in the area. These affects would be seen cumulatively though visual, traffic and noise impacts. Furthermore, as there is going to be more foot and vehicular traffic (with workers going to and from site), there is a potential for the sense of safety of the residents to be compromised.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	High	High	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Medium	Medium	-N/A
Significance rating of impact prior to mitigation	**Medium-High**	**Medium-High**	**-N/A**
Degree to which the impact can be avoided:	Medium	Medium	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**

General mitigations:

- All mitigation measures proposed under the visual impacts above must be implemented on site.
- All mitigation measures proposed under the traffic impacts above must be implemented on site.

Noise:

- Noise muffling must be applied to the reverse indicator of all construction vehicles.
- Designated eating areas must be identified by the Contractor and these areas must be indicated on site plan. Ideally these eating areas must not be located adjacent to the N2-Highway or the Eastern boundary of the proposed development site.
- Works on site may only be from 7:30 – 17:00 on a Monday to Friday. Should works be required outside of those times, permission must be obtained from the Municipality and all surrounding landowners/occupants must be notified thereof at least 24 hours in advance.

Safety and Security

- There must be a 24/7 security team on the proposed development site during the construction phase of the project.
- No local workers may access the proposed development area outside of the designated clock in times.
- An attendance register must be available on site at all times.
- All labourers must sign the attendance register upon entrance and exit of the workday.
- Workers must be encouraged to wear distinguishable clothing in order for surrounding landowners to clearly identify workers associated with the proposed development site.
- From the onset of the project, a notice must be placed at all entrances to the site that no 'Off the Street' opportunities are available.

CONSTRUCTION PHASE			
	Socio-Economic Impact – Increase in revenue Riversdale and surrounding communities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	During the construction phase of the proposed development, a number of employment opportunities will be available over a temporary (2-5 years) period. The opportunities will range between unskilled, semi-skilled and skilled workers. Additionally, there is a likelihood that surrounding businesses will benefit from the influx in workers. With potential increases in sales at restaurants, corner shops, bed and breakfasts (for overnight or short-term visitors to the proposed construction area) etc. During the construction phase of the proposed development, socio-economic benefits will also be seen in the quality of life in the labourers as the opportunity would provide a source of income.		
Nature of impact:	Direct, Positive	Direct, Positive	Direct, Negative
Extent and duration of impact:	Regional / Medium term	Regional / Medium term	Regional / Medium term
Probability of occurrence:	Definite	Definite	Definite
Degree to which the impact can be reversed:	High	High	High
Degree to which the impact may cause irreplaceable loss of resources:	N/A	N/A	Medium
Cumulative impact prior to mitigation:	Medium	Medium	Medium
Significance rating of impact prior to mitigation	**Medium-Low**	**Medium-Low**	**Medium**
Degree to which the impact can be avoided:	N/A	N/A	High
Degree to which the impact can be managed:	N/A	N/A	Medium
Degree to which the impact can be mitigated/enhanced:	High	High	High
Proposed mitigation:	See below.		Should the proposed development not be approved, the socio-economic benefits will not be seen. No alleviation (albeit of a temporary nature) of the unemployment factor in the municipality will be seen and no further latent benefits will be seen). Mitigation would be to grant EA to the proposed development.

CONSTRUCTION PHASE			
	Socio-Economic Impact – Increase in revenue Riversdale and surrounding communities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Cumulative impact post mitigation:	Medium	Medium	Medium
Significance rating of impact after mitigation	**Medium-High**	**Medium-High**	**Medium-High**

General mitigations:

- An independent Community Liaison Officer (CLO) must be appointed by the Contractor/Developer to ensure that employment of local labour is fair.
- The CLO must engage with the Ward Councillor prior to and during the construction works regarding the employment of local labourers.
- If applicable, the CLO must engage with any business forums and/or community groups regarding the opportunities available on site.
- Where applicable, Local SMME's should be approached and afforded with the opportunity to provide services to the construction works,
- Where possible, local labourers must be used on site (should the skill sets allow for it).
- If applicable, local labourers must be trained and provided with the possibility to obtain or improve skillsets which would be transferrable to future employment opportunities.

OPERATIONAL PHASE IMPACTS

OPERATIONAL PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Hydrological and Geomorphological impacts on the identified water resource as a result of the establishment of the proposed mixed-use development.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short-term	Local / Short-term	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low-Medium	Low-Medium	-N/A
Significance rating of impact prior to mitigation	**Low-Medium**	**Low-Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**
CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Damage to instream and riparian habitats of the identified water resource through vegetation removal and excavations relating to potential periodic maintenance activities.		

OPERATIONAL PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short-term	Local / Short-term	-N/A
Probability of occurrence:	Highly Probable	Highly Probable	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low-Medium	Low-Medium	-N/A
Significance rating of impact prior to mitigation	**Low-Medium**	**Low-Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**
CONSTRUCTION PHASE			
	Aquatic Biodiversity Impacts – Impacts on delineated Seasonal Seep Wetland		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Soil and Groundwater Contamination as a result of the establishment of the mixed-use development and potential periodic maintenance activities.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short-term	Local / Short-term	-N/A
Probability of occurrence:	Highly Probable	Highly Probable	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low-Medium	Low-Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Low**	**Low**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Specialist mitigation measures:

- Hydrological and Geomorphological impacts on the identified water resources as a result of the establishment of the proposed
- An Operational Maintenance Management Plan (OMMP) which includes all mitigation/management measures as contained in the Risk Assessment Matrix (RAM) is to be compiled as part of the legally binding Environmental Management Plan (EMPr) or the mitigation/management measures should be added to the existing OMMP;
- The OMMP is to specifically refer to operational maintenance requirements for all civil service infrastructure, including timelines as per the relevant civil engineer's recommendations and/or operational service manual. This operational maintenance is also to include visual and physical inspection of the service infrastructure for any defect and/or leaks and must include replacement is deemed necessary for adequate operation;
- The OMMP is to be audited for compliance by a suitably qualified Environmental Control Officer (ECO) at intervals stipulated by the competent authority, for the operational maintenance of all infrastructure proposed. Additional control/mitigation measures applicable during the operational phase and to be included in the OMMP:
- No vehicles are permitted to enter the freshwater ecosystems. Any maintenance works must be undertaken by foot or the relevant authorisations obtained beforehand;
- Stormwater management must not adversely affect downgradient freshwater ecosystems. Accordingly, the SWMP for the proposed development must ensure that stormwater drainage inputs to the freshwater ecosystems mimic the baseline as far as feasibly possible;
- In order to achieve this, it is strongly recommended that the principles of Sustainable Urban Drainage Systems (SUDS) be implemented into stormwater design and attenuation facilities associated with the proposed development, in order to be able to effectively filter and polish the stormwater runoff;
- Polishing of stormwater by trapping sediments and by removing pollutants that could contaminate downgradient freshwater ecosystems, and in order to allow for the attenuated release of stormwater into the catchments of the downgradient freshwater ecosystems following rainfall events;
- As such the use of 'soft' engineering features such as riprap, vegetated with suitable indigenous vegetation that is tolerant of both wet and dry conditions is strongly recommended;
- The use of stone pitching to reduce velocity of stormwater is strongly recommended;
- Stormwater infrastructure must be regularly inspected for litter, debris and excess sediment must be regularly flushed; The design of the stormwater infrastructure must incorporate energy dissipating structures to prevent erosion and incision downstream towards the freshwater ecosystems;
- It is recommended that the integrity of civil infrastructure be tested at least once every five years or more often should there be any sign of a fault or leak;
- It must be ensured that the hydrological regime and water quality of the freshwater ecosystem(s) is not impacted as a result of failure or leakage of bulk infrastructure, and that an emergency response plan must be compiled to ensure a quick response and attendance to the matter in case of failure or leakage;
- Should repair of bulk infrastructure be required, control measures as defined above for the construction phase, especially pertaining to excavations and trenching is to be implemented depending upon the location of the required repairs;
- Regular inspection of the stormwater infrastructure must be undertaken (specifically after large storm events) in order to monitor the occurrence of erosion. If erosion has occurred, it must immediately be rehabilitated through stabilisation of the embankments and revegetation;
- The stormwater channels, inlets and outlets must be regularly cleaned to ensure there no debris buildup/blockages occur;
- It is recommended that the integrity of all proposed civil service pipelines be tested at least once every five years or more often should there be any sign of a leak;
- It is considered imperative that all works be undertaken during the drier summer months to limit surface water contamination and the need for any surface water diversion during the construction works (diverting the flow of water through a pipe or an excavated channel was not included as part of this risk assessment);
- A suitable Alien Invasive Management Plan (AIMP) must be developed, implemented and managed by the property managers or Homeowner Association (HOA) for all open space areas, to ensure that AIPs do not become established within the areas. This AIMP is to include adequate control/management of AIPs which might proliferate as a result of the potential eutrophication of the freshwater ecosystems as a result of contaminated stormwater runoff.

OPERATIONAL PHASE			
	Terrestrial Animal Impacts – Impacts Faunal Species of Conservation Concern		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	During the site visit, a total of 22 animal species were recorded. Notable observations included a total of four Blue Cranes (*Grus paradisea*) feeding in the harvested fields within the proposed development area. These cultivated fields (both while under cultivation, and after being harvested) provide a habitat for the species recorded, but there is an abundance of similarly suitable habitat for these species in surrounding areas, and the development is unlikely to have a major impact on the continued survival of these species in this area.		
Nature of impact:	Negative	Negative	No Impact (Status quo remains as is)

OPERATIONAL PHASE			
	Terrestrial Animal Impacts – Impacts Faunal Species of Conservation Concern		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Extent and duration of impact:	Local / Permanent	Local / Permanent	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	Reversible	Reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low	Low	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Low**	**Low**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**No significance**

Mitigation measures provided by the specialist:

Due to the absence of georeferenced records of SCCs, the lack of suitable habitat for the SCC on site and the lack of SCCs observed within the proposed development area, no mitigation measures were proposed.

General mitigation measures:

- No animals are to be harmed or killed if intersected.
- Occupants are NOT allowed to collect any flora or snare any faunal species. This management measure must be included in the management guidelines of the estate (if private and managed by an Home Owner' Association).

OPERATIONAL PHASE			
	Agricultural Impacts – Impact on Agricultural Resources		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	The assessed site is classified almost entirely as Very High agricultural sensitivity by the screening tool. This has been confirmed by the specialist assessment, because of the agricultural production potential and current agricultural land use. An agricultural impact is a change to the future agricultural production potential of land. This is primarily caused by the exclusion of agriculture from the footprint of a development. In this case the impact of the development will be the permanent exclusion of agriculture from 56 hectares of viable cropland. The loss of this amount of scarce cropland is a loss of agricultural production potential in terms of national food security. Care must be taken toward not causing additional impact (by the proposed development) during the operational phase of the proposed development		
Nature of impact:	Negative	Negative	Positive
Extent and duration of impact:	Local / Permanent	Local / Permanent	Local / Permanent
Probability of occurrence:	Definite	Definite	Definite
Degree to which the impact can be reversed:	Reversible	Reversible	Reversible
Degree to which the impact may cause irreplaceable loss of resources:	High	High	High
Cumulative impact prior to mitigation:	High	High	High

OPERATIONAL PHASE			
	Agricultural Impacts – Impact on Agricultural Resources		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Significance rating of impact prior to mitigation	**High**	**High**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Can be partly managed	Can be partly managed	-N/A
Degree to which the impact can be mitigated:	Low	Low	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Low (-)**	**Low (-)**	**Medium (+)**

Mitigation measures provided by the specialist:
No mitigation measures were proposed by the appointed specialist.

General mitigation measures:

- No activities are allowed beyond the boundaries of the approved development area.

OPERATIONAL PHASE			
	Heritage Impacts – Impacts on Cultural Landscape		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Direct impacts to the cultural landscape would occur during the construction phase when construction equipment enters the site and work begins. The equipment and activity will not be compatible with the current rural environment and will cause a visual disruption. The new development will also result in a change of character of the study area from rural to urban. The construction phase is envisaged to be short term, although it is possible that some plots may not be sold and developed within five years.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Permanent	Local / Permanent	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	High	High	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Low	High	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	Low	Low	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Medium - Low (-)**	**Medium - Low (-)**	**No significance**

Mitigation measures provided by the specialist:

- As per the VIA but key measures include:

OPERATIONAL PHASE			
	Visual Impacts – Visibility of construction vehicles and activities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Visibility of construction vehicles, temporary structures, scaffolding, site storage of materials during construction.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Medium	Medium	-N/A
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**
CONSTRUCTION PHASE			
	Visual Impacts – Change in visual character of the area		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	Change in the visual character of the area from an agricultural rural setting to a more lively residential setting.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Medium	Medium	-N/A
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A

OPERATIONAL PHASE			
	Visual Impacts – Visibility of construction vehicles and activities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Significance rating of impact after mitigation	**Medium-Low**	**Medium**	**No significance**
	Change in visual character of scenic tourist route		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	The site is potentially visible from viewpoints along the N2. It is also situated in an area frequented by sensitive receptors relating to the tourist industry.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Low	Low	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	Medium	Medium	-N/A
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium**	**No significance**
	Visual intrusion of lighting at night		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	The proposed developments will increase lighting on the site at night and bring about changes from the rural night sky currently experienced in Riversdale.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Highly probable	Highly probable	-N/A
Degree to which the impact can be reversed:	High	High	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium-High	Medium-High	-N/A
Cumulative impact prior to mitigation:	Medium	Medium	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	High	High	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A

OPERATIONAL PHASE			
	Visual Impacts – Visibility of construction vehicles and activities		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Medium to Low**	**Medium**	**No significance**

Mitigation measures provided by the specialist:

- Design of buildings and landscape to complement the existing landscape character and sense of place.
- The design of the proposed development layout to better fit into the existing urban fabric of Riversdale by allowing internal roads and residential buildings to follow the contours of the landscape rather than imposing a rigid grid pattern onto the site.
- Use of materials and finishes that will allow new developments to blend in with their visual surroundings and reduce visual intrusion.
- Appropriate screening by new planting.
- Management of outdoor lighting to reduce visual intrusion and avoid light pollution.
- Design parameters set out in the
- Hessequa Municipality's Zoning Scheme By-Law (2018) must be followed, in terms of coverage, building setback lines and maximum building heights. Building lines between residential buildings and along the borders of the property can provide an opportunity for the planting of vegetated buffers to reduce the overall impact of the development, as well as the visual intrusion thereof.
- Buildings should be sited in visually less sensitive portions of the site, where possible.
- Height and size of buildings should be restricted to blend in with existing typology to support landscape character and preserve special features on site and in surrounding areas. Buildings must be of a scale in keeping with what the site topography will allow so as to reduce visual impact. To mitigate the overall visual impact of the development when viewed from afar, buildings must be of a similar nature and scale as neighbouring properties. Building platforms should be sited along contours as much as possible and not at right angles to the direction of the slope to minimise cut and fill operations, that could cause visual scarring, to a minimum.
- Development and building guidelines should address planning, aesthetic and procedural considerations to
- safeguard the visual environment and scenic resources. Architectural guidelines should promote overall design sensitivity rather than be a set of restrictive conditions.
- Landscaping with indigenous trees and tree buffers within the development and in between residential buildings can in time provide screening and visually integrate new developments with the greater landscape. Regulations regarding open spaces in a group housing complex, as set out in the Hessequa Municipality's Zoning Scheme By-Law (2018), must be followed and can provide meaningful and enjoyable spaces within the development.
- Guidelines should be drawn up by a suitably qualified electrical- or lighting specialist. Outdoor lighting to buildings or landscape areas should be restricted and directed as per architectural guidelines. Low level bollard-type lighting is recommended as opposed to overhead post top lighting to reduce visual intrusion of lighting at night.
- Use visually permeable fencing rather than boundary walls, to visually integrate new developments with
- the existing rural landscape.
- Maintain new tree and shrub planting until it is self-sufficient.
- Buildings and roadways must be positioned along contours to limit cut and fill operations wherever possible.
- Use finishes and colours on external building envelope that will fit in with surrounding buildings.
- Reflective surfaces must be kept to a minimum and shaded with roof overhangs and / or screens to limit glare. Use mat finish paint on external surfaces.

OPERATIONAL PHASE			
	Traffic Impacts associated with the construction phase		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	During the construction phase of the proposed development, there will be many trucks and construction vehicles will be required to access the site. Beyond that, workers will be required to and from the proposed development area.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	Medium	Medium	-N/A

OPERATIONAL PHASE			
	Traffic Impacts associated with the construction phase		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
Degree to which the impact may cause irreplaceable loss of resources:	Low	Low	-N/A
Cumulative impact prior to mitigation:	Medium	Medium	-N/A
Significance rating of impact prior to mitigation	**Medium**	**Medium**	**-N/A**
Degree to which the impact can be avoided:	Low	Low	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	Medium	Medium	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Medium-Low	Medium-Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**

Specialist recommendations:
All upgrades recommended by the specialist must be implemented.

OPERATIONAL PHASE			
	Socio-Economic Impact – Sense of Place and Security		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	During the operational phase of the proposed development, the proposed development would likely have an impact on the sense of place of the resident living and commuting in the area. These effects would be seen cumulatively though visual, traffic and noise impacts. Furthermore, as there is going to be more foot and vehicular traffic, there is a potential for the sense of safety of the residents to be compromised.		
Nature of impact:	Direct, Negative	Direct, Negative	No Impact (Status quo remains as is)
Extent and duration of impact:	Local / Short term	Local / Short term	-N/A
Probability of occurrence:	Definite	Definite	-N/A
Degree to which the impact can be reversed:	High	High	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	Medium	Medium	-N/A
Cumulative impact prior to mitigation:	Medium	Medium	-N/A
Significance rating of impact prior to mitigation	**Medium-High**	**Medium-High**	**-N/A**
Degree to which the impact can be avoided:	Medium	Medium	-N/A
Degree to which the impact can be managed:	High	High	-N/A
Degree to which the impact can be mitigated:	High	High	-N/A
Proposed mitigation:	See below.		-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	**Medium-Low**	**Medium-Low**	**No significance**

General mitigations:

- All mitigation measures proposed under the visual impacts above must be implemented on site.
- All mitigation measures proposed under the traffic impacts above must be implemented on site.

OPERATIONAL PHASE			
	Socio-Economic Impact – Supply of Market-value housing		
	Proposed Development Layout (Alternative 1)	**Proposed Development Layout (Alternative 2)**	**NO-GO Alternative (Alternative 3)**
DESCRIPTION OF IMPACT:	In line with the IDP and SDF for the proposed development, the proposed development will be the source of a		
Nature of impact:	Direct, Positive	Direct, Positive	Direct, Negative
Extent and duration of impact:	Regional / Permanent	Regional / Permanent	Regional / Medium term
Probability of occurrence:	Definite	Definite	Definite
Degree to which the impact can be reversed:	High	High	High
Degree to which the impact may cause irreplaceable loss of resources:	N/A	N/A	Medium
Cumulative impact prior to mitigation:	Medium	Medium	Medium
Significance rating of impact prior to mitigation	**High**	**High**	**High**
Degree to which the impact can be avoided:	N/A	N/A	High
Degree to which the impact can be managed:	N/A	N/A	Medium
Degree to which the impact can be mitigated/enhanced:	High	High	High
Proposed mitigation:	See below.		Should the proposed development not be approved, the socio-economic benefits will not be seen. No alleviation (albeit of a temporary nature) of the unemployment factor in the municipality will be seen and no further latent benefits will be seen). Mitigation would be to grant EA to the proposed development.
Cumulative impact post mitigation:	Medium	Medium	Medium
Significance rating of impact after mitigation	**High**	**High**	**High**

OPERATIONAL PHASE			
	Legislative Compliance and Design Considerations including Climate Change		
	Proposed Development Layout (Alternative 1)		**NO-GO Alternative (Alternative 2)**
DESCRIPTION OF IMPACT:	When finalizing the design, climate change risks must be considered, and planned for, where possible. All relevant financial and time allowances for meeting the requirements of any conditions or requirements of the approved licences/permits/authorizations, including the approved EMPr, must be planned for and integrated into appropriate tender documents and other relevant agreements. All relevant approvals/licenses/permits must be obtained and valid before construction commences, or the specific activity is commenced with, if relevant (such as Water Use Authorizations, for specific activities).		
Nature of impact:	Negative	Negative	No Impact
Extent and duration of impact:	Site Specific; Temporary	Site Specific; Temporary	-N/A
Probability of occurrence:	Improbable	Improbable	-N/A

OPERATIONAL PHASE			
	Legislative Compliance and Design Considerations including Climate Change		
	Proposed Development Layout (Alternative 1)		**NO-GO Alternative (Alternative 2)**
Degree to which the impact can be reversed:	Completely reversible	Completely reversible	-N/A
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources	No loss of resources	-N/A
Cumulative impact prior to mitigation:	Medium	Medium	-N/A
Significance rating of impact prior to mitigation	Medium	Medium	-N/A
Degree to which the impact can be mitigated:	Can be mitigated	Can be mitigated	-N/A
Proposed mitigation:	**See below.**	**See below.**	-N/A
Cumulative impact post mitigation:	Low	Low	-N/A
Significance rating of impact after mitigation	Low (-)	Low (-)	No significance

Mitigation Measures:

General:

- Planning and design team must take into consideration on relevant conditions of any relevant licenses/permits/authorizations.
- All relevant licenses/permits/authorizations must be obtained prior to the start of construction.
- Local contractors, suppliers, labour must be utilized.
- The appointed consulting engineer must ensure that the aforementioned conditions/requirements are integrated into appropriate contractual documentation, including the tender document.
- An appropriately registered/qualified ECO must be appointed prior to construction to ensure that all pre-construction conditions are met.
- An appropriately registered/qualified Environmental Auditor must be appointed prior to construction to ensure that all pre-construction conditions are met.

Duties of the Environmental Control Officer (ECO):

- Appoint an independent Environmental Control Officer (ECO) to monitor construction activity.
- Site inspections should be undertaken on a weekly basis, for the duration of the construction phase.
- ECO monitoring audit reports must be compiled on a monthly basis, reporting on the compliance against the conditions of the Environmental Authorisation and the approved EMPr.
- The duties of the ECO will be included in the EMPr.

Climate Change Considerations:

- Final designs must include:
  - Green building materials must be integrated into the development as much as possible.
  - Apply soft engineering techniques, where possible.
  - Take into consideration floodline/drainage areas that can be exacerbated during flooding/storm surge events.
  - Incorporate thermal efficiency into designs and use climate-resilient technologies.
  - Water saving technologies/techniques (jo-jo tanks for rainwater collection) and energy saving technologies/techniques (solar geezers/solar panels on roofs, potentially in for light poles, etc. and utilizing energy saving bulbs where possible).
  - An appropriate stormwater management plan must be compiled and approved.
  - Ensure materials are sourced locally, where available, and consider Life Cycle of all materials utilized, when selecting materials.

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.			
Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
ASHA Consulting (Pty) Ltd Jayson Orton (Heritage Consultant)	Medium	During the site visit, the following was observed: • Although they cannot be properly understood due to the poor ground visibility at the time of the survey, indications are that archaeological materials are present on the site. A key concern is that the density of such materials cannot be determined. These archaeological resources are most likely to have low cultural significance at the local level for their scientific value and could potentially be graded IIIC with the implication that mitigation can be implemented and the material would not prevent development. It is also possible that their density may be too low for meaningful research and that a grade of NCW may apply with no mitigation required. The chances of a higher significance and grade are considered very small. • There are no graves or historical/built environment resources on or close to the site. • On site the landscape does not have much intrinsic cultural significance. The local urban landscape has no heritage value and the few remaining historical structures in the core area of Riversdale lie far from the proposed development, more than 1 km away, and engulfed by modern buildings. However, the wider region spanning the Agulhas Plain from the mountains to the coast does have cultural significance for its aesthetic value and is rated as having at least medium cultural significance at the local level. It can be graded at least IIIB. Included in this landscape is the N2 as a scenic route. It, too, is thus graded IIIB. • Other than the wider landscape and N2 scenic route, there are no specific graded heritage resources to be mapped on or close to the site. As such, no grade map is provided.	• Compile landscape plan and building design manual. • <u>Construction</u> o Implement Chance Finds Procedure such that isolated fossils can be collected during development and safeguarded for future research. o Pre-construction survey during dry season to determine true density of ESA materials and recommend mitigation if required. o As per the VIA but key measures include: ▪ Develop in phases ▪ Rehabilitate and revegetate as soon as possible ▪ Plant trees within the development at the earliest opportunity o Implement HWC Fossil Chance Finds Procedure (see attached). Reporting chance finds as early as possible to HWC or palaeontologist. o Reporting chance finds as early as possible to HWC or an archaeologist, protect in situ and stop work in immediate area. • <u>Operational</u> o Ensure disturbance is kept to a minimum and does not exceed project requirements. Rehabilitate areas not needed during operation. o Implement landscape plan. Compile and implement building design manual.	Supported

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.

Specialist Details	Sensitivity of receptors	Summary of findings	Summary of Impact management measures identified by the specialist	Stance of the specialist
John Almond (Palaeontological Consultant	Medium	Direct impacts to palaeontological resources would occur during the construction phase when excavations for foundations and services are made. While fossil wood fragments could be found, they would be difficult for lay people to recognise. However, fossil bones (potentially dinosaur) would be more recognisable and are of significant research value. The potential impact intensity is thus regarded as high, but the features are improbable to find on site.	• Implement Chance Finds Procedure such that isolated fossils can be collected during development and safeguarded for future research	Supported
HC Holm (Visual Specialist)	High	Five (5) viewpoints were identified for the proposed development site: • Viewpoint 1 is situated at the northwestern corner of the Langezicht residential complex located along Erica Street – Site exposure is expected to be high at this point. • Viewpoint 2 is situated at the Oakdale High School's entrance gate on the R323 – Site exposure is expected to be moderate at this point. • Viewpoint 3 is situated on the corner of the Ou Meul Restaurant located along the N2 highway – Site exposure is expected to be moderate to high at this point. • Viewpoint 4 is situated on the N2 highway leading to George, looking in an easterly direction towards the site – Site exposure is expected to be moderate at this point. • Viewpoint 5 is situated in the industrial area along Fritz Grub Crescent – Site exposure is expected to be moderate to high at this point.	<u>Design phase:</u> • Siting proposed buildings to avoid areas of inherent site sensitivity, such as elevated or sloped positions, as far as possible. • Organising internal roads and proposed buildings along the contours of the landscape to allow for a more organic layout and to better fit in with the existing urban fabric of Riversdale. • Allowing for varied and well-defined public spaces within the proposed layout to create enjoyable urban experiences and improving the overall liveability of the space. • Siting buildings to be congruent with existing building typologies in the vicinity of the site, i.e. buildings set back from road edges along sensitive visual corridors. • Providing architectural and landscape development guidelines to guide the visual characteristics of proposed developments. Colours and finishes must complement the existing landscape character of Riversdale and allow the proposed new developments to blend in with its surroundings. Material selection must be considered as part of the design in order to ensure that proposed building structures are in harmony with the surrounding landscape as far as possible. • Screening new developments from neighbouring properties and roadways using a combination of earthworks and screening vegetation must be prioritised.	Supported

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.			
Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			• Height and scale of buildings must be minimised where possible. Appropriate building height as identified by the Hessequa Municipality Zoning Scheme By-Law (2018) must be adhered to. Building form should be fragmented to reduce visual scale in the landscape and allow for landscaped areas between buildings to effectively screen new developments. • Extensive landscaping in private open areas and streetscapes to visually integrate new developments with the greater landscape must be undertaken immediately following the completion of building works. • Existing planted tree avenues and earthworks along the N2 area set a precedent for landscape development and can be used to effectively screen new developments from surrounding areas. <u>Construction phase:</u> • Screening the construction site with visually appropriate site hoarding. • Rehabilitate and revegetate disturbed areas on site immediately following construction. • Limit disturbance to the least possible area needed for construction. • Developing the proposed developments in phases to reduce the overall construction effect to a smaller portion of the site. • Locate site camp and temporary structures within an appropriate area that is not visible from the most • prominent views from neighbouring properties and prominent tourist routes. • Signage must be managed not to be excessive and must be maintained in a neat and tidy condition throughout the construction period. • Disturbance area and hoarding must be limited to the smallest area possible needed for construction.	

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.			
Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			• Erosion control measures must be put in place as required to reduce visual scarring during extreme rainfall events. • The site is exposed to the predominantly south-easterly and south-westerly breezes during summer months and dust control measures must be implemented during the construction phase. • Temporary site lighting, if required, must be kept to a minimum and must not be flood lighting. • The construction site must be kept clean and in a neat condition at all times during the construction period. • Make good and rehabilitate all areas disturbed during the construction period within 3 months after completion of the building works. • Re-vegetation on site must be undertaken as soon as possible after completion of civil engineering- and building works to provide dust control and visually integrate new developments with the greater landscape. All new landscaping must be maintained until it is fully established. <u>Operational phase:</u> • Design of buildings and landscape to complement the existing landscape character and sense of place. • The design of the proposed development layout to better fit into the existing urban fabric of Riversdale by allowing internal roads and residential buildings to follow the contours of the landscape rather than imposing a rigid grid pattern onto the site. • Use of materials and finishes that will allow new developments to blend in with their visual surroundings and reduce visual intrusion. • Appropriate screening by new planting. • Management of outdoor lighting to reduce visual intrusion and avoid light pollution.	

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.			
Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			• Design parameters set out in the • Hessequa Municipality's Zoning Scheme By-Law (2018) must be followed, in terms of coverage, building setback lines and maximum building heights. Building lines between residential buildings and along the borders of the property can provide an opportunity for the planting of vegetated buffers to reduce the overall impact of the development, as well as the visual intrusion thereof. • Buildings should be sited in visually less sensitive portions of the site, where possible. • Height and size of buildings should be restricted to blend in with existing typology to support landscape character and preserve special features on site and in surrounding areas. Buildings must be of a scale in keeping with what the site topography will allow so as to reduce visual impact. To mitigate the overall visual impact of the development when viewed from afar, buildings must be of a similar nature and scale as neighbouring properties. Building platforms should be sited along contours as much as possible and not at right angles to the direction of the slope to minimise cut and fill operations, that could cause visual scarring, to a minimum. • Development and building guidelines should address planning, aesthetic and procedural considerations to • safeguard the visual environment and scenic resources. Architectural guidelines should promote overall design sensitivity rather than be a set of restrictive conditions. • Landscaping with indigenous trees and tree buffers within the development and in between residential buildings can in time provide screening and visually integrate new developments with the greater landscape. Regulations regarding open	

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.			
Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			spaces in a group housing complex, as set out in the Hessequa Municipality's Zoning Scheme By-Law (2018), must be followed and can provide meaningful and enjoyable spaces within the development. • Guidelines should be drawn up by a suitably qualified electrical- or lighting specialist. Outdoor lighting to buildings or landscape areas should be restricted and directed as per architectural guidelines. Low level bollard-type lighting is recommended as opposed to overhead post top lighting to reduce visual intrusion of lighting at night. • Use visually permeable fencing rather than boundary walls, to visually integrate new developments with • the existing rural landscape. • Maintain new tree and shrub planting until it is self-sufficient. • Buildings and roadways must be positioned along contours to limit cut and fill operations wherever possible. • Use finishes and colours on external building envelope that will fit in with surrounding buildings. • Reflective surfaces must be kept to a minimum and shaded with roof overhangs and / or screens to limit glare. Use mat finish paint on external surfaces.	
Nick Helm (Terrestrial Biodiversity and plant species specialist)	Low	Eastern Ruens Shale Renosterveld is gazetted as Critically Endangered on a national basis (Government of South Africa 2022), with less than 19% of its total original extent remaining intact, less than 1% conserved, and a national conservation target of 27% (Rouget et al 2004). The unit supports a very high number of threatened and endemic plant species, and occurs on nutrient rich, shale derived soils in the lowland area between Swellendam and Albertinia, and the vegetation type needs fire for optimal ecological functioning (Helme and Rebelo 2016).	No mitigation measures were proposed for the development.	Supported

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Specialist Details	Sensitivity of receptors	Summary of findings	Summary of Impact management measures identified by the specialist	Stance of the specialist
		There is essentially no natural vegetation remaining on site, as >97% of the site is regularly cultivated. The two small patches of CBA2 may support some low diversity, partly natural vegetation, one on the eastern corner and on the western corner, but have both clearly been moderately to heavily disturbed, and were used as dumping grounds for rocks, equipment, animal feed and storage areas for farm implements over many years. The areas also each support a few alien trees, probably for livestock shade, in the form of gums (*Eucalyptus* sp.) and rooikrans (*Acacia cyclops*). The vegetation in the study area is deemed to be of Very Low sensitivity, with the two small, partly natural remnants (terrestrial CBA2 areas) being of Low sensitivity at a regional scale. No plant Species of Conservation Concern (SoCC) are likely to be present anywhere within the study area, given its long history of agricultural disturbance.		
Agriculture	High	The assessed site is classified almost entirely as high agricultural sensitivity by the screening tool. This has been confirmed by this assessment, because of the agricultural production potential and current agricultural land use. The soils are limited by high stone content, drainage limitations, and shallow depth in places but are nevertheless suitable for the grain production that takes place on the site. There is not significant variation in agricultural production potential across he site and the whole site is considered suitable for cropping. the soils on site are rated, in the ten-point system of soil capability used in the Western Cape, as being between 5 and 6.	No mitigation measures were proposed for the development.	Not Supported
Willem Matthee and Jan Venter (Animal Species)	Low	During the site visit, a total of 22 animal species were recorded, with one amphibian, 14 bird species, one gastropod, five insect species, and one mammal species being recorded. Notable observations included a total of four Blue Cranes (*Grus paradisea*) feeding in the harvested fields on the property, Common Quail (*Coturnix coturnix*) calling from the cultivated fields, and the dung of Steenbok (Raphicerus campestris) in the harvested fields. These cultivated fields (both while under cultivation, and after being harvested) provide a habitat for the species recorded, but there is an abundance of similarly suitable habitat for these	No mitigation measures were proposed for the development.	Supported

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Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
		species in surrounding areas, and the development is unlikely to have a major impact on the continued survival of these species in this area.		
Dietmar de Klerk (DDK Consulting) (Aquatic Biodiversity)	Low	A small (approximately 2 500m²) depression wetland was delineated within the proposed development area. The delineation aligns with the 2017 WCBSP (during which it was delineated as an ESA), the NFEPA wetland delineations and the NWM5 delineations	• Clearing of indigenous vegetation within the study area should be kept to a minimum and only within areas under active construction; • All cleared vegetation must be disposed of at a licensed refuse facility and may not be mulched or burned on site; • No stockpiling, equipment storage or construction laydown areas may be planned within 15 metres of the freshwater ecosystem(s); • Dust suppression measures must be implemented throughout construction to prevent excessive dust which may smother freshwater ecosystem(s) and alter water quality; • All vehicles must remain at least 15 metres from the delineated extent of the freshwater ecosystem(s), unless required as part of a specific construction activity and then only for a short period of time; and • Any AIPs within the study area should ideally be removed prior to soil stripping to reduce seed loads within the topsoil. This will assist in reducing the long-term AIP management requirements. • Excavated materials may not be contaminated, and the stockpiles may not exceed 2 metres in height; • Topsoil should be stockpiled separately from deeper soil layers to ensure that topsoil gets backfilled last which will facilitate growth of new vegetation; • All exposed soils must be protected for the duration of the construction phase with a suitable geotextile (e.g. hessian sheeting) to prevent potential sedimentation into the freshwater ecosystem(s); • Adequate sediment/erosion protection measures such as silt traps and silt fences is to be installed	Supported

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Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			downstream of all construction works to further reduce the potential impacts on freshwater ecosystem(s). • The delineated extent of the freshwater ecosystems outside the construction footprint areas are to be strictly treated as a no-go areas and demarcated as such. • The construction works are to be audited for compliance by a suitably qualified Environmental Control Officer (ECO) in accordance with an approved Environmental Management Plan (EMP) which is to be approved by the Competent Authority. • Concrete and cement-related mortars can be toxic to aquatic life due to the high alkalinity associated with cement which can contaminate both soil, surface and groundwater. • The following recommendations must be adhered to: • Proper handling and disposal should minimise or eliminate discharges into the freshwater ecosystem(s); • Fresh concrete and cement mortar may only be mixed within the authorized construction footprint (limited to the study area). Mixing of cement may be done within the construction camp, may not be mixed on bare soil, and must be within a lined, bound or bunded portable mixer. Consideration must be given to the use of ready mix concrete; • No mixed concrete shall be deposited directly onto the ground. A batter board or other suitable platform/mixing tray is to be provided onto which any mixed concrete can be deposited whilst it awaits placing; • Cement bags must be disposed of in the demarcated hazardous waste receptacles and the used bags must be suitably disposed of;	

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Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			• Spilled or excess concrete must be disposed of at a suitable registered landfill site. • It is highly recommended that construction activities are limited to the dry summer months to avoid potential wet concrete runoff directly into the freshwater ecosystem(s); • It is highly recommended that excavation activities occur during the dry summer months as far as feasibly possible to limit erosion, sedimentation, freshwater contamination/collection and thereby flow manipulation and the potential for the slumping of the trench walls on site. Trench walls must be stabilised if necessary. • Excavated soil to be stockpiled to a height no greater than 2 metres to minimize dust generation and be deposited on the upgradient side of the trench as far as possible as a failsafe to catch sedimentation should it become mobilized to avoid deposition into downgradient freshwater ecosystems; • Excavated materials to be safeguarded from all forms of contamination; • Topsoil to be stored separately from deeper soil and all soil protected from weathering and wind transport by covering with a suitable geotextile such as hessian sheeting and stockpiling period to be minimized to effect backfilling; • Excess soil and waste generated through the construction process must be disposed of at an appropriate and registered waste disposal facility; • The duration of impacts within the freshwater ecosystems should be minimised as far as possible by ensuring that the duration of time in which flow alteration and sedimentation will take place is minimised. Therefore, the construction period should be kept as short as possible;	

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Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			• Protect exposed soils and stockpiles from wind, and limit the time in which soils are exposed, by covering with a suitable geotextile such as hessian sheeting; and • All excavated trenches must be compacted to natural soil compaction levels to prevent the formation of preferential surface flow paths and subsequent erosion. Conversely, areas compacted as a result of construction activities. • Backfilling to take place as soon as construction activities have been completed, ensuring that topsoil is backfilled last according to the last-out-first-in backfilling principle; • Soil must be appropriately compacted according to the natural soil characteristics of the area to preserve future surface and subsurface drainage through the previously trenched areas – this will require supervision by a suitably competent individual; and • The topsoil must be ripped for reestablishment of vegetation. However, to account for subsidence of the soil level over time, allowance for a slightly higher soil level within backfilled trench (depending on the soil type) may be made. Therefore, monitoring post construction activities is required. <u>Operational phase:</u> • Hydrological and Geomorphological impacts on the identified water resources as a result of the establishment of the proposed • An Operational Maintenance Management Plan (OMMP) which includes all mitigation/management measures as contained in the Risk Assessment Matrix (RAM) is to be compiled as part of the legally binding Environmental Management Plan (EMPr) or the	

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			mitigation/management measures should be added to the existing OMMP; • The OMMP is to specifically refer to operational maintenance requirements for all civil service infrastructure, including timelines as per the relevant civil engineer's recommendations and/or operational service manual. This operational maintenance is also to include visual and physical inspection of the service infrastructure for any defect and/or leaks and must include replacement is deemed necessary for adequate operation; • The OMMP is to be audited for compliance by a suitably qualified Environmental Control Officer (ECO) at intervals stipulated by the competent authority, for the operational maintenance of all infrastructure proposed. Additional control/mitigation measures applicable during the operational phase and to be included in the OMMP: • No vehicles are permitted to enter the freshwater ecosystems. Any maintenance works must be undertaken by foot or the relevant authorisations obtained beforehand; • Stormwater management must not adversely affect downgradient freshwater ecosystems. Accordingly, the SWMP for the proposed development must ensure that stormwater drainage inputs to the freshwater ecosystems mimic the baseline as far as feasibly possible; • In order to achieve this, it is strongly recommended that the principles of Sustainable Urban Drainage Systems (SUDS) be implemented into stormwater design and attenuation facilities associated with the proposed development, in order to be able to effectively filter and polish the stormwater runoff;	

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Specialist Details	**Sensitivity of receptors**	**Summary of findings**	**Summary of Impact management measures identified by the specialist**	**Stance of the specialist**
			• Polishing of stormwater by trapping sediments and by removing pollutants that could contaminate downgradient freshwater ecosystems, and in order to allow for the attenuated release of stormwater into the catchments of the downgradient freshwater ecosystems following rainfall events; • As such the use of 'soft' engineering features such as riprap, vegetated with suitable indigenous vegetation that is tolerant of both wet and dry conditions is strongly recommended; • The use of stone pitching to reduce velocity of stormwater is strongly recommended; • Stormwater infrastructure must be regularly inspected for litter, debris and excess sediment must be regularly flushed; The design of the stormwater infrastructure must incorporate energy dissipating structures to prevent erosion and incision downstream towards the freshwater ecosystems; • It is recommended that the integrity of civil infrastructure be tested at least once every five years or more often should there be any sign of a fault or leak; • It must be ensured that the hydrological regime and water quality of the freshwater ecosystem(s) is not impacted as a result of failure or leakage of bulk infrastructure, and that an emergency response plan must be compiled to ensure a quick response and attendance to the matter in case of failure or leakage; • Should repair of bulk infrastructure be required, control measures as defined above for the construction phase, especially pertaining to excavations and trenching is to be implemented depending upon the location of the required repairs;	

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Specialist Details	Sensitivity of receptors	Summary of findings	Summary of Impact management measures identified by the specialist	Stance of the specialist
			• Regular inspection of the stormwater infrastructure must be undertaken (specifically after large storm events) in order to monitor the occurrence of erosion. If erosion has occurred, it must immediately be rehabilitated through stabilisation of the embankments and revegetation; • The stormwater channels, inlets and outlets must be regularly cleaned to ensure there no debris buildup/blockages occur; • It is recommended that the integrity of all proposed civil service pipelines be tested at least once every five years or more often should there be any sign of a leak; • It is considered imperative that all works be undertaken during the drier summer months to limit surface water contamination and the need for any surface water diversion during the construction works (diverting the flow of water through a pipe or an excavated channel was not included as part of this risk assessment); • A suitable Alien Invasive Management Plan (AIMP) must be developed, implemented and managed by the property managers or Homeowner Association (HOA) for all open space areas, to ensure that AIPs do not become established within the areas. This AIMP is to include adequate control/management of AIPs which might proliferate as a result of the potential eutrophication of the freshwater ecosystems as a result of contaminated stormwater runoff.	

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr

Aquatic Biodiversity Impact Assessment

- Contractor laydown areas are to be established outside of the identified water resource and only for a short duration in consultation with the appropriate authority.
- All development footprint areas are to remain as small as feasibly possible and vegetation clearing is to be limited to what is absolutely essential to complete the required scope-of-works.
- Construction Activities should preferably be undertaken during the drier summer months, to minimise the impact on the Hydrological & Geomorphological Functioning of the water resource.
- Excavated topsoil is to be stockpiled and re-utilised during backfilling.
- All construction debris and litter must be removed. It may be temporarily stockpiled outside the extent of the identified water resource but must be removed and disposed of at a licensed Processing Facility.
- Only authorised construction personnel may be permitted to enter the construction zones to prevent excessive compaction of the soil.
- Care must be taken, and all construction personnel must receive training on the risks of chemical contamination of the water resource.
- Chemical spills within and surrounding the water resource should be immediately remediated through the implementation of an Emergency Chemical Spill Procedure that must form part of a legally binding Environmental Management Plan (EMP) and be audited for compliance by a suitably qualified Environmental Control Officer (ECO).
- Sediment control measures (silt traps) are to be installed to ensure that no sediment as a result of the construction activities enters the identified water resource. The location of these silt traps is to be established during the audits by the appointed Environmental Control Officer (ECO).
- The mitigation measures above are to be incorporated into the approved Environmental Management Plan (EMP) and audited for compliance by a suitably qualified Environmental Control Officer (ECO) and submitted to the Competent Authority at intervals specified by the Competent Authority.
- The delineated seep wetland area is to form part of a stormwater management structure (stormwater detention area). The relevant civil engineers are to be consulted to provide input regarding the practicable/feasible design of this structure. This structure is to be incorporated into the Stormwater Management Plan for the proposed development which is to be approved by the competent authority and local municipality. Additionally, this area is to be demarcated and zoned for Open Space within the proposed Spatial Development Plan (SDP) which is to be submitted to the Competent Authority and Local Municipality for approval.
- All development footprint areas should remain as small as feasibly possible to complete the proposed scope of work.
- The boundaries of footprint areas, including contractor laydown areas, are to be clearly defined and it should be ensured that all activities remain within defined footprint areas. Edge effects will need to be extremely carefully controlled.
- Temporary access routes during the construction phase should be restricted to existing gravel roads where feasible.
- Appropriate sanitary facilities must be provided during the construction phase for all personnel and services at regular intervals.
- All hazardous chemicals, as well as stockpiles, should be stored on bunded surfaces and have facilities constructed to control runoff from these areas.
- It must be ensured that all hazardous storage containers and storage areas comply with the relevant SANS codes to prevent leakage and contamination of surface and groundwater.
- No fires should be permitted.
- All construction vehicles must be regularly inspected for leaks. Refuelling must take place on a sealed surface area to prevent the ingress of hydrocarbons into the topsoil.
- In the event of a vehicle breakdown, maintenance of vehicles must take place with care and the recollection of spillage should be practised near the surface area to prevent the ingress of hydrocarbons into the topsoil.
- All spills should they occur should be immediately cleaned up and treated accordingly.
- Sheet runoff from access roads should be slowed down by the strategic placement of silt traps in accordance with the approved Environmental Management Plan (EMP).
- As far as feasibly possible, all construction activities should occur during the dry summer months (December – February)

Agricultural Impact Assessment:

No impact management measures provided for inclusion into the EMPr.

Terrestrial Biodiversity and Plant Assessment:

No impact management measures provided for inclusion into the EMPr.

Animal Assessment:

No impact management measures provided for inclusion into the EMPr.

Visual Impact Assessment:

- Design phase:
    - Siting proposed buildings to avoid areas of inherent site sensitivity, such as elevated or sloped positions, as far as possible.

- Organising internal roads and proposed buildings along the contours of the landscape to allow for a more organic layout and to better fit in with the existing urban fabric of Riversdale.
- Allowing for varied and well-defined public spaces within the proposed layout to create enjoyable urban experiences and improving the overall liveability of the space.
- Siting buildings to be congruent with existing building typologies in the vicinity of the site, i.e. buildings set back from road edges along sensitive visual corridors.
- Providing architectural and landscape development guidelines to guide the visual characteristics of proposed developments. Colours and finishes must complement the existing landscape character of Riversdale and allow the proposed new developments to blend in with its surroundings. Material selection must be considered as part of the design in order to ensure that proposed building structures are in harmony with the surrounding landscape as far as possible.
- Screening new developments from neighbouring properties and roadways using a combination of earthworks and screening vegetation must be prioritised.
- Height and scale of buildings must be minimised where possible. Appropriate building height as identified by the Hessequa Municipality Zoning Scheme By-Law (2018) must be adhered to. Building form should be fragmented to reduce visual scale in the landscape and allow for landscaped areas between buildings to effectively screen new developments.
- Extensive landscaping in private open areas and streetscapes to visually integrate new developments with the greater landscape must be undertaken immediately following the completion of building works.
- Existing planted tree avenues and earthworks along the N2 area set a precedent for landscape development and can be used to effectively screen new developments from surrounding areas.

- <u>Construction phase:</u>
  - Screening the construction site with visually appropriate site hoarding.
  - Rehabilitate and revegetate disturbed areas on site immediately following construction.
  - Limit disturbance to the least possible area needed for construction.
  - Developing the proposed developments in phases to reduce the overall construction effect to a smaller portion of the site.
  - Locate site camp and temporary structures within an appropriate area that is not visible from the most
  - prominent views from neighbouring properties and prominent tourist routes.
  - Signage must be managed not to be excessive and must be maintained in a neat and tidy condition throughout the construction period.
  - Disturbance area and hoarding must be limited to the smallest area possible needed for construction.
  - Erosion control measures must be put in place as required to reduce visual scarring during extreme rainfall events.
  - The site is exposed to the predominantly south-easterly and south-westerly breezes during summer months and dust control measures must be implemented during the construction phase.
  - Temporary site lighting, if required, must be kept to a minimum and must not be flood lighting.
  - The construction site must be kept clean and in a neat condition at all times during the construction period.
  - Make good and rehabilitate all areas disturbed during the construction period within 3 months after completion of the building works.
  - Re-vegetation on site must be undertaken as soon as possible after completion of civil engineering- and building works to provide dust control and visually integrate new developments with the greater landscape. All new landscaping must be maintained until it is fully established.
- <u>Operational phase:</u>
  - Design of buildings and landscape to complement the existing landscape character and sense of place.
  - The design of the proposed development layout to better fit into the existing urban fabric of Riversdale by allowing internal roads and residential buildings to follow the contours of the landscape rather than imposing a rigid grid pattern onto the site.
  - Use of materials and finishes that will allow new developments to blend in with their visual surroundings and reduce visual intrusion.
  - Appropriate screening by new planting.
  - Management of outdoor lighting to reduce visual intrusion and avoid light pollution.
  - Design parameters set out in the
  - Hessequa Municipality's Zoning Scheme By-Law (2018) must be followed, in terms of coverage, building setback lines and maximum building heights. Building lines between residential buildings and along the borders of the property can provide an opportunity for the planting of vegetated buffers to reduce the overall impact of the development, as well as the visual intrusion thereof.
  - Buildings should be sited in visually less sensitive portions of the site, where possible.
  - Height and size of buildings should be restricted to blend in with existing typology to support landscape character and preserve special features on site and in surrounding areas. Buildings must be of a scale in keeping with what the site topography will allow so as to reduce visual impact. To mitigate the overall visual impact of the development when viewed from afar, buildings must be of a similar nature and scale as neighbouring properties. Building platforms should be sited along contours as much as possible and not at

right angles to the direction of the slope to minimise cut and fill operations, that could cause visual scarring, to a minimum.
- Development and building guidelines should address planning, aesthetic and procedural considerations to
- safeguard the visual environment and scenic resources. Architectural guidelines should promote overall design sensitivity rather than be a set of restrictive conditions.
- Landscaping with indigenous trees and tree buffers within the development and in between residential buildings can in time provide screening and visually integrate new developments with the greater landscape. Regulations regarding open spaces in a group housing complex, as set out in the Hessequa Municipality's Zoning Scheme By-Law (2018), must be followed and can provide meaningful and enjoyable spaces within the development.
- Guidelines should be drawn up by a suitably qualified electrical- or lighting specialist. Outdoor lighting to buildings or landscape areas should be restricted and directed as per architectural guidelines. Low level bollard-type lighting is recommended as opposed to overhead post top lighting to reduce visual intrusion of lighting at night.
- Use visually permeable fencing rather than boundary walls, to visually integrate new developments with
- the existing rural landscape.
- Maintain new tree and shrub planting until it is self-sufficient.
- Buildings and roadways must be positioned along contours to limit cut and fill operations wherever possible.
- Use finishes and colours on external building envelope that will fit in with surrounding buildings.
- Reflective surfaces must be kept to a minimum and shaded with roof overhangs and / or screens to limit glare. Use mat finish paint on external surfaces.

Heritage Impact Assessment:

- Compile landscape plan and building design manual.
- Construction
  - Implement Chance Finds Procedure such that isolated fossils can be collected during development and safeguarded for future research.
  - Pre-construction survey during dry season to determine true density of ESA materials and recommend mitigation if required.
  - As per the VIA but key measures include:
    - Develop in phases
    - Rehabilitate and revegetate as soon as possible
    - Plant trees within the development at the earliest opportunity
  - Implement HWC Fossil Chance Finds Procedure (see attached). Reporting chance finds as early as possible to HWC or palaeontologist.
  - Reporting chance finds as early as possible to HWC or an archaeologist, protect in situ and stop work in immediate area.
- Operational
  - Ensure disturbance is kept to a minimum and does not exceed project requirements. Rehabilitate areas not needed during operation.
  - Implement landscape plan. Compile and implement building design manual.

Traffic Assessment

No impact management measures provided for inclusion into the EMPr.

Geological Assessment:

No impact management measures provided for inclusion into the EMPr.

3.	List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

The following integrations from the specialists will not be incorporated into the implemented management measures of the proposed development:

- Aquatic Biodiversity Assessment (Partially):
  - *The delineated seep wetland area is to form part of a stormwater management structure (stormwater detention area). The relevant civil engineers are to be consulted to provide input regarding the practicable/feasible design of this structure. This structure is to be incorporated into the Stormwater Management Plan for the proposed development which is to be approved by the competent authority and local municipality.* ***Additionally, this area is to be demarcated and zoned for Open Space within the proposed Spatial Development Plan (SDP) which is to be submitted to the Competent Authority and Local Municipality for approval***
  - The highlighted portion of the mitigation measure highlighted above will not be adopted for the proposed development. This feature will be incorporated into the stormwater management infrastructure of the proposed development area and will be considered no go in terms of the detailed internal design of the General Residential Area (Retirement Estate). This has been incorporated as such into the EMPr of the proposed development.
- Visual Impact Assessment (Partially):
  - *Building works on site must be screened with site hoarding constructed to a minimum height of 1800mm comprising a double layer of 80% shade netting, securely fixed to three horizontal 114 x 38mm treated timber*

members top, middle and bottom fixed to 114 x 114mm treated timber posts or poles at 3m centres set securely into ground to a minimum depth of 700mm and including all necessary corner posts, stays, etc. The contractor is to maintain all hoardings and keep clean and finally remove and make good on completion of the contract.

- The specialist provided extremely specific mitigation measures toward the visual screening of the site. However, due to the extremely specific nature of the mitigation, the actions may not be practically implementable at the time of the construction phase. The EAP therefore proposes the following mitigation for inclusion into the EMPr:
  - During the construction phase, the proposed construction activities (of the mixed-use development specifically) must be screened by the best practicable measures, to the satisfaction of both the Engineer and the ECO).

4.	Explain how the proposed development will impact the surrounding communities.

The proposed development of a residential area will contribute towards economic growth and allow for additional expenditure in the area. The proposed development will have a positive socio-economic impact on the area, such as job creation during construction and operation, and the development of more residential opportunities. The upgrade and expansion of multiple access routes/roads in the area will also contribute to job creation and an overall positive socio-economic impact.

The proposed development can also potentially cause visual impacts associated with building material placement during the construction phase and potential noise impacts associated with the use of construction machinery during the construction phase as well as temporary traffic impacts during the operational phase.

5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

According to the Western Cape Department of Environmental Affairs and Development Planning, climate change will affect the Western Cape in the following ways:

- Higher average annual temperature; Higher maximum temperatures; More hot days and more heat waves; Higher minimum temperatures; Fewer cold days and frost days
- Reduced average rainfall in the Western Cape, particularly the western parts
- Rising sea levels (not applicable to this project)
- Increased fire risks
- Increase in the frequency and intensity of extreme weather events, including floods, droughts, and storm surges

Taking each of these potential risks into consideration, the EAP has recommended the following adaption and mitigation measures, as applicable to this project, based on the anticipated impacts:

Higher average annual temperature; Higher maximum temperatures / change in rainfall patterns; More hot days and more heat waves; Higher minimum temperatures

- Strain on services, as temperatures increase.
- Strain on water resources as weather patterns shift and water resources are depleted at an increased rate and replenished at a decreased rate.
- Will impact negatively on groundwater capacity and availability.

Adaption Measures:

- The design must take into consideration that potential higher temperatures may result in an increase in water demand. This must be taken into consideration in the design and planning phase.
- Where possible feasible alternative sources of raw water must be sourced, to supplement the water demand.
- The design must take into consideration that rainfall capturing and storage may need considered in future.
- Mitigation Measures to Apply during Construction:
  - Daily assessment of weather conditions should be completed during construction stage, to ensure conditions are viable for labourers to be working outside (ie: temperatures are not excessive).
  - Potable water should be available for consumption during construction, to keep labourers hydrated.
  - Ensure that the Contractor's Safety Officer is stationed on site and ensuring that working conditions are acceptable and safe.
  - If possible, implement rainwater capturing system for temporary storage of water to be utilized for washing tools, etc.
  - Utilize hand sanitizer for washing hands.

Increased Fire Risk

- Fires can be started by negligent labour activity. Which in turn can affect private properties, homes, and livelihoods (farms), etc.
- Based on the land cover of the proposed development site, drier periods may see fire hazards occurring beyond the control of the contractor or farmers, which can put lives and infrastructure at risk.
- Adaption Measures:
  - Position fire safety equipment at all proposed reservoir sites.
  - Discourage homeowners from making fires during windy conditions.
- During the construction phase the following mitigations must be implemented:
  - During development fires should be strictly prohibited, smoking must be discouraged on site. (If the Contractor allows this activity there must be a designated area within the site camp, with an appropriate bin to contain discarded cigarettes, with an appropriately heavy cover, only permitted within the site camp where it can be controlled) No smoking is permitted within the working corridor.
  - If security is positioned on site, at night, they must be briefed on fire hazard risks.
  - During construction no uncontrolled fires are allowed.

- Ensure emergency numbers are readily available with a working cell-phone on site, and if construction teams are split, the foreman responsible for each team is to ensure that he has these emergency numbers, and can contact emergency services immediately.

Increase in the frequency and intensity of extreme weather events, including floods, droughts, and storm surges.

- Potential for the storm event to damage infrastructure due to stormwater runoff.
- Potential for storm events to impact on electricity supply feeding the proposed development.
- Adaption Measures:
  - The design must take into consideration that potential for storm surges to impact on infrastructure and its function. Measures to consider includes:
  - Consider integrating solar panels into the design of infrastructure, which require electrical sources to function.

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.

With regard to the cumulative impacts of the proposed development, although in terms of the Agricultural sensitivity of the site, the specialist indicated that the single, direct agricultural impact of this development is the total loss of agricultural production potential due to the permanent exclusion of agriculture from the development site. The entire development footprint is considered to be above the threshold of being worthy for conservation as agricultural production land because its agricultural potential makes it suitable as viable cropland. The proposed development will result in the permanent loss of this land to agriculture, which will result in a loss of future agricultural production potential in terms of national food security. The overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of medium significance. The factors that lessen the significance of the agricultural impact, making it medium and not higher, are that the soils are not rated as high potential soils, and that the development will not lead to fragmentation of agricultural land.

The acceptability and ultimate approval of the development cannot be based purely on its agricultural impact but requires the weighing of many diverse factors, which include satisfying the demand for urban expansion and that the site is logically located to satisfy that demand. Such a weighing is far beyond the scope and expertise of an agricultural impact assessment, which cannot therefore conclude on the overall acceptability of the development and make a recommendation in that regard. It can only conclude that if the development goes ahead it will result in the loss of 56 hectares of viable, small grain cropland.

Please note that all other specialists have deemed the proposed development as between Very Low and Medium-Low (as summarised in Section 1.3 below) after mitigation. The need and desirability of the proposed development is deeply rooted in the recognised socio-economic benefits associated with the proposed development. Furthermore, the Hessequa Local Municipality has included the proposed development footprint into the Urban Edge (As indicated in Appendix L4 of the BAR) and has included it as a Housing Development Zone in terms of their drafted strategic planning documents.

No other conflicting recommendations are presented.

7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.

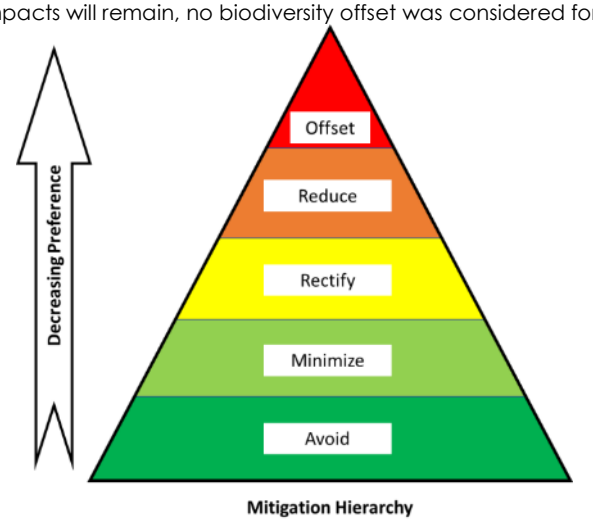
The findings and recommendations have been integrated into the impact tables (Section H.4, of this document), and the EMPr, so as to guide the various phases of the project.

Furthermore, the EAP has made recommendations toward the inclusion of specific conditions of the EA. These conditions have been detailed in Section J.2.2.

8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

For the purpose of the proposed project, the Mitigation Hierarchy was considered while determining the best practicable environmental option for the construction and operational phases of the project. Activities related to the proposed refurbishments have been considered. Where possible activities have been avoided, therefore all activities included in the proposal of this development are essential for the successful implementation and operation of this development.

All impacts that could not be avoided, have been investigated to establish mitigation measures to minimize and rectify, where possible or radically reduce the predicted impacts. As all the proposed impacts can be sufficiently reduced in significance, and no residual negative biodiversity impacts will remain, no biodiversity offset was considered for this development.



Mitigation Hierarchy

The impact tables in Section H4 above include the identified potential environmental impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of impact, the degree to which the impact can be reversed, may cause irreplaceable loss of resources and can be avoided, managed or mitigated.

Mitigation hierarchy evaluations.

Hierarchy level		Description in relation to the proposal
1	Avoid	Through the implementation of the proposed project and the proposed development layout, the natural environment will be avoided. It should be noted that the impact on the agricultural resources will not be avoided as part of the proposed development. The impacts the proposed development must be considered from a cumulative perspective (also highlighted as such by the appointed specialist).
2	Minimise impacts	The recommended mitigation measures of the various specialists reports in addition to the mitigation measures to be provided in the EA will lead to the minimisation of the impacts of the construction phase.
3	Rectify	Rehabilitation measures will be proposed in the EMPr in order to manage the impacted areas, outside of the development footprint, back to a functional state. The Applicant, and by extension, the Contractors, will be responsible for rectifying any non-compliances with the conditions of the EA and EMPr.
4	Reduce	In order to manage the impact on the watercourse located on site, the specialist has indicated that the watercourse must be considered a no-go areas and should be incorporated into the stormwater management infrastructure. This watercourse may not be developed. In order to reduce the direct and indirect impacts of the proposed development, the EMPr compiled for the proposed development must be adhered to and mitigation measures provided therein must be implemented during the various phases of the proposed development.
5	Offset	In June 2023, the Department of Forestry, Fisheries and Environment (DFFE) promulgated the National Biodiversity Offset Guidelines in terms of the National Environmental Management Act. 1998, as amended (Act No. 107 of 1992). Based on the National Biodiversity Offset Guidelines, 2023 (GN 3569 of 2023), an offset is required where the residual impacts are Medium or High. The proposed development is located within the Eastern Ruens Shale Renosterveld ecosystem type. This ecosystem type is considered Critically Endangered. That being said, the specialist has confirmed the following: - There is essentially no natural vegetation remaining on site, as >97% of the site is regularly cultivated. The two small patches of CBA2 may support some low diversity, partly natural vegetation, one on the eastern corner and on the western corner, but both have clearly been moderately to heavily disturbed. - The vegetation in the study area is deemed to be of Very Low sensitivity, with the small patches of partly natural remnants (the terrestrial CBA2 areas) being of Low sensitivity at a regional scale. - Overall both the construction and operational phase ecological Impacts of the proposed subdivision and development here are likely to be Low negative before and after mitigation. Therefore, no Offsets are applicable to the proposed development.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.

The key findings of the EIA indicate that the proposed development will have significant positive impacts and all negative impacts can be significantly mitigated with reasonable and practical mitigation measures, these can be summarised below:

SOCIO-ECONOMIC:
POSITIVE IMPACTS

- Provision of market-related housing solutions of various typologies (including agricultural plots -for small holdings, a retirement estate and low-medium density housing) to both current and future residents of Riversdale.
- Due to the infrastructural interventions (such as upgrades to the existing identified intersections), strain on the existing infrastructure will be reduced.
- Local labour will be sourced from the local communities, this will be done through the use of a CLO designated to the proposed development area. Employment will see to the upliftment of employees of various genders, educational and socio-economic levels. The proposed development will provide:
  - Employment opportunities will be created for skilled, semi-skilled and unskilled workers.
  - Provide an opportunity for uplifting and education through the adoption of new skills and also economical upliftment through earning wages and salaries.
  - Boosting of the local economy by creating employment opportunities, and using locally sourced goods, services, and accommodation.
  - Creating social stability by providing jobs will improve the quality of life for the labourers.
- Due to the 10m buffer associated with the N2-Highway, the proposed development will have a lessened impact on the national road. Furthermore, no access from the national road will be permitted during the operational phase and therefore, no direct impacts will be seen on the infrastructure during the operational phase.

NEGATIVE IMPACTS

- Impacts associated with the construction works are of temporary nature, such as noise, dust, traffic, visual and safety impacts from construction activities. All impacts can be curtailed through mitigation measures proposed.

ENVIRONMENTAL IMPACTS
POSITIVE IMPACTS

- The proposal has been found acceptable from an aquatic, terrestrial biodiversity, plant species, animal species, visual (with interventions), traffic impact (with interventions), geotechnical (with interventions) and heritage perspective.
- Opportunity for alien invasive clearance.
- Opportunity to implement an EMPr that can be enforced during construction phase and operational phase and supports the implementation and compliance with multiple legislation.

NEGATIVE IMPACTS

- There will be a loss of an irreplaceable agricultural resource (arable land (rainfed land)).

With regard to the cumulative impacts of the proposed development, although in terms of the Agricultural sensitivity of the site, the specialist indicated that the single, direct agricultural impact of this development is the total loss of agricultural production potential due to the permanent exclusion of agriculture from the development site. The entire development footprint is considered to be above the threshold of being worthy for conservation as agricultural production land because its agricultural potential makes it suitable as viable cropland. The proposed development will result in the permanent loss of this land to agriculture, which will result in a loss of future agricultural production potential in terms of national food security. The overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of medium significance. The factors that lessen the significance of the agricultural impact, making it medium and not higher, are that the soils are not rated as high potential soils, and that the development will not lead to fragmentation of agricultural land.

the specialist indicated that he was not in favour of the proposed development, it should be noted that he does further indicate that the approval of the project has to weigh the inputs of various factors. In light of the extracted statement above, please note that all other specialists have deemed the proposed development as between Very Low and Medium-Low (as summarised in Section 1.3 below) after mitigation. The need and desirability of the proposed development is deeply rooted in the recognised socio-economic benefits associated with the proposed development. Furthermore, the Hessequa Local Municipality has included the proposed development footprint into the Urban Edge (As indicated in Appendix L4 of the BAR) and has included it as a Housing Development Zone in terms of their drafted strategic planning documents.

1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)

See attached as part of Appendix D.

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.

Positive Impacts

- Given the disturbed state of the site, the impact on the existing vegetation and biodiversity is of low concern.
- Construction phase job opportunities for the surrounding low-income areas.
- Operational long-term job opportunities.
- Additional investment and rates and taxes to the area and municipality.
- Incorporating various land uses, such as residential and agricultural zones, maximizes land utilization whilealigning with urban edge boundaries.
- Organic layout design minimizes visual impact, blending the development with the natural contours of the landscape.
- The affected seep wetland is already seriously modified and has limited ecological functionality, making the development's impact relatively low. The Applicant also committed to incorporating the wetland into the detailed designs of the proposed development.
- Mitigation recommendations, like integrating the seep wetland into a stormwater management system, could help control water flow and reduce flooding risks (though this was not fully incorporated into the final design).

Negative Impacts

- Should the final design results in the infilling of the small seasonal seep wetland, leading to the potential loss of this ecologically isolated habitat.
- Despite visual mitigation efforts, the development will still be visible from key vantage points, potentially altering the natural landscape's aesthetic.
- Rezoning agricultural land for residential purposes may lead to the loss of land previously available for agricultural activities, affecting local farming.
- Without proper stormwater management, the development may lead to increased surface runoff, especially in areas where natural water resources exist nearby (e.g., tributaries of Naroo River).
- Potential visual impacts (visual intrusion) associated with both the construction and operational phases;
- Potential noise impacts associated with the use of machinery during the construction phase;
- Potential traffic impacts during the construction phase.

2. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr

Construction phase:

- Limited impacts on the receiving environment as a result of construction activities (vegetation, SCCs, water resources).
- Limited additional impacts (beyond what is proposed) on the Agricultural Resources in the surrounding area)
- Creation of employment opportunities to the local community.
- Reduction of the visual impacts of the proposed construction works on the neighbouring properties/land uses.
- Minimal traffic related inconveniences.

Operational phase:

- Prevention of further impacts on the biophysical resources within proximity to the proposed development site.
- Ensuring limited visual impacts of the proposed development.
- The creation of employment opportunities to the local community.
- No depreciation of neighbouring property values.
- Minimal traffic related inconveniences.

2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

Following recommendations which should be included as conditions of authorisation:

- Environmental Assessment Practitioner:
  - All specialist mitigation measures must be implemented in order to sufficiently reduce the impacts identified.
  - An Independent Environmental Control Officer must be appointed to monitor the compliance and Implementation of the Environmental Management Programme, mitigation measures and the Environmental Authorization conditions.
  - It is highly recommended that an Environmental Site Officer, be appointed as a part of the Contractors team, to ensure that the environmental aspect is implemented and managed efficiently, on a daily basis.
  - The Applicant is to ensure that all relevant permits/license etc. are in place prior to commencement of construction activities, this includes, but is not limited to:
    - Water Use License approval
    - Approval from the Department of Agriculture is required
    - Town Planning Approval must obtained
  - Implement all management plans as recommended by the Specialist and EAP, including but not limited to:

- Approved Environmental Management Programme.
- Landscape Plan
- Alien invasive management plan
- Site Preparation Plan
- Emergency Preparedness Plan

- Heritage Impact Specialist:
  - The HWC Fossil Chance Finds Procedure must be included in the EMPr;
  - An archaeologist must be contracted to survey the site during the dry season to record and/or collect artefacts as deemed appropriate. This must be done under an approved Workplan.
  - An architectural design guideline manual must be developed, approved by HWC, and implemented. This must address main buildings, outbuildings and fencing for each development type and should aim to prohibit inappropriate architectural elements and create a degree of unity while allowing enough variability to allow unique designs.
  - A landscape Plan must be developed, approved by HWC, and implemented. This should focus mainly on perimeter and street planting with a view towards softening the development's appearance in the rural landscape.
  - Tree planting should commence as early as possible during the construction phase.
  - Visually permeable fencing must be implemented as far as possible, but especially along the N2 with vegetation used for privacy screening.
  - Outdoor lighting must be designed to minimise light spillage; and If any archaeological material or human burials are uncovered during the course of development, then work in the immediate area should be halted. The findings would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.

The following on-site features of concern were raised by the various specialists:

- Aquatic biodiversity: An aquatic feature was identified within the boundaries of the Remainder of Erf 21, it was indicated that this area be considered a no-go area. The Applicant has committed to incorporate this feature into the stormwater management features of the site.
- Agricultural: The Agricultural specialist indicated that the sensitivity of the proposed development site is High and the development of the site would be deemed unacceptable from an arable land perspective. ***However, its acceptability and ultimate approval requires the weighing of all relevant factors, only a few of which are agricultural, against each other***. *The weighing of these different factors is far beyond the scope of an agricultural impact assessment. It should however be noted that, from a town planning perspective, the municipality have approved the development of the site and the Spacial Development Framework considers it desirable to expand Riversdale in a westerly direction to include Erf RE/21 within the urban edge."*
- Terrestrial biodiversity: The proposed development site does have two CBA areas located within its boundaries. However, it was determined that they are of low sensitivity at a regional scale. These areas are not considered no-go in terms of the proposed development.
- Plant Species – No SCCs were found on site.
- Animal Species – No SCCs were found on site.
- Cultural Heritage – No features conservation concern were found on site.
- Palaeontological features - No features expected to be unearthed as a result of proposed works.
- Visual Impact – A 10 m buffer was required around from the N2-Highway's road reserve.

With regard to the cumulative impacts of the proposed development, although in terms of the Agricultural sensitivity of the site, the specialist indicated that he was not in favour of the proposed development, it should be noted that he does further indicate that the approval of the project has to weigh the inputs of various factors. In light of the extracted statement above, please note that all other specialists have deemed the proposed development as between Very Low and Medium-Low (as summarised in Section 1.3 above) after mitigation. The need and desirability of the proposed development is deeply rooted in the recognised socio-economic benefits associated with the proposed development. Furthermore, the Hessequa Local Municipality has included the proposed development footprint into the Urban Edge (As indicated in Appendix L4 of the BAR) and has included it as a Housing Development Zone in terms of their drafted strategic planning documents.

It is the opinion of the EAP that, based on the outcomes (respective and cumulatively) of the specialist studies conducted and further potential impacts as identified in this report, the proposed development on the Erf 266 and the Remainder of Erf 21 be approved, with the condition that all mitigation measures presented in this report, the mitigation measures presented by the independent specialists the conditions of the EMPr must be implemented on site.

Please refer to Section 2.2 above for a detailing regarding the conditions to be included in the EA, if approved.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.

The following limitations, assumptions and gaps in the knowledge were identified by the EAP and the relevant specialists.:

General assumptions:

- It is assumed that all the information provided in this report and on which the report is based is correct and valid at the time receipt thereof.
- It is assumed that the proposed mitigation measures, as listed in this report and the EMPr, will be implemented and adhered to by all the relevant stakeholders involved.

Terrestrial Biodiversity and Plant Species Compliance Statement

No site visit was undertaken for this study. The author has undertaken extensive work within the region, including on various sites within 5km of the study area, which facilitates the making of local and regional comparisons and inferences of habitat quality and conservation value. The study area is also largely cultivated, with little or no natural vegetation or habitat remaining, and colour site photographs were provided to the author by the Renier Kapp.

The confidence in the accuracy of the botanical and faunal findings is high.

The biodiversity website iNaturalist.org was consulted (only three observations from this site). Satellite imagery dated October 2022 (and earlier) was used to inform this assessment, and for mapping. It is assumed that any development would result in the permanent loss of all natural or partly natural vegetation and faunal habitat in that area.

The botanical sensitivity of a site is a product of plant species diversity, plant community composition, rarity of habitat, degree of habitat degradation, rarity of species, ecological viability and connectivity, restorability of habitat, vulnerability to impacts, and reversibility of threats.

Agricultural Impact Assessment

There were no specific assumptions, uncertainties or gaps in knowledge or data that affect the findings of this study.

Aquatic Biodiversity Impact Assessment

- The Ground-Truthing and Delineation of Water Resource boundaries and the assessment thereof were confined to a single site visit undertaken during June 2023 of the concerned development area.
- The Water Resources identified were Delineated in fulfilment of GN 509 of 2016 as it relates to the National Water Act, 1998 (Act No. 36 of 1998) using various Desktop Methods including the use of Topographic Maps, Historical and/or current Digital Satellite Imagery and/or Aerial Photographs. Where possible (based on accessibility) the water resource was Ground-Truthed and Delineations were undertaken utilizing Global Positioning System (GPS) technology.
- A concerned effort was made to access all concerned areas in question. In instances where access was a constraint, the findings from the areas that could be assessed were used to infer information as they present similar onsite conditions.
- Global Positioning System (GPS) technology is inherently somewhat inaccurate and some inaccuracies due to the use of handheld GPS instrumentation may occur, however, the delineations as provided in this report are deemed accurate enough to fulfil the requirements as well as the implementation of the proposed Mitigation Measures.
- Water Resources and Terrestrial Zones create transitional areas where an Ecotone is formed as vegetation assemblages change from Terrestrial to Obligate/Facultative Wetland Species. Within this Transition Zone, some variation of opinion on the Water Resource boundaries may occur. However, if the DWAF (2008) method is followed, all assessors are expected to obtain largely similar results.
- With Ecology being dynamic and complex, certain aspects (some of which may be important) may have been overlooked. However, it is expected that the concerned areas have been accurately assessed and considered, based on the site assessment and the consideration of existing studies and monitoring data in terms of Riparian and Wetland Ecology.

Heritage Impact Assessment

The field study was carried out at the surface only and hence any completely buried archaeological sites would not be readily located. Similarly, it is not always possible to determine the depth of archaeological material visible at the surface. Due to the very dense vegetation covering (wheat), the survey was severely restricted. The few archaeological finds made are assumed to be representative of a much wider scatter present beneath the wheat. Due to this ground covering, it was not possible to accurately determine the density and significance of the archaeological materials. It is assumed that the information provided for the assessment is an accurate reflection of the development proposal.

Cumulative impacts are difficult to assess due to the variable site conditions that would have been experienced in different areas and in different seasons. Survey quality is thus likely to be variable. As such, some assumptions need to be made in terms of what and how much heritage might be impacted by other developments in the broader area.

Visual Impact Assessment

The report was prepared during the planning stages of the project and assumes that the base information provided by others is correct.

A combination of 1: 50 000 topo-cadastral maps, site photographs, open-source satellite imagery, and GIS mapping techniques were used to prepare this report. The digital generation of viewsheds is based on topographical landform information and does not take into account the screening effect of vegetation and buildings. Although every effort to maintain accuracy was undertaken, the use of satellite imagery and not measured survey information may not represent an exact visibility of the site or proposed developments.

The visual study was based on the development proposal provided by the proponent and does not review alternative design layouts.

Geological Assessment
The extent of the investigations undertaken is deemed adequate, within the time and budget constraints, to present an overview of the geotechnical conditions across the investigation site.

It must be borne in mind that the overall interpretation of geotechnical conditions is based upon point information derived from the respective test positions and that conditions intermediate to these have been inferred by interpolation, extrapolation and professional judgement.

It is recommended the author be appointed to inspect the earthworks and foundation excavations during the development of the site to confirm founding depths and validate the recommendations provided in this report.

Traffic Assessment
The following assumptions were made in order to estimate the trip generation potential:

- Agricultural Zone II Erven - 27 Erven in total. No commercial farming activities to take place on these stands. Trip Generation potential of one stand is equal to that of a TMH 17 Code 210 (Single Dwelling Unit).
- Single Residential Zone II Erven - 155 Erven in total. Trip Generation potential of one stand is equal to that of a TMH 17 Code 210 (Single Dwelling Unit).
- General Residential Zone II
    - Erf 29 – 7.2ha. Assume future development density of 35 units per ha. Number of units therefore equals 252. Trip Generation potential of one stand is equal to that of a TMH 17 Code 251 (Retirement Village).
    - Erf 30 – 2.0 ha. Assume future development density of 35 units per ha. Number of units therefore equals 70. Trip Generation potential of one stand is equal to that of a TMH 17 Code 231 (Townhouses).
- Erf 31 – 1.9 ha. Assume future development density of 35 units per ha. Number of units therefore equals 67. Trip Generation potential of one stand is equal to that of a TMH 17 Code 231 (Townhouses).
- Business Zone III
    - Erf 188 - 5,210m2. Assume future development is for a shopping centre. Assume GLA of shopping centre is 45% of erf size, therefore future GLA equals 2,345m2. Trip Generation potential of erf is equal to that of a TMH 17 Code 820 (Shopping Centre, with mixed use reduction factor due to inclusion in residential suburb).

2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.

No activities (in terms of the EIA Regulations of 2014, as amended) triggered by the proposed development has operational aspects associated to them. Therefore, it is requested that an EA with a validity period of 10 years is grated for the proposed development. This would make allowance for:

- The Applicant to obtain all approvals required in terms of the EMPr and any other legislative body (Hessequa Local Municipality, the Breede-Olifants Catchment Management Agency etc).
- Construction activities to be completed – with an estimated construction timeframe of 36 months.
- Rehabilitation and landscaping following the construction activities.

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.

During the construction phase of the proposed project, no potable water will be used for the purpose of construction activities, such as cement mixing, layer compaction where necessary, and where required to fulfil the mitigation measures (dust suppression methods). Potable water within the construction site will only be used for drinking water.

Development, Design and Construction:

- Labour will be encouraged to utilize buckets of water to clean tools and machinery, rather than running water, to preserve water.
- Rainwater capturing should be encouraged on site.

Operational Phase:
During the operational phase of the proposed development, water will be used for the following purposes:

- Sanitation purposes (shower, lavatory, kitchen/canteen facilities).
- At the wash bay for the purpose of operating the wash bay.
- Potable water for drinking purposes.

Where possible water saving interventions will be implemented during the construction and operational activities.

Rainwater harvesting (in terms of Schedule 1 activities of the National Water Act (Act No. 36 of 1998)) will also be a preferred measure of obtaining water specifically for the purpose of sanitary (lavatory) provisions.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.

The EMPr has encouraged waste management through the various phases of the project.

Construction Phase:
An integrated waste management approach (Avoid first, then Reduce, then Reuse, then Recycle, then disposal) must be adopted.

- Adequate waste receptacles, bins and skips should be available for the collection and removal of waste.
- Individual recycling bins for the various categories (paper, glass, plastic, etc.) must be provided, labelled and have a designated area on site, close to access points (for easy removal), away from any natural areas, and should have appropriately weighted lids, to prevent the wind from toppling the bins, resulting in waste dispersal.
- These bins must be emptied as often as possible and dropped off at a collection point for recycling, a waste slip is to be obtained as proof of this, and this must be filed in the Environmental File.
- Environmental awareness training will be conducted for all site workers to create awareness.
- Any solid waste intended for disposal must be disposed of at a registered landfill site.

Operational Phase:
Waste generated through the operational phase of the development will likely predominantly be general household waste). It is noted that the General Residential Zones II and the Agricultural Zones I typologies will be gated communities. Therefore, opportunities do exist to encourage the avoid, reduce, reuse, recycle waste management approach. Strategically, the Utilities Zone located within the Agricultural Estate, could be fitted by the Home Owners' Association, with appropriate bins / skips toward managing the waste collected. A similar approach could be followed in the General Residential Zone areas.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

- Energy-efficient appliances and lightbulbs will be used where practicably possible.
- During the operational phase of the development, property owners will be encouraged to install solar panel infrastructure to their properties. Furthermore, it will be encouraged that solar geysers be installed as part of the installations.
- Please refer to the EMPr for the additional measures required.
- According to the services confirmation letter obtained from the Hessequa Municipality, a bulk electrical line needs to be constructed to provide electricity to the proposed development at the developer's cost.

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

Note: Duplicate this section where there is more than one Applicant.

I, Gideon Pepler, ID number 6602075100088 in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;

- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;

- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;

- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;

- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;

- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Gideon Pepler — 2 October 2025

Signature of the Applicant: Date:

Belladonna (Pty) Ltd

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I Madeleine Knoetze, EAP Registration number 2021/3230 as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

1 October 2025

Signature of the EAP: Date:

Sharples Environmental Services CC

Name of company (if applicable):