Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

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

APRIL 2024

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APRIL 2024

(For official use only)	
Pre-application Reference Number (if applicable):	16/3/3/6/7/1/B4/45/1247/23
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 development of Welmoed Village on Portion 28 of Farm Welmoed Estate No. 468, Stellenbosch RD (Notice of Intent with Specific Fee Ref. B-BA-EIA-J24) refers. The farm has an area of 45,5 ha that is inside of the delineated urban edge of Lynedoch, but it is outside of the Lynedoch Village (established on a subdivided portion of Portion 28 in 2003) urban area.

The proposal is a phased development, by rezoning of the property to a subdivisional area that provides for mixed uses, including, but not limited to:

- multi-unit housing zone for medium and high-density residential units, inclusive of a retirement village, blocks of flats, group housing, townhouses, inclusionary housing, private roads, and renewable energy structures;
- private open space zone for conservation of the natural features, access and circulation, and open spaces;
- transport facilities zone for transport purposes (goods and passengers);
- public roads and parking zone for public roads and streets;
- local business zone with a small retail outlet, restaurant, medical consulting rooms, and offices;
- community zone for the establishment of a place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities; and
- utility services zone for the accommodation of private infrastructure and utility services as required for the proposed development.

The external services infrastructure (none of which requires environmental authorisation) consists of the following:

- Widening of the Vlottenburg service road by 4m to create turning lanes for access to the development;
- An 11kV overhead feeder of approximately 4km from Lynedoch substation to the development and upgrading of the Lynedoch Substation transformer;
- A bulk potable water line of approximately 2,3km with a capacity of 20,47 kl/d and peak flow rate of 17,415 l/s (fire flow requirement 25 l/s); and
- A rising sewer main (pump line) of approximately 4km with peak wet weather flow 14,019 l/s in a 160mm Class 34 uPVC pipes.

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); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): o Ridges; o Cultural and historical features/landscapes; o 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
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**	**N/a**
	Appendix A3:	**Map with the GPS co-ordinates for linear activities**	**N/a**
Appendix B:	**Appendix B1:**	**Site development plan(s)**	✓
	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 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**	✓
	Appendix E2:	**Copy of comment from Cape Nature**	**N/a**
	Appendix E3:	**Final Comment from the DWS**	✓
	Appendix E4:	**Comment from the DEA: Oceans and Coast**	**N/a**
	Appendix E5:	**Comment from the DALR&RD**	✓
	Appendix E6:	**Comment from WCG: Dept of Infrastructure**	**X**
	Appendix E7:	**Comment from WCG: DoA**	✓
	Appendix E8:	**Comment from WCG: DHS**	**N/a**
	Appendix E9:	**Comment from WCG: DoH**	**N/a**

	Appendix E10:	**Comment from DEA&DP: Pollution Management**	**N/a**
	Appendix E11:	**Comment from DEA&DP: Waste Management**	**N/a**
	Appendix E12:	**Comment from DEA&DP: Biodiversity**	**N/a**
	Appendix E13:	**Comment from DEA&DP: Air Quality**	**N/a**
	Appendix E14:	**Comment from DEA&DP: Coastal Management**	**N/a**
	Appendix E15:	**Comment from the local authority**	✓
	Appendix E16:	**Confirmation of all services (water, electricity, sewage, solid waste management)**	**X**
	Appendix E17:	**Comment from the District Municipality**	**X**
	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.**	✓
	Appendix E21:	**Proof of land use rights**	✓
	Appendix E22:	**Proof of public participation agreement for linear activities**	✓
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 G:	**Specialist Report(s)**		✓
Appendix H:	**EMPr**		✓
Appendix I:	**Screening tool report**		✓
Appendix J:	**The impact and risk assessment for each alternative**		✓
Appendix K:	**Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline**		✓
Appendix…..	**Any other attachments must be included as subsequent appendices**		✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	**CAPE TOWN OFFICE: REGION 1**		~~GEORGE OFFICE: REGION 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:	Uniqon Developers (Pty) Ltd	
Name of contact person for Applicant/Proponent (if other):	Etienne Coetzer	
Company/ Trading name/State Department/Organ of State:	Uniqon Developers (Pty) Ltd	
Company Registration Number:	1997/021737/07	
Postal address:	17 Catherine Road, Shere, Pretoria East	
		Postal code: 0084
Telephone:	+27 12 809 0262	Cell: +27 83 442 5799
E-mail:	etienne@uniqon.co.za	Fax: ( )
Company of EAP:	Virdus Works Environmental (Pty) Ltd (Reg. No. 2019/133896/07)	
EAP name:	Dupré Lombaard	
Postal address:	3rd Floor, Time Square, Elektron Street, Techno Park, Stellenbosch	
		Postal code: 7600
Telephone:		Cell: +27 82 895 6362
E-mail:	dupre.lombaard@virdus.com	Fax: ( )
Qualifications:	MA; MSc	
EAP registration no:	EAPASA: 2019/304	
Duplicate this section where there is more than one landowner Name of landowner:	Billy Visser Trust (IT 15284/1996)	
Name of contact person for landowner (if other):	Ms Elrona Goosen (ID NO: 651226 0180 086)	
Postal address:	Shop 54, Bosman's Crossing Square, Distillery Road, Stellenbosch	
		Postal code: 7600
Telephone:	021-8562451	Cell: 083 724 7551
E-mail:	elrona.bvb@gmail.com	Fax: ( )
Name of Person in control of the land:	Uniqon Developers (Pty) Ltd	
	As above – Mr Etienne Coetzer	
Name of contact person for person in control of the land: Postal address:	As above	
		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:	Stellenbosch Municipality	
Contact person:	Schalk van der Merwe	
Postal address:	PO Box 17	
	Stellenbosch	Postal code: 7600
Telephone	(021) 808 8940 / 8679	Cell:
E-mail:	Schalk.VanderMerwe@stellenbosch.gov.za	Fax: ( )

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

1.	Is the proposed development (please tick):	New	X	Expansion		
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.					
Greenfield. 45ha farm inside of the Lynedoch urban edge, but still used for agricultural purposes.						
3.	**For Linear activities or developments**					
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:					
N/a						
3.2.	Development footprint of the proposed development for all alternatives.					m²
N/a						
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.					
N/a						
3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.					
3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives					
3.6.	**Starting point co-ordinates for all alternatives**					
	Latitude (S)	°	‘	“		
	Longitude (E)	°	‘	“		
	Middle point co-ordinates for all alternatives					
	Latitude (S)	°	‘	“		
	Longitude (E)	°	‘	“		
	End point co-ordinates for all alternatives					
	Latitude (S)	°	‘	“		
	Longitude (E)	°	‘	“		
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):					455 000 m²
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):					0 m²
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:					455 000 m²
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 proposed development of Welmoed Village on Portion 28 of Farm Welmoed Estate No. 468, Stellenbosch RD refers. The farm has an area of 45,5 ha that is inside of the delineated urban edge of Lynedoch, but it is outside of the Lynedoch Village urban area (established on a subdivided portion of Portion 28 in 2003).

The proposal is a phased development, by rezoning of the property to a subdivisional area that provides for mixed uses, including, but not limited to:

- multi-unit housing zone for medium and high-density residential units, inclusive of a retirement village, blocks of flats, group housing, townhouses, inclusionary housing, private roads, and renewable energy structures;
- private open space zone for conservation of the natural features, access and circulation, and open spaces;
- transport facilities zone for transport purposes (goods and passengers);
- public roads and parking zone for public roads and streets;
- local business zone with a small retail outlet, restaurant, medical consulting rooms, and offices;
- community zone for the establishment of a place of assembly, place of worship, day care facilities, place of education, indoor and other sporting, and related facilities; and
- utility services zone for the accommodation of private infrastructure and utility services as required for the proposed development.

The external services infrastructure (none of which requires environmental authorisation) consists of the following:

- Widening of the Vlottenburg service road by 4m to create turning lanes for access to the development;
- An 11kV overhead feeder of approximately 4km from Lynedoch substation to the development and upgrading of the Lynedoch Substation transformer;

• A bulk potable water line of approximately 2,3km with a capacity of 20,47 k/d and peak flow rate of 17,415 l/s (fire flow requirement 25 l/s); and • A rising sewer main (pump line) of approximately 4km with peak wet weather flow 14,019 l/s in a 160mm Class 34 uPVC pipes.			
4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.		
Three accesses off the Vlottenburg service road.			
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C06700000000046800028	
4.7.	Coordinates of the proposed site(s) for all alternatives:		
	Latitude (S)	-33° 58' 48.986"	
	Longitude (E)	18° 46' 02.834"	

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.		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.		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	
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	
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.		NO
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")		NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").		NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").		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.		NO

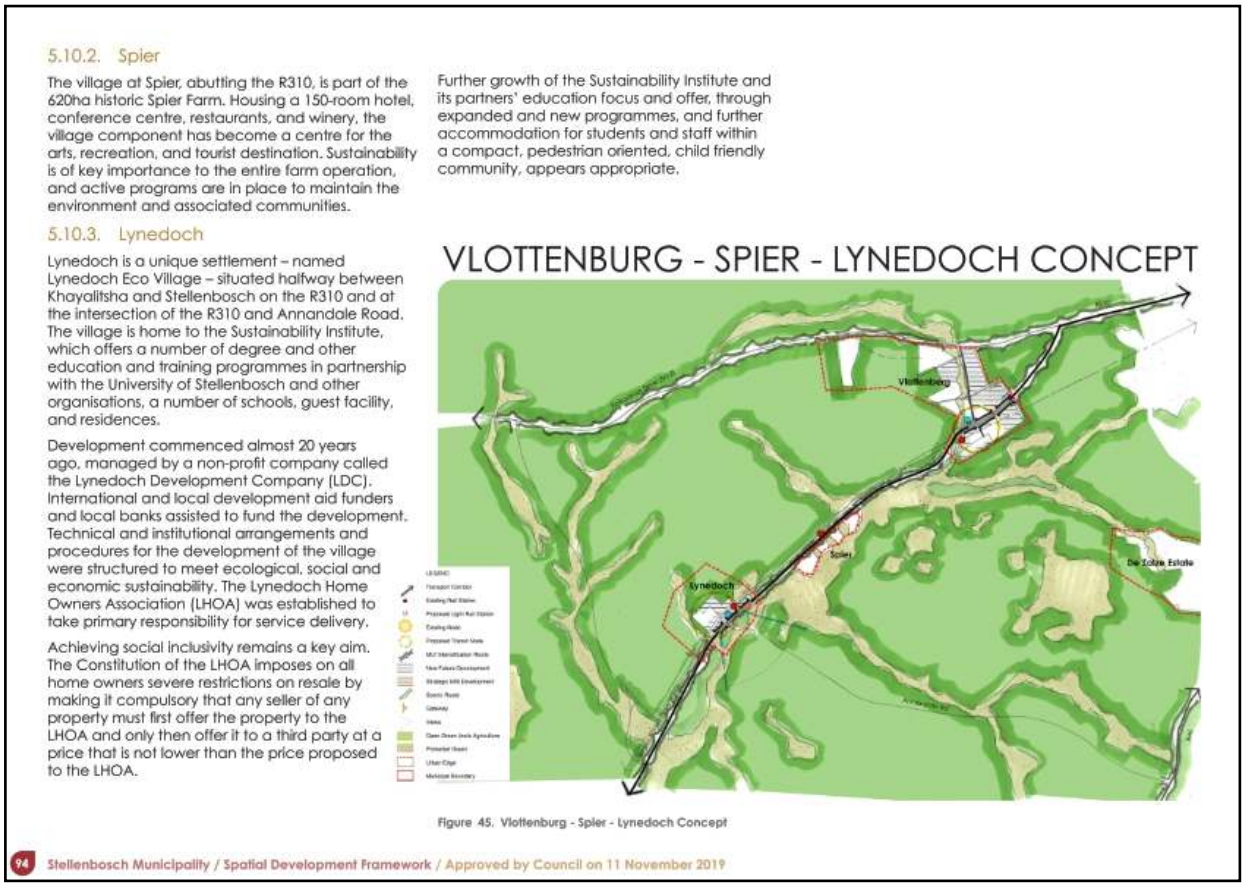
3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
Stellenbosch Municipality Land Use Planning Bylaw, 2023 Subdivision of Agricultural Land Act, 1970, Act 70 of 1970

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.
The approved Stellenbosch Municipality Spatial Development Framework, 2023 (SDF) indicates that: "*over the longer term, the Muldersvlei/ Koelenhof and Vlottenburg/Lynedoch areas can potentially develop into significant settlements*." The settlements are identified "*as balanced, inclusive communities … to fulfil a role in containing the sprawl of Stellenbosch town, threatening valuable nature and agricultural areas. Importantly, they should not grow significantly unless parallel public transport arrangements can be provided*." The SDF indicates the Lynedoch Node as being a rural node with social inclusivity as the aim thereof together with the expansion of the education and training facilities. The policy is for the gradual expansion of the "*unique development model based on sustainable living and education*." The policy further and importantly determines that: "*Over the longer term, these expanded settlements … should not grow significantly unless parallel public transport arrangements can be provided*." As a consequence of the policy, an integrated community with limited need for the use of private transport is envisaged over the long term. The public transport systems are non-existent and will not be operational or functional within the foreseeable future and only if economies of scale and appropriate threshold populations can be established to make use of such public transport. The spatial policy states that the relevant authorities must: "*Support private sector led institutional arrangements to enable joint planning and development*" of the node, thus a cooperative and facilitative approach to the land use planning process is foreseen.

The Stellenbosch SDF should be based on properly defined and consistently applied assumptions. On the one hand the SDF assumption is that the economy will not grow faster or stronger than at present and that the land demand for settlement will be in the "*middle of the road/ consensus development scenario*." On the other hand, the transport assumptions are for the "*transport specific strategies to manage travel demands … providing a choice of alternative modes of travel to enable shifts to occur. … future growth is enabled by the introduction of shared transport options, formal public transport and for the shorter journeys provision for safe cycling and walking*." The transport demand scenario is thus significantly more optimistic than the land demand scenario, indicating significant growth in demand.



5.10.2. Spier

The village at Spier, abutting the R310, is part of the 620ha historic Spier Farm. Housing a 150-room hotel, conference centre, restaurants, and winery, the village component has become a centre for the arts, recreation, and tourist destination. Sustainability is of key importance to the entire farm operation, and active programs are in place to maintain the environment and associated communities.

Further growth of the Sustainability Institute and its partners' education focus and offer, through expanded and new programmes, and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community, appears appropriate.

5.10.3. Lynedoch

Lynedoch is a unique settlement – named Lynedoch Eco Village – situated halfway between Khayalitsha and Stellenbosch on the R310 and at the intersection of the R310 and Annandale Road. The village is home to the Sustainability Institute, which offers a number of degree and other education and training programmes in partnership with the University of Stellenbosch and other organisations, a number of schools, guest facility, and residences.

Development commenced almost 20 years ago, managed by a non-profit company called the Lynedoch Development Company (LDC). International and local development aid funders and local banks assisted to fund the development. Technical and institutional arrangements and procedures for the development of the village were structured to meet ecological, social and economic sustainability. The Lynedoch Home Owners Association (LHOA) was established to take primary responsibility for service delivery.

Achieving social inclusivity remains a key aim. The Constitution of the LHOA imposes on all home owners severe restrictions on resale by making it compulsory that any seller of any property must first offer the property to the LHOA and only then offer it to a third party at a price that is not lower than the price proposed to the LHOA.

Figure 45. Vlottenburg - Spier - Lynedoch Concept

Extract of the Stellenbosch SDF showing the Lynedoch concept

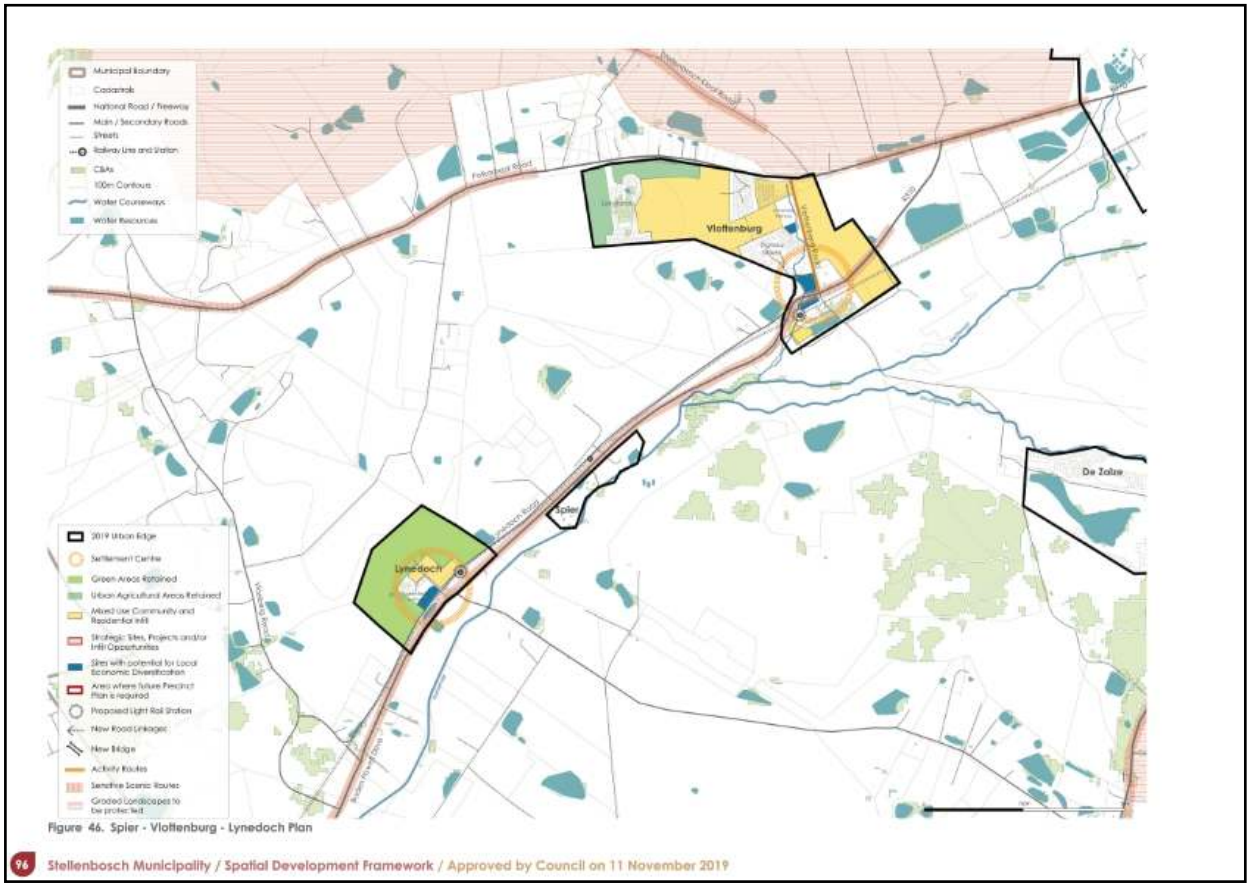
Due to there being no infrastructure services to support an urban development at Lynedoch, significant expenditure needs to be incurred to provide such infrastructure for a development on Portion 28. It must have sufficient capacity to accommodate the long term development vision for the node, which, according to the approved spatial development framework, is an urban node. Moreover, the indicated linking of the node via public transport to the surrounding urban areas further support a long term growth vision that would create a threshold population to make the provision of public transport and infrastructure services feasible.

The primary assumption in this application is that the national, regional, and local economies will not grow any faster or stronger in the coming five years than at present and that therefore the provision of public transport will not improve, but that the demand for affordable housing and demand for employment opportunities will remain the same, which is high. It is further assumed that the agricultural sector would need to be strengthened and supported if it is to overcome the effects of settlement development for large unemployed communities and climate change. The farms in the area range in size from small to well above the municipal average. The crops that are produced are varied and the water demand for the continued production of vegetables, vineyards, and irrigated grazing is increasing, while the supply of irrigation water is not growing, and climatic conditions are requiring increased irrigation or crop protection through shade netting and cover, albeit both climate change responses are not acceptable and desired in the approved Stellenbosch Heritage Survey, 2019.

The Stellenbosch Rural Area Plan (RAP) already indicated in 2016 that Stellenbosch Municipality experienced significant population growth at a rate of 3,7% per year. The Integrated Development Plan (2023) estimates current population growth at 2% per year, which equates to approximately 4 000 new residents annually. The average household size is 3,6, i.e., the estimated number of new households establishing in Stellenbosch is 1 110 per year. As will be shown in the socio-economic impact assessment and demographic assessment of the development proposal, the population growth and socio-economic situation, including urbanisation trends, require a growth in residential accommodation units in excess of 1 100 units per year. There is an existing shortfall in accommodation for daily commuters to Stellenbosch, for which provision should also be made, in addition to the expected population growth.

The RAP and the Urbanisation Strategy (2016) indicated that the Municipality became more urbanised, with more than 73%, up from 70% in 2011, then residing in urban areas, while the IDP indicates that 74,5% of the population currently resides

in urban settlements. There is therefore a definite need for housing in the Stellenbosch Municipal area, and more so for affordable housing.



Extract from Stellenbosch Municipality Spatial Development Framework

The demographic trend highlights the need for proactive planning of sustainable urban settlements:

- It requires planning for access to community facilities and services.
- Such services are difficult to provide in dispersed rural populations and requires rural residents, who can mostly least afford it, to travel to urban settlements.
- Without efficient (or non-existent) public transport, essential travel creates challenges for the relevant authorities and the residents in need of services, as well as those affected by congestion.
- Small population nodes cannot function efficiently as the low population numbers do not warrant sustainable service delivery.
- It requires planning for and the provision of municipal infrastructure services, whether publicly or privately supplied, which cannot grow incrementally due to the prohibitive cost of replacement of redundant infrastructure.

The IDP lists a number of spatial challenges, as indicated in the extract inserted below. Of note is the reference to the need to adapt to climate change, with reference to the current agricultural use of the property, which is no longer sustainable, and the need for the provision of planned urban settlements for those who cannot afford to live in the low density unaffordable residential neighbourhoods of the major towns.

Table 29: Spatial Challenges

Theme	Spatial Challenges
Biophysical context	↓ The degradation of key ecological assets and loss of productive agricultural land has been ongoing. ↓ The condition of the river systems within the municipality has deteriorated. ↓ Climate change is likely to have a significant impact on the natural resource base of the municipal area, which will include a reduction in water, increased temperatures, increased fire risks, and increased incidences of extreme weather events. This in turn will impact agricultural production, scenic landscapes, the liveability of urban areas and the ability to provide basic services such as water and sewerage treatment.
Socio-economic context	↓ The population in the municipality will continue to grow above the average provincial rate, and urbanisation rates will increase with settlements absorbing the bulk of growth. ↓ The ability of the economy to absorb growth, particularly concerning job creation, is concerning. ↓ The informal sector will continue to provide livelihoods to a significant proportion of residents. ↓ The growing youthful population, large student population, and the seasonal influx of labour are likely to increase the municipality's dependency ratio, in addition to a smaller base from which the municipality can collect revenue to provide services and opportunities that will improve the lives of the poor. ↓ Inequality in the municipal area, and particularly in historic towns such as Stellenbosch and Franschhoek, remains significant and current development patterns are not addressing the issue. ↓ Crime rates remain high and the market response i.e. private security provision for those who can afford it, is likely to exacerbate inequality.

Extract of Table 29 from Stellenbosch Municipality IDP, 2023

The development includes provision for inclusionary housing, thus providing for affordable housing at the lowest level possible for private sector developers, and further proposes housing for middle income commuters through the provision of high density dwellings within walking distance of the Lynedoch Station. It is thus responsive to the stated needs of the IDP.

Access to social and community facilities, with specific reference to educational facilities, is an issue that is highlighted in all strategic planning documents, together with the need for housing and employment opportunities. The proposed long-term development of a sustainable urban node at Lynedoch Village seeks to participate in the provision of the required resources and satisfaction of the demand and needs, with minimal investment by the Municipality.

MERO 2022 extract showing population trends.

3.2 POPULATION PROFILE

Figure 3.1 illustrates the future population growth of the CWD and its municipal areas between 2022 and 2026. In 2022, the CWD's population is forecast at 968 667, and is mainly concentrated in the Drakenstein (30.8 per cent), Stellenbosch (20.6 per cent) and Breede Valley (20.3 per cent) municipal areas. The least populated municipal area in the District is the Langeberg municipal area, with a concentration of 12.6 per cent.

Figure 3.1
FUTURE POPULATION GROWTH, Cape Winelands District, 2022 – 2026

Source: Western Cape Government PPU, 2022. Provincial, district and local municipal area population estimates by sex and age (2002 to 2037) based on Stats SA MYPE series 2021 and 2022

Between 2022 and 2026, the CWD is forecast to grow annually by 1.7 per cent, reaching above 1.0 million people in 2024. The Witzenberg municipal area is forecast to have the highest population growth rate across all municipal areas in the District, growing annually by 2.2 per cent in the period. This is followed by the Stellenbosch municipal area, which is forecast to grow annually by 2.0 per cent. Though the Drakenstein municipal area is forecast to grow annually at a lower rate than the District across the period (1.5 per cent), it is also forecast to have the highest population share of all the municipal areas in the District (30.6 per cent). The Breede Valley municipal area is forecast to have the lowest growth rate across all municipal areas in the District in the period, with annual growth of 1.2 per cent. The Langeberg municipal area is forecast to grow by 1.6 per cent in the period. It is also forecast to shrink in population share across the District in 2026, contributing 12.5 per cent of the population in the District.

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.
DEA&DP (2010) Guideline on Public Participation, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP). A plan of study has been submitted and it included the required public participation process. DEA&DP (2011) Information Document on the Guidelines, Policies and Decision-Making Instruments Relevant to EIA Applications in the Western Cape, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP), October 2011. Department of Environmental Affairs (2017), Public Participation guideline in terms of NEMA EIA Regulations, Department of Environmental Affairs, Pretoria, South Africa. DEA (2017), Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa, ISBN: 978-0-9802694-4-4. All of these have been considered in setting up the process and in undertaking the assessment.

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
Protocol for the specialist assessment and minimum report content requirements for environmental impact on agricultural resources and site sensitivity verification requirements where a specialist assessment is required but no specific assessment protocol has been prescribed, (Gazette Notice no. 320, 2020)

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.
24	The development of a road— (i) [a road] for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) [a road] with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road— (a) [roads] which [are] is identified and included in activity 27 in Listing Notice 2 of 2014; (b) [roads] where the entire road falls within an urban area; or (c) which is 1 kilometre or shorter.	Internal main roads exceed the parameters.
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 (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial, or institutional purposes.	The proposed development will contain residential, mixed use and institutional development components on land used for agriculture after 1998. The proposed development footprint will be larger than 5 hectares.
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. Western Cape i. Areas zoned for use as public open space or equivalent zoning; ii. Areas outside urban areas; (aa) Areas containing indigenous vegetation; (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or iii. Inside urban areas: (aa) Areas zoned for conservation use; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.	Internal roads will exceed the limits.
18	The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.	Upgrading of the Vlottenburg service road as confirmed in the TIA to create turning lanes.

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.

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.

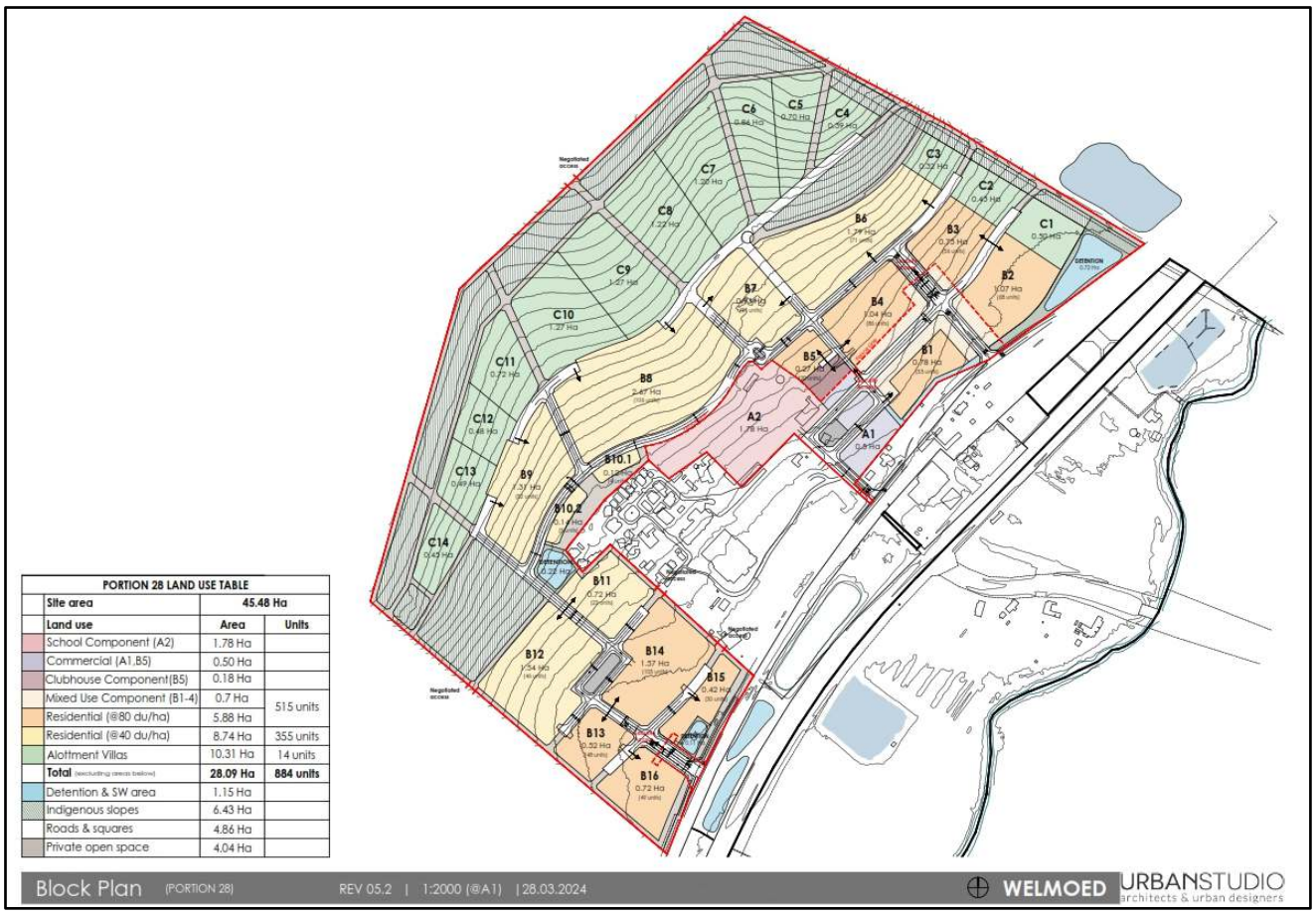
SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

See Section B, Paragraph 4.4 above for broad description. The attached concept site development plan (Urban Studio, Welmoed Context and Concept, dated 28 March 2023) provides a graphic description of the development concept and some of the proposed design details, e.g., development densities, land uses, public and private roads, and developmental elements.

Due to the need to maximise the use of the scarce land resources, development densities of up to 80 dwelling units per hectare are planned for the area. A residential development with integrated community facilities is planned on an area of only 29,13 ha, with servitudes, storm water run-off detention facilities, and site constraints such as slopes steeper than 1:4, limiting development on 7,97 ha. The proposed residential development consists of 878 units, with planned densities of up to 80 units per hectare inside of individual blocks. The average development density is 30 units per hectare. Communal private open space and internal roads take up 8,43 ha.

The internal roads are planned as a grid with due consideration of the slopes and the need to design the development in such a way that it can be accommodated in the landscape without significant negative visual effect. Densities of development will be highest in proximity of the main transport infrastructure, while higher lying development will be structured to avoid skyline effect and allow for significant terrace forming. As a result of the site characteristics and grading of the development, and the need for affordable and inclusionary housing in the area, nett densities of development on the lower-lying areas and abutting the public facilities (school, railway station, commercial use) will be up to 80 units per hectare.



Phased development of Portion 28

The purpose of the application for the long-term phased development and the planning of the property is to be proactive in planning the future shape and form of Lynedoch Village in a certain population growth scenario. The current land use management system is a reactive system, that reacts to urban challenges, rather than a proactive system that creatively plans for the future shape and form of settlements and predetermines a vision and development pattern inclusive of the required infrastructure to sustain the settlement. With a growing urban population, proactive planning can and must play an important role in creating environmentally sustainable communities.

The phased development of Portion 28 will occur over a period of more than 10 years unless there is a significant increase in demand for housing in the area. Currently the demand exceeds the supply (Housing Market Studies for Intermediate Cities / Larger Towns in the Western Cape, Stellenbosch Town Report, August 2022, Department of Environmental Affairs and Development Planning). The socio-economic impact and market assessment (Demacon) provides a good estimate of the demand over time. Any development will be phased to limit capital expenditure not recoverable through short term supply to the market and therefore continued use of the remaining (undeveloped) land for agricultural purposes.

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.

The existing use rights are for agriculture and rural use and need to be changed by way of rezoning to subdivisional area in terms of the Stellenbosch Municipality: Municipal Land Use Planning Bylaw, 2023.

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.

The Western Cape Land Use Planning Act, 2014, Act 3 of 2014, and the Stellenbosch Planning Bylaw obligate the Municipality to have regard (amongst other things) to the desirability of the proposed land use when it considers and decides a land development application. Regulation 18 of Government Notice No. R. 326 of 07 April 2017 (amendment of the Environmental Impact Assessment Regulations, 2014 made under Section 24 of NEMA) also requires consideration of the need and desirability of the proposed activity.

In terms of the planning legislation, a municipality should refuse an application if it does not comply with the stated minimum threshold requirements or is inconsistent with a spatial development framework. Both aspects are addressed in the land development application submitted to the Stellenbosch Municipality.

The concept of desirability relates to the type of development being proposed in a specific place and its impact (positive or negative) on the larger community, i.e., more than the immediate neighbours. It is a matter of illustrating that the proposed development is the best practicable environmental option for the property concerned. The Guideline on Need and Desirability, EIA Guideline and Information Document Series (March 2013) determines that: "*the construct of "need and desirability" must also be informed by the sum of all the impacts considered holistically. In this regard "need and desirability" also becomes the impact summary with regard to the proposed activity*".

Consideration is therefore given in the application motivation as to who would be adversely or positively affected by the proposed development activities if the application should be approved. The question is whether Portion 28 is the right place for the proposed development, considering the nature and scale thereof, and its impact on infrastructure services.

As indicated in the relevant applications, there are no municipal infrastructures services readily available for the proposed development and the existing Lynedoch Eco Village is largely independent in its provision and use of infrastructure services. It relies on its own waste water treatment system, it relies heavily on rain water harvesting, water storage, and has a single communal municipal connection shared by all properties. It has a separate or dual water circulation system for treated effluent to be used for flushing and irrigation. The Village operates a waste reduction and recycling system in conjunction with a private contractor, with minimal waste going to landfill. Eskom provides the electricity to the Village, with all houses supplementing their energy requirements in different manners, mostly through the use of micro solar systems and some houses connected to gas derived from bio-digesters. Road access is off Lynedoch Road, a service road constructed parallel to Baden Powell Drive following the closure of the level crossing at the Annandale Road intersection.

Thus, when a development of Portion 28 is being considered, it must be considered simultaneously with a full (municipal) services infrastructure plans and designs. Such new infrastructure might be beneficial to the existing Village, but it would not have any negative effects on the Village, as it would not cause a reduction in the existing standards and levels of service. Two new access roads with intersections on the service road are proposed, to avoid congestion at the existing main entrance to the Village at the station, while the existing main access road, which is substandard and without any sidewalks for pedestrians, will be upgraded.

According to the available information, the Village residents use the property for informal recreation, by walking their dogs, for hiking and in general outdoor recreation, even if not by agreement with the owner. The residents of the surrounding community, who make use of the services offered by the Sustainability Institute, gain access to the Village across the farm, using it for direct access rather than trying to access it on foot via existing formal roads which are significantly lengthier and riskier, with no walkways or even space for pedestrians. Both of these uses, namely accessibility and recreation are addressed in the application and planning, allowing for formalisation of the pedestrian access across the land, by the creation of pedestrian walkways along the public roads where possible and within limits of acceptability in terms of the current legislation, and the creation of green lanes and trails for Village (and future) residents to enjoy the outdoors.

As for the desirability of the development of the land for urban purposes from a regional perspective, it is necessary to consider the history of it being indicated as an urban node. The spatial planning strategies for the land in the

approved 2023 version of the SDF indicate that a portion of the land is set aside for urban development purposes, even if the entire property is shown to be inside of the urban edge. The intention is a low density development which allows for the retention of green space around an urban node focused on "*further growth with an education focus and further accommodation for students and staff within a compact, pedestrian oriented, child friendly community*".

In 2018 the land was however shown as being designated for full urban development, together with Portion 27, on the eastern side of the railway line, i.e., at the time it was indicated as being a desirable location for a nodal development. In 2019 the proposed urban development footprint was reduced, still indicating the desirability of an urban node on the land, albeit that the overall extent and scale was reduced. A reduced urban footprint and scale is described as "*an irrational approach to the establishment of an urban node in an environment where the population is growing, where land is a scarce resource, and where a node can be established around a transit node, in keeping with the policy to maximise the use of land around such transit nodes*" in the land development application.

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

The PSDF focuses strongly on densification and intensification of urban areas to achieve its desired outcomes. The average gross residential density of urban areas should increase to 25 units / ha before extensions to an urban edge are considered. The proposed development is within the designated urban edge of the Lynedoch node, but the proposed use of the land is limited to a small footprint which will cause the development densities in the node to be significantly lower than sustainable from a service delivery perspective. A low density development which retains the area surrounding Lynedoch as a cultural landscape conservation area will cause the development not to achieve the population thresholds essential for the establishment of efficient public transport systems and services infrastructure for amongst others affordable (inclusionary) housing. The proposal for the development of a feasible urban node at a major transport interchange is consistent with the PSDF.

The policy of more intense use of nodes and urban core areas further requires consideration of the bio-physical environment, cultural heritage, municipal infrastructure services and social infrastructure issues and factors. The purpose of densification and best use of scarce land resources in appropriate locations, is primarily to maintain sustainable supplies of natural resources, for food production and ecological functioning, which are not relevant to the subject property. The PSDF seeks to achieve more economical use of municipal services infrastructure and community facilities, provide for efficient public transport services, and reduce traveling distances to a variety of opportunities. The proposed development is aligned to the policy as illustrated above.

The proposed use of the property inside of an identified node and abutting an existing public transport interchange for a development aimed at affordable medium to high density residential use containing retail opportunities and community facilities is aligned to the PSDF. It contributes to intensification and densification of the Lynedoch node, and it leads to improvement of the efficiencies in service provision as indicated above. It does not diminish the supply of ecological or agricultural resources, opportunities for redress, or improved spatial integration with access to land for those previously dispossessed.

4.2	The Integrated Development Plan of the local municipality.

The node is described as Rural Node 5.

The development includes provision for inclusionary housing, thus providing for affordable housing at the lowest level possible for private sector developers, and further proposes housing for middle income commuters through the provision of high density dwellings within walking distance of the Lynedoch Station. It is thus responsive to the stated needs of the IDP.

Access to social and community facilities, with specific reference to educational facilities, is an issue that is highlighted in all strategic planning documents, together with the need for housing and employment opportunities. The proposed long-term development of a sustainable urban node at Lynedoch Village seeks to participate in the provision of the required resources and satisfaction of the demand and needs, with minimal investment by the Municipality.

The IDP however cautions against capital investment by the Municipality in the smaller settlements other than Stellenbosch, Klapmuts and Franschhoek. It determines that: *Over the longer term, Muldersvlei / Koelenhof and Vlottenburg / Lynedoch along the Baden Powell Adam Tas-R304 could accommodate more growth and be established as inclusive settlements offering a range of opportunities. However, much work needs to be done to ensure the appropriate make-up of these settlements (including each providing opportunity for a range of income groups) and integration with the corridor in terms of public transport. They are therefore not prioritised for significant development over the SDF period. Should significant development be enabled in these areas now, it is likely to be focused on private vehicular use and higher-income groups (in gated developments) and will in all probability reduce the potential of initiatives to transform Stellenbosch town and Klapmuts.*

The focus on Stellenbosch town and Klapmuts does not exclude all development focus in Franschhoek and the smaller settlements. Rather, it is argued that these settlements should not accommodate significant growth as the pre-conditions for accommodating such growth do not exist to the same extent as in Stellenbosch town and Klapmuts.

What should be emphasised in Franschhoek, and smaller settlements are improving conditions for existing residents and natural growth within a context of retaining what is uniquely special in each (from the perspective of history, settlement structure and form, relationship with nature and agriculture, and so on).

4.3.	The Spatial Development Framework of the local municipality.

Section C Paragraph 4 above contains an extract of the land development application that addresses the SDF.

The SDF states as a strategic objective that: "Over the longer term, Vlottenburg, Spier, and Lynedoch along the Baden Powell-Adam Tas-R304 corridor could possibly accommodate more growth and be established as inclusive settlements offering a range of opportunities. However, these settlements are not prioritized for development at this stage" and that the Municipality must:" Support private sector led institutional arrangements to enable joint planning and development".

Lynedoch is identified and proposed as a socially inclusive urban node with a focus on education and training (for future development) in the 2019 Stellenbosch SDF. It is further indicated as a node in a range of other related documents, and it has been designated as a node since at least 2010 when the concept of a "string of pearls", relating to the nodes along the railway line and at major intersections on the main transport corridors, was promoted as the growth strategy for Stellenbosch.

The provisos in the SDF are:

- *That public transport systems must first be established before any significant nodal development may occur.*
- *That cognisance be taken of the agricultural potential of the land.*
- *That appropriate green corridors and spaces be retained in view of the need for environmentally sustainable development and the location of the node at the gateway to Stellenbosch.*
- *That maximum protection be given to valuable agricultural resources and land around the node.*
- *That the availability and extension of municipal infrastructure services be considered in the assessment of the spatial planning issues.*
- *That the historical character of the area and the landscape be protected and complemented by development.*

The expansion of the Lynedoch node, with amongst others inclusionary and affordable housing, is argued in the land development application to be "aligned to the Spatial Planning and Land Use Management Act, 2013, Act 16 of 2013 (SPLUMA), which, together with the Western Cape Land Use Planning, 2014, Act 3 of 2014 (LUPA), promotes the following five general principles for spatial planning, land development and land use management, as applicable to the subject area.

Spatial Sustainability: The proposed residential development is within the future fiscal, institutional, and administrative means of government. Bulk municipal services infrastructure has to be established and external services provided for the development of the node, to which the development would make a significant contribution. It will create economies of scale and by facilitation of improved access to housing that is not within the fiscal other means of government.

The protection of prime and unique agricultural land might not be an issue in this instance, as the land has not been used for viable commercial agriculture for approximately 10 years, primarily due to the changing climatic conditions and lack of water resources for irrigation. The changes in the surrounding land use and agricultural environment have also impacted on the agricultural use of the land." (This aspect has been appropriately assessed in a specialist assessment by AgriInformatics.)

"A residential development at Lynedoch will promote and stimulate effective and equitable functioning of land markets, as it will provide for affordable housing and access opportunities for middle and lower-middle income groups by using land included in the urban edge of the node.

Given the long term development view of the node, it follows that land which could be feasibly used for agriculture will be retained for at least or more 10 years, but allowance will be made in the planning (of infrastructure and transport infrastructure and systems) for eventual development, to achieve appropriate threshold populations and economies of scale. The loss of the agricultural production on Portion 28 will thus occur over time and not immediately.

Efficiency: The proposed land development, albeit in the medium to long term, will optimise the use of existing resources and infrastructure.

The bulk of the proposed residential development is within 500m of the Lynedoch rail commuter station and a potential bus stop on Baden Powell Drive. The proposal complies with the approved Stellenbosch Comprehensive Integrated Transport Plan (CITP) policy statement, namely: "to maximise the use of land accessible by public transport in walkable (industrial) neighbourhoods where jobs can be created without negative impact on the natural resources of the area."

Its treated effluent can be availed to surrounding farmers for irrigation purposes, thus enhancing the viability of the local agricultural sector, making up for any loss of agricultural production on the land.

Spatial Justice: Past spatial and other development imbalances will be redressed through improved access to and use of land for affordable housing opportunities in proximity of an existing node and a public transport interchange and corridor. It is located along one of the primary movement corridors, where land development has to be considered in view of the settlement and human needs of a growing middle and lower income population.

Resilience: Spatial plans, policies and land use management systems must be flexible to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks. By allowing the proposed development, it would create a more resilient spatial development pattern with limited effect on the natural or agricultural resources.

Re-use of the water consumed in the proposed node for irrigation of surrounding agricultural land will increase the resilience of the farms where it is used.

Good governance: An integrated approach to land use and land development in the area must be considered in keeping with the stated policy of the Municipality.

The development of the node is supported in the Stellenbosch SDF, although only for a partial development, the argument being that the majority of the land should be retained as a visual and heritage resource. The question is which needs are to be served, those which have an effect on the health and well-being of the residents and those in need, or those who wish to retain the character of the area and trust that the provision in the needs of the people can be satisfied elsewhere?

It is only a matter of timing, i.e., whether planning and gradual development should occur in expectation of the future public transport system upgrades or prior thereto to fit in with the socio-economic needs of the growing population.

The proposed rezoning, subdivision and use of the land is "consistent with norms and standards, measures designed to protect and promote the sustainable use of agricultural land, national and provincial government policies and the municipal spatial development framework", as indicated above.

4.4.	The Environmental Management Framework applicable to the area.
The Draft Stellenbosch EMF indicates the land around the Lyndoch node as marginally arable and non-arable.	
5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.
Due to the nature of the site, used for mono-culture (vineyards) with only two minor disconnected portions of natural vegetation where granitic outcrops occur, less than 3ha, biodiversity played a role in the overall master plan consisting of the urban design framework and the landscape master plan. Green corridors and networks are proposed to increase the biodiversity on the site.	
6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.
None.	
7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
N/A	
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 change.	
9.	Explain how the proposed development will optimise vacant land available within an urban area.
As under paragraph 4 above.	
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.
As under paragraph 4 above.	
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).
The GLS civil services report for the Stellenbosch Municipality concludes as follows:	

The developer of portion 28 of Farm 468 (Welmoed development) in Stellenbosch may be liable for the payment of a Development Contribution (as calculated by Stellenbosch Municipality) for bulk water and sewer infrastructure as per Council Policy.

The development of Phase 1 to Phase 13 below the 60 m contour line can be accommodated within the existing Faure rural water system without any upgrades required.

The development of Phase 14 on portion 28 of Farm 468 above the 60 m contour line should be supplied with water directly from the Skilpadvlei reservoir in the Polkadraai system. Master plan item SPW3.1 will be required to supply the development with bulk water from the Skilpadvlei reservoir and master plan item SPW3.2 will be required to manage static pressures at the development.

There are no sewer services in the vicinity of the proposed development and master plan items SSS4.1, SSS3.1 & SSS3.2 will be required to pump sewage from the proposed development area to the existing Blaauwklippen bulk sewer pumping station, located roughly 5.0 km to the north east of the proposed development.

The existing Blaauwklippen pumping station has sufficient spare capacity to accommodate the proposed development.

The electrical engineering report concludes as follows:

1. Alternative energy sources such as gas and PV Solar will be used for the development. LED street lightning recommended.
2. The NMD for the development will increase in relation to construction of the development. Application for increase to a 2MVA NMD supply will follow the completion of the designed consumers (886).
3. The annual energy consumed form the grid will be reduced by the proposed PV solar system.
4. Ring feed MV reticulation recommended for the development MV network.
5. MV underground armoured cable design has been allowed for. Overhead MV reticulation recommended as a more cost-effective approach, subject to development allowance for MV overhead line reticulation.
6. Option 1 is recommended to start the project and establish a point of supply for the development. Instruction to proceed required.
7. Option 2 is recommended to supply remaining demand to the development. Approved overhead line route to be confirmed.

Option 1:
Transfer load to interconnecting feeders to de-load both the substation and Lynedoch farmers 1 feeder. The amount of load that can be transferred is limited due to the capacity limitations of the interconnecting feeders. This approach is considered a temporary solution and upgrading of the substation transformer will still be required eventually. Eskom confirms 650kVA can be made available of the required maximum demand (MD). See Annexure A.

Option 2:
Construct as second overhead feeder (approximately 4km) from Lynedoch substation to the development to share the current load. This option will also require upgrading of the Lynedoch Substation transformer.

This option will require an approved route between Lynedoch substation and Welmoed, Portion 28. Wayleaves assuring legal right of way will be required prior to construction. The overhead powerline will become Eskom property after construction. A self-build project may be considered to speed along the process. See figure 6.

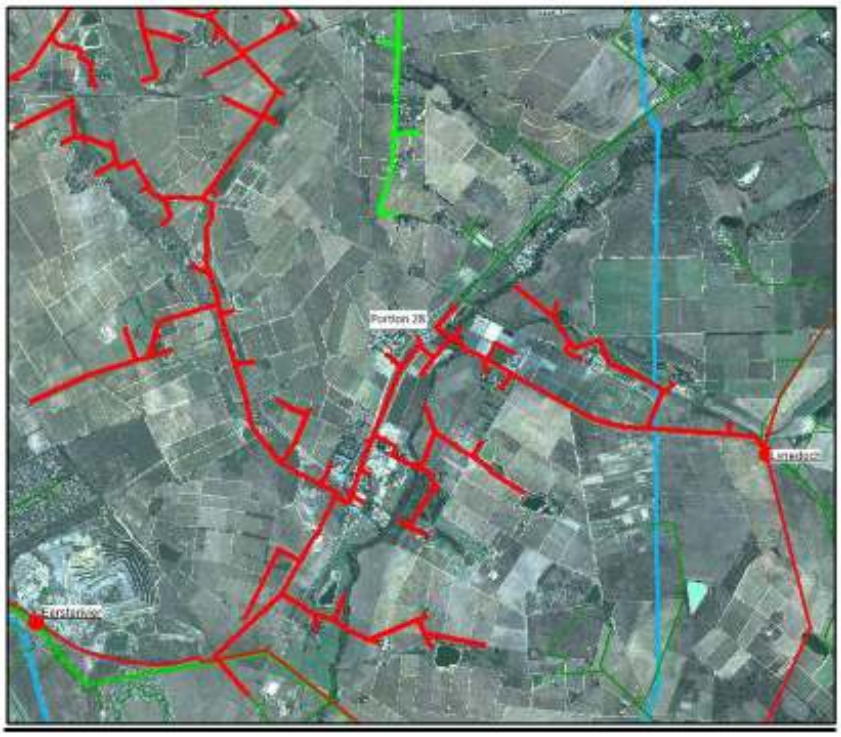


Figure 6: Eskom MV network

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.

Desirability is addressed in various sections and paragraphs above as quoted from the land development application.

The need was assessed by Demacon, and the full assessment is annexed hereto. In brief, the need determined for the area is 1 500 residential units together with other commercial and community facilities to create a sustainable node.

LYNEDOCH MIXED-USE DEVELOPMENT LAND BUDGET & PHASING

The individual land uses are allocated in the table below.

Land Use Budget & Phasing – 10 year timeframe

Land Use	Proposed Size	Net demand (ha)	Surplus buffer (10%)	Including roads (15%)	Composition (% of land)	OPME*	Market Gap
Residential Bonded (Low Density)	±630 units	25.2	27.73	31.89	82.2%	2024+	Moderate to High
Student Accommodation (Medium Density)	±120 units	2.0	2.20	2.53	6.5%	2024+	Moderate
Retail (Small Convenience Centre)	±2 869m²	0.8	0.90	1.04	2.7%	2029+	Moderate
Trade (Automotive)	±455m²	0.1	0.14	0.16	0.4%	2028+	Moderate
Offices / Administrative Functions	±2 082m²	0.5	0.57	0.66	1.7%	2029+	Moderate
Private Day Clinic	±488m² (5 to 7 beds)	0.1	0.13	0.15	0.4%	2028+	Moderate
Private School	±3 720m² (350 to 400 pupils)	1.9	2.05	2.35	6.1%	2028+	Moderate
Total Hectare Take-Up		**30.7**	**33.72**	**38.78**	**100.0%**		

Source: Demacon Demand Modelling, 2023
**Optimum point of market entry*

A total of **38.78 hectares** could be developed and taken up over a 10-year timeframe. This includes 88.7% (34.41 ha) for residential uses and 11.3% (4.37 ha) for non-residential uses. The site is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. Take-up is forecast to accelerate as the development gains traction in the market.

Considering the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45.48 ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development.

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.

N/A

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 will be completed in keeping with the applicable statutory requirements and the guidelines.

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

Western Cape Dept Infrastructure (roads and transport infrastructure): Pieter Pienaar <Pieter.Pienaar@westerncape.gov.za> Western Cape Dept Agriculture (land use management): Cor Van der Walt <Cor.VanderWalt@westerncape.gov.za> Department of Agriculture, Land Reform and Rural Development: Serah Muobeleni <SerahMu@Dalrrd.gov.za> Department of Water and Sanitation (E-WULAAS) <E-WULAASCalls@dws.gov.za> Department of Mineral Resources and Energy (MPRDA Sec 53 application): Morne Koen <Morne.Koen@dmre.gov.za> Heritage Western Cape (heritage matters and NID submitted): HWC HWC <HWC.HWC@westerncape.gov.za> Stellenbosch Municipality (spatial planning and land use): Stiaan Carstens <Stiaan.Carstens@stellenbosch.gov.za> PRASA (rail transport) Paul Motsoaledi <paul.motsoaledi@prasa.com>

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

Those who were not consulted have no interest in the matter.

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

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.

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?		NO
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
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.		

2. Surface water

2.1.	Was a specialist study conducted?	YES	
2.2.	Provide the name and/or company who conducted the specialist study.		
EnviroSwift, Nick Steytler			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		
Specialist assessment was related to the external services crossing water courses. No surface water features occur on the site. The study found that the proposed services infrastructure could be installed without any significant negative effect on the water courses.			

3. Coastal Environment

3.1.	Was a specialist study conducted?		NO
3.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
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.		
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
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.		

4. Biodiversity

4.1.	Were specialist studies conducted?		NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
N/A			
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.		
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.		
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.		
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.		
4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.		

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
The site slopes up westerly from the Eerste River, between 25 and 110m above MSL. A geotechnical assessment of the site was prepared by Delta Geotech. Topographically there is an average fall of approximately 3.5% and a max fall of 22% from the northwest to the south-east with a small dam located off site adjacent to the site. The site closest to Lynedoch Road, on the south-east side has a smaller fall than the steeper slope on the north-west side. Regionally, the general geology of the area comprises Quaternary colluvial gravelly clay loam soils and phyllite and greywacke of the Tygerberg Formation and granites of the Cape Granite Suite. Locally the site is overlain, as intersected in the test pits, by made ground, colluvial and residual soils and granite rock. Perched groundwater was not intersected across the site. This is mostly likely due to the slope of the land. During and after peak rainfall periods strong surface stormwater flow may occur. To prevent erosion, precautions will likely be required in this regard. Stormwater run-off is expected to accumulate in the lower lying parts of the site. Drainage measures to remove this water will be required. The main water table is expected to occur at depth within the fractured rock aquifer.

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	
6.2.	Provide the name and/or company who conducted the specialist study.		
Hearth Heritage, Emmylou Bailey			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
The conclusion of the heritage impact assessment is that: "*an appropriate residential and educational development that considers the recommendations, heritage indicators and guidelines contained in this report, will benefit the area, and uplift the R310 scenic drive. The site has been consistently included within the urban edge, in both heritage surveys and planning documentation and sensitive and appropriate development will encourage local economy without further damage to the rural aesthetic of the cultural landscape. The success of the Sustainability Institute's model should be taken as guidance and a village node, with similar aesthetic and impact should be encouraged and will improve the experience of this historically and scenically significant cultural landscape*". Considering that the landscape has changed over time and will continuously change, in view of the environmental changes experienced in the area, the planning of the development must be sensitive to, but not inhibited by the heritage aspects. From the point of view of the local community and those with strong bonds to the Lynedoch Village, the landscape is not only observed. It is part of their frame of reference, perceived to be part of their social assets. On the other hand, there is the growing population in need of housing and social infrastructure. Therefore, in planning an area which is designated as a cultural landscape, to which an existing community has specific feelings, while simultaneously located in proximity of significant infrastructure such as the public transport node and an identified urban node, the planning should strive to create a human habitat that provides existing and future residents with balance. The balance must be between retention of some of the landscape features dear to the existing community, while providing for future activities dedicated to work and those which are dedicated to relaxation for the envisaged larger community. The settlement is planned with due cognisance of the heritage indicators as reflected in the urban design study.			

7. Historical and Cultural Aspects

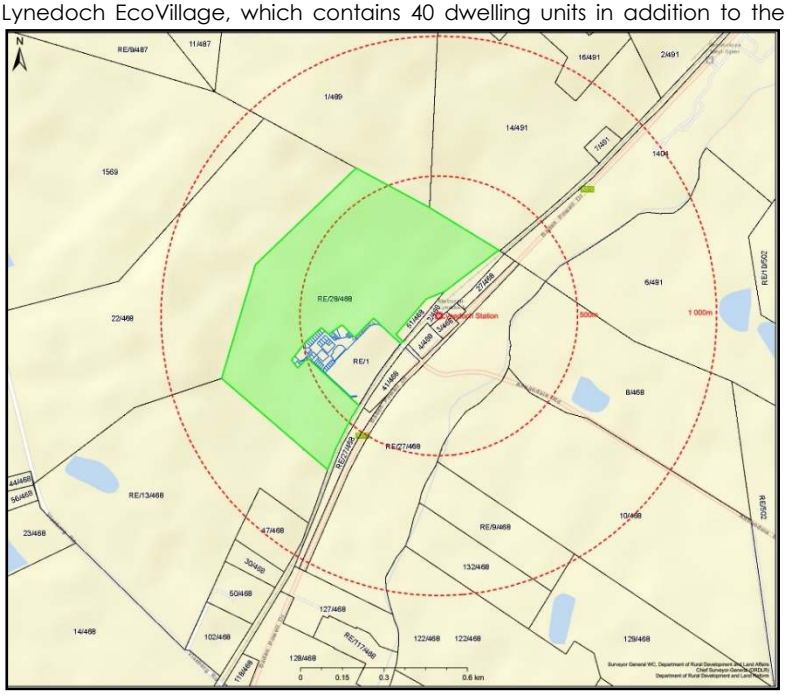
Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
The Cultural Landscape Study and associated Visual Study of the site have revealed a context and site of medium heritage significance but with very high scenic qualities, particularly in providing an agricultural backdrop to other heritage sites within the vicinity. It follows that, to preserve heritage significance (especially tangible heritage significance associated with physical elements) these fundamental elements must be identified, protected, and enhanced in the course of the future development and densification of the site. Heritage indicators and guidelines give direction to new developments. The spatial setting of site has the potential to respond to characteristic aspects of settlement within the Cape Winelands and promote a better sense of place within the wider village node. The site has consistently been included within the urban edge, in both heritage surveys and planning documentation. The challenge is to ensure that any development here reinforces the existing character of the site and the positive aspects seen within the context, to ensure the visual integrity of the development with its surrounds, and the retention of the contributing agricultural character of the site as a background element to the scenic route and many other heritage resources within the wider valley.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
The property is located along the Baden Powell transport corridor, at the intersection with Annandale Road, around Lynedoch Village. Lynedoch EcoVillage is the described as "*the first ecologically designed socially mixed intentional community in South Africa*" (http://www.sustainabilityinstitute.net/lynedoch-ecovillage10/detailed-story). It was established around the Drie	

Gewels Hotel, which was a student hangout and party place into the early 1990's. The hotel facilities were converted with the development of the Village in the early 2000's to accommodate a guest accommodation establishment, the Sustainability Institute, and the Lynedoch Primary School that accommodates up to 500 children, mostly from farm worker families in the surrounding area. The Village also contains a pre-school and other community facilities aimed at serving the surrounding community.

Lynedoch EcoVillage, which contains 40 dwelling units in addition to the aforementioned facilities, does not receive full municipal services and relies mostly on its own resources for the provision of infrastructure services (potable water, internal roads, sewerage, solid waste, electricity, and storm water). It is managed by a non-profit company that, with the Sustainability Institute, focuses on creating and maintaining a sustainable socio-economic living environment through innovation, and community development.



Locality of Portion 28 of Farm No. 468, Stellenbosch in context

Prior to the closure of the at-grade level crossing at the Lynedoch Station in 2014, the Lynedoch node and urban edge was inclusive of land to the east of the railway line and amongst others Portion 27 of the farm, up to the Eerste River. The node forms part of the so-called "string of pearls" of settlements occurring along the transport corridors through the Stellenbosch municipal area. The entire property is within 750m of the railway station and the erstwhile level crossing, and major road intersection, which is the reason why in the first instance the node was identified as one of the "pearls" in the "string" and why it was designated as an urban node of secondary significance.

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

The socio-economic impact and need were assessed by Demacon in the Lynedoch Mixed-use Market Study, September 2023.

According to the study a total of 38,78 hectares could be developed and taken up over a 10-year timeframe. This includes 88,7% (34,41 ha) for residential uses and 11,3% (4,37 ha) for non-residential uses. The site, albeit smaller than the area needed, is ideally positioned to accommodate the full extent of residential and commercial/non-residential land uses. "*Take-up is forecast to accelerate as the development gains traction in the market. Considering, the ±15-year take-up forecast for the larger residential quantum (±1 500 units), the 45,48ha land holding would become oversubscribed and additional land would have to be acquired to accommodate the full extent of the development*".

According to the study there is a current demand for approximately 322 medium density residential dwelling units, the property fitting as a desirable location from a market perspective with a score of 73,2%. Take-up of units over time is estimated as:

- Short to medium term (3 to 5 years): 100 – 150 units;
- Medium to longer term (5 – 10 years): 431 additional units up to 750 units; and
- Long term (10 – 15 years)): up to 1 500 units.

The market assessment further indicated that there is a need for a small retail component to serve the development and surrounding market area, defined as the area within 10 minutes' drive time from the property. Offices, automotive services, and private healthcare are also listed as being in demand for the area. The estimated land requirement for the activities and uses highlighted in the study as appropriate for the area is 38,78 ha.

Affordability profile for the development

The affordability profile in the study provides guidance on the implementation of the Stellenbosch Municipality Inclusionary Zoning Policy, 2023.

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

The developer has offered to develop inclusionary housing in the project and to establish a property owners' association for the entire development, through which all residents can be involved in the management of the future village.

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.

The impact of a development on the safety, health, and wellbeing of the surrounding or receiving community cannot be measured (or predicted) over time. It is possible to predict the effects during the development phases, but once developed, the residents determine the community characteristics.

On the one hand the development activities will cause nuisances, like dust, noise, and an influx of labourers not resident in the area and normally perceived to be a security (safety) risk, with limited duration negative effect on the receiving community. On the other hand, these negative effects will be the result of all development within existing urban areas or designated urban edges where there are existing resident communities, i.e., the negative effects cannot be avoided. These are necessary "evils" to cater for a growing population.

There are however positive effects as a result of the establishment a larger resident community, e.g., the creation of a threshold population able to sustain larger schools catering for more grades and thus reducing the need to travel for educational purposes, to warrant the provision of healthcare facilities, community sporting facilities, public transport, and a wider range of business activities, to mention a few. The wellbeing of the community is thus likely to be improved by a larger settlement.

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 attached concept site development plan for Portion 28 of Farm Welmoed Estate No. 468, Stellenbosch (Urban Studio, Welmoed Context and Concept, dated March 2024) provides a graphic description of the development concept and some of the proposed design details, e.g., development densities, land uses, public and private roads, and developmental elements.

Due to the need to maximise the use of the scarce land resources, development densities of up to 80 dwelling units per hectare are planned for the area. A residential development with integrated community facilities is planned on an area of about 28 ha, with servitudes, storm water run-off detention facilities, and site constraints such as slopes steeper than 1:4, limiting development on 7,97 ha. The proposed residential development consists of 884units, with planned densities of up to 80 units per hectare inside of individual blocks. The average development density is 34 units per hectare. Communal private open space, indigenous vegetation areas and internal roads take up about 8,50 ha.

The internal roads are planned as a grid with due consideration of the slopes and the need to design the development in such a way that it can be accommodated in the landscape without significant negative visual effect. Densities of development will be highest in proximity of the main transport infrastructure, while higher lying development will be structured to avoid skyline effect and allow for significant terrace forming. As a result of the site characteristics and grading of the development, and the need for affordable and inclusionary housing in the area, nett densities of development on the lower-lying areas and abutting the public facilities (school, railway station, commercial use) will be up to 80 units per hectare.

The residential component will consist of clusters of group housing, townhouses, three storey walk-ups and four storey apartment blocks. Although the different block clusters might in future be on separate erven, each block is holistically planned, and the layout includes open space, access and parking as integrating elements. Parking and open space are planned with due cognisance of the zoning requirements as reflected in the Municipality's Zoning Scheme Bylaw.

While a total of 884 dwelling units are planned in the residential component, the ideal would have been between 1 250 and 1 500, as a critical threshold number. The provision of educational facilities to also satisfy a demand in the surrounding area, public transport, healthcare, and a sustainable community require minimum population thresholds, which in this instance is determined at between 1 250 and 1 500 households. The surrounding area within which the Sustainability Institute provides community and educational services, approximately in a radius of 3,5km, already accommodates an estimated 100 – 150 households, with 40 in the Village and 878 planned.

Although the node is not identified in the Stellenbosch Municipality housing pipeline as an area earmarked for social or subsidy housing development, inclusionary housing is included in the planning in accordance with the Municipality's policy (Inclusionary Zoning Policy, 2023). In terms of the Policy, 20% of the proposed residential units (176 units) need to be set aside for inclusionary housing. The Policy states that: "*Inclusionary zoning is mandatory for all new development applications under the jurisdiction of Stellenbosch Municipality that request additional development rights from the municipality within their new residential or mixed-use developments*". The value of the inclusionary housing units still needs to be determined, but it will fall into the categories as defined in the Policy and related documents. The following quote from the Policy is indicative: "*Based on the aforementioned standard definitions of affordability and the evidence gathered through the Stellenbosch housing market study, affordability in the Stellenbosch Municipality context refers to the following market segmentations – affordable (R300 000 – R600 000), conventional (R600 000 – R900 000), and high-end (R900 000 - R1.2 million)*".

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

None

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

The reason for the selection of the site is that it is included in the urban edge of the Lynedoch node. A development of this nature cannot be considered favourably outside of a designated urban edge. The alternative would be to develop in one of the three primary nodes, being Stellenbosch, Klapmuts of Franschhoek. Each of these however have limitations in terms of locational, demographic, and market factors. Stellenbosch is being extended northwards along the R304 with a development of similar scale. Klapmuts serves a completely different market, with potential residents employed along the N1 corridor. Franschhoek is too far off and does not have any likelihood of being connected to a public transport network, which is a criterion in the decision-making process. Much of the available land for development in Stellenbosch is brownfields development, where the land is currently used for other purposes and where redevelopment must occur. The proposed brownfields developments in Stellenbosch will be too costly for the majority of people seeking affordable housing and the Municipality has not been able to provide any significant subsidised housing for those who do not qualify for full state subsidies. Low and middle income earners are excluded from the housing market in Stellenbosch. The SDF recognises this shortcoming, and it states amongst others that it is necessary to focus on: "*Broadening of residential opportunity for lower income groups, students, and the lower to middle housing market segments*".

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

The Welmoed Urban Design Framework, dated April 2024, provides the rationale for the preferred layout alternative.

The framework is based on the input from the various specialists, with due consideration of the cultural landscape development indicators, the visual impact assessment, the landscaping master plan, the topography, and the existing activities of the Sustainability Institute and the nature of Lynedoch Eco Village.

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

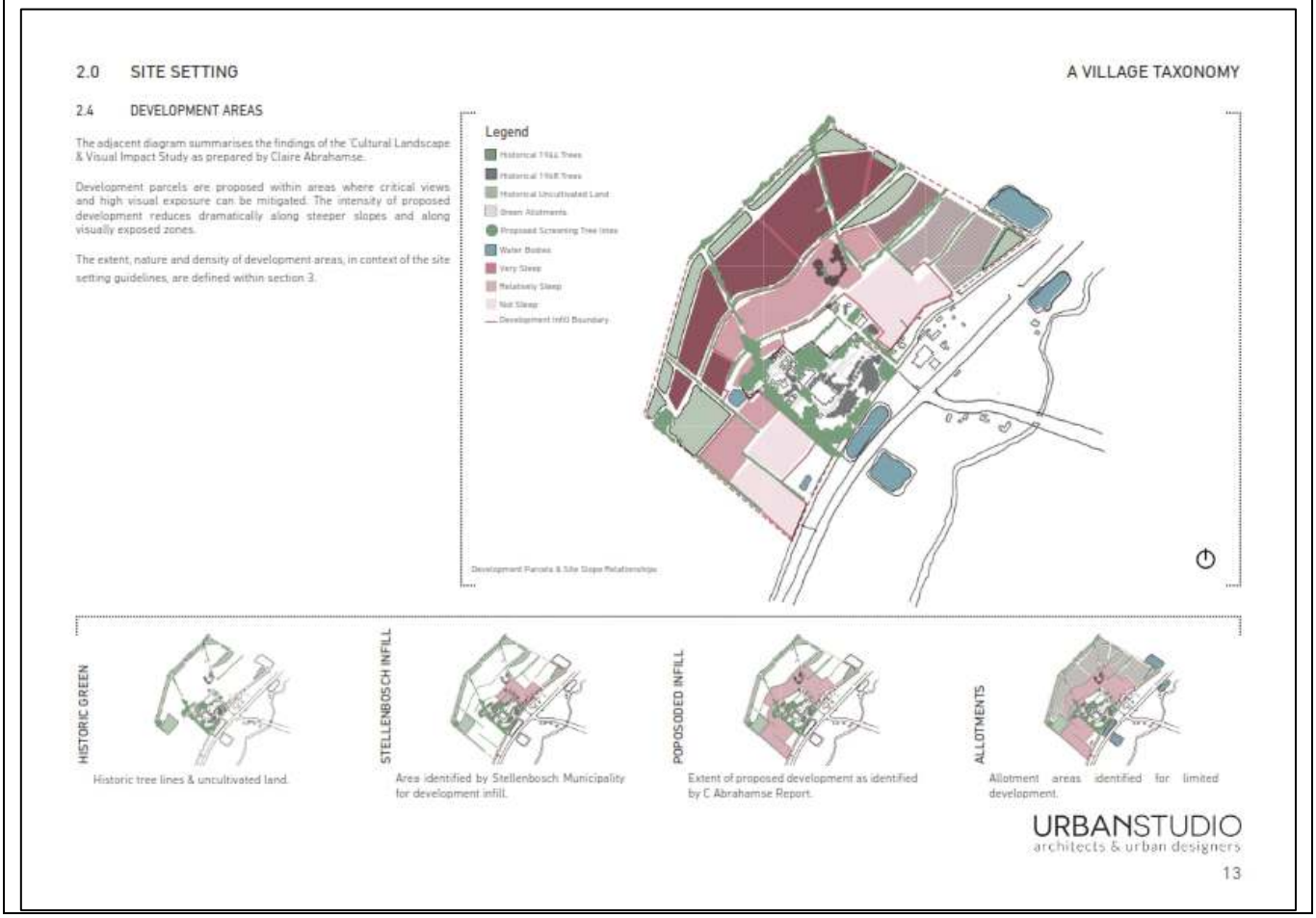
As above, a development of this nature can only be considered inside of a designated urban edge and there are no such designated areas to the southwest of Stellenbosch other than the Vlottenburg node, where an industrial park is being planned.

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

Positive
It is believed that a development on this site will contribute to the retention of higher value agricultural resources elsewhere in the Stellenbosch or surrounding municipal areas and is therefore supported.
Accessibility and movement to and from Lynedoch Village and the node will be improved, with the establishment over time of a threshold population large enough to warrant a public transport system.
In addition to the educational and other community facilities which will be added as a result of the development, there will be retail and other commercial facilities and opportunities as well, providing a benefit by reducing the residents' reliance on transport to access such opportunities.
The positive effects as a result of the establishment a larger resident community include the creation of a threshold population able to sustain larger schools catering for more grades and thus reducing the need to travel for educational purposes, to warrant the provision of healthcare facilities, community sporting facilities, public transport, and a wider range of business activities. The wellbeing of the community is thus likely to be improved by a larger settlement.
Expansion of the Lynedoch urban node and urban development of Portion 28 will not have any significant negative effect on the surrounding agricultural uses. Surrounding land is predominantly used for viticulture, all of which accessed from the surrounding farms. The likelihood of the urban development for middle income homeowners having any negative effect on the viticulture is very low, as experience in Stellenbosch has shown over many years.

Negative
The development will transform ±29 ha of farmland that was used for wine grape production.
The proposed development will have an impact on the use and enjoyment of the environment by the residents of Lynedoch Village.
A small urban community where every resident knows every other resident will change into a large community where residents are largely unknown except to neighbours and where the erstwhile sense of security will change to one of uncertainty.
The sense of place enjoyed by the existing Village residents will change from a small rural node to a small urban node.

The impact of a development on the safety, health, and wellbeing of the surrounding or receiving community cannot be measured (or predicted) over time. It is possible to predict the effects during the development phases, but once developed, the residents determine the community characteristics. The development activities will cause nuisances, like dust, noise, and an influx of labourers not resident in the area and normally perceived to be a security (safety) risk, with limited duration negative effect on the receiving community.	
1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred activity alternative.	
None.	
Provide a description of any other activity alternatives investigated.	
Provide a motivation for the preferred activity alternative.	
Provide a detailed motivation if no activity alternatives exist.	
The only activity alternative is the no-go option for retention of the land for agricultural purposes.	
List the positive and negative impacts that the activity alternatives will have on the environment.	
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 Welmoed Urban Design Framework, dated April 2024, illustrates the preferred development and layout alternative.	



PORTION 28 LAND USE TABLE			
	Site area	**45.48 Ha**	
	Land use	**Area**	**Units**
	School Component (A2)	1.78 Ha	
	Commercial (A1,B5)	0.50 Ha	
	Clubhouse Component(B5)	0.18 Ha	
	Mixed Use Component (B1-4)	0.7 Ha	515 units
	Residential (@80 du/ha)	5.88 Ha	
	Residential (@40 du/ha)	8.74 Ha	355 units
	Alottment Villas	10.31 Ha	14 units
	Total (excluding areas below)	**28.09 Ha**	**884 units**
	Detention & SW area	1.15 Ha	
	Indigenous slopes	6.43 Ha	
	Roads & squares	4.86 Ha	
	Private open space	4.04 Ha	

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

A much denser development containing 1 500 residential units was considered, but it did not fit the in with the development indicators established in terms of the visual and heritage impact assessments. It would require visible medium and high density development on the slopes above the 60m contour, with significant negative visual impact according to the specialist assessment.

A much smaller development with significantly lower density, limited development footprint, and extensive open space as shown in the Stellenbosch SDF was considered. Such a limited footprint development consisting of Block A1, A2, B1, and B5 as on the Maste Plan would probably result in the development of only 75 – 100 residential units, educational facilities and large tracts of open space, or the retention of the remaining vineyards / agricultural land. In such development the potable water pipeline from the Skilpadvlei reservoir need not be constructed, as all development would be located below the 60m contour line. The electricity, road and sewerage infrastructure would nonetheless need to be upgraded to accommodate the development.

Provide a motivation for the preferred design or layout alternative.

The preferred alternative contains a sufficient number of residential units to create a threshold population to sustain a school, and other facilities in the node, and to justify the establishment of a link to a public transport system. Moreover, it creates a sufficient consumer base for the provision of municipal services infrastructure to be installed and maintained and can accommodate the growing population in a pre-planned manner.

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

N/a

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

Same as under 1.1 above.

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:

An on-site wastewater treatment works (package plant) and water re-use system would have been an ideal technology alternative to create an irrigation water resource for surrounding farms. The Municipality has however opposed such private technology development and insists on the wastewater being treated in the Stellenbosch WWTW.

Provide a description of any other technology alternatives investigated.

Community septic system and an absorption field (reed-bed system as currently in operation for Lynedoch Village) with enhancements to improve effluent quality: recirculating sand filter and UV disinfection.

Provide a motivation for the preferred technology alternative.

Centralised municipal system allows for appropriate quality management, risk avoidance, and reuse by local farmers over a wider area.

Provide a detailed motivation if no alternatives exist.

The Stellenbosch Municipality as the water services authority does not allow for the development of alternatives.

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

Stellenbosch Municipality regularly in the news for release of effluent that is not compliant with regulated standards.

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

A mixed-use urban development in the Lynedoch node operated as an open private village under the management of a property owners' association.

Provide a description of any other operational alternatives investigated.

A mixed-use urban development in the Lynedoch node as urban settlement under the management of the Municipality.

Provide a motivation for the preferred operational alternative.

The Stellenbosch Municipality indicated that it will not allocate funds to the development or management of any nodes other than Stellenbosch town, Klapmuts or Franschhoek in the foreseeable future.

Provide a detailed motivation if no alternatives exist.

List the positive and negative impacts that the operational alternatives will have on the environment.	
Same as under 1.1 above.	
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.	
The agricultural potential study and impact assessment by Agri Informatics provides the reason. The land is not capable of being farmed viably unless significant irrigation water resources are availed to it. As it is, the land is not and can be sustainably and productively used for agricultural purposes.	
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 have been considered.	
1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.
The proposed planning and phased development of the property contribute to intensification and densification around existing urban nodes in proximity of major transport interchanges, corridors, and infrastructure by development that improves the efficiencies in service provision as set out above, on under-utilised land within an identified urban node and in an area of need where housing demand outstrips supply. It does not diminish the supply of ecological or commercially viable agricultural resources and does not have any significant negative effect on the surrounding agricultural area.	

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).
There are no no-go areas on the site. The two portions of the site where natural vegetation still occur around rocky outcrops are proposed to be retained and used a private open space for conservation purposes and as anchor points for the green network proposed through the development.

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 methodology used by Virdus Works Environmental in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risk associated with the alternatives is an accepted methodology of impact and issue identification and assessment. Identification and assessment of environmental impacts is a process during which quantitative and qualitative techniques and evaluations are applied. The application of scientific measurements and / or professional judgement leads to the determination of the significance of the probable environmental impacts associated with the proposal. Identified impacts and issues are described in terms of the nature, extent, duration, consequence, and probability, with reversibility and possibility of avoidance or mitigation also considered.

Probability	None	Unlikely	Low	Medium	High	Unknown
	0	1	2	3	4	5
Extent	Footprint	Site	Local	Regional	National	Unknown
	0	1	2	3	4	5
Consequences	None	Minor	Low	Medium	High	Very high
	0	1	2	3	4	5
Duration	None	Immediate	Short term	Medium term	Long term	Permanent
	0	1	2	3	4	5

Significance rating SR=(E+C+D)xP	
Low (L)	< 12
Medium (M)	13-27
High (H)	28-48
Very high (VH)	49 <

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.

Alternative:	Preferred development	No-go (agriculture)	SDF development
PLANNING, DESIGN AND DEVELOPMENT PHASE	See Appendix J	See Appendix J	See Appendix J
OPERATIONAL PHASE	See Appendix J	See Appendix J	See Appendix J
DECOMMISSIONING AND CLOSURE PHASE	See Appendix J	See Appendix J	See Appendix J

Potential impact	**Preferred alternative (Master plan development)**
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
1. Construction phase	
1.1 Nuisance impacts	Dust and noise during construction.
· Nature of impact	Earthmoving and construction activities will cause noise, and dust.
· Extent	Local, with abutting properties potentially affected.
· Duration	Duration of project (medium term).
· Consequence	Neighbours disturbed by noise. Dust potentially damaging crops on adjacent properties and dirtying houses.
· Probability	Heavy construction equipment will cause noise and dust will be generated by all vehicle movement on soil cleared of vegetation.
· Reversibility	The effects of dust are reversible by washing. Noise effects reverse with cessation.
· Irreplaceable loss of resources	No resources would be lost as a result.
· Avoidance	Effects are unavoidable. Effects can be mitigated through implementation of an EMPr.
· Management	EMPr to address potential effects.
· Mitigation	Limit construction times and movement of vehicles on bare untreated soil.
· Residual impact	None.
· Significance rating	H
1.2 Resource loss	Removal of vineyards and agricultural activity.
· Nature of impact	Loss of wine production and land for alternative crops.
· Extent	The agricultural production has regional effects due to it being linked to other services and service providers.
· Duration	Replacement of vineyards with urban settlement will be permanent.
· Consequence	29ha of low potential vineyards exchanged for 884 dwelling units for which a demand exists.
· Probability	Any settlement development will cause loss of vineyards which are unproductive and replaced by needed residential dwellings.
· Reversibility	Wine production is expanding to new regions as a result of climate change and cultivar adaptation. Locally irreversible but with limited negative effect.
· Irreplaceable loss of resources	Loss of wine production capacity has limited negative effect.
· Avoidance	Effects could be mitigated through refusal of urban development, but retention of vineyards and agricultural production not guaranteed.
· Management	Allow best use of land for urban development to reduce demand elsewhere in same area.
· Mitigation	Support agricultural production elsewhere and cause highest possible density and intensity of development to occur to reduce demand for urban land use elsewhere.
· Residual impact	Urban development.
· Significance rating	M
1.3 Traffic impacts	Movement of construction vehicles.
· Nature of impact	Construction vehicles using roads could disrupt traffic and pedestrian movement in surrounding area and around station.
· Extent	Extent will differ depending on the phase of development, e.g., external services, road upgrading, internal services.
· Duration	Every new development phase will have short term effects during construction.
· Consequence	Traffic congestion or disruptions might occur and risk to pedestrians.
· Probability	It is unlikely that the surrounding farms will suffer negative effects, but construction traffic will affect Lynedoch residents.
· Reversibility	The effects are immediately reversible.
· Irreplaceable loss of resources	None.
· Avoidance	Effects can be mitigated through implementation of an EMPr.
· Management	EMPr to address potential effects.
· Mitigation	Set times for movement of vehicles.
· Residual impact	None.
· Significance rating	L
1.4 Socio-economic impacts	Employment creation, influx of labourers, security of existing residents, and changing living patterns.
· Nature of impact	The construction will create new employment opportunities and benefit job seekers. Continuous influx of job seekers is however always perceived as a risk due to increased crime levels during construction periods.
· Extent	The effects will be positive and negative locally.
· Duration	Medium term positive and negative effects during construction.

Potential impact	**Preferred alternative (Master plan development)**
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
· Consequence	The potential positive socio-economic effects will improve the livelihoods of some citizens, while local residents will feel threatened during the construction periods.
· Probability	It is likely that the effects will occur.
· Reversibility	The effects are reversible as they cease when construction ceases.
· Irreplaceable loss of resources	None.
· Avoidance	Effects need to be managed to increase benefits and reduce negative effects.
· Management	Mitigation measures are required in the EMPr.
· Mitigation	Establish a labour and security (risk avoidance) plan.
· Residual impact	None.
· Significance rating	L
1.5 Bio-physical environmental impacts	Loss of habitat for fauna adapted to the agricultural environment.
· Nature of impact	The construction activities and change in use of the buildings could cause loss of habitat to birds, rodents and reptiles which have adapted to the vineyards.
· Extent	Effects will be on the site only.
· Duration	Medium term effects during construction and development.
· Consequence	The potential negative effects will be minimised by the introduction of landscape networks aimed at improving biodiversity.
· Probability	It is unlikely that the bio-physical environment will suffer enduring negative effects as a result of construction.
· Reversibility	The effects are reversible by the creation of specific biodiversity attributes.
· Irreplaceable loss of resources	Loss of mono-culture environment is unavoidable, and a new more biodiverse environment can be created through landscape networks.
· Avoidance	Avoidance of negative effects during construction is not possible.
· Management	Mitigation measures are required in an Operational Phase EMPr.
· Mitigation	No mitigation is required during the construction phase.
· Residual impact	None.
· Significance rating	L
1.6 Surface water resources	No on-site surface water resources exist or are affected. The external services for the development cross streams and there are water bodies within 500m of the site.
· Nature of impact	Construction activities could damage stream banks, bottoms, and ecosystems, or lead to runoff that could impact nearby waterbodies.
· Extent	Effects will be localised due to the nature of the environment, with potential only for minor sediment transport downstream in one water course (crossed by potable water pipeline).
· Duration	Medium term effects during construction.
· Consequence	The potential negative effects are minor as reported by specialist.
· Probability	Negative effects are unlikely if construction is managed.
· Reversibility	Negative effects of construction are partially reversible.
· Irreplaceable loss of resources	None.
· Avoidance	Effects can be mitigated.
· Management	Specific mitigation measures provided by specialist to be included in EMPr.
· Mitigation	Construction through streams to occur during dry summer months and natural vegetation disturbance to be minimised.
· Residual impact	None.
· Significance rating	L
1.7 Surface run-off and pollution	No on-site surface water resources exist. There are water bodies (dams, man-made wetlands, and the Eerste River) within 500m of the site.
· Nature of impact	Construction activities could disturb the surface and increase runoff that could impact nearby waterbodies.
· Extent	Effects will be localised if polluted or sediment bearing runoff is retained on site. If not it has the potential to affect the environment downstream.
· Duration	Medium term effects during construction.
· Consequence	The potential negative effects should be minor as reported by specialist.
· Probability	Negative effects are unlikely if construction is managed.
· Reversibility	Negative effects of sediment transport and pollution might not be reversible.
· Irreplaceable loss of resources	Significant pollution could cause resource loss.
· Avoidance	Potential negative effects can be mitigated.
· Management	Mitigation measures provided by specialist and best practice to be included in EMPr.
· Mitigation	Construction management and early creation of storm water systems.
· Residual impact	None.
· Significance rating	L

2. Operational phase

2.1 Change in social environment	Small interactive community in Lynedoch and surrounding area will significantly increase and become urbanised.

Potential impact	**Preferred alternative (Master plan development)**
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
· Nature of impact	Change in the community dynamics and management.
· Extent	Changes will only affect Lynedoch and the immediate surrounding agricultural community.
· Duration	Change will be permanent.
· Consequence	Urban settlement and increased population will lead to loss of social cohesion.
· Probability	The larger community will not have the same dynamic as the existing small village.
· Reversibility	The effects are irreversible.
· Irreplaceable loss of resources	None.
· Avoidance	Effects can be mitigated but not avoided.
· Management	A property owners' association (POA) could be implemented to mitigate potential effects.
· Mitigation	Establish a management body and POA.
· Residual impact	Less control over built environment, resource use, and security.
· Significance rating	M
2.2 Traffic impacts	Additional traffic on Vlottenburg service road and around Lynedoch Village.
· Nature of impact	Traffic congestion and increased pedestrian movement in surrounding area.
· Extent	Vlottenburg service road up to intersections with Vlaeberg and Vlottenburg Road, i.e., Baden Powell connections.
· Duration	Long term effect with gradual increase as settlement occurs.
· Consequence	Traffic congestion or disruptions and risk to pedestrians.
· Probability	All properties with access off Vlottenburg service road will experience negative effects.
· Reversibility	The effects are reversible.
· Irreplaceable loss of resources	None.
· Avoidance	None.
· Management	Road traffic management processes.
· Mitigation	Effects can be mitigated through appropriate road upgrading and establishment of a public transport system.
· Residual impact	Higher levels of traffic.
· Significance rating	H
2.3 Socio-economic impacts	Creation of opportunities for employment and business, also changing living patterns of existing residents.
· Nature of impact	The development will create new economic opportunities and benefit the larger community. Threshold population established for various services.
· Extent	The effects will be positive for a larger community and negative only locally.
· Duration	Medium term positive and negative effects during construction.
· Consequence	Positive socio-economic effects for larger community, while local residents will feel negative effects.
· Probability	It is likely that the effects will occur.
· Reversibility	The negative effects are reversible over time with residents benefitting from additional services.
· Irreplaceable loss of resources	None.
· Avoidance	Effects need to be managed to increase benefits and reduce negative effects.
· Management	Services need to be provided by developer.
· Mitigation	Developer needs to provide opportunities and services.
· Residual impact	Economic and social opportunities for residents.
· Significance rating	H
2.4 Settlement impacts	Provision of housing in high demand.
· Nature of impact	High demand for housing in Stellenbosch over range of market categories.
· Extent	Additional housing in affordable categories will benefit citizens currently residing in wider region.
· Duration	Long term positive effects.
· Consequence	The positive effects of housing in proximity of place of demand include indirect effects such as reduced traffic movement, and benefits to local businesses.
· Probability	Housing in a wide range in the affordable categories is likely according to the application.
· Reversibility	The positive effects are not reversible.
· Irreplaceable loss of resources	None.
· Avoidance	Positive effects need not be mitigated.
· Management	Inclusionary housing in terms of the Stellenbosch policy must be a condition of the development.
· Mitigation	None required.
· Residual impact	Improved housing supply for growing population.
· Significance rating	H
2.5 Visual impact	Built environment will change agricultural character of area.
· Nature of impact	The visual experience of the area will change with vineyards being replaced by an urban settlement.
· Extent	Site is visible only from certain places in the surrounding area.
· Duration	Long term effects albeit that change is accepted over time.

Potential impact	Preferred alternative (Master plan development)
Environmental issue	**Activity and significance threshold**
Impact / Criteria	**Description**
· Consequence	The effect is to the experience of the sense of place for citizens who have known the area for a long time.
· Probability	The change in character is definite, but the negativity of the effect might not be significant.
· Reversibility	The change is not reversible.
· Irreplaceable loss of resources	The rural character will be lost.
· Avoidance	Effect cannot be avoided.
· Management	Mitigation measures required in EMPr.
· Mitigation	Recommendations of the visual impact assessment to be introduced, e.g., placement of buildings, landscaping, nature of the development.
· Residual impact	Loss of rural character of node.
· Significance rating	H
2.6 Surface run-off and pollution	No on-site surface water resources exist. There are water bodies (dams, man-made wetlands, and the Eerste River) within 500m of the site.
· Nature of impact	Development increases the surface runoff and decreases the quality thereof that could impact nearby waterbodies.
· Extent	Effects will be localised if polluted or sediment bearing runoff is retained on site. If not it has the potential to affect the environment downstream.
· Duration	Long term effects.
· Consequence	The adjacent freshwater habitats could be degraded if effects are not avoided.
· Probability	Negative effects are likely if run-off is not managed.
· Reversibility	Negative effects of enduring pollution might not be reversible.
· Irreplaceable loss of resources	Enduring pollution will cause resource loss.
· Avoidance	Potential negative effects can be mitigated.
· Management	Mitigation measures provided in storm water management plan and best practice to be included in EMPr.
· Mitigation	Construction and management of storm water systems.
· Residual impact	Storm water ponds on site to be managed.
· Significance rating	M

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.

Agricultural: Land is not suitable for economically viable agriculture. Make best use of land to reduce demand elsewhere.

Socio-economic: Need is for medium and high density affordable housing. 1 500 units to be developed on the land over time.

Visual: Certain parts of the land are highly visible or sensitive landscapes. Development to be planned according to indicators.

Archaeological: The proposed development will not negatively impact on the archaeological heritage resources.

Heritage: Cultural landscape is sensitive. Development to be planned and undertaken according to indicators.

Landscaping: Landscaping can be used to mitigate the visual effects of the proposed development. Wider road reserves and visual focus areas are required to allow for appropriate landscaping.

Traffic: Road infrastructure requires upgrading. Intersections and access off Vlottenburg service road to be upgraded.

Geotechnical: Some parts of land are "made ground", i.e., filled, with limited granite intrusions and no groundwater intersections. Earthworks and foundation preparation to be cognisant of soil conditions.

Freshwater: The external services infrastructure will cross three freshwater streams. One is in a near natural state and requires special construction mitigation measures, while the other two are significantly transformed and can be improved by construction.

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

Construction phase EMPr

Geotechnical evaluation:
1. Site Clearance and Preparation. Site clearance and preparation should include but will not necessarily be limited to the following:
• Removal of grasses and trees and associated root systems.
• The removal of roots will likely require ripping and removal to spoil of approximately 0,20m of loose colluvial rootbound soils.
• Demolishing existing farm structures, foundations, septic tanks etc. These will also have to be backfilled accordingly. Backfilling protocols similar to the below test pitting regimen would be effective.

• Removal of dumped waste across the site but particularly in areas B14 and B15. Or utilization of these areas as green zones or drainage areas etc.
• Identifying the positions of the 23 test pits and removing, say, 1m of the very loose backfill, compacting the newly exposed base of the excavation to at least 95% of mod AASHTO maximum dry density and then re-using the excavated colluvium or importing geotechnically inert material to backfill the pit and compacting it to at least 98% of mod density. These operations are required wherever the test pits could affect subgrade conditions for roads and parking or founding conditions for the buildings.
2. Earthworks.
• It is assumed that level cuts to create platforms will be required. During cut to fill operations, due to the quality and post compaction strength of the colluvial soils, it is not recommended that the colluvial soils are used as recompacted fill below surface beds or foundations. Foundations should extend through the fill into at least medium dense in-situ soils or geotechnically inert imported materials.
• Once the upper root bound soils are removed, medium dense in-situ soils will form a suitable in-situ subgrade for pavements and surface beds. Loose disturbed soils can then be compacted using a vibratory roller to at least 95% MDD below pavements and 98% MDD below structures.
• During bulk earthworks, if the soils become saturated, an allowance should be made to remove and spoil saturated soils and emplace imported gravels to create temporary access and work areas. The early site drainage measures such as upslope cut off trenches should be implemented.
• Excavation in materials on site in terms of the SANS 1200DM Earthworks Specifications generally classifies as "soft excavation" in soils. With "intermediate" to "hard rock" excavation expected to occur in localized areas where granite outcrop occurs. "Boulder Class B" excavation may also occur due to the presence of granite core stones.
3. Stability of Temporary Slopes.
a. Temporary excavations for service trenches and foundations will be required. These will intersect granular colluvial and residual soils. The following batters can be used for temporary cuts:
• 0,00 to 1,0m – Vertical to 1,50m – 1:0,50;
• 1,00 to 1,50 – 1:0,5;
• 1,50 to 2,50 – 1:1.
b. The following precautions are required: All trenches must be reviewed by a suitably qualified person. If groundwater is intersected work must be stopped and the stability reassessed. No surcharging should be allowed near excavations.
4. Stability of Permanent Slopes.
a. In areas of cut permanent slopes with retaining structures may be required. In order to undertake design, the parameters as indicated in Table 2 of the Geotechnical Evaluation should be considered.
b. The granular colluvial soils will have a unit weight of 17 to 19kN/m3 zero cohesion and an internal friction of 32° to 34°. Alternatively, if a larger area is provided batters of 1:1,5 could be considered throughout the materials, but the slopes would have to be well vegetated and provided with sufficient drainage to prevent erosion and sloughing.

Archaeological recommendations:
1. No mitigation required for identified pre-colonial archaeological resources.
2. Simple archaeological recording of historic ceramics.
3. The structures directly related to the Drie Geuwels Hotel building should be retained in form in any future development.
4. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Geuwels should be retained in form.
5. No development within 20m of the concrete boundary marker at LYN149 (33.977012°S 18.769523°E).
6. Archaeological monitoring of all development within 50m of the structures directly related to the Drie Geuwels Hotel and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
7. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
8. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
9. The HWC Fossil Finds Protocol is to be implemented.
10. Although unlikely, there may be buried or currently hidden archaeological material, including human remains, present on site and should these be uncovered or exposed during excavations or vegetation clearing, HWC should be notified immediately and all development work on site (preconstruction included) should be halted until these finds are investigated by HWC (Att: Ms Waseefa Dhansay 021 483 9685).

Freshwater Ecological assessment recommendations:
1. Essential mitigation measures to address alteration of flow regime during the development/construction phase:
 Avoid the impact as far as is practically possible by undertaking the watercourse crossings (vegetation clearing and trench excavations) during the dry summer season, where possible;
 If installation of the external services cannot be undertaken prior to the onset of the winter rainy season then the Environmental Control Officer (ECO) must advise on measures to ensure that run- off from cleared areas is contained and encouraged to infiltrate rather than discharge directly into the downstream watercourses;
 Timeously revegetate areas cleared by construction activities near the watercourse crossing points with suitable indigenous plants.
2. Essential mitigation measures to address the development/construction phase impact of erosion and sedimentation:
 Avoid the impact as far as is practically possible by undertaking the watercourse crossings (vegetation clearing and trench excavations) during the dry summer season, where possible;
 If the installation of the external services cannot be undertaken prior to the onset of the winter rainy season then the ECO must advise on measures to ensure that sediment plumes from the trench excavation are contained and run-off from cleared areas

upslope of the watercourses is contained and encouraged to infiltrate rather than discharge directly into the receiving watercourses;

 Formulate and implement a Development/Construction phase EMP which includes the following specifications:

o No stockpiles may be located within 30m of the crossing point;

o The ECO shall designate the site for stockpiling (note this should preferably take place at the Construction Camp but an alternative site can be identified closer to the crossing site, but no closer than 30m, in consultation with the ECO);

o Protect soil stockpiles, if required, from erosion using a tarp or erosion blankets;

o Implement erosion control measures in order to prevent erosion and sedimentation of the receiving watercourses as required by the ECO. For example. strategically place straw bales or sediment fences/traps, to divert stormwater away from areas susceptible to erosion etc.);

o Any sediment contaminated runoff should be contained and allowed to settle before being discharged. The settled-out sediment collected in this manner should be cleared manually as needed and removed from site;

o The ECO shall check erosion control measures weekly to ensure these are still intact (and cleared of sediment in accordance with the recommendations above) as needed;

o The ECO shall check the site for erosion damage and sedimentation after every heavy rainfall event. Should erosion or sedimentation be noted, immediate corrective measures must be undertaken; and

o Ensure that any area within 50m of the crossing point that is damaged as a result of construction activities is suitably and timeously rehabilitated to the satisfaction of the ECO.

 Any areas that need to be cleared in close proximity to the crossing points because they contain listed alien invasive species or are cleared for any other purpose must be revegetated timeously with appropriate indigenous vegetation.

3. Essential mitigation measures to reduce water quality impairment associated with construction activities:

 Formulate and implement an EMP for the development/construction phase which includes the following specifications:

o Where cement is mixed in a cement mixer ensure that the cement mixer operates at all times within a bunded area with an impermeable base;

o Where cement is mixed by hand, ensure that the cement is mixed at all times in impermeable containers or in a bunded area with an impermeable base;

o All wet and dry cement deposits outside the contained areas are to be cleaned at the end of each day and disposed of off-site as rubble;

o Store fuel, chemicals, and other hazardous substances in suitable secure weather-proof containers with impermeable and bunded floors to limit pilferage, spillage into the environment, flooding, or storm damage and to be located at least 100m from any wetland;

o Inspect all storage facilities and vehicles daily for the early detection of deterioration or leaks;

o Clean up any spillages (e.g. concrete, oil, fuel), immediately. Remove contaminated soil and dispose of it appropriately;

o Dispose of used oils, wash water from cement and other pollutants at an appropriate licensed landfill site. Disposal of any of these waste materials into any watercourse is strictly prohibited;

o Dispose of concrete and cement-related mortars in an environmental sensitive manner (as this can be toxic to aquatic life). Washout may not be discharged into any watercourse;

o Provide an adequate number of portable toilets where work is being undertaken. These toilets must be located at least 30m from the watercourse and must be serviced regularly in order to prevent leakage/spillage;

o All contaminated soil removed from the site by excavator or hand is to be immediately placed in a skip (i.e. no stockpiling of contaminated soil on-site);

o All skips containing waste shall be immediately transported to landfill for disposal when the skip becomes full;

o Any skips containing solid waste at the end of the day shall be covered to prevent wind from blowing the waste away; and

o Receipts for the safe disposal of solid waste shall be kept on record by the Contractor.

4. Essential mitigation measures to minimise biota loss associated with construction activities:

 Clearly demarcate the edge of the 'clean' watercourse (viz-a-viz the un-channelled valley bottom wetland) for a distance of 20m either side of the crossing point using weather-proof markers for the full duration of the construction phase;

 Any part of the wetland upstream and downstream of the marked-off portion of the wetland must be off-limits to construction workers, vehicles and machinery unless authorised by the ECO); and

 Construction material stockpiles should be kept at least 20m from the wetland edge.

5. Essential mitigation measures to address the alteration of flow regime during the operational phase:

 Ensure that all pipelines within the 1:50 year flood lines of the watercourses are lined with an internal Kevlar or similar sleave;

 Inspect the water supply and sewerage pipelines within the 1:50 year flood lines of the affected watercourses annually and repair / address leaks timeously.

6. Essential mitigation measures to address water quality impairment during the operational phase (both alternatives):

 Ensure that all new sewerage pipelines within the 1:50 year flood line of the Sand River are lined with an internal Kevlar or similar sleave;

 Inspect all sewerage infrastructure within the 1:50 year flood line annually and repair / address leaks timeously.

Operational phase EMPr

Implement the recommendations of the TIA to accommodate the development traffic:

1. Dedicated left- and right-turn lanes along all approaches, and traffic signals be provided at the Vlaeberg Road/Lynedoch Road intersection.

2. Dedicated left- and right-turn lanes be provided along all approaches to the development accesses.

3. That the existing pedestrian crossing across Lynedoch Road (at the railway station) be raised and that the existing sidewalk along Lynedoch Road be improved and extended up to the eastern development-access.

Implement the recommendations of the electrical engineer:
The design load of 2.5kVA as calculated for each dwelling unit must be supplemented with the following alternative energy measures to limit energy consumption from the national grid:
1. Gas stoves and ovens to be used.
2. Gas geyser to be used.
3. A 4,5kW PV solar system to be installed per dwelling unit. The PV solar efficiency of each induvial dwelling to be maximised by design according to the roof structure, aspect, and exposure.

Implement the recommendations of the HIA:
1. The historic farm barn structures and small "managers house" should be retained and adaptively re-used.
2. All existing areas of Fynbos and/or natural vegetation must be retained and reinforced on the site.
3. The spring course identified on the c1938 SG Diagram and the dam along the roadway to the south-east should be preserved as assets of the site.
4. The mature trees on and around the site are higher-order landmark elements and should be retained.
5. A plan for the staggering or replacement of mature planting must be put in place. Existing treelines should be reinforced and extended to screen the development.
6. Planting as visual screening must be used extensively on the southern slopes which are visually exposed from the east.
7. New buildings must follow the contour, as the existing buildings within the Lynedoch node currently do.
8. Verges/Pavements: It is preferred that verges and pavements are grassed, hard-packed soil or brick paving, and planted with trees. Brickwork and laterite surfacing should be preferred to tarmac throughout.
9. Boundary Treatments: High and solid walls are not permitted, as well as pre-cast concrete fencing, exposed blockwork, and face-brick walling. Historic boundary elements such as fences and hedges must be preserved and extended as far as possible.
10. Street-facing stoeps are a common feature of the buildings in the area and new residential development should include these elements.
11. Heights: New buildings must respond to and interpret the character-giving aspects of the site. New buildings should predominantly be no more than double storey.
12. Materials, Colour and Architectural Detail: Building materials should be compatible with traditional materials in terms of scale, colour, and texture.
13. New buildings should be of a walled architectural type. New structures should be painted a muted colour and be rectilinear in form. Corrugated roofs should be darker colours.
14. Scenic Route Restrictions within 500m of the roadway: Foreground guidelines:
a. Avoid the obstruction of mountain views along proclaimed scenic routes and avoid visual intrusions, such as inappropriate signage (billboards) and infrastructure, including transmission lines. Also, prevent the obstruction of views towards important cultural features.
b. New buildings must be carefully sited to avoid the blocking views and erosion of its informal agricultural edges: hard boundary treatments (such as solid walls), over-scaled entrances, signage clutter, and road- related interventions affecting its sense of fit in the landscape must be avoided.
c. Ensure appropriate design of road verges, stormwater structures, fences, farm stalls and picnic sites, which should be in character with the natural or rural surroundings. Insensitive road 'improvements', road widenings, out of scale flyovers and bridges are to be avoided, as they detract from the rural character of the Winelands.
d. Avoid over-engineered construction details, such as concrete kerbs and asphalt parking /pedestrian areas.
e. Scenic Visual Linkages: New buildings must be located to avoid the blocking of existing visual links between urban agricultural and urban development areas including framed vistas.
f. The natural character of Fynbos vegetation, especially along scenic route corridors should be embraced, by carefully considering the effect of out of place 'landscaping' often associated with over-scaled entrance structures.
g. Other developments (not covered in one of the items above) should preferably not be allowed in the 500m scenic route corridor and should undergo a detailed Visual Impact Assessment with mitigation before they can be considered (from the list of deviated land-use documented for the Stellenbosch Winelands:
• Farm stalls/restaurants.
• Nurseries/mixed use/garden centres/timber yards.
• Greenhouses, agricultural netting, chicken broilers, strawberry fields.
• Subdivisions, gated communities, shopping centres, business parks.
• Large scale industrial structures.
• Open Air Markets.
15. Scenic Route Restrictions within 500m of the roadway: Background guidelines:
h. Avoid development on rocky outcrops or ridgelines.
i. Prevent construction of new buildings on visually sensitive, steep, elevated or exposed slopes, ridgelines, and hillcrests.
j. Avoid the construction of over-scaled private dwellings and other structures in locations of high visual significance.
k. Respect traditional settlement patterns.
l. Promote urban densification within the historic node to protect the rural landscape as the main communal asset.
m. Respect the layout, scale, massing, hierarchy, alignments, access, landscaping and setting of the existing settlement pattern.
n. Prevent the gentrification of rural settlements through "lifestyle rural estates".
o. The development of security estates and gated communities must be prevented.

Archaeological recommendations:
1. No mitigation required for identified pre-colonial archaeological resources.
2. Simple archaeological recording of historic ceramics.
3. The structures directly related to the Drie Geuwels Hotel building should be retained in form in any future development.
4. Historic early C20th roads as depicted in the SG Diagrams and related to Drie Geuwels should be retained in form.

5. No development within 20m of the concrete boundary marker at LYN149 (33.977012°S 18.769523°E).
6. Archaeological monitoring of all development within 50m of the structures directly related to the Drie Geuwels Hotel and all upgrades to extant historic farm roads, by a qualified archaeologist and any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.
7. Archaeological monitoring of areas with no current visibility, including any exposed areas of Lynedoch road, during earthworks by qualified archaeologist and any archaeological material uncovered should be recorded and photographed, unless deemed significant enough to halt construction.
8. If any human remains are found, work in the immediate vicinity is to stop, SAPS Accidental Finds Protocol is to be followed, and Heritage Western Cape to be notified immediately.
9. The HWC Fossil Finds Protocol is to be implemented.
10. Although unlikely, there may be buried or currently hidden archaeological material, including human remains, present on site and should these be uncovered or exposed during excavations or vegetation clearing, HWC should be notified immediately and all development work on site (preconstruction included) should be halted until these finds are investigated by HWC (Att: Ms Waseefa Dhansay 021 483 9685).

Geotechnical evaluation:
1. Foundation Recommendations. The following options should be considered:
a. Single and double storey structures. After the recommended bulk earth works and preparations, found the structures in at least medium dense colluvial or residual soils using reinforced strip or pad footings with modified construction techniques.
b. Articulation joints should also be considered at the cut to fill transition of each structure. While modified construction should account for minor collapse and variability that may occur and minimize differential settlement between varying substrates. If foundation depths through fill soils are to be reduced, consider importing geotechnically inert materials to form a soil mattress.
c. Foundation inspections will be required to ensure ground conditions are as specified. A bearing pressure of 150kPa would be achievable on medium dense natural and in-situ granular soils.
d. Where deep made ground / fill soils occur, removal of these soils and replacement with an engineered soil mattress could be considered. Or founding of structures below the uncontrolled fill onto medium dense in-situ soils using pad footings or caissons.
e. The foundations and surface beds should be designed to tolerate alkaline soil conditions. This based on laboratory results that indicate pH values of between 8.5 to 9.0.
f. A Phase 2 geotechnical investigation will be required. This to confirm the ground conditions are as anticipated after bulk earthworks have been completed.
2. Pavements and Surface Beds
a. If loose soils occur, re-compaction of the subgrade will be required. Once compacted, or where medium dense in-situ soils occur, the granular colluvial and residual soils would form a suitable in-situ subgrade (conservatively anticipate G9 quality) for surface beds and pavements.
3. Use of On-site Soils for Backfill
a. The colluvial soils classify at best as G9 with two of the three samples classified as <10. Through control testing and careful selection, G9 soils could be identified and utilized on site for general fill. But these soils should not be compacted and utilized below foundations or surface beds.
b. The residual granite with completely weathered granite gravels classified as G7. If an excess of these materials occurs, then these soils could be utilized on site. However, continuous control testing would be required as it is unlikely that these soils will be readily available.
4. Drainage
a. During the rainy season, surface water flow can be expected across the site. Measures to prevent erosion would be as follows:
• Cut off trench along the upper portions of the site with surface water diverted into formalized drainage areas.
• V drains upslope of proposed structures and parallel to paved access roads and parking areas.
• Also allow for collection of rainwater through downpipes and drains directed away from structures.

Freshwater Ecological assessment recommendations:
1. Essential mitigation measures to address the alteration of flow regime during the operational phase:
 Ensure that all pipelines within the 1:50 year flood lines of the watercourses are lined with an internal Kevlar or similar sleave;
 Inspect the water supply and sewerage pipelines within the 1:50 year flood lines of the affected watercourses annually and repair / address leaks timeously.
2. Essential mitigation measures to address water quality impairment during the operational phase (both alternatives):
 Ensure that all new sewerage pipelines within the 1:50 year flood line of the Sand River are lined with an internal Kevlar or similar sleave;
 Inspect all sewerage infrastructure within the 1:50 year flood line annually and repair / address leaks timeously.

Storm water management plan:
The property owners' association must undertake the following management actions:
1. Inlet structures and manholes.
 Clean and remove litter.
 Clean and remove sand and silt.
 Inspect for damages and implement remedial action.
6 month basis (at least once before winter).
2. Pipework
 Clean and remove litter.
 Clean and remove sand and silt.
 Inspect for damages and implement remedial action.
6 month basis (at least once before winter).

3. Head wall and gabion structures.
 Clean and remove litter.
 Clean and remove sand and silt.
 Inspect for damages and implement remedial action.
6 month basis (at least once before winter).
4. Vegetated channels
 Clean and remove litter.
 Maintain grass to a height of below 50mm.
 Remove sediment from channel as required.
Continuous, but not less than once per month.
5. Embankments of vegetated channels, swales, and attenuation ponds.
 Inspect embankment for signs of erosion.
 Implement remedial action as required.
6 month basis.
6. Plant species.
 Inspect plant species for successful establishment. If unsuccessful plant new/ different species.
6 month basis

Waste management plan:
The property owners' association must undertake the following management actions:
1. Register as waste minimisation / management club in keeping with the Stellenbosch Municipality Integrated Waste Management Bylaw, 2021.
2. Conclude a contract with an accredited service provider, to collect waste generated by the development in keeping with the Stellenbosch Municipality Integrated Waste Management Bylaw.
3. Submit the integrated waste management plan that forms part of the EMPr to the Municipality for approval.
4. Cause separation of recyclable and non-recyclable material at the point of source.
5. Set targets for waste reduction through waste minimisation, re-use, recycling, and recovery.
6. Determine methods for monitoring and reporting on the implementation of the integrated waste management plan.

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.

None.

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

The impact of a development on the safety, health, and wellbeing of the surrounding or receiving community cannot be measured (or predicted) over time. It is possible to predict the effects during the development phases, but once developed, the residents determine the community characteristics.

On the one hand the development activities will cause nuisances, like dust, noise, and an influx of labourers not resident in the area and normally perceived to be a security (safety) risk, with limited duration negative effect on the receiving community. On the other hand, these negative effects will be the result of all development within existing urban areas or designated urban edges where there are existing resident communities, i.e., the negative effects cannot be avoided. These are necessary "evils" to cater for a growing population.

There are however positive effects as a result of the establishment a larger resident community, e.g., the creation of a threshold population able to sustain larger schools catering for more grades and thus reducing the need to travel for educational purposes, to warrant the provision of healthcare facilities, community sporting facilities, public transport, and a wider range of business activities, to mention a few. The wellbeing of the community is thus likely to be improved by a larger settlement.

Potential impact	**Development issue / Activity**	**Potential effect**	**Remedial / mitigation measure**
Quality of life of citizens	Rural setting to change to an urban setting. Loss of "freedom to roam" by informal use of under-utilised agricultural holding.	Loss of uniqueness of Lynedoch Village with perceived effect on property values.	Plan settlement with elements of the existing landscape and assets retained. Phase growth over time to systematically effect change.
Health and well-being of citizens	Disturbances during construction. Change in environment post construction.	Dust, noise, and emissions which could lead to health issues. Houses and assets could be affected by dust. Citizens could be affected by noise. Sense of place could be lost, and existing residents could feel negative about it. New residents would feel positive about finding a place to settle in a desirable environment. Feeling of ruralness and open space will be lost for existing residents, while new residents will enjoy the relative ruralness of the setting.	Construction and operational management plans to be prepared and implemented. Planning and development to incorporate features that would create an attractive human habitat and environment for all residents.
Disintegration of community	Small integrated community becomes a larger, less integrated, and cohesive community.	Management of the home owners' association and Village becomes more difficult and complex.	Establish home and /or property owners' associations to assist in managing the social and other

			aspects of the new urban environment.
Change in built environment	Existing community / Village becomes surrounded by urban development.	Micro-climatic changes.	Plan settlement with elements of the existing landscape and bio-physical assets retained. Phase growth over time to systematically effect change.
Loss of agricultural resource	Removal of vineyards and fields which provided a rural setting, but no meaningful economic opportunities.	Seasonal agricultural activities no longer have a negative effect on the citizens. Insignificant loss in productive capacity of the area.	No mitigation required. New development brings economic opportunity for more employment seekers.
Loss of natural resource	Land surrounding the Village becomes an urban environment with altered bio-physical characteristics.	Increased surface run-off and loss of habitat for fauna that survived in the agricultural setting.	Planning of the development must ensure sufficient greenery and vegetation to in corridors to enhance the urban environment and create storm water retention ponds.
Loss of cultural landscape	Vineyards deemed of cultural significance are converted to an urban setting.	Stellenbosch area and Baden Powell Drive become less attractive as a tourist destination.	Establish an attractive settlement with features that produce a desirable human habitat.
Municipal administration and service delivery	Additional ratepayers and residents to be provided services. New connector services infrastructure for maintenance.	Additional revenue and expenditure to local authority.	Manage the settlement through a property / home owners' association and reduce the administrative demands on the Municipality by also managing services infrastructure.
Services infrastructure	New services infrastructure required as existing Lynedoch was designed only for the Village. Municipal services need to be extended to provide appropriate connections.	No negative effect on existing community. Additional extent of municipal (link) services infrastructure.	Operational management of internal services becomes a property owners' association function, while only external services are municipal.
Roads and access	Major road upgrading on and off site required. Non-motorised transport facilities such as sidewalks for pedestrians to be created and Lynedoch (service) Road to be upgraded.	Increased traffic in and around the Village. Better access to the Village and the Station area. Effect on the abutting bio-physical environment.	Create alternative entrances and access to the settlement and improve the existing deficient roads with no sidewalks for pedestrians.
Traffic	Increased traffic on access roads.	Increased risk for pedestrians and farm traffic.	Improve road layout and design to create safe NMT facilities where permitted by relevant authorities.
Security and vulnerability of citizens	A larger community means a less connected community with more uncertainties and less control, a greater sense of insecurity for existing residents. Shorter distance to destination for new residents improves their sense of security and vulnerability.	Need for increased security and integration measures in the community.	Establishment of a property owners' association could mitigate the effects.
Pressure on educational facilities	A larger population increases the demand for educational and social facilities, with limited investment in such facilities by government.	Overcrowded schools.	Provide additional private educational facilities and attract a private operator.
Pressure on social facilities	A larger population increases the demand for health and social facilities, with limited investment in such facilities by government.	Overcrowded facilities.	Consider provision of a club house which includes space for social facilities and where private practitioners can provide services without having to develop own offices and rooms.
Air quality	A change in use from agriculture to urban settlement will lead to increased traffic.	Lower air quality.	Reduce the need for vehicle use inside of the settlement by provision of mixed use space where retail and other needs can be met.
Affordable housing provision	Inclusionary and other forms of affordable housing to be provided.	More housing for lower income families subsidised by government in the consumption of services.	Provide inclusionary housing as per the Municipality's policy.

Economic impact	Urbanisation is proven to be a contributor to economic growth.	Increased economic opportunities in the community. Loss of or effect on the landscape character will not have any proven significant effect on tourism.	Settlement will provide more opportunities than the current agricultural use.

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.

The primary assumption in the land development application is that the national, regional, and local economies will not grow any faster or stronger in the coming five years than at present and that therefore the provision of public transport will not improve, but that the demand for affordable housing and demand for employment opportunities will remain the same, which is high. It is further assumed that the agricultural sector would need to be strengthened and supported if it is to overcome the effects of settlement development for large unemployed communities and climate change. The farms in the area range in size from small to well above the municipal average. The crops that are produced are varied and the water demand for the continued production of vegetables, vineyards, and irrigated grazing is increasing, while the supply of irrigation water is not growing, and climatic conditions are requiring increased irrigation or crop protection through shade netting and cover, albeit both climate change responses are not acceptable and desired in the approved Stellenbosch Heritage Survey, 2019.

The IDP lists a number of spatial challenges, as indicated in the land development application. Of note is the reference to the need to adapt to climate change, with reference to the current agricultural use of the property, which is no longer sustainable, and the need for the provision of planned urban settlements for those who cannot afford to live in the low density unaffordable residential neighbourhoods of the major towns.

The construction and operational phases of the development need to be managed according to the recommendations of the geotechnical evaluation and the storm water management plan.

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

None.

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 urban design framework is based on the development indicators established by the various specialists. The first two specialist input were the Agri Informatics Agricultural Impact Assessment and the Demacon Demographic and Market Assessment. These determined that the agricultural use of the property is not viable or sustainable and that there is a demand / need for 1 500 odd residential dwellings in an integrated urban settlement in the Lynedoch node. All specialists received the same input assessments and considered the different site sensitivities from the different specialist viewpoints, leading to the determination of a site sensitivity map and development indicators, on which the urban design framework is based, and to which is added the landscape management plan to ensure further mitigation of any potential visual effects.

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

AVOID – The site has been farmed and fully cultivated with vineyards except for two rocky outcrop areas and the area of excavation below the neighbour's dam in the northeastern corner. It thus does not contain environmentally sensitive features or elements. External municipal services infrastructure associated with the proposal has to cross three streams, of which only one is unmodified. The impacts on non-tangible elements associated with the development have been assessed and considered in the planning and design process. Adverse impacts have been avoided where possible.
MINIMISE - The adverse impacts relating to the social, heritage, visual, and traffic impacts, which could not be avoided, can be minimised through the mitigation measures to be incorporated in the EMPr.
RECTIFY - Rehabilitation of the streams where external municipal services infrastructure is installed will be undertaken as per the specialist recommendations. Landscaping of the development as recommended in the landscape master plan will enhance the biodiversity of the site and soften the visual impact thereof.
REDUCE – Energy efficiency measures and actions as recommended in the electrical infrastructure report will reduce demand. Waste generated on site to be reduced in keeping with the integrated waste management plan to form part of the EMPr.
OFFSET - No biodiversity offset is required due to the nature of the site that is covered in vineyards and transformed.

SECTION J: GENERAL

1. Environmental Impact Statement

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

Although the Department of Agriculture, Land Reform and Rural Development did not issue consent for the exclusion of the property from the provisions of the Subdivision of Agricultural Land Act, 1970, (DALR&RD) Act 70 of 1970, the specialist finding by Agri Informatics indicates that the development proposal will not have significant adverse impact on agricultural resources. Moreover, as the land is and has been included in the urban edge of the approved Stellenbosch Spatial Development Framework (SDF) since 2010, to which the DALR&RD was a party and did not object (see PPP summary of approved 2019 and 2023 SDF). Thus, the proposed nodal development is deemed not to have significant negative environmental effect on agricultural resources.

The SDF includes the entire property in the urban edge, but since 2019 indicates only a portion of the property as designated for settlement development as "*further accommodation for students and staff within a compact, pedestrian oriented, child friendly community*". The settlement is "*not prioritized for development at this stage*" but when public transport systems can be expanded. The Municipality will also not invest in the provision of external services to the node.

There is an identified need for housing and related uses in the area, predominantly in the affordable market categories.

There are no botanical, freshwater, or faunal constraints associated with the proposed development of Portion 28 of Farm 468.

The Heritage and Archaeological Impact Assessments confirm that the proposed development could occur without significant negative effect on the heritage, archaeological, and cultural resources of the area, subject to certain mitigation measures implemented in the design of the development. The two remnants of natural vegetation located high up the slopes on the property boundaries were identified as anchor points for landscaping as recommended by the visual specialist. To this end the urban design framework considered the development indicators as provided by the various specialists and contained the footprint of the development to the less sensitive areas of the site and grading the development from high density in proximity of the public transport systems to low density higher up the slope.

The traffic impact assessment identified and assessed certain impacts and recommended mitigation measures, such as the creation of three accesses and upgrading of intersections and pedestrian routes.

GLS, as the municipal civil services infrastructure advisor, has indicated that the bulk infrastructure has the capacity to accommodate the proposed development, subject to the installation of external (linear) services infrastructure to connect to the bulk services. The external water and sewerage services do not trigger an environmental authorisation application, but the potential effects thereof on the biophysical environment were assessed and a freshwater specialist assessment undertaken for the three stream crossings required for installation. The potential negative effect of the stream crossings can be mitigated.

Upgrading of and connection to the ESKOM grid is necessary for the development. The upgrading and external linear services do not trigger an environmental authorisation application and ESKOM has given confirmation of the availability of the capacity. The demand for energy is proposed to be reduced by measures recommended by the electrical engineer.

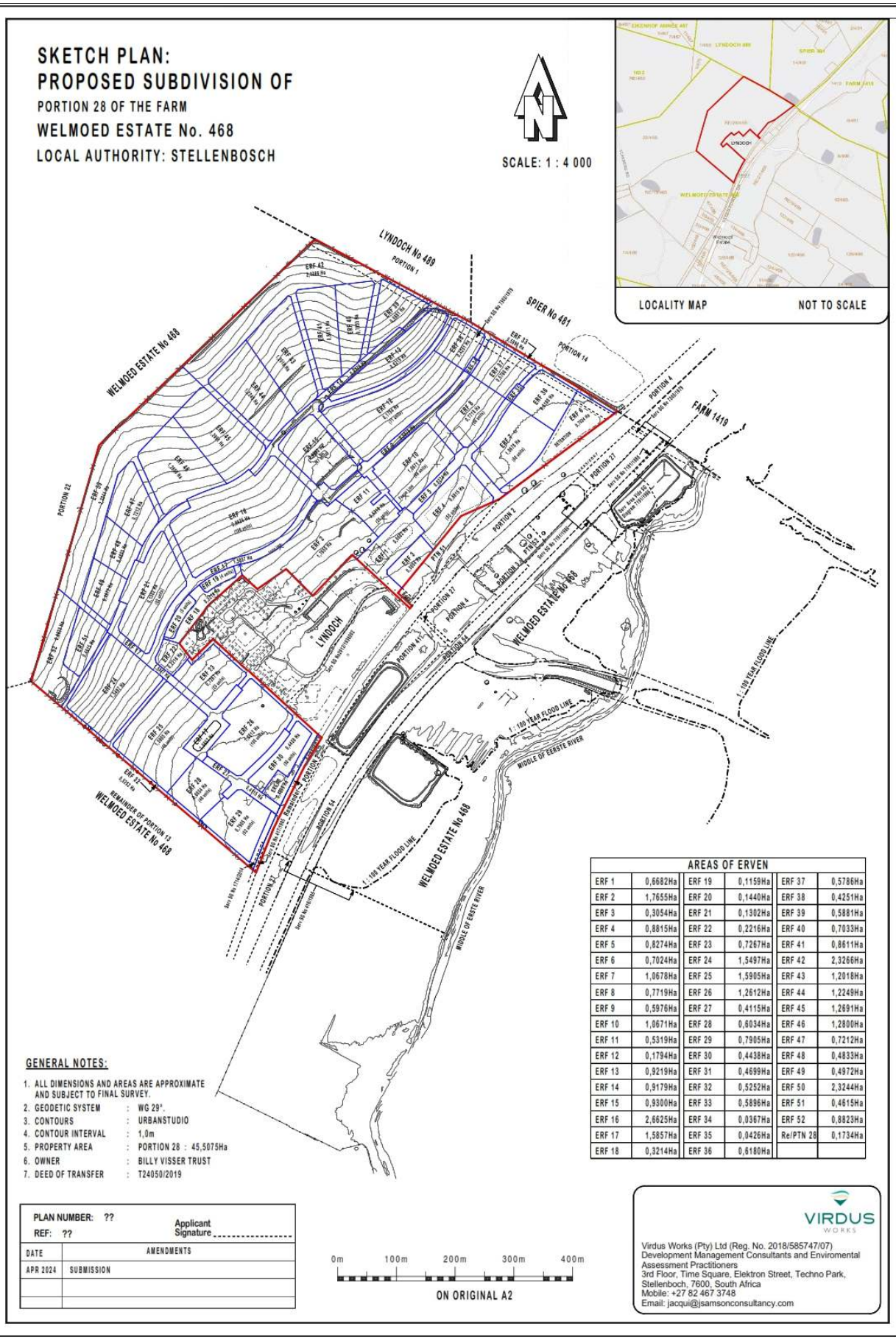
An assessment of the geotechnical situation determined that the site contains significant volume and area of "made ground", i.e., introduced fill. The site is sufficiently stable for development purposes subject to certain precautions relating to trenching, cutting, use of site material for fill, and management of storm water.

A storm water management plan has been prepared by the civil engineer and it responds to the requirements of the geotechnical assessment and the identified effect of the development on run-off. The development layout was adjusted to accommodate the storm water management proposals.

- The farm is not economically viable, and the agricultural resource is of low value.
- The property is located within the urban edge and indicated for development subject to certain guidelines and constraints.
- Any urban development will cause a further lowering of the already identified low agricultural potential of the site.
- The proposed development surrounds the existing Lynedoch Village and is within walking distance of the Lynedoch Station and the bus route on Baden Powell Drive, i.e., public transport.
- External / linear services upgrades have to be u, as confirmed by ESKOM and the Municipality.
- The population of the entire region is constantly growing, and the growth is projected to continue for the medium to long term. Planning and project assessment should thus focus on the medium to long term and not short term.
- The impacts on the historical and cultural environment can be mitigated.
- The traffic impacts can be mitigated.
- The effects of the construction activities can be mitigated.
- Social effects are the most difficult to manage and mitigate, but there are positive (for people seeking housing in the area) and negative effects (for the existing residents of Lynedoch) which are deemed to balance the effects.
- Operational effects on the provision of services can be managed and mitigated by the retention of the settlement as a private village, as in the case of the existing Lynedoch settlement.

With due consideration and assessment of the potential environmental effects associated with the proposed development, the conclusion is that the proposed development will not have any significant or detrimental effects or impacts on the environment. Impacts can be mitigated by the implementation of an EMPr and where not, e.g., the expected negative social impacts, progressive adaptation is required and will be an effect regardless of where the development occurs.

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)



Erven 13 and 24 contain the only remnants of natural vegetation and Erf 6 contains the uncultivated land below the neighbour's dam.

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.
See Appendix J and Section H, Paragraph 4 above.	

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

1. IMPACT MANAGEMENT OUTCOMES - PRE-CONSTRUCTION ACTIVITIES

The following outcomes are desired during the construction planning and preparation phase (following numbered items):

1.1 Approvals, permits and licensing requirements for operations

All engineering designs and plans relevant to the phase of the development under construction must be submitted to the Municipality and any other relevant authority for approval prior to commencement of any construction activities. Plans for all buildings and structures must be submitted to the Municipality for approval prior to commencement of any building construction.

Construction activities must comply with the authorisation and the EMPr.

1.2 Method statements

Method statements from the contractor will be required for specific sensitive actions on request of the authorities or the ECO. A method statement forms the base line information on which sensitive area work takes place and is a "live document" in that modifications are negotiated between the contractor and ECO, as circumstances unfold. All method statements will form part of the EMPr documentation and are subject to all terms and conditions contained in the original EMPr document. The contractor must submit the method statement to the ECO, who must ensure that it is workable and approve it before any particular construction activity commences. Work may not commence until the method statement has been approved by the ECO, or if it requires a departure from the authorisation / EMPr, then also the authorities.

A method statement describes the scope of the intended work in a step-by-step manner for the ECO to understand the contractor's intentions. This will enable interaction in devising mitigation measures, which would minimise environmental impact during these actions. For each instance where the contractor must submit a method statement, it should clearly indicate the following:

- What: a brief description of the work to be undertaken;
- How: a detailed description of the process of work, methods, and materials;
- Where: a description / sketch of the locality / outcome of work (if applicable);
- When: the sequencing of actions with due commencement dates and completion date estimates; and
- What thereafter: how the work area will be rehabilitated and returned to its original state prior to the activity or the agreed state.

All work in a "no-go" area shall be subject to the prior submission and approval of method statements, as will all work outside of the site boundaries, e.g. where the erosion occurs downstream from the dam. A method statement will be specifically required for each of the following:

- Construction of external services through streams.
- Any construction activities on land other than the site (Portion 28 of Farm No. 468).
- Any construction activities over or along the bulk water pipeline servitude along the northeastern boundary of the site.

1.3 Environmental engineering design requirements

The works must make special provision for erosion and siltation prevention. The engineer must prescribe methods and designs for water run-off systems that feed into detention structures and the storm water management infrastructure on the site and for containment of effects in stream courses through which infrastructure will be installed.

- Run-off from any cleared and hardened surface must be managed to reduce or avoid the risk of erosion and effect on the river systems, primarily through siltation and reduced water quality.
- No surface drainage of water from any construction activity shall be allowed to run off the construction site other than through a planned and designed system.
- All contaminated water from the construction site must be contained on the site and be allowed to filter into the soil in a position where no erosion risk occurs or it must be polished by the removal of all contaminants, e.g. litter, cement, silt, acid, fuel, oil, and other substances that could cause harm to the aquatic environment and released through an appropriately designed storm water management system.

1.4 Environmental awareness training for employees and contract workers

Awareness training should address, but not be limited to, the demarcation of the site, the erection of the camp site for construction teams, establishment of working and storage areas, training of staff and labourers in emergency responses, protection of flora, fauna, natural features and any archaeological material of significance that may be discovered, cultural issues (e.g. religious activities), landscaping and re-vegetation of indigenous plants and trees, refuse and waste management, dust and noise control, effluent and storm water management, hazardous material use and handling, fire prevention measures, hygiene, pollution control measures, monitoring and reporting, penalties and the system of claims and damages.

The awareness program must include hygiene, maintenance of the integrity of the environment, waste management and water saving. It should specifically address the demarcation of no-go areas and the prevention of damage to third party property, the routing of construction vehicles, and the handling and removal of all waste.

The contractor and the ESM will be responsible for ensuring that the environmental training or education course and the requirements in the EMPr are presented to the staff and labourers. The contractor will be responsible for training of sub-contractors and their staff and labourers, either by arranging with the ESM to undertake such training whenever new sub-contractors come on site or by presenting the course and confirming such actions with the ECO. During construction, if new labourers arrive on the site, the contractor shall be responsible for ensuring that they are aware of the environmental specifications.

1.5 Site management

1.5.1 Contractor's yard

A suitable contractor's yard must be identified by the contractor and its location must be approved by the ECO prior to its establishment.

The contractor's yard is intended for storage, administration, and the location of facilities for the labourers and staff. Only security personnel may be accommodated in the contractor's yard, with a maximum occupation of five people.

1.5.2 Demarcation of sensitive and out of bounds / no-go areas

The "no-go" areas must be clearly and effectively demarcated (or fenced) prior to the commencement of any construction activities. Danger tape attached to a wire fence may be used for this purpose. All demarcation material, items and tape must be maintained for the duration of the construction phase. Signage must be placed on the "no-go" boundary demarcation, to clearly indicate that there shall be no access to the area.

The demarcation and fencing of "no-go" areas on third party property, especially farms and along public roads, must not obstruct the movement of the normal users of the land.

The construction site(s) must also be demarcated as such, to advise the general public not to enter it and of all construction activities that could cause harm.

1.5.3 Hygiene

All staff and labourers must be advised of the unacceptability of defecating and urinating in public and anywhere else than in a toilet or ablution facility. The staff and labourers must be made aware of the importance of waste management, with specific reference to placing of empty food containers and wrappers into refuse bins at clearly defined eating areas.

Toilets, at a ratio of one toilet per 12 people employed on the site (labourers and staff) must be erected for the full duration of construction activities. All employees must be advised to only use the site ablutions for "relief", to specifically prevent the use of the surrounding bush as an informal toilet area. Sanitation provision and servicing of the ablutions must be to the satisfaction of the municipality. The contractor must ensure that toilets are emptied and cleaned weekly and before any builders' holiday and that the service provider uses approved sewerage disposal points for dumping of the waste. Temporary toilets shall be of a neat construction and shall be provided with doors and locks and shall be secured to prevent them blowing over.

1.5.4 Site instruction book and diary

The contractor must keep these records in the site office. The responsible parties will use the site instruction book entries for the recording of general site instructions. The site instruction book will also be used for the issuing of stop work orders for the purposes of immediately halting any particular activities of the contractor in view of the environmental risk that they may pose. The records must be available to the authorities for inspection or on request to a member of the public. Contractor's meeting minutes must reflect environmental queries, agreed actions and dates of eventual compliance. These minutes form part of the official environmental record and must be recorded in the site diary.

1.5.5 Fires and cooking facilities

The contractor must provide adequate facilities for all staff and labourers so that they need not supplement their comforts on site by accessing what can be taken from the natural surroundings. Fires are not permitted on site, unless in a specially constructed barbeque / braai and limited to a single fireplace. Activities that may pose a fire risk must be identified and suitable preventative measures must be put in place to prevent any possible damage by fire. Contractors must inform the staff of the risk of fire and fire prevention and emergency procedures in the event of a fire. Firefighting equipment shall be supplied by the contractor at suitable locations.

The Contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

The desired outcome is an approved construction phase, where the contractor and all contract workers are aware of the environmental sensitivities and mitigation measures, and all stakeholders are aware of what the phased construction activities will entail.

2. IMPACT MANAGEMENT OUTCOMES - CONSTRUCTION ACTIVITIES

The following outcomes are desired during the construction phase (following numbered items):

2.1 Management of job seekers

An appropriate employment policy to accommodate and manage local job seekers is required from the contractor.

The contractor must develop and apply an appropriate communications plan and introduce signage at the site to advise job seekers and suppliers of the construction activities and requirements.

The contractor must manage the congregation and movement of job seekers to avoid risks to job seekers and disturbance of traffic, pedestrians, and construction activities by job seekers by appropriate placement of signage, implementation of the communications plan, and active interaction with job seekers.

2.2 Support opportunities for skills development

All stakeholders need to create opportunities for small enterprises and service providers to work with established enterprises and service providers to build skills in keeping with government policy and statutory provisions (Skills Development Act, 1998, Act 97 of 1998 as amended).

2.3 Responsible and essential site clearing

Site clearing must be limited to the area approved for construction activities only. Site clearance and construction must also consider seasonal factors and avoid leaving cleared surfaces for extended periods in adverse weather conditions. Site clearance must be planned and executed to avoid further negative effects such as windblown dust, surface run-off causing erosion and siltation.

Prior to commencement of land-clearing and construction activities, the outer boundary of the development area must be surveyed and demarcated in consultation with the ECO to ensure that clearing and construction activities are restricted to the area required for the approved development.

Soil and earth removal and stockpiling must be undertaken in consultation with the ECO and where possible used in the erosion control activities as described in the annexed method statement.

2.4 Phased removal of vegetation where development has been authorised

The applicant must prepare and present a plan for the management of the remnant vegetation and agricultural infrastructure. The remnants must be utilised and / or managed to avoid negative effects.

2.5 Archaeological resources

Archaeological monitoring of all development within 50m of the existing buildings and structures and excavation of existing farm roads must be undertaken by a qualified archaeologist. The ESM and ECO will be responsible for ensuring that an archaeologist is alerted when such construction is scheduled.

Any archaeological material uncovered should be recorded and photographed unless deemed significant enough to halt construction.

If any human remains are found, work in the immediate vicinity must cease and the prescribed protocols followed, inclusive of notification of Heritage Western Cape.

2.6 Soil erosion prevention

The vegetation on the land where development activities will not occur as part of a development phase in progress must be maintained and managed to avoid soil erosion.

Site clearing and construction must be planned in consultation with the engineer and ECO to ensure that surface run-off can be contained and channelled to planned storm water retention facilities and that windblown erosion is minimised through appropriate measures.

2.7 Management of remnants and uncleared land

The applicant is responsible for the appropriate management and use of the land not cleared for construction forming part of future development phases. The land must be maintained in a manner that is does not have negative effects on the construction or operations of the current development phase(s).

2.8 Avoid and manage littering by workers

Appropriate signage must be erected by the applicant at strategic places around the dam to warn about the negative effects of littering, together with the signs intended for the management of the use of the area and public safety.

Appropriate refuse bins and receptacles must be placed around the dam along accessible places and pathways for use by people by the applicant and the bins must be maintained regularly.

2.9 Effective water use management

Potable water is a scarce and costly resource, and it must be used sparingly and primarily for the purpose it was purified. Construction activities should make use of the existing boreholes on site and other non-potable water where possible and where not, then consume water from a metered connection only.

2.10 Risk averse materials handling and storage

Construction activities must not have any significant impact on the ecosystem. All materials that are potentially harmful to the aquatic ecosystem must be stored at least 40m away from a watercourse in appropriately bunded space and no vehicles or equipment must be washed or refuelled within the 40m buffer area.

Where hazardous substances and fuels (such as diesel, oil, lubricant, detergent, chemicals, paint, cleaning agents) are to be stored on site for construction purposes, a designated and appropriately enclosed area must be set aside for it in the contractor's yard.

2.11 Fire control and emergency procedures

Appropriate usable and functional fire safety equipment must be present in the construction site and a fire safety team has to be trained by the contractor to ensure an effective first response when "hot works" (e.g. welding, grinding, cutting) occur and it causes a risk to any buildings, lives, or vegetation.

The contractor must always adhere to the relevant legislation (Occupational Health and Safety Act, 1993, Act 85 of 1993).

2.12 Solid waste management

An integrated waste management system must be adopted on site. It is the responsibility of the contractor to ensure that a waste minimisation approach is followed, and that reduction, recycling, re-use, and disposal occurs as appropriate. Waste bins for the different categories of recyclable waste (paper, plastic, metal) must be provided on site and effectively maintained with proper records available for the ECO to monitor.

The non-recyclable or reusable waste (builder's rubble, household general waste) must be appropriately contained in bins and regularly disposed of at a licensed landfill in keeping with the relevant legislation (National Environmental Management: Waste Act, 2008, Act 59 of 2008).

Waste management offers economic opportunities for individuals and small businesses with appropriate certification or under appropriate supervision, aligned to a skills and economic development programme.

2.13 Dust management

The surrounding environment, property owners and users must not be exposed to significant dust-related impacts, which cause nuisance and health risks. Dust levels may not exceed that specified in the National Dust Control Regulations (G.N. 827 of November 2013) i.e. 1200mg/m2/day.

2.14 Noise management

The surrounding environment, property owners and users must not be exposed to and impacted by noise arising from the construction activities, which must comply with the relevant legislation (Western Cape Noise Control Regulations, 2013, RN 627/PG 5309/19981120, as amended).

2.15 Storm water management

The contractor must implement appropriate measures to control the flow of storm water across the construction site, to prevent flooding, erosion, sedimentation, and dispersion of pollutants. Surface run-off must be contained and channelled to planned storm water retention facilities.

2.16 Wastewater and storm water management

The contractor must implement appropriate measures manage wastewater. All wastewater from on-site ablutions must be disposed of into the municipal sewerage system after gaining formal approval for such disposal from the Municipality, while wastewater from construction activities (contaminated water) must be contained and disposed of in consultation with the ECO to avoid any negative environmental effects.

The environment (terrestrial and aquatic ecosystems) must not be contaminated or negatively affected by the leaching of polluted water into any watercourse, fuel and contaminants leaking from vehicles, or by changing the landscape hydrology.

2.17 Avoidance of stream bed and bank destabilisation

Prior to commencement of construction activities through stream courses, the outer boundary of the line must be surveyed and demarcated in consultation with the ECO to ensure that clearing and construction activities are restricted to the line required for the approved installation and that the watercourse is not at risk.

Avoid negative impacts by undertaking the watercourse crossings (vegetation clearing and trench excavations) during the dry summer season.

Areas cleared for construction must be revegetated with suitable indigenous plants upon completion of the backfilling of the trenches.

2.18 Temporary and permanent site closure procedures

The contractor and the ECO must agree on site closure procedures to ensure that no negative effects occur during periods of inactivity on the site. These must take cognisance of all the outcomes as set out herein.

On completion of the construction phase and any related activities, all areas utilised for the construction activities have to be rehabilitated by removal of all rubble, litter, contaminated soils, structures, and infrastructure solely intended for the construction phase and the ECO must certify the site as cleared to the applicant.

3. IMPACT MANAGEMENT OUTCOMES - REHABILITATION OF THE ENVIRONMENT AFTER CONSTRUCTION AND WHERE APPLICABLE POST CLOSURE

The following outcomes are desired after conclusion of the construction activities:

Alien vegetation management and watercourse rehabilitation

The applicant must ensure that at least one inspection of the external services construction sites is undertaken, which inspection must include alien removal, erosion control, and further introduction of appropriate indigenous vegetation in late winter or early spring following the construction. An inspection report must be prepared and submitted to the EAP responsible for the audit and the relevant authorities in terms of the approved water use licence.

4. IMPACT MANAGEMENT OUTCOMES - OPERATIONAL ACTIVITIES

The following outcomes are desired over a long term as operational activities (following numbered items):

4.1 Management of the Village

A property owners' association constitution must be prepared to establish a management body for the entire Welmoed Village. The constitution must be submitted to the Municipality for consideration, and it must be made applicable to all properties, property owners, and tenants in the development of the property.

The management body must endeavour to promote integration of the residents into the Lynedoch Village community and must interact with the Lynedoch Home Owners' Association or any other established body to find solutions to issues of common interest which might arise as a result of the new development.

All services infrastructure in Welmoed Village will be private and must be managed by the property owners' association or management body established in terms of the constitution.

4.2 Waste management post development

An integrated waste management system must be promoted and adopted in the development. The applicant must prepare and submit an integrated waste management plan for the development to the Municipality.

Waste management services must be provided by accredited service providers in keeping with the relevant legislation (National Environmental Management: Waste Act, 2008, Act 59 of 2008) and the Stellenbosch Municipality Integrated Waste Management Bylaw, 2021.

4.3 Landscaping

The Welmoed Village Landscape Strategy and Master Plan (Terra, April 2024) must be implemented.

4.4 Management of storm water

The storm water management plan (UDS Africa, Revision 00, April 2024) must be implemented.

4.5 Management of water use

Effective rainwater harvesting systems for all roof water must be installed. The volume of the storage facilities should be based on 0,02m³/m² roof area and the water used to supplement non-potable uses.

Irrigation of all landscaping, sports fields, and gardens in the Village must be done with non-potable water, e.g., by means of borehole water extraction.

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.

The need for housing in the area as determined by Demacon in the market study and the findings of Claire Abrahamse in the visual impact assessment were the two main determining reports, further informed by the other specialist studies, which led to the final and preferred development alternative. The urban design framework took cognizance of the input and resulted in the plan as indicated in Section H above. This urban design framework formed the basis of the assessment for the on-site activities, while the infrastructure master plans (GLS) of the Municipality formed the basis of the offsite activity assessments.

All specialists confirmed and agreed that the development of the preferred alternative could be authorized, and that the impacts thereof could be sufficiently mitigated or that it produced sufficient positive impacts to warrant authorization.

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 predicted possible impacts associated with the proposed Welmoed Village development on Portion 28 of Farm No. 468, Stellenbosch, and the construction of external services infrastructure on adjacent land have been assessed.

The content of and recommendations in the specialist assessments have been considered and incorporated into the basic assessment for the Welmoed Village development. It has been determined that there is a need for the development as in the Lynedoch Mixed-use Market Study, the impacts of the proposed development are negligible, as in the Agricultural Agro-Ecosystem Specialist Assessment Report, or can be mitigated to an acceptable level, amongst others by the implementation of an EMPr as contained in Appendix H.

Three alternatives were investigated in the process, namely:

- the preferred option with a phased full development containing 884 residential dwelling units and other land uses over the full extent of the property;
- a much denser development containing 1 500 residential units and other land uses over the full extent of the property; and
- a much smaller development with significantly lower density, limited development footprint, and extensive open space as shown in the Stellenbosch SDF.

The preferred alternative is recommended for authorisation, as it can be implemented in a phased manner over time and it leads to the creation of a node with a threshold population that can sustain services provided for it, e.g., municipal infrastructures services, public transport, and educational and community facilities.

A smaller limited footprint development as in the SDF does not provide for a viable threshold population, providing only for 75 – 100 residential units, educational facilities, and large tracts of open space as described in the SDF. It is unlikely that such a small settlement would be able to cover the cost of the electricity, road and sewerage infrastructure that would be required for it. Moreover, a limited development would have similar impacts as a larger development, and cause similar effects, without the benefit of a planned node for future growth that does not require upgrading of infrastructure and recurring capital expenditure.

The denser development option with more residential units could not be accommodated on the site unless with significant negative visual impact in conflict with the development indicators provided by the heritage and visual specialists.

This Basic Assessment process has been concluded in compliance with the requirements of Regulation 40 of the NEMA: EIA Regulations, 2014 (as amended). Al potential and registered I&APs have been given appropriate opportunity to consider and comment on the development proposal, the assessment, and the environmental management program.

The proposed node on the property that is fully included in the urban edge is consistent with the Stellenbosch SDF, although the extent and character of the proposed development is inconsistent with it. A land development application motivating site specific conditions for consideration of the preferred option has been submitted to the Municipality and it is under consideration.

In view of the aforementioned it is concluded that the development of the preferred alternative can be authorised subject to conditions relating to the implementation of the mitigation measures as contained in the EMPr and the following specialist assessment reports:

- Visual: Cultural Landscape & Visual Impact Study For The Proposed High Density Residential With Additional Facilities On Portion 28 Welmoed Farm 468, Stellenbosch. Case Number: HWC23040509AM0411. August 2023. Claire Abrahamse.
- Archaeological: Archaeological Impact Assessment Re/ Portion 28, Welmoed Farm 468, Stellenbosch, HWC Case Reference: HWC23040509AM0411, August 2023. Hearth Heritage.
- Heritage: Heritage Impact Assessment Phase 1 In terms of NHRA Section 38(8). Re/ Portion 28, Welmoed Farm 468, Stellenbosch. HWC Case Reference: HWC23040509AM0411, August 2023. Hearth Heritage.
- Landscaping: Welmoed Village Landscape Strategy and Master Plan, April 2024. Terra Landscape Architects.
- Traffic: Application For Rezoning To Subdivisional Area For Proposed Development Of Portion 28 Of Remainder Farm 468, Lynedoch, Stellenbosch: Traffic Impact Assessment. April 2024. UDS Africa.
- Geotechnical: Report to Uniqon - Geotechnical Investigation for a proposed Residential Development – Welmoed – Stellenbosch, Delta Geotech, Reference: 24-713, Dated: March 2024.
- Freshwater: Detailed Freshwater Ecological Assessment: Proposed installation of external services entailing stream crossings for the proposed urban development on Portion 28 of the Farm Welmoed Estate No. 468, Stellenbosch, Western Cape, Nick Steytler SACNASP Reg. no. 400029/02, EnviroSwift, Date: 22.03.2024.
- Electrical: Portion 28 Of Farm Welmoed Estate No. 468, Stellenbosch Infrastructure Report Electrical Services April 2024, DMCE.
- Engineering: Portion 28 Of Farm 468, Lynedoch, within the Stellenbosch Municipal Area, Western Cape, Stormwater Management Plan Revision 00, UDS Africa, April 2024.

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

Assumptions:

- It is assumed that all the authorities have agreed to the designation of the urban edge as delineated in the Stellenbosch SDF and that the entire property could and should be excluded from the provisions of the relevant legislation as agricultural land.

- It is assumed that the information obtained from other sources in the preparation of the BAR is true and correct or was at the time of collection.
- It is assumed that the availability of capacity in the bulk services on which the development will rely will be reserved for the development and that such services will be available when the development is authorised and commences.
- It is assumed that the population growth trend in the area will continue.

Uncertainties:

- The period within which the development will occur is uncertain, as the market will have a significant effect on the phasing and implementation.
- The level to which integration of the existing and new resident community at Lynedoch can occur is uncertain.

Gaps in knowledge:

There are no identified gaps in knowledge relevant to the BAR.

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.

The EA should be valid for a period of no less than 15 years, as the projected development will be done in phases, the last of which will probably only commence 10 -12 years after authorization. Moreover, the activity includes an operation phase, which will also be implemented in a phased manner.

The development activity (construction) will probably only be concluded in 15 years, with on-going building construction following on the earthworks, installation of services, and construction of roads.

The post construction monitoring requirements should be concluded with four months of the conclusion of construction of each phase.

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.

Construction phase

The applicant and contractor have access to existing groundwater sources (boreholes) which can be used for construction purposes.

Operational phase

All wastewater to be conveyed to the Stellenbosch WWTW (on condition of the Stellenbosch Municipality) where all wastewater is treated through membrane bioreactor process to guarantee a high-quality effluent, which surpasses the standards prescribed in the water use licence issued by the Department of Water and Sanitation and ensures high-quality, compliant effluent for reuse in line with the Municipality's water conservation and demand management strategy.

All buildings to be fitted with water saving devices and rainwater harvesting systems.

Irrigation of gardens and landscaping to be done with non-potable water only.

4. Waste

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

An integrated waste management plan has been prepared and must be implemented in terms of the Stellenbosch Municipality Integrated Waste Management Bylaw, 2021.

5. Energy Efficiency

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

The recommendations of the electrical engineer as indicated in Section I, paragraph 2 above to be implemented.

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

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

I……, ID number ……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.

Signature of the Applicant: Date:

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I ……, EAP Registration number …….. 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;

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP

I ……, EAP Registration number …….. as the appointed Review EAP hereby declare/affirm that:

- I have reviewed all the work produced by the EAP;
- I have reviewed the correctness of the information provided as part of this Report;
- I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the specialist (if any), the review specialist (if any), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

I ……, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, 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 development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST

I ……., as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s):
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):