EMPr

EXPANSION OF DAMS, VEGETATION REMOVAL & CONSTRUCTION OF LODGE AND COTTAGES ON RE OF P1 OF FARM 492 MELKHOUTRIVIER (MALGAS)

Melkhoutrivier Properties (Pty) Ltd SEPTEMBER 2025



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Key terms and abbreviations

BOCMA – Breede Olifants Catchment Management Agency – provincial authority mandated to enforce the National Water Act.

Contractor – the main or specialised contractors as engaged by the Owner from time to time for the execution of the works, including all sub-contractors appointed by the main contractor of his own volition for the execution of parts of the works; and any other contractor from time to time engaged by the Owner directly in connection with any part of the Works which is not a nominated subcontractor or a subcontractor to the main contractor.

Council – the local authority, Swellendam Local Municipality, its successors in title or assigns.

Department of Environmental Affairs and Development Planning (DEA&DP)— the provincial authority for sustainable environmental management and integrated development planning.

Department of Water Affairs & Sanitation (DWS) – the national authority mandated to enforce the National Water Act.

Environmental Authorisation (EA)— the decision issued by the competent authority ito the NEMA Regulations

Environment Conservation Act, 1989 (ECA) - To provide for the effective protection and controlled utilization of the environment and for matters incidental thereto

Environmental Management Programme (EMPr) - an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation, maintenance and decommissioning of a project are managed, and that positive benefit of the projects are enhanced.

Environmental Control Officer (ECO) – a suitably qualified environmental consultant to be appointed by the Owner to oversee the implementation of the EMPr until the completion of works on the site.

Heritage Western Cape (HWC)—Provincial body responsible for enforcing the National Heritage Resources Act in the Western Cape.

Maintenance Management Plan (MMP) - an environmental management tool used to ensure that undue or reasonably avoidable adverse impact of the long-term maintenance activities that will be ongoing and regular, are prevented and that positive benefits of the projects are enhanced

Method statement (MS) - describes the **environmental** management measures to be applied to the establishment and operation of the construction site during various phases of the project

National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) – national legislation that provides principles for decision-making on matters that affect the environment.

National Water Act (NWA) – national legislation that provides principles for decision making on matters that relate to watercourse/water use/water bodies.

Overberg District Municipality (WCDM) – the district municipality

Site Manager / Future Owner / Applicant – Melkhoutrivier Properties (Pty) Ltd

Workdays – the days of the week excluding Sundays and public holidays.

Water Use Licence Authorisation (WULA) decision issued by the competent authority (DWS/BOCMA) in terms of the NWA.

1. Introduction

This report aims to supply an EMPr for the proposed unlawful expansion of the existing Dam 1 and Dam 2, the construction of a new dam access road, the expansion of the firebreak road, the construction of landowner cottages and a parking/ utility building, and a lodge linked to a S24G process. The site is situated approximately 2.5km southeast of Malgas adjacent to the Malgas Infanta Road Nr 268. (refer Figure 1). A MMP has also been developed for the Maintenance Management Phase of the project.

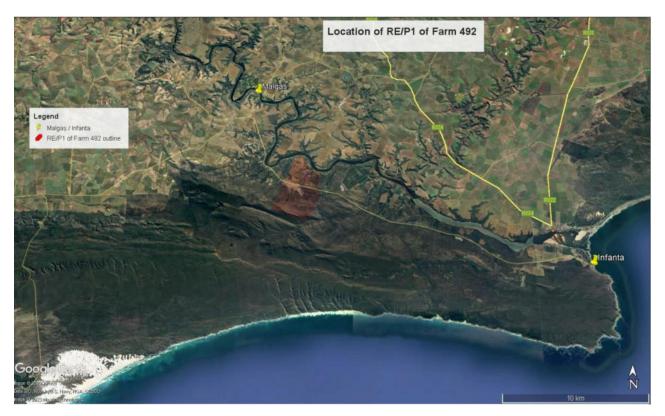


Figure 1: Location of site in proximity to Malgas

Dam 1 and Dam 2 have been in existence since approximately 1967 but were left to become overgrown and silted up in the years to follow. The two dams were recently cleaned and expanded with vegetation removed around their sites.

The access road to the dams, single track farm roads adjacent to the dams and the expansion of the firebreak road on the northeastern perimeter were constructed in 2021/2022.

Two cottages and a parking/ utility building have been constructed on site and the lodge is still to be constructed.

RE of P1 of Farm 492 Melk Hout Rivier:

Site Coordinates	SG Number
34° 21'32.66"S & 20°37'45.79"E	C073 000 000 000 492 000 01
(middle of dam wall Dam 1)	
Property Size	Title Deed
1072.24 ha*	T8580/2011*

^{*} NOTE: the property is in the process of being subdivided after which the northern portion above the Malgas Infanta Road Nr 268 will become the property of Melkhoutrivier Properties (Pty) Ltd. After this process the property size and title deed will change.

Summary of proposed project scope:

The proposed work which has not commenced:

Building of a lodge within the old quarry and natural area, in the northeastern section of the farm. The development footprint will be approximately 1292m².

And for work already completed on site includes:

- 1) Access road to dams (4 020m²)
- 2) Single track farm road (1500m²)
- 3) Cleaning and expansion of Dam 1 (4 343m²)
- 4) Cleaning and expansion of Dam 2 (1 685m²)
- 5) Construction of firebreak road / access road on eastern boundary (2011) (5 250m²)
- 6) Expansion of a firebreak road/ servitude road on eastern boundary (2022) (1 200m²)
- 7) Construction of 2 new landowner's cottages of 150m² each and a parking/ utility building of 160m² (460m²/disturbance footprint of 2700m²)
- 8) Installation of solar pump adjacent to the dam to pump water from the dam (less than 100m²)

THE DEA&DP REGION IN WHICH THE MAINTENANCE IS TO BE UNDERTAKEN:

Directorate: Development Management: Region 2

Department of Environmental Affairs and Development Planning - Western Cape

Physical address: 7th Floor, 1 Dorp Street, Utilitas Building, Cape Town, 8001

Postal address: Private Bag X9086, Cape Town, 8000

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EXPERTISE OF ENVIRONMENTAL ASSESSMENT PRACTITIONERS:

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EAP	
BSc, BSc Hons, MSc Water Resource	
Management	
Twenty-four years' experience in Environmental	
Impact Assessments, Public Participation,	
auditing, water resource management, WULA	
applications and compilation of Environmental	
Management Programs (refer CV attached as	
Appendix B to this report)	
IAIAsa, Pri. Sci. Nat (118385), WISA fellow;	
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Name	Lindsay Speirs
Responsibility on Project	EAP
Qualifications	BA, BA Hons, MA
Experience	21 years of experience in Environmental Impact
	Assessments, Public Participation and
	compilation of Environmental Management
	Programs (refer CV attached as Appendix B to
	this report)
EAP Registrations/Associations	IAIAsa, Registered EAP - 2019/1470 (EAPASA)
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Postal Address	PO Box 1752, Hermanus, 7200

DETAILS OF LANDOWNER:

Name of Landowner	Mr JT Kemp
Company Registration Nr/ID	6010265028087
Contact Person	Mr JJ Booysen (083 414 8468)
Company/ Trading name	n/a
Postal address	PO Box 287, Swellendam, 6740
Telephone:	n/a
Fax	n/a
Cell	083 479 9790
E-mail	Happyhooves14@gmail.com

Note: Mr JJ Booysen will be responsible for the implementation of the EMPr.

NOTE: This EMPr is based on the findings of the Freshwater Ecological Study (July 2023), the Hydrological study (dated November 2022), and the Terrestrial Ecological Study (Dated October 2023 and updated September 2025) for the proposed project, and the associated DWS risk matrix for the S21(c) and (i) activities. The identified risks have been incorporated into the EMPr, and additional general risks have been included. The EMPr must be implemented in conjunction with conditions contained in both the Water Use Authorization, Environmental Authorization and MMP. The applicant and ECO must use the above-mentioned documents during and after the Pre-construction / Planning, Construction, Operational and Maintenance phases of the project. This should also become a condition of the Environmental Authorization.

1.1 Purpose of the EMPr:

The purpose of the EMPr is to ensure that the environmental impacts associated with the proposed activities are managed, mitigated and kept to a minimum during the different phases of the project:

In general, the EMPr can consist of the following phases: planning & design; pre-construction activities; construction activities; operational activities and rehabilitation &/or decommissioning. However, the need to include all the above phases depends on the scale and scope of each individual project.

For the purposes of this application the following three categories are largely defined:

- Planning, Design & Pre-construction Phase: This section relates to the demarcating of the proposed activity footprint areas and no-go areas.
- Construction Phase: This section relates to the planned scope of construction activities
- Operational Phase: This section is intended to guide the operation and maintenance aspects associated with the infrastructure in line with relevant legislative requirements and the recommendations made by the specialist consultant (s).

Decommissioning refers to the actual removal of the operating assets of the project after completion of the life cycle- in other words the decommissioning of the dams and related infrastructure. It is highly unlikely that the dams, landowner cottages and lodge will be decommissioned and closed, and therefore it is not further addressed in this document. It is also unlikely that the access road and fire break road will be decommissioned and closed in future, but a section for rehabilitation of roads has been included in this document should this need arise for any road on the farm in future.

1.2 Status of the EMPr:

The EMPr must form part of all contractual documents for this project and possible maintenance projects in the future. The approval of the EMPr by DEA&DP will require that the applicant and all appointed contractors must comply with the requirements therein. Any amendments/ changes/ upgrades to the EMPr will require submission to and approval by DEA&DP.

2. Project phases

The following descriptions of proposed activities related to the construction / enlargement / repair, operation and maintenance of the dams, the access and fire break roads, the landowner house and the lodge have been identified:

2.1 Planning, Design & Pre-construction Phase:

Activities during Planning, Design & Pre-construction Phase:

- Demarcating of the proposed activity footprint areas and no-go/ buffer areas,
- Environmental awareness training of all construction staff,
- Programming of construction events,
- Establishment of communication and contractual network,
- Site survey and the placement of boundary pegs.

2.2 Construction Phase:

Activities during Construction Phase:

- Moving material from area adjacent to Dam 1 to Dam 1 dam wall,
- Moving material from adjacent to Dam 2 to Dam 2 dam wall,
- Formalizing dam walls (installation of culverts and swales) and building road over Dam 1 dam wall,
- Construction of the access road from the main road to the two dams,
- Clearing of vegetation inside and around the two dams (including the access track) and the drainage line,
- Removal of silt out of Dam 1 and Dam 2,
- Expansion of the fire break road to farm boundary in northeast,
- Construction of two cottages of approximately 150m² each and a parking/ utility building of 160m² with total disturbance footprint of 2700m²,
- Construction of lodge and amenities in northeastern section of farm.

NOTE: The first two phases can overlap and are generally also referred to collectively as the Development Phase. The Impact Assessment for the project (Section F of the S24G) was grouped according to the Development Phase (Planning, Design and Construction), Operational and Maintenance phase, and Decommissioning phase.

2.3 Operation and Maintenance Phase:

Activities during Maintenance Phase and Operational Phase:

- Alien Vegetation removal from drainage line, roads and dams,
- General maintenance of the dam areas, infrastructure and the road over Dam 1 wall,
- Silt removal from the dams or drainage line when needed,
- Maintenance of firebreaks.
- Controlled burns every 12 -15 years within natural areas. CapeNature must be contacted prior to a burn.

NOTE: Maintenance activities related to the specific development and authorization of a MMP have been included in the standalone MMP to be authorized for this project.

3. Relevant Legislation and Policies

This EMPr aims to highlight design, capacity, management and use issues and propose a means to manage these within the framework of environmental best practice, the guiding principles of the National Environmental Management Amendment Act (Act 62 of 2008) and the requirements of the National Water Act (Act 36 of 1998).

The following is a list of the legislation that may be pertinent to the project and its long-term operational management. All activities on site must ensure compliance with the provisions of the legislation as applicable:

- The Constitution of the Republic of South Africa (Act 108 of 1996),
- National Environmental Management Act (Act 107 of 1998) NEMA,
- Government Notices 327, 325 and 324 in terms of NEMA,
- National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004),
- National Environmental Management Waste Act (No 59 of 2008),
- Natural Heritage Resources Act 1999 (Act 25 of 1999),
- National Water Act 1998 (Act 36 of 1998) NWA,
- National Veld and Forest Fire Act, Act 101 of 1998.
- Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).

3.1 National Environmental Management Act (Act 107 of 1998)

NEMA embraces the notion of sustainable development as contained in the Constitution in that everyone has the right:

- to an environment that is not harmful to their health or well-being; and
- to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures.

NEMA aims to provide for cooperative environmental governance by establishing principles for decision-making on all matters relating to the environment, and by the development and implementation of Environmental Management Programmes (EMPr's).

Excavation within the two dams resulted in the removal / moving of more than 10m³ from a watercourse, and the removal of more than 300m² of critically endangered vegetation for the road construction and dam expansion, and in terms of the NEMA and the 2014 EIA Regulations, these activities trigger "listed activities" that require authorisation from the competent authority.

The compilation and authorization of this EMPr fulfills the requirements in terms of NEMA, where the proposed activities constitute a listed activities identified in terms of the NEMA EIA Regulations, 2014 (as amended):

Listing Notice 1 - Activity 19: The infilling or depositing of any material of more than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from

- (i) a watercourse;
- (ii) the seashore;
- (iii) the littoral active zone, an estuary or a distance of 100m inland of the high-water mark of the sea or estuary, whichever distance is the greater

but excluding where such infilling, depositing, dredging, excavation, removal or moving -

- (a) will occur behind a development setback;
- (b) is for maintenance purposes undertaken in accordance with a maintenance management plan;
- (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;
- (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or

where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.

The above "listed activity" specifically necessitates the development of the MMP (as a standalone document to the EMPr) as per the DEA&DP *Information Document for the Development of a Maintenance Management Plan for a Watercourse*.

Additional "listed activities" identified due to the project scope of work include:

Listing Notice 1- *Activity 26:* Residential, retail, recreational, tourism, commercial or institutional developments of 1000 square metres or more, on land previously used for mining or heavy industrial purposes;

excluding -

- (i) where such land has been remediated in terms of part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or
- (ii) where an environmental authorisation has been obtained for the decommissioning or closure of such an industry in terms of this Notice or any previous NEMA notice; or

where a closure certificate has been issued in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) for such land.

Listing Notice 1- *Activity 27:* The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—

- (i) the undertaking of a linear activity; or
- (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

Listing Notice 1- Activity 48: The expansion of

- (i) infrastructure or structures where the physical footprint is expanded by 100m² or more; or
- (ii) **dams** or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100m² or more;

where such expansion occurs -

- (a) within a watercourse;
- (b) in front of a development setback; or
- (c) if no development setback exists, within 32m of a watercourse, measured from the edge of a watercourse;

excluding -

- (aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;
- (bb) Where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;
- (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;

- (dd) where such expansion occurs within an urban area; or
- (ee) where such expansion occurs within existing roads, road reserves or railway line reserves.

Listing Notice 3 - Activity 4

The construction of a road wider than 4m with a reserve less than 13.5m.

Listing Notice 3 - Activity 6:

The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more.

Listing Notice 3 - Activity 12:

The clearance of an area of 300m² or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

Listing Notice 3 - Activity 14:

The development of -

- (i) Dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds $10m^2$; or
- (ii) infrastructure or structures with a physical footprint of 10m² or more;

where such development occurs—

- (a) within a watercourse;
- (b) in front of a development setback; or
- (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;

Excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.

- i. Western Cape
- i. Outside urban areas:
- (aa) A protected area identified in terms of NEMPAA, excluding conservancies;
- (bb) National Protected Area Expansion Strategy Focus areas;
- (cc) World Heritage sites;
- (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;

- (ee) Sites or areas listed in terms of international convention;
- (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
- (gg) Core areas in biosphere reserves; or
- (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.

Listing Notice 3 – Activity 23:

The expansion of-

- (i) dams or weirs where the dam or weir is expanded by 10 square metres or more; or
- (ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more; where such expansion occurs –
- (a) within a watercourse;
- (b) in front of a development setback adopted in the prescribed manner;
- (c) or if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;

excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.

All the above "listed activities" need to be authorised by the competent authority (DEA&DP) before the activity may commence.

3.2 National Water Act (NWA) (Act 36 of 1998)

The National Water Act (NWA) gives effect to the **constitutional right of access** to water. The Act's overall purpose is to ensure that South Africa's water resources are protected, used and managed in such a way that it considers several factors, including inter-generational equity, equitable access, redressing the results of past racial and gender discrimination, promoting sustainable and beneficial use, facilitating social and economic development, and providing for water quality and environmental protection.

Any water uses that are listed in section 21 of the National Water Act (Act 36 of 1998) and fall outside of the ambit of the published General Authorizations or cannot be registered as ELU (Existing Lawful Use) must be licensed by an application process to the DWS.

The two dams for part of an ELU registration with BOCMA.

Water use licence approved for the proposed project:

- For the taking of water from the dams for irrigation (S21a);
- For the proposed expansion of the dams (S21b);
- Altering the bed/ banks of the drainage lines feeding into and out of the dams (S21c & i).

Only once the authorisations have been issued may the activities and water uses commence.

3.3 Occupational Health and Safety Act (No. 85 of 1993)

The Landowner must ensure compliance with the Occupational Health and Safety Act. Of key importance is the following (Section 8):

General duties of employers to their employees

- (1) Every employer must provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees.
- (2) Without derogating from the generality of an employer's duties under subsection (1), the matters to which those duties refer include in particular-
- (a) the provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, are safe and without risks to health;
- (b) taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety or health of employees, before resorting to personal protective equipment;
- (c) making arrangements for ensuring, as far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances:
- (d) establishing, as far as is reasonably practicable, what hazards to the health or safety of persons are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in his business, and he shall, as far as is reasonably practicable, further establish what precautionary measures should be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures;
- (e) providing such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of his employees;

- (f) as far as is reasonably practicable, not permitting any employee to do any work or to produce, process, use, handle, store or transport any article or substance or to operate any plant or machinery, unless the precautionary measures contemplated in paragraphs (b) and (d), or any other precautionary measures which may be prescribed, have been taken;
- (g) taking all necessary measures to ensure that tire requirements of this Act are complied with by every person in his employment or on premises under his control where plant or machinery is used;
- (h) enforcing such measures as may be necessary in the interest of health and safety;
- (i) ensuring that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented; and
- (j) causing all employees to be informed regarding the scope of their authority as contemplated in section 37 (1) (b).

The Contractor is to appoint a safety steward, who will be responsible for safety of the labour force, construction activities and handling emergency situations on site during construction hours.

4. Impacts associated with the proposed scope of works:

4.1 Impact Assessment summary

Impacts	Significance rating of impacts after mitigation	
Impacts that resulted from the planning, design and construction phases		
Removal of indigenous vegetation - 0.65ha of vegetation clearance around dams, NE firebreak (0.1ha of vegetation loss) cottages area (0.27ha) and access roads clearing. Total clearance of approx. 1.4ha.	LOW NEGATIVE	
Removal of indigenous vegetation - Clearance of dams and proposed new lodge. Total clearance of approx. 0.05ha.	LOW NEGATIVE	
Faunal Impacts- vegetation loss and habitat disturbance	LOW NEGATIVE	
Faunal Impacts- Access Road clearing	LOW NEGATIVE	
Faunal Impacts- clearance of dams	LOW NEGATIVE	
Disturbance/modification of aquatic habitat as well as flow impacts	LOW NEGATIVE	
Increased abstraction of water for irrigation, domestic and tourism usage	LOW NEGATIVE	
Over exploitation of the resource	LOW NEGATIVE	
Increased construction traffic to farm along Malgas-Infanta Road	LOW NEGATIVE	
Employment (direct and indirect) creation during construction	LOW POSITIVE	
Noise created during construction	NEGLIGIBLE	
Visual impact from lodge and increased infrastructure on site	NEGLIGIBLE	
Impacts that result from the operational phase Habitat fragmentation and a local increase in alien invasive vegetation caused by LOW POSITIVE		
soil disturbance 0 access road, NE firebreak and dams Habitat fragmentation and a local increase in alien invasive vegetation caused by	LOW NEGATIVE	
soil disturbance – cottages area and lodge Fire suppression around built infrastructure	LOW - MEDIUM NEGATIVE	
Opportunity to improve function and habitat through the proposed mitigation measures	NEGLIGIBLE	
Over exploitation of the resource	LOW NEGATIVE	
Employment (direct and indirect) creation	LOW POSITIVE	
Impact on nearby Protected Area: Benefit to local trade and tourism market	LOW TO MEDIUM POSITIVE	
Impact on nearby Protected Area: Impact on roads	LOW NEGATIVE TO NEGLIGIBLE	
Impact on nearby Protected Area: Impact on conservation of these areas	LOW POSITIVE	
Impact on nearby Protected Area: Competition to nearby conservation areas	LOW POSITIVE	
Visual impact from lodge and increased infrastructure on site	NEGLIGIBLE	
Impacts that may result from the decommissioning and closure phase		
Removal of infrastructure on site and closure of lodge; rehabilitation of roads	LOW POSITIVE	
Decrease in local employment after closure of lodge and farm	LOW NEGATIVE	
Decrease in local trade and tourism after closure of lodge and farm	LOW NEGATIVE	
Visual - Removal of infrastructure and lodge after closure and decommissioning	NEGLIGIBLE	
Impacts associated with the No-Go Alternative		
Extensive ongoing alien plant invasion and less job opportunities	LOW TO MEDIUM NEGATIVE	

4.2 Enforcement of the EMPr and Responsibilities

4.2.1 The Applicant

The Applicant, Melkhoutrivier Properties (Pty) Ltd. is accountable for the potential impacts of the activities that are undertaken and is responsible for managing these impacts. The Applicant has the overall environmental responsibility to ensure that the implementation of the maintenance and operational requirements complies with the relevant legislation and the conditions of the approved EMPr.

The Landowner must ensure that he/she is fully familiar with the requirements of this EMPr, the MMP, any relevant Environmental Authorisation (EA), WULA or any other legally binding documentation, but training on the requirements of the EMPr will also be presented to the Landowner by the ECO upon appointment.

Environmental awareness training of all staff / contractors involved in the EMPr work activities will be completed by the Landowner or ECO on their roles and responsibilities, compliance to the EMPr and required monitoring. It will be ensured that staff members not proficient in the language of instruction are given training in a suitable alternative language.

As a minimum the training must include:

- Explanation of the **reason of complying** with the EMPr;
- Discussion of the potential environmental impacts of operation activities;
- Employees' roles and responsibilities on site, including emergency preparedness;
- Explanation of the mitigation measures that must be implemented when carrying out the Activities;
- Explanation of the specifics of this **EMPr** and its specifications (no-go areas, etc.);
- Explanation of the management structure of individuals responsible for matters pertaining to the EMPr.

The material/source of information for the training will be the approved EMPr, the MMP, the WULA, the EA, as well as other relevant specialist reports. These documents will be utilised to compile a database which will contain all medium to high significant environmental aspects and issues. The environmental

issues and aspects will be entered into the database with associated mitigation measures and responses, along with the specific legislation that governs such an impact or aspect.

Environmental awareness training will be addressed through induction sessions:

All environmental impacts and aspects and their mitigating measures will be discussed, explained and communicated to employees. The induction sessions will be modified according to the level of employees attending the induction session, so that all employees gain a suitable understanding of environmental issues and pollution.

The basic content of the induction program is as follows:

- Welcome and Registration;
- Disciplinary Code;
- Fire Preparedness;
- Security;
- HIV/Aids Awareness;
- Environmental Issues as per EMPr;
- Environmental and Quality Checklists.

<u>Environmental meetings</u> can be held with management / landowner, and selected groups of supervisors and / or employee representatives. The meetings will aid in environmental awareness being generated at all levels, as well as assist in identifying new environmental issues, concerns and pollution sources.

<u>In-house training sessions</u> will be held with relevant employees and will allow for employees to participate in determining what the environmental issues and concerns are about their specific occupation. Education about environmental incident reporting will be detailed at these sessions.

On the job training is an essential tool in environmental awareness. Employees will be given details of the expected environmental issues and concerns specifically related to their occupation. Employees will be trained on how to respond if an environmental problem or source of environmental pollution arises. The training will be on-going, and all new employees will be provided with the same standard of training as existing employees.

4.2.2 Engineers and Contractors

The Engineers and Contractors, where applicable, are responsible for physically carrying out the relevant activities. The responsibilities indicated here are also relevant to Sub-Contractors.

The responsibilities of the Engineers and Contractors include but are not limited to the following:

- Be conversant with the EMPr, any relevant Environmental Authorisation, WULA or any other legally binding documentation;
- Have a responsibility to adhere to any conditions and recommendations laid out in the above mentioned documentation;
- Prevent actions that may cause harm to the environment;
- Be responsible for any remedial activities in response to an environmental incident;
- Review and amend any construction activities to align with the EMPr and Best Practice Principles;
- Ensure compliance of all site personnel and / or visitors to the EMPr and any other authorisations.

4.2.3 Environmental Control Officer (ECO)

A suitably qualified individual will be designated and appointed by Melkhoutrivier Properties to fulfill the role of Environmental Control Officer, to ensure and oversee the implementation of the EMPr in its entirety on site during maintenance operations. Monitoring of activities on site by the ECO should be done monthly during the construction phase and operational phase (for one year post completion).

The responsibilities of the ECO during the life span of the project will include:

- Conduct awareness training on the EMPr;
- Demarcation of no-go areas on site;
- Record keeping of non-compliances and incidents;
- To review method statements and to determine the most environmentally sensitive options of modus operandi for the operational tasks;
- To oversee the implementation of environmental procedures set out in this document;
- Liaison with the Landowner, contractors and authorities and to report on environmental issues;
- Monitoring of contractors, the EMPr and the implementation thereof; followed by reporting to the relevant authorities;
- Conflict resolution;

Hold monthly meetings and obtain specialist environmental input if required.

Reporting and record keeping by the ECO should include ECO reports (during construction), audit reports (during the first year of operation), photographic record keeping for all site visits and communication to and from relevant authorities, documentation generated by landowner for the proposed maintenance (MS) and post maintenance.

4.2.4 The Competent Authority (DEA&DP)

DEA&DP will review the EMPr and on approval they may have the following role to play:

- Review and monitor implementation of EMPr;
- Review whether there is compliance by the Landowner;
- Perform random control checks;
- Review ECO, incident and audit reports;
- Enforce legal mechanisms for contraventions of the EMPr.

4.2.5 Department of Water and Sanitation

The DWS is the national authority that authorizes and licenses the use of water and water resources in South Africa, and BOCMA is the designated catchment representative. The BOCMA require additional measures in the Water Use License Authorization, which will have to be implemented with this EMPr.

5. Mitigation of potential impacts related to development and operational phases of the proposed works and maintenance

5.1 Impacts associated with Development phase:

a) Expansion of Dam 1 and Dam 2 footprint

Proposed mitigation:

- Outflow from base of Dam 1 to secure ecological 25%; removal of alien vegetation from drainage line and around dams.
- At least 25% of the flow in the watercourse that enters the dams should be allowed to continue
 downstream. This downstream flow requirement is important to maintain the downstream
 wetlands that provide habitat for amphibians and birdlife. The downstream flow requirement
 should largely be achieved passively by not drawing down the water level in the dam such
 that it drops below the lower culvert in the dam wall. The culverts should also be kept open
 and not blocked.
- Monitoring of the flow from the culverts in the lower dam wall should be recorded, as well as abstraction from the dam.
- Access dams and drainage line during work through fixed access points,
- Ensure that activities around the dams and drainage line occurs outside of main bird breeding / nesting periods (i.e., November to end of March),
- b) Transformation of land through construction of roads, cottages, parking/ utility building and lodge Proposed mitigation:
 - No further clearance of vegetation outside of existing footprints.
 - Keep existing cottages disturbance footprints, and lodge footprints to demarcated areas.
 - No expansion of road network on site.
 - Fence off sensitive areas to prevent disturbance during construction.
 - c) Removal of indigenous vegetation

Proposed mitigation:

 All woody invasive alien vegetation (notably Acacia cyclops, A. mearnsii and A. saligna) within 100m of all footprints noted in this report (i.e. new houses, scraped areas around dams, new access road, eastern boundary fence) must be felled, using appropriate methodology (following best practise as outlined in Martens et al 2021). No heavy machinery may be used, and stems

- should be cut at close to ground level and immediately painted (not sprayed) with a suitable herbicide such as Garlon (but this not necessary for rooikrans). This must be completed within one year of the date of this report, and should be audited by CapeNature.
- A team trained in invasive alien invasive plant management (see Martens et al 2021) should be appointed to remove all woody alien invasive species on the on the applicant property (section of Rem of Ptn 1 south of Breede R and north of road to Cape Infanta) over the next three years, as well as all seedlings of invasive alien Acacia species, such that there is less than 1% overall woody alien vegetation cover on the property. The least densely invaded areas should be cleared first, as this is the most cost and ecologically effective strategy. This must be completed within three years of the date of this report, and should be audited by CapeNature. If not adequately completed within three years the DEA&DP or similar authority should be tasked with enforcing this.
- No spraying of herbicide should be allowed anywhere where there is any natural vegetation, and should thus be restricted to designated cultivation areas.
- Any future clearing of firebreaks on the property must be done by brushcutting, to a height of no lower than 10cm. No soil disturbance should be allowed (hence no scraping by machinery), as this encourages alien plant invasion.
- All natural vegetation in moderate to good condition on the applicant property (between Breede River and Infanta Rd; about 200ha) should be signed up with CapeNature's Stewardship program within one year of any authorisation, with the applicant being responsible for all costs associated with this registration, and all Stewardship site management costs going forward.
- d) Increased abstraction of water for irrigation, domestic and tourism usage

Proposed mitigation:

- Outflow from base of Dam 1 to secure ecological 25%; removal of alien vegetation from drainage line and around dams
- Removal of alien vegetation from farmland and drainage line areas
- e) Potential Water Quality degradation within Dam1 and Dam 2 drainage line due to cleaning of dams and alien vegetation removal

Proposed mitigation:

- Cleaning of dams and alien vegetation removal to be completed during dry season and with minimal disruption to dam basin to minimize downstream siltation.
- Implementation of MMP for maintenance activities in drainage lines and dams.

- Maintenance and refueling of construction machinery and vehicles should only be done in the site camp, and with appropriate anti-spill measures in place.
- Vehicles to be stored overnight with drip trays,
- Hazardous substances and chemicals should only be stored in the construction camp, at least 50m from any watercourse and on a bunded surface,
- f) Nuisance factors (dust) during construction phase

Proposed mitigation:

- Dust suppression during high wind conditions.
- Minimise areas to be disturbed/ cleared to create less source of dust.
- g) Infrastructure and resource requirement increase (sewage disposal, water usage, electricity needs)

Proposed mitigation:

- Renewable energy source for farm to negate ESKOM usage.
- Minimise water usage through low evaporation times irrigation, indigenous landscaping around lodge and low flow toilets, showers and basins in lodge.
- Conservancy tank installation for lodge.
- h) Noise created during construction

Proposed mitigation:

- Keep working hours 7am to 6pm during weekdays, work half day on Saturdays and no work on Sundays or public holidays.
- i) Visual impact from lodge and increased infrastructure on site

Proposed mitigation:

- · Screen lodge buildings with landscaping.
- Use natural colours for walls and roofing.

5.2 Impacts associated with Operational and Maintenance phase

a) Visual impact from lodge and increased infrastructure on site

Proposed mitigation:

- Maintain screening vegetation around lodge area.
- Maintain natural colours for buildings.
- Use downwards and minimum lighting around lodge at night.
- b) Disturbance of instream habitat and potentially increased risk of erosion as a result of periodic vegetation removal

Proposed mitigation

- Identify alien plants and trees to be removed.
- Avoid trampling or clearing indigenous vegetation by using established paths where possible.
- Indigenous vegetation observed along the watercourse that is suitable for revegetation of cleared riparian areas comprises Searsia lucida, Gymnosporia buxifolia, Osteospermum moniliferum, Morella serrata, Ficinia nodosa, Cyprus textilis and Isolepis prolifera.
- Clear alien vegetation according to the methods and herbicides/biological control recommended
 on the Working for Water website: http://www.dwaf.gov.za/wfw/. Kikuyu should be poisoned with
 foliar herbicide (e.g., Agil) during the summer growing season (before the end of March).
- When using herbicides, it is essential to apply the correct herbicide, in the right dose, at the right time, using the correct application method. Use only registered herbicides, follow manufacturer's instructions on the label, and wear the appropriate protective clothing during handling.
- Remove cleared alien vegetation from the aquatic features and dispose of at a suitable point.
- Where necessary revegetate cleared areas with suitable indigenous vegetation as identified by the Freshwater Ecologist. Planted areas may require irrigation and care for a period following planting. The irrigation requirements will be determined by the season in which planting takes place and the plant species planted. Planting of the new vegetation at the start of the wet season can assist in ensuring that the new vegetation is kept wet whilst establishing itself; and
- Ongoing monitoring and clearing of regrowth of alien plants within these areas will be required.
- Undertake dam maintenance during the dry summer months (October to end of April) and ensure that no excavations or infilling take place during the rainy winter period.
- Restrict all stockpiling and works to the area within and immediately upslope and downslope of the dams.

c) Sediment removal in dams leading to sedimentation of downstream reaches, water quality impairment through operation of heavy vehicles and possible loss of biota as a result of maintenance activities.

Proposed mitigation:

- Undertake dam maintenance activities during the dry summer months only.
- Ensure that all excavators and other vehicles remain outside of the drainage line and cross the drainage line only on the existing road.
- Dispose of sediment outside of any watercourse or other areas of ecological sensitivity, and such that it will not wash into such watercourse.
- Ensure appropriate maintenance and refuelling of machinery and the appropriate containment of hazardous substances and chemicals (if required) at least 50m from the nearest watercourse, on a bunded surface.
- Restrict maintenance activities to outside of bird breeding season (November to end of March).
- Restrict vehicle and machinery operation to previously disturbed areas and ensure that material stockpiles are set-back from the watercourse by a minimum distance of 30m.

NOTE: the above maintenance activities are also addressed in the MMP developed for the site.

d) Removal of indigenous vegetation

Proposed mitigation:

- All woody invasive alien vegetation (notably Acacia cyclops, A. mearnsii and A. saligna) within 100m of all footprints noted in this report (i.e. new houses, scraped areas around dams, new access road, eastern boundary fence) must be felled, using appropriate methodology (following best practise as outlined in Martens et al 2021). No heavy machinery may be used, and stems should be cut at close to ground level and immediately painted (not sprayed) with a suitable herbicide such as Garlon (but this not necessary for rooikrans). This must be completed within one year of the date of this report, and should be audited by CapeNature.
- A team trained in invasive alien invasive plant management (see Martens et al 2021) should be appointed to remove all woody alien invasive species on the on the applicant property (section of Rem of Ptn 1 south of Breede R and north of road to Cape Infanta) over the next three years, as well as all seedlings of invasive alien Acacia species, such that there is less than 1% overall woody alien vegetation cover on the property. The least densely invaded areas should be cleared first, as this is the most cost and ecologically effective strategy. This must be completed within three years of the date of this report, and should be audited by CapeNature. If not adequately

- completed within three years the DEA&DP or similar authority should be tasked with enforcing this.
- No spraying of herbicide should be allowed anywhere where there is any natural vegetation, and should thus be restricted to designated cultivation areas.
- Any future clearing of firebreaks on the property must be done by brushcutting, to a height of no lower than 10cm. No soil disturbance should be allowed (hence no scraping by machinery), as this encourages alien plant invasion.
- All natural vegetation in moderate to good condition on the applicant property (between Breede River and Infanta Rd; about 200ha) should be signed up with CapeNature's Stewardship program within one year of any authorisation, with the applicant being responsible for all costs associated with this registration, and all Stewardship site management costs going forward.

5.3 Impacts associated with Decommissioning and Closure phase

- a) Removal of infrastructure on site and closure of lodge; rehabilitation of roads Proposed mitigation:
 - Recycle/ reuse building material where possible to minimise disposal to landfill.

6. General Management objectives:

6.1 Development Impact Management Objectives

- Demarcate all constructed areas and keep all work to designated footprint areas;
- Work associated with the dams must be planned to coincide with drier months of the year;
- Measures must be put in place to prevent silt from entering any downstream areas;
- The Landowner must appoint a suitably experienced ECO prior to commencing with any construction activities;
- No heavy machinery may be used to clear alien vegetation;
- The use of heavy machinery within the in-stream / riparian habitat and dam areas may lead to compaction of soils and vegetation and must be strictly controlled / monitored;
- Areas for stockpiling of excavated material from the dams / drainage line must be stored outside
 the 1:100-year flood line to prevent being washed into the watercourse and must be covered to
 prevent wind and rain erosion;
- Material removed from the dams / drainage lines must be inspected to determine what portion can be reused and other materials must be stockpiled safely;
- No vegetation removal by burning in the riparian buffer;
- If any heritage remains are exposed during excavations or any other action on the site these
 must immediately be reported to the Provincial Heritage Resources Authority of the Western
 Cape. Heritage remains uncovered or disturbed during earthworks must not be further disturbed
 until the necessary approval has been obtained from the competent authority;
- A qualified archaeologist and/or palaeontologist must be contracted where necessary (at the
 expense of the Landowner) to remove any heritage remains.

6.2 Operational/ Maintenance Impact Management Objectives

- Demarcate all maintenance work areas and keep all work to designated footprint areas;
- Maintenance work must be planned to coincide with drier months of the year;
- Measures must be put in place to prevent silt from entering any downstream areas;
- The use of heavy machinery within the in-stream/ riparian habitat and dam area may lead to compaction of soils and vegetation and must be strictly controlled/monitored;

- Areas for stockpiling of excavated material from the dams / drainage lines must be stored outside the 1:100-year flood line to prevent being washed into the watercourse and must be covered to prevent wind and rain erosion;
- Disposal of this material should be to suitable areas within agricultural fields; or the material may be re-used elsewhere on the farm (i.e., for road maintenance or erosion control);
- No vegetation removal by burning in the riparian buffer.
- Firebreak maintenance must not result in any soil disturbance, and should be done with handheld brushcutters.
- Controlled block burns of natural areas must be done every 12 to 15 years. This must be undertaken by a professional.
- Any additional disturbance footprints relating to the lodge, owner's cottages and dams must be rehabilitated.

6.3 General Management Objectives and Outcomes

The following items must be integrated into the management of the activity whenever required:

a) Notification of Maintenance and emergency activities to the Competent Authority

Except for emergency situations (i.e., dam wall break) the Landowner must notify the Competent Authority of specified maintenance activities no less than 7 days before commencing with the maintenance activity, using the prescribed Form A. After completing the maintenance activities, the Landowner must complete Form B within 3 days of completion of the work. This procedure is further detailed in the MMP.

Work done in terms of an emergency situation must be reported to the Competent Authority within 48 hours of the emergency situation. An incident report must thereafter be compiled and submitted to the Competent Authority within 1 week from having completed the work necessary to address the emergency.

b) The watercourses and sensitive features

The following must be undertaken to protect the integrity of the watercourse and the availability of water to downstream users:

 None of the material removed from the dams or drainage line may be disposed of in a watercourse or any other unauthorised area;

- Should any additional material be required in the maintenance of the dam wall such material
 may only be taken from previously disturbed areas outside of regulated areas, and areas that do
 not contain critically endangered or endangered vegetation;
- Existing vegetation composition along drainage lines (except for the dam footprints and their
 existing infrastructure) must be maintained or improved by maintaining the natural variability in
 flow fluctuations.
- Any major earth works are to be restricted to the construction site boundaries. Bulldozer and
 heavy machinery operations are to be under constant supervision and must be aware of all the
 environmental obligations, as they have the potential to inflict severe damage to the surrounding
 environment.
- The use and excessive movement of heavy machinery should be avoided in particularly sensitive areas with great environmental value, or areas with high erosion potential.

Fencing of Sensitive Features

Should this be required, all fencing is to be erected prior to construction works commencing on site and are to remain in position and in good repair for the duration of the works. No materials, rubble or equipment is to be stored or stockpiled within the fenced areas, and no-one should enter these areas. Any deviations from these specifications are subject to the approval of the ECO.

c) Site Access Routes and Roads

Heavy machinery may have to access the dams and drainage line from time to time in order to perform maintenance activities, and it would be preferable if the same access point can be used.

This access point must ensure:

- No access gained via steep banks;
- Only single tracks may be used;
- Vehicles may not remain in the dams when not in use;
- The preferred access route should not give rise to erosion;
- Vehicles leaking oil or diesel may not access the dams / drainage line and must be repaired before continuing with the activity;
- Care should be taken that compaction of soil along riparian edges is avoided from heavy machinery usage;
- Vehicles should be stored with drip trays at night;
- Refuelling to be with appropriate spill protection in place.

Cleanliness of roads

The Contractor must ensure that construction vehicles do not spill or drop any construction materials (sand, cement, debris, etc) onto public or private roads. If this should occur, it is the responsibility of the Contractor to ensure that the roads are suitably cleaned.

Rehabilitation of redundant internal roads:

Where identified, small sections of internal roads will be rehabilitated by the following means:

- Block any kind of vehicle access to eliminate use. This can be achieved by implementing a barrier.
- Address areas with any erosion first.
- Mimic the local topographical features and ensure that the area is free draining. The slope angle should be such that it promotes the establishment of vegetation.
- Remove any stones/ rocks delineating the road edges.
- Topsoil should be sourced from previously disturbed areas and spread evenly over the affected road surfaces.
- Mulching should be uniformly applied and worked into the top layer of the soil to promote seed germination.
- When indigenous vegetation in area seed, introduce hand-picked seeds into the area to stimulate pioneer growth.
- Cleared brush should be applied over the seeded areas as base stabiliser. Alien vegetation shoots should be hand pulled.
- Make use of stone cobles to keep brush cut in position and fill erosion ditches with stone where needed to trap sediment.

d) Erosion Control

Care must be taken to prevent erosion of soils on the construction sites. Should any erosion be detected on site, the ECO / Site Manager must identify the cause of such erosion and ensure that the most appropriate method of mitigation or stabilisation is employed as soon as possible.

Runoff generated during construction should not cause any damage and should be controlled or contained during periods of high rainfall.

e) Fire Management and Protection

The contractor/ landowner must take appropriate measures to guard against accidental fire.

Fire beaters are to be kept on site and should always be easily accessible. In the case of any welding, grinding or other "hot work", a fire extinguisher is to be readily available to extinguish any fire that may result from these activities.

All excavation equipment should carry fire extinguishers, and all staff should be able to use them if required.

No open fires may be lit on the construction site, except at locations approved by the ECO and Site Manager. The burning of refuse or vegetation material on site as a means of disposal is not allowed.

Due to the potential fire risk in the area, no vegetation may be removed using fires, and no excess vegetation material may be burned or stockpiled anywhere on site.

The contractor must take appropriate measures to guard against accidental fire, and it will be presumed that any bush fire which starts on the site, or within 100m thereof during the construction period would be the responsibility of the developer and incur legal liability thereof. However, it is recommended that controlled burns are conducted within natural areas, every 12 to 15 years. These burns must be undertaken or managed by a professional person and CapeNature must be contacted prior to a burn.

In accordance with Chapter 4 of the National Veld and Forest Fires Act 101 of 1998, firebreaks must be established along all property boundaries in order to prevent the potential spreading of wildfires. The firebreaks must be wide enough to have a reasonable chance of preventing fire from spreading to adjacent land. The width of the firebreak must be mutually agreed upon between adjacent landowners. All required onsite firebreaks must be established in early November, prior to the fire season. Firebreaks must be kept free of flammable plants and fuels, as well as bushy and tall vegetation and trees.

Any future clearing or maintenance of firebreaks on the property must be done by brushcutting, to a height of no lower than 10cm. No soil disturbance is allowed (hence no scraping by machinery), as this encourages alien plant invasion.

f) Irrigation Water Management

Irrigation infrastructure must be developed and managed so that the use of water and energy is as efficiently as possible, production is optimized and as little water as possible is lost to non-beneficial consumption or leaks.

The Applicant must ensure compliance with the "Regulations Requiring that the Taking of Water for irrigation Purposes be Measured, Recorded and Reported" (Government Gazette, 17 February 2017 issued in terms of Section 26 of the National Water Act, No 36 of 1998) that:

- stipulates that the water user is required to measure water taken by installing and operating a self-registering water measuring device to measure the water taken, and
- must record the volumes measured for each calendar month at the end of the month, and keep record of such measurements for at least five (5) years,
- The meter must be operated and maintained, and a record must be kept of such operations /
 maintenance; with accuracy verified at least once every five (5) years or for such period as
 required by the manufacturer whichever is the shortest period, by a person or an institution
 accredited to verify the accuracy of the device and furnish proof of such verification,
- The records of the volumes and information must be made available to BOCMA as requested,
- The irrigation water offtake must be measured once a month,
- Irrigation techniques must consider soil type, crop type, soil water status and weather conditions,
- All equipment (pumps, pipes and irrigation mechanisms) must be maintained and in good working order, in order to minimise leaks and other water losses and ensure a longer life cycle for equipment.

g) Waste management

General Waste

Waste management during the construction phase is the responsibility of the Contractor. The Contractor must establish a system acceptable to the ECO for control during execution of the works. Refuse refers to all construction debris (cement bags, rubble, timber, cans, nails, wire, spilt bitumen, glass, packaging, plastic, organic matter, etc.).

Refuse generated during the execution phase of the works should be stored in an appropriate area on site, protected against wind dispersion and removed on a regular basis for disposal at a permitted disposal site.

The following management actions apply:

- Provide multiple secured onsite bins with weighed down lids that effectively contain waste. (NB to prevent scavenging by wildlife and wind dispersal),
- Separate food waste from recyclable waste onsite through use of clearly labelled bins,
- Where necessary, make use of secured skips for large construction waste. Skips should be covered to prevent wind-blown waste and scavenging, including during transport from site to landfill,
- All bins (and skips) must be regularly emptied, and waste must be appropriately disposed of at registered offsite waste disposal site,
- No bins (or skips) may be used to overflow,
- Vegetation removed should be chipped and used on site for mulching or covering bare areas to be stabilised. If vegetation removed is not suitable for chipping / mulching it should be suitably disposed of at the nearest landfill site.
- Construction areas should be left clean and clear of all building waste after completion of construction phase.

Discharge of construction water

All cement effluent from mixer washings and run-off from batching areas and other work areas shall be contained in suitable sedimentation ponds. Sedimentation ponds must be suitably lined to prevent contamination of the ground and shall be allowed to dry on a regular basis to allow for solid material to be removed. The material must be disposed of in a suitable manner, depending on the nature of the material, and to the discretion of the ECO.

h) Stormwater Management

A stormwater management plan including drainage measures for the construction phase and relevant method statements shall be presented to the ECO for approval before the start of any works.

The Contractor must take suitable measures to prevent erosion resulting from a diversion, restriction or increase in flow of stormwater caused by the presence of his own works, operations and activities to the satisfaction of the ECO.

i) Topsoil Removal and Stockpiling

Where topsoil is to be removed from the work areas, it should be stockpiled separately from subsoil, and must be stabilised within a day of stockpiling.

Stockpiles should be convex at the top to promote run- off, so that water is not able to accumulate and result in leaching of nutrients from the soil.

i) Dust Control

The contractor shall take appropriate measures, to the satisfaction of the ECO to minimise the generation of dust and mud on the site, by supplying suitable stabilisation (such as mulch or straw stabilisation) for all cleared ground.

Watering of exposed working areas may be considered for the control of dust during windy conditions, although great care must be taken that this does not result in excessive run-off, and erosive action.

k) Trenching and Service Installation

The excavation of trenches for the installation of services should be undertaken in a phased manner where possible, to allow for trenches to stand open for a maximum of five days only. Materials removed from trenches must be stockpiled in a suitable position and should be stabilised if backfilling is not expected to occur within the following two days.

Service installation should be coordinated to prevent the undue reopening of trenches for the installation of additional services.

I) Emergency

All accidents and emergency situations are to be reported to the ECO and Site Manager, and full details included in the monthly environmental report.

Fire

In the case of a fire occurring on site, the ECO and safety steward are to be notified immediately. If localised, effort should be made to extinguish the fire immediately, and if required, the assistance of the local fire department should be sought by the safety steward.

First Aid

The Contractor must provide and maintain a suitable first aid kit on site, with a member of staff suitable qualified in first aid on site during working hours, in accordance with the Occupational Health and Safety Act.

m) Public Complaints

All public complaints received are to be registered by the ECO or Site Manager and addressed immediately. Public complaints and responses are to be recorded and included in the monthly environmental report by the ECO.

n) Construction vehicles

The contractor must take appropriate measures to limit the impact of unreasonable **noise** from construction activities. Working hours should be from 7am to 6pm during the week and half days on Saturdays. No construction activities should be allowed on Sundays and public holidays.

Emission control in vehicles will be reduced by implementing the noise control methods and:

- All diesel vehicles must be maintained/ serviced to minimise unnecessary exhaust emissions;
- Vehicles with smoking exhausts must be repaired immediately;
- Speed limits must be adhered to; and,
- Vehicles and other diesel driven machinery must be switched off when not in use.

All mechanical equipment and work vehicles which may be kept on site are to be stored, serviced and refuelled only at designated areas within the Contractor's Camp. Within these areas drip trays and other impervious materials, for example plastic or metal sheeting, are to be used to prevent contamination of the ground in any way. The ECO may order the removal of equipment that is causing continual environmental damage by leaking oil or diesel for example, until such equipment has been repaired.

Construction Traffic Management

All construction vehicles carrying materials must use sheeting to prevent loss of loads due to wind or rain. Movement of all construction vehicles on site is to be strictly limited to ECO approved haul and access routes. Should deviation from these routes be necessary for any reason, this is to be with approval of the ECO, to ensure that no significant environmental damage or disruption of farming operations results.

o) Alien Vegetation Management

Alien invasive vegetation is imported/ non-indigenous plant material that can out-compete indigenous vegetation and must be continuously removed from the site to ensure restoration of the indigenous vegetation.

Removal of alien vegetation can be undertaken using various methods. These include mechanical (cutting, chopping, pulling, ring barking), chemical (poisoning) or biological (bugs, beetles). Each species reacts differently and thus often requires specific actions or a combination of actions to effectively remove. The important thing is to first identify the species of plant and then to implement an effective removal plan. Most species require on-going management, i.e., initial clearing then several follow up clearings of juvenile plants.

If herbicides are required for the removal of alien vegetation in a watercourse, it is important to obtain the details of acceptable products to use. Always read the instructions and follow the dilutions correctly. Herbicide application must be directly to the intended area and not spread to adjacent natural vegetation.

Mitigation measures stipulated by the Freshwater Ecologist and Botanist include:

- All woody invasive alien vegetation (notably Acacia cyclops, A. mearnsii and A. saligna) within 100m of all footprints noted in this report (i.e. new houses, scraped areas around dams, new access road, eastern boundary fence) must be felled, using appropriate methodology (following best practise as outlined in Martens et al 2021). No heavy machinery may be used, and stems should be cut at close to ground level and immediately painted (not sprayed) with a suitable herbicide such as Garlon (but this not necessary for rooikrans). This must be completed within one year of the date of this report, and should be audited by CapeNature.
- A team trained in invasive alien invasive plant management (see Martens et al 2021) should be appointed to remove all woody alien invasive species on the on the applicant property (section of Rem of Ptn 1 south of Breede R and north of road to Cape Infanta) over the next three years, as well as all seedlings of invasive alien Acacia species, such that there is less than 1% overall woody alien vegetation cover on the property. The least densely invaded areas should be cleared first, as this is the most cost and ecologically effective strategy. This must be completed within three years of the date of this report, and should be audited by CapeNature. If not adequately completed within three years the DEA&DP or similar authority should be tasked with enforcing this.
- No spraying of herbicide should be allowed anywhere where there is any natural vegetation, and should thus be restricted to designated cultivation areas.
- Any future clearing of firebreaks on the property must be done by brushcutting, to a height of no lower than 10cm. No soil disturbance should be allowed (hence no scraping by machinery), as this encourages alien plant invasion.

- All natural vegetation in moderate to good condition on the applicant property (between Breede River and Infanta Rd; about 200ha) should be signed up with CapeNature's Stewardship program within one year of any authorisation, with the applicant being responsible for all costs associated with this registration, and all Stewardship site management costs going forward.
- A programme should be put in place to remove the invasive alien trees along the riverbanks in this area. The main invasive alien vegetation currently occurring within the disturbed areas on the farm include Port Jackson willows (*Acacia saligna*), rooikrans (*Acacia cyclops*), black wattle (*Acacia mearnsii*), thistle (*Cirsium vulgare*) and wild tobacco (*Nicotiana glauca*).
- Indigenous vegetation observed along the watercourse that is suitable for revegetation of cleared riparian areas comprises Searsia lucida, Gymnosporia buxifolia, Osteospermum moniliferum, Morella serrata, Ficinia nodosa, Cyprus textilis and Isolepis prolifera.
- Any future clearing of firebreaks on the property must be done by brushcutting, to a height of no lower than 10cm. No soil disturbance should be allowed (hence no scraping by machinery), as this encourages alien plant invasion.

p) The contractor's camp/ laydown area (for construction/ maintenance activities):

There will be one Contractor's camp for use by all contractors and subcontractors, for the provision of staff facilities as well as the storage of all materials and equipment. The most suitable location for the camp has been determined as within the quarry footprint at the lodge construction site. It is located on an already impacted area, ensuring minimal risk to existing operations on the property.

The Contractor should ensure that ablutions are restricted to the sanitary facilities only. Where chemical toilets are provided, the Contractor should ensure that they are kept in hygienic condition and emptied on a regular basis.

Care must be taken that no spillage occurs when chemical toilets are cleaned, and their contents are properly stored and removed off site. A contingency plan for spills must be supplied by the contractor and approved by the ECO. Toilets should be located where their use would result in minimal impact on the environment and may not be in areas of running or standing water during winter and must be secured to prevent them from blowing over.

All building materials are to be prepared at a dedicated batching / contractor's area identified by the Site Manager and approved by the ECO, or within the Contractor's Camp, to enable the effects of cement and other substances, and the resulting effluent and building waste to be more easily managed.

Fuels and hazardous materials

Fuels and flammable materials are to be stored in suitably equipped storage areas, inside the Contractor's Camp. These areas shall comply with general fire safety requirements. Impervious materials are to be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks. Quantities of fuels and hazardous materials stored on site should be appropriate to the requirement for these substances on site.

Bulk fuel depots are to be placed within hardened bund areas; bunds are to have a holding capacity equal to 110% of the largest fuel container. The Contractor is to ensure that he is aware of the effects of all substances on staff and the environment, and the correct action to take in the case of any incident involving these materials.

The Contractor must ensure that all structures, equipment, materials and facilities used on site construction activities are removed once the project has been completed. The construction site shall be cleared and cleaned to the satisfaction of the ECO. The Contractor will ensure that no building rubble or waste is left behind.

Quantities of fuels and hazardous materials stored on site should be appropriate to the requirement for these substances on site. The responsible management of hazardous chemicals should be practiced, and no storage or handling of chemicals must take place within the watercourses.

q) Stockpiles

The Contractor must identify sites for stockpiling building materials, and excavated material, which are to be marked on a plan, and approved by the Site Manager and ECO. Stockpile sites should preferably be in areas with a gentle gradient. Stockpiles should be stabilised if required to prevent erosion.

r) Rehabilitation after construction

The Landowner and Contractor must ensure that all areas are cleaned up and rehabilitated after completion of construction activities. Any additional disturbance footprints relating to the lodge, owner's cottages and dams are to be rehabilitated.

That includes the following actions:

- Removal of excess building materials from construction sites;
- Removal of and correct disposal of all stockpiles (silt removed from dams; topsoil; materials for construction),

- Removal of all protective fencing for buffer and no-go areas and around the construction camp area,
- Removal of all temporary toilet facilities,
- Removal of all temporary signage and re-routing equipment,
- Temporary flow diversions,
- Any materials and waste from construction camp,
- Removal and correct disposal of all alien vegetation removed,
- Removal of vehicles from site.

6.4 Method Statements

The method statement must provide a step-by-step plan (which may include a schematic diagram etc.) to inform the responsible person(s) on the process and actions to take in a sequential and logical manner, which aims to reduce the impact of undertaking the activity within a reasonable timeframe and cost.

A method statement should be compiled for each individual activity given the likely specific circumstances and conditions of a site requiring maintenance. However, in situations whereby uniform conditions and circumstances are evident for multiple sites requiring the same type of activity, a method statement can be given for a specific type of activity to be undertaken at multiple sites given the requirements:

- The method statement must provide a step-by-step plan (which may include a schematic diagram
 etc.) to inform the responsible person(s) on the process and actions to take in a sequential and
 logical manner, which aims to reduce the impact of undertaking the activity within a reasonable
 timeframe and cost.
- The detail of the method statement will be assessed by the Department and other relevant regulatory authorities to ensure actions that are taken are such that they do not perpetuate increased incidences of erosion/deposition of material.
- Time periods must be given within which the maintenance actions contemplated need to be implemented. An indication must be made whether maintenance actions will be repeated, e.g. clearing of silt/debris from under a bridge annually or after flood events.
- The following serves as a general guide required to minimise the spatial impact of the maintenance activity:
- Repairs and maintenance should be undertaken within the dry season, except for emergency maintenance works.
- Where at all possible, existing access routes should be used. In cases where none exist, a route should be created through the most degraded area avoiding sensitive/indigenous vegetation areas.
- Responsible management of pollutants through ensuring handling and storage of any pollutants is away from the watercourses or dams. When machinery is involved, ensure effective operation with no leaking parts and refuel outside of the riparian areas, at a safe

distance from the watercourses to manage any accidental spillages and pose no threat of pollution.

- At no time should flow in watercourses be blocked nor should the movement of aquatic and riparian biota (noting breeding periods) be prevented.
- In circumstances which require the removal of any topsoil, this must be sufficiently restored through sustainable measures and practices.
- Concerted effort must be made to actively rehabilitate repaired or reshaped banks with indigenous local vegetation.
- o No deepening of the watercourses beyond the original is allowed.

The following Method Statements (amongst others) will be required from the Landowner before commencement of work, authorised and agreed upon by the ECO, and implemented on site:

- 1) Alien Vegetation removal and disposal;
- 2) Work within 32m of the drainage line;
- 3) Silt removal and disposal;
- 4) Site cleanup and rehabilitation after completion of works;
- 5) Dust management;
- 6) Waste management.

6.5 Environmental Control Sheets

A. Communications

TASI	K	MITIGATION ENVIRONME CONTRO	AC	CTION	
Site Rec	ords	To be updated on	a regular basis	ECO/S	ite Manager
Public complaints		To be recorded, along with records of responses to them		ECO/S	ite Manager
Environmental Awareness/ Education		 Each contractor team attends a training session prior to the start of work on site. Record of members attending training sessions. 		ECO	
Method Statements		 Method statements to indicate: What, How, Where and When activities are to take place. Method statements for each relevant activity submitted to ECO prior to the start of that activity on site. Work is not to commence until method statement approved by ECO. 		Contractor/ Landowner	
COMMENTS/ U	JPDATE				
RECORD OF PERFORMANCE					
Acceptable Details of T		Transgression Responsible Party		Action Taken	Date
Yes No					

B. Site Preparation

TASK		MITIGATION AND EN	ACTION		
Site definition				Site Manager / Contractor/ Surveyor	
Fencing of sensitive features		Buffer areas and no-go areas are to be clearly demarcated prior to any work commencing related to that area. All fencing is to be erected prior to construction works commencing on site and are to remain in position and in good repair for the duration of the works. No materials, rubble or equipment is to be stored or stockpiled within the fenced areas, and no-one should enter these areas.		Landowner/Contractor/ ECO	
COMMENTS/ UPDATE:					
RECORD OF	RECORD OF PERFORMANCE:				
Acceptable		Details of Transgression	Responsible Party	Action Taken	Date
Yes No					
<u> </u>					

C. Site Procedures

TASK	MITIGATION AND ENVIRONMENTAL CONTROLS	ACTION
Toilet facilities	Ablutions are restricted to the sanitary facilities only. Toilets to be kept in hygienic condition and emptied on a regular basis. No spillage occurs when chemical toilets are cleaned, and contents must be properly stored and removed off site.	Contractor
Fire control	Required firefighting equipment is available on site, and in working order. No open fires are lit on site without approval of the ECO and Site Manager Burning of refuse not allowed.	Contractor
Material handling and storage	Fuels and hazardous materials to be stored in suitably equipped storage areas in Contractor's camp. Impervious materials are to be used to prevent contamination of soil in the event of spillages or leaks. Material stockpiles should be set-back from the watercourses by a minimum distance of 15m.	Contractor
Waste management	All waste to be stored in an appropriate area on site and protected against wind dispersal. Waste to be removed on a regular basis for disposal at a permitted disposal site. No burning or burying of refuse on site is allowed. Food waste should be separated from recyclable waste, and both should be disposed of in the correct waste stream at the local landfill site. Vegetation removed should be chipped and used on site for mulching or covering bare areas to be stabilized.	Contractor
Maintenance of equipment	All mechanical equipment and work vehicles to be stored serviced and refueled at designated areas in the contractor's camp. Drip trays or impervious materials to be used to prevent contamination of ground.	Contractor
Dust control	Suitable stabilisation (such as mulch or straw stabilisation) for all cleared ground. Watering of exposed working areas during windy conditions.	Contractor

		taking place. Cover topsoil sto	Restrict areas cleared to where construction is taking place. Cover topsoil storage areas. Shield dust blowing onto roads.					
COMMENTS/ U	PDATE					1		
RECORD OF F	RECORD OF PERFORMANCE							
Acceptable	Details	of Transgression	Respon	sible	Action		Date	
		T	Party	Ţ	Taken	ı		ı
Yes	No							

7. Monitoring and Compliance

Notwithstanding the EA, the Site Manager must comply with any other statutory requirements that may be applicable when undertaking the approved listed activities.

7.1 Procedures

The Site Manager must comply with the requirements of this EMPr, the EA and WULA on an on-going basis and any failure on his part to do so will entitle the relevant competent authorities to **impose legislative action**.

In the event of non-compliance, the following recommended process shall be followed:

- The competent authority shall issue a **Notice of Non-compliance** to the Landowner, stating the nature of the non-compliance.
- The Landowner shall act to correct the transgression within the period specified in the notice.
- The Landowner shall provide the relevant authority with a **written statement** describing the actions to be taken to discontinue the non-compliance, the actions taken to mitigate its effects and the expected results of the actions.
- In the case of non-compliance giving rise to physical environmental damage or destruction, the competent authority shall be entitled to undertake or to cause to be undertaken such **remedial works** as may be required to make good such damage at the cost of the Landowner.
- In the event of a dispute, difference of opinion, etc. between any parties regarding or arising out of interpretation of the conditions of the EMPr, disagreement regarding the implementation or method of implementation of conditions of the EMPr, etc. any party shall be entitled to require that the issue be referred to **specialists and / or the competent authority** for determination/ clarification.
- The relevant authority shall always have the right to **stop work** and/or certain activities on site in the case of non-compliance or failure to implement remediation measures.

7.2 Amendments

Any changes to, or deviations from the scope of the approved activity, must be accepted or approved, in writing by the Competent Authority before such changes or deviations may be implemented. If the Holder wishes to extend the validity period of the EA or change details with respect to the EA or EMPr, the Holder must submit a formal Application for Amendment to the Competent Authority at least three (3) months prior to the lapsing of the EA (for extensions specifically).

7.3 Monitoring

Monitoring of the Construction & Operational / Maintenance Phases must be undertaken by the Landowner, or the appointed representative, by means of a photographic record during excavation periods, as they are undertaken.

ECO reporting must be done monthly so that monthly ECO reports can inform the necessary external Audits that may be specified in terms of the EA and WULA.

7.4 External Audit Requirements

The Landowner must ensure that compliance with the conditions of the EA and the EMPr are audited externally and independently:

- A suitably qualified Environmental Auditor is to be appointed, at the expense of the Landowner, to undertake audits of compliance with the EMPr.
- The external environmental audit report must be prepared by an independent person (registered EAP);
- The external environmental audit must provide verifiable findings and recommendations for improvements, in a structured and systematic manner, on the performance and compliance of the Landowner and the project, against the conditions of authorisation and requirements of the EMPr;
- The Holder must submit external environmental audit report(s) to the relevant Competent Authority bi-annually during the construction period;
- The final external Environmental Audit Report must be submitted to the Competent Authority within one month from the date of completion of the construction phase of the project.
- Internal and external audits on compliance with the conditions of the water use license must be completed according to the requirements stipulated in the WULA and submitted to BOCMA.

Appendix 7 of Regulation 982 of the 2014 EIA Regulations stipulates the required contents of an External Environmental Audit Report:

- (1) An External Environmental audit report must contain:
- (a) Details of -
- (i) The independent person who prepared the environmental audit report; and
- (ii) The expertise of the independent person that compiled the environmental audit report.

- (b)Details of -
- (i) The independent person who prepared the environmental audit report; and
- (ii) The expertise of independent person that compiled the environmental audit report.
- (c) A declaration that the independent auditor is independent in a form as may be specified by the competent authority.
- (d) An indication of the scope of, and the purpose for which, the environmental audit report was prepared.
- (e) A description of the methodology adopted in preparing the environmental audit report.
- (f) An indication of the ability of the MMP to -
- (i) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on-going basis;
- (ii) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility; and
- (iii) Ensure compliance with the provisions of environmental authorisation, MMP.
- (g) A description of any assumptions made, and any uncertainties or gaps in knowledge.
- (h) A description of a consultation process that was undertaken during the course of carrying out the environmental audit report.
- (i) A summary and copies of any comments that were received during any consultation process.
- (j) Any other information requested by the competent authority.

External Environmental Audits must be used to determine the effectiveness of the EMPr and EA conditions of approval. Any recommendations forthcoming from External Audits must be used to inform improvements to the EMPr and where necessary amendments to the EA.

7.5 Record keeping

The Applicant should keep records of the following:

- Routine implementation and maintenance (Form A and B),
- Monitoring Reports (ECO reports),
- Complaints received and responses made,
- Audit reports and reviews of the EMPr,
- Amendments to the EMPr / EA or WULA.

Records should be kept and must be made available for review on request, based on adequate motivation.

Minutes of meetings on site must reflect environmental queries, complaints, actions agreed upon, dates of eventual compliance and must form part of the official environmental site record.

In addition to the summary report, the ECO shall keep a monthly photographic record of issues on site and an ad hoc record of incidents or events on site, especially in the case of transgressions from EMPr specifications. Such photographs are to be taken with an in- camera dating facility.

7.6 Incident reporting

Environmental incident reporting is a vital part of communication. Employees are required to report all environmentally related problems, incidents and pollution, so that the appropriate mitigating actions can be implemented timeously.

The Applicant shall investigate the incident and record the following information:

- How the incident happened;
- o The reasons the incident happened;
- How rehabilitation or clean up needs to take place;
- The nature of the impact that occurred;
- The type of work, process or equipment involved; and
- Recommendations to avoid future such incidents and/or occurrences.
- Shall inform the ECO of all incidents that were reported.
- Shall consult with the ECO for recommendations on actions to be taken or implemented where appropriate (e.g., clean-ups).

8. Transgressions in terms of the EMPr

NOTE: For all activities undertaken outside the scope of the adopted EMPr, WULA, MMP and / or EA, in terms of the action outlined within the given method statement, the responsible person(s) will be subject to Section 24(F) of NEMA, and that appropriate enforcement and compliance requirements will follow by the competent authority.

Transgressions relate to actions by the Applicant and operating team members whereby damage or harm is inflicted upon the environment or any feature thereof and where any of the conditions or specifications of the EMPr / EA / WULA / MMP are infringed upon.

In instances of environmental damage, the damage is, where possible, repaired and rehabilitated using appropriate measures, as specified and undertaken by appropriate specialists, for the account of the party responsible.

Issues of non-compliance noted by the ECO are to be communicated to the site operator, the Applicant and reported on in the required ECO site visit report to DEA&DP on a regular basis.

The ECO will advise on appropriate corrective actions when necessary.

Appendix A: SITE DEVELOPMENT PLAN

PROPOSAL

Legend

Property Boundary

Proposed Lodge

LODGE

Inland water

- River

Cottage Footprint

Dam 1

Dam 2

Cleared Veg 1

Cleared Veg 2

Melkhoutrivier springAccess track

New dams access road

Firebreak road

Firebreak road extension

Datum: WGS84
Projection: Geographic

Scale: 1:4 000 (on A3)

Amended: September 2025



UNAUTHORISED ACTIVITIES ON MELKHOUTRIVIER, MALGAS PROPOSAL

Date: October 2023



Datum: WGS84
Projection: Geographic

Scale: 1:2 000 (on A3)





Legend

Property Boundary

Proposed Lodge

- LODGE

Inland water

- River

Cottage Footprint

Dam 1

Dam 2

Cleared Veg 1

Cleared Veg 2

Melkhoutrivier spring Access track

New dams access road

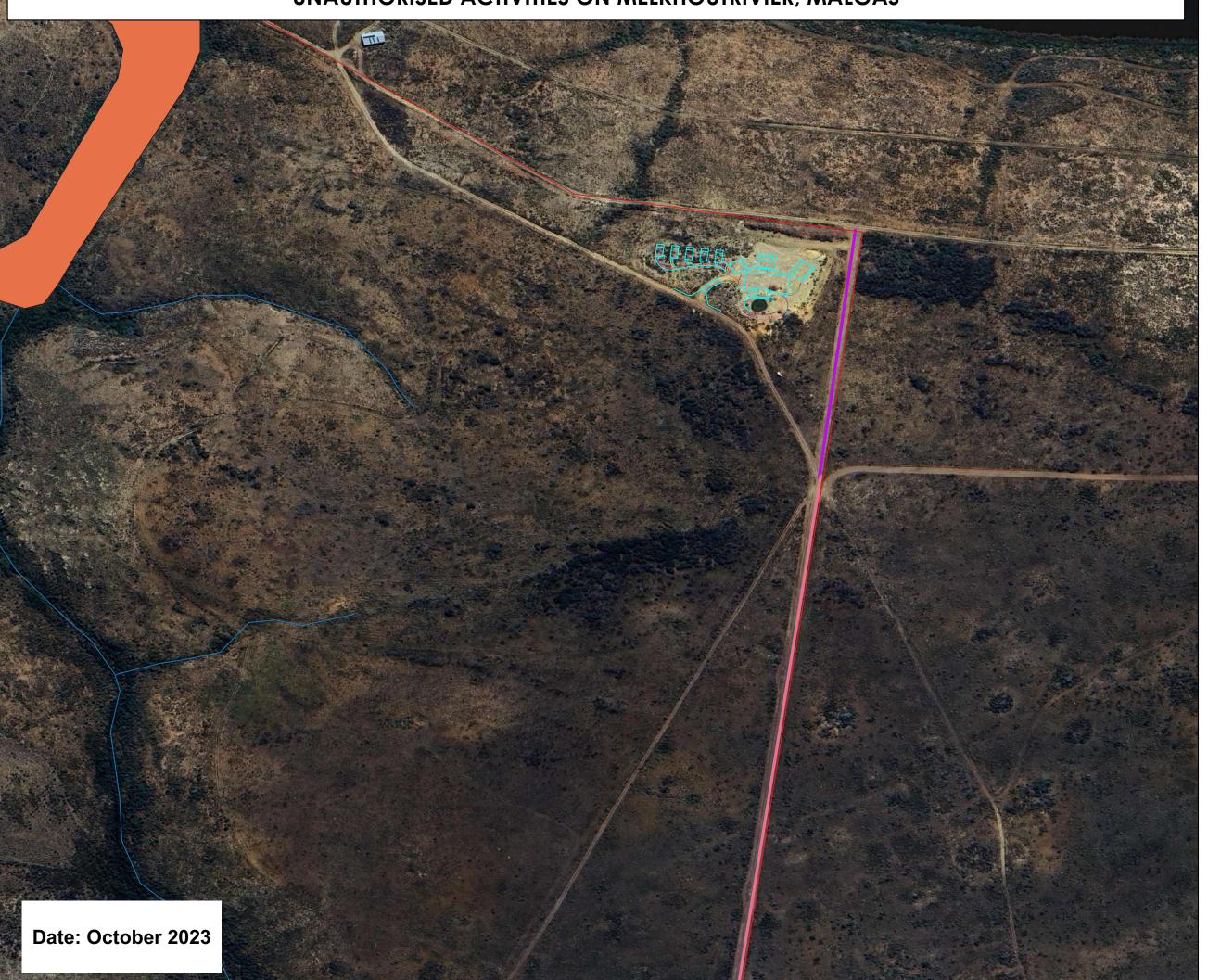
Firebreak road

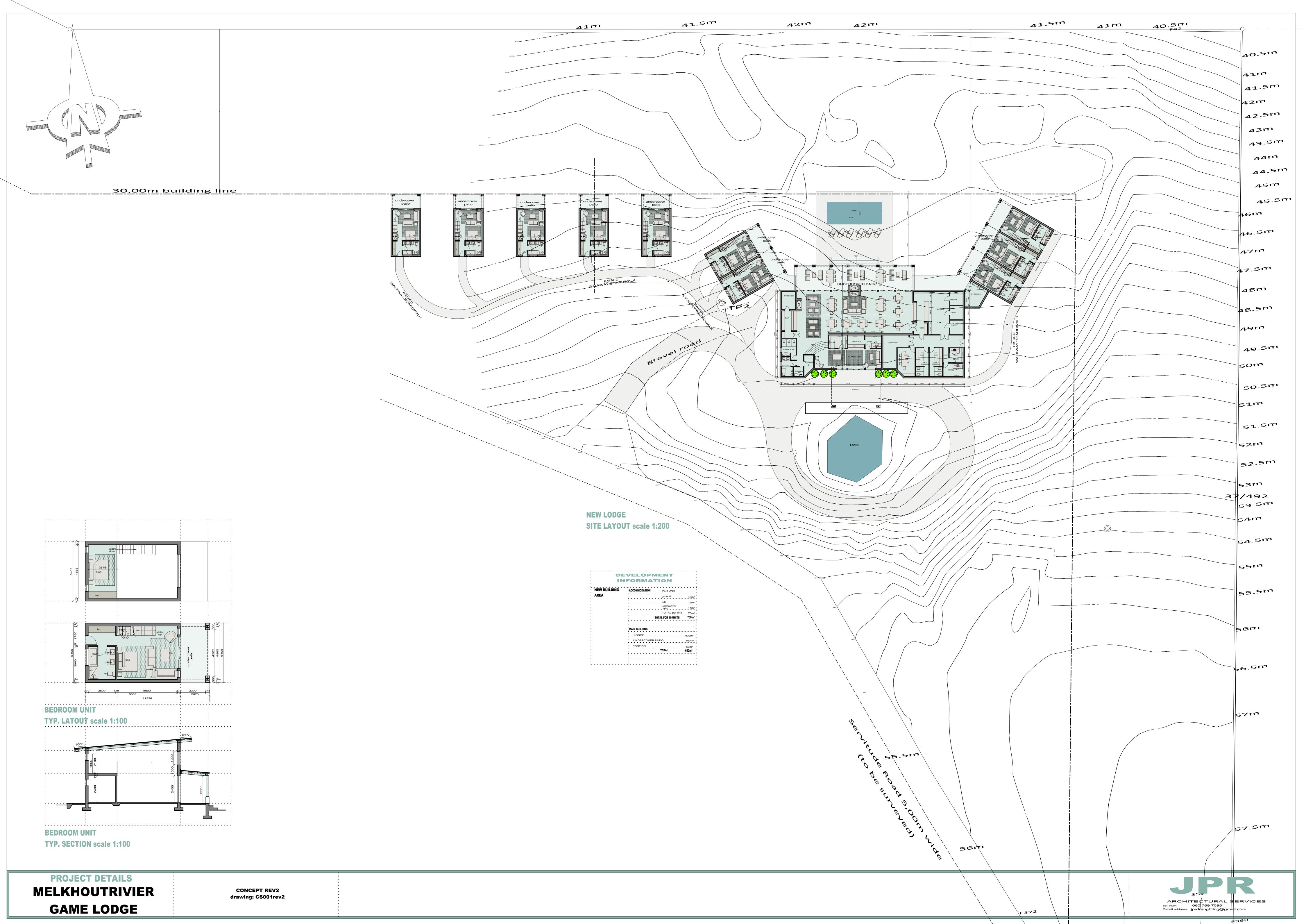
Firebreak road extension

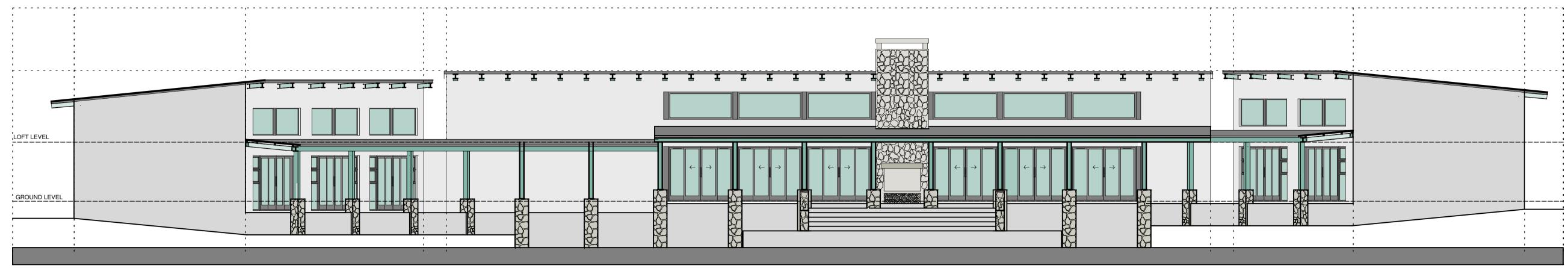
Datum: WGS84 **Projection: Geographic**

Scale: 1:2 000 (on A3)





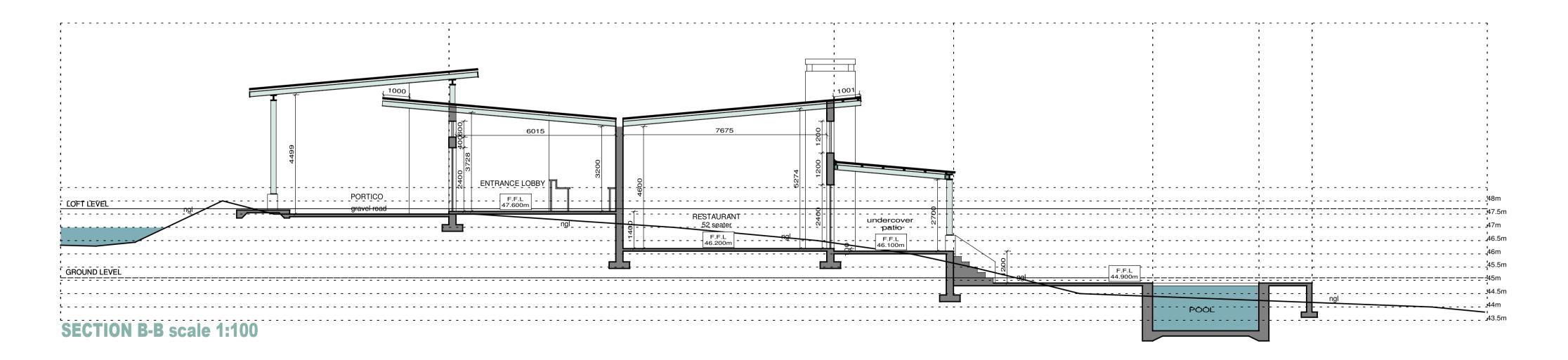




NORTH ELEVATION scale 1:100

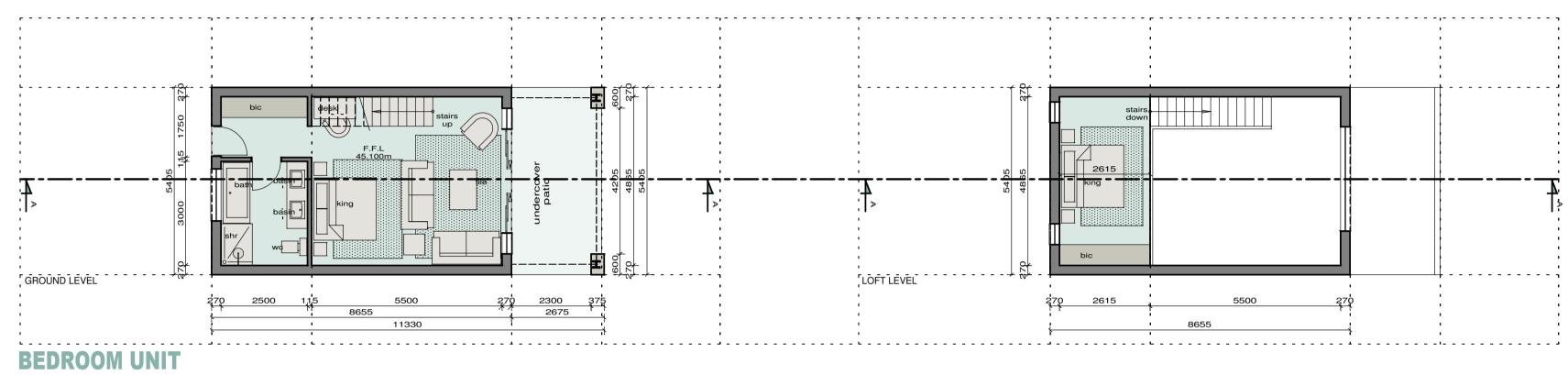


SOUTH ELEVATION scale 1:100

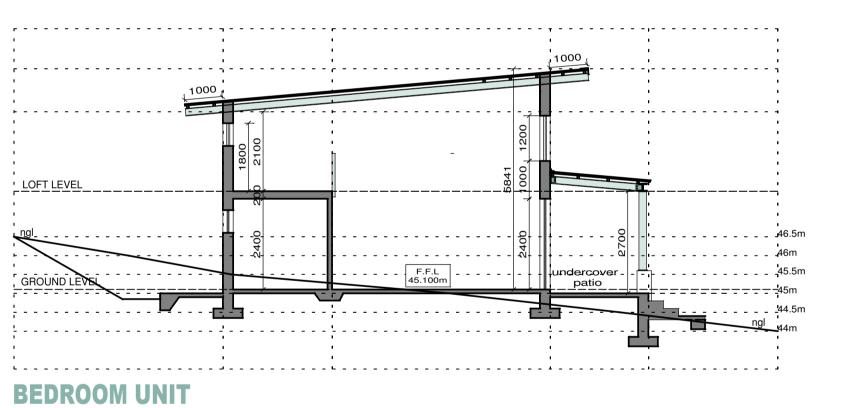


scale as shown on A1

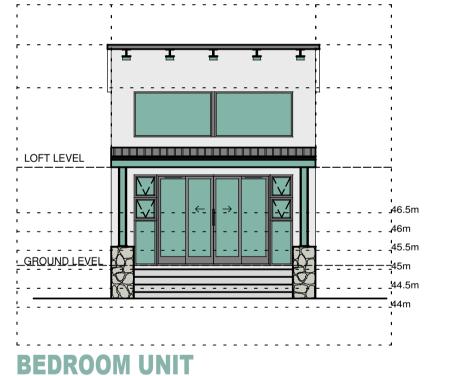




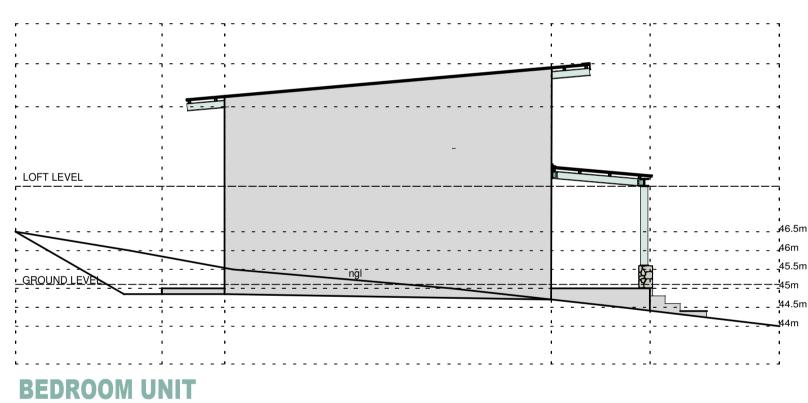
TYP. LATOUT scale 1:100



TYP. SECTION A-A scale 1:100



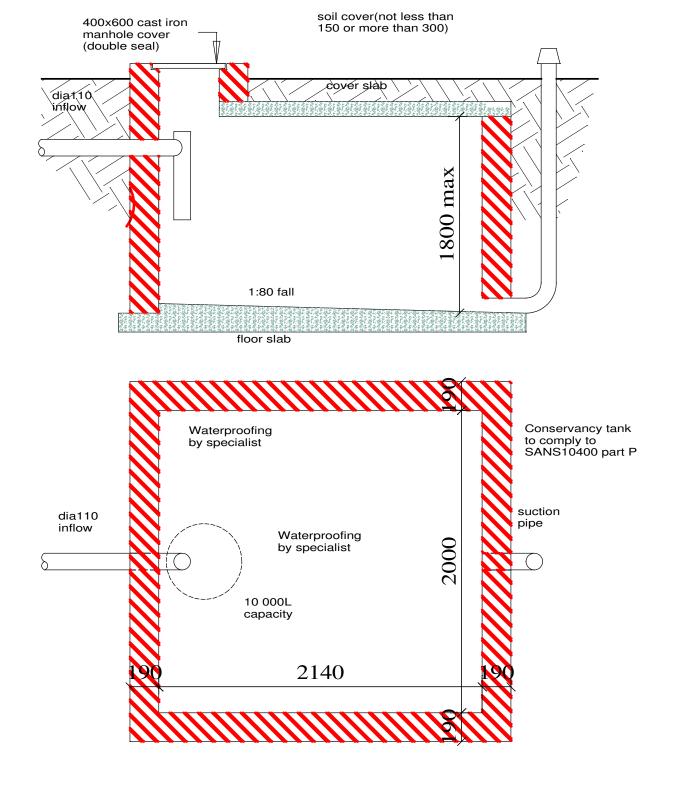
FRONT ELEVATION LATOUT scale 1:100



SIDE ELEVATION LATOUT scale 1:100

scale as shown on A1





CONSERVANCY TANK scale 1:25

PROJECT DETAILS

MELKHOUTRIVIER GAME LODGE

DETAIL DRAWING REV0

scale as shown on A3

10 000L
CONSERVANCY TANK
DETAIL



ARCHITECTURAL SERVICES
cell num: 060 769 7095
E-mail address: jprdraughting@gmail.com

Appendix B: CV OF EAP

CURRICULUM VITAE of AMANDA FRITZ-WHYTE

ENVIRONMENTAL SCIENTIST & GEOLOGIST

1. PERSONAL DETAILS

Born: 17th July 1974 Nationality: South African

Drivers License: Code EB

Languages: Proficient in English and Afrikaans

2. KEY COMPETENCIES

After completing a BSc Honors degree in geology and two years of mining geology experience, I was nominated onto the AngloGold Ltd Young Highflyer Program. Whilst on the program I was exposed to environmental management and was provided the opportunity to develop myself in that field of interest. I now hold a Master of Science degree in Water Resource Management and more than 22 years of environmental management experience.

During my career to date, I have accumulated experience in the following key areas:

Competencies	Key Experience		
Water Management	MSc in Water Resource Management (distinctions in two subjects)		
	Environmental Coordinator: Water (AngloGold Ashanti)		
	Water Use License Applications, General Authorizations and		
	Existing Lawful Use verifications and registrations		
	Compilation of water management strategies/ plans for both the		
	KOSH & West Wits areas		
	Management of wastewater treatment plant at Toyota SA		
	Manufacturing		
	Wastewater management and pollution prevention (industrial)		
	Inter-basin pumping schemes (flood prevention) in mining (KOSH &		
	West Wits area).		
	Industrial pollution control (planning, design & implementation)		
	Water management plan for OR Tambo airport		
	WSI and brine disposal authorisations		

2. Environmental Monitoring Programs	 Appeal applications to Water Tribunal (Shoprite Checkers (Pty) Ltd and Dasbosch Family Trust) Groundwater monitoring program for Toyota SA EMPr\s for Coastal Disaster Rehabilitation projects and various construction projects
S. Environmental Management Systems	Maintenance Management plans (dams in Western Cape) Assistant in implementation of electronic EMS at AngloGold Ashanti energicing.
Management Systems	 operations Implementation & Management of EMS for various plants at Toyota SA Manufacturing (Durban)
4. Environmental Assessments	Risk Assessments conducted for large scale capital projects at AngloGold Ashanti
	 Basic Assessments for Coastal Disaster Rehabilitation projects (KZN) and construction projects (Western Cape and KZN) including Public Participation per project S21(c) and (i) risk matrix assessments for determining impacts under the NWA EIA for Mining Right expansion (Steyn's Quarry, Botrivier) Risk assessment as part of Water Use License applications (Shoprite Checkers (Pty) Ltd, PEPKOR, Caledon Mixed use development) Mining Permit applications (Western Cape) S24(G) applications Western Cape S30(A) applications KZN
5. Environmental Auditing	 Lead Auditor Toyota SA NEMA compliance audits for mining ECO for various construction projects Water Use License audits (Shoprite Checkers (Pty) Ltd and PEPKOR)
6. Geology	 BSc Honors degree (Geology, Biochemistry) Two years underground mining geology experience 4 years diamond evaluation and certification experience

7. Energy & Emissions	Compilation of CO₂ inventory for Toyota SA
8. Capital Project	Wastewater plant upgrade for Toyota SA
Management	
9. Training	Training to middle management at Toyota SA Manufacturing on
	HSE course
	Mentorship to Archaeology student Anja Huisamen (2017-2018)
	Guest lecturer on Water Management Course (hosted by DWS)
	Mentorship for Candidate EAP as part of EAPASA
	Training to Shoprite Management on WULA conditions

3. TERTIARY EDUCATION

3.1 Master of Science in Water Resource Management

Year/s of study: 2005 - 2006

Institution: University of Pretoria

Course Modules: Strategic Environmental Management

Water, Sanitation and Treatment

Water Quality Management

Water Conservation & Demand Management

Environmental Analysis, Assessment & Modeling

Environmental Paradigms
Environmental Governance

Thesis: Towards finding a solution to the KOSH inter-mine

water management problems. (Refer to Section 4.5 for

details).

3.2 Bachelor of Science Honours in Geology

Year/s of study: 1997 - 1998

Institution: University of Port Elizabeth

Subjects: Igneous petrology, Sedimentology, Structural Geology,

Oceanography

Thesis: Structural geology formations on a farm near Steytlerville

(Cape Fold Belt)

3.3 Bachelor of Science

Year/s of study: 1993 - 1996

Institution: University of Port Elizabeth

Major subjects: Geology, Biochemistry

Other subjects: Mathematics 1, Botany 1 & 2, Chemistry 1 & 2, Physics 1

4. EMPLOYMENT RECORD

4.1 Current

Designation: Environmental Assessment Practitioner

Period: May 2016 to current

Key responsibilities: Conduct EIA's, Basic Assessments, Setback Line

applications, Water Use Authorizations, General Authorizations, Water Services S24G applications, Intermediary and Brine disposal authorizations, Mining Permit and License applications, S102 applications (including public participation requirements for all the listed processes as needed according to stipulations in NEMA). NEMA compliance audits, water audits, ECO work, social and labour plan compilations, Financial Provision for Mining, S21(c) and (i) risk matrix assessments for

determining impacts under the NWA, environmental

awareness plans, EMPr's, Alien invasive management

plans, mining plans and Maintenance Management Plans.

Public Participation is conducted as part of BAR, EIA and

WULA processes.

4.2 Freelance/ Self-employed

Designation: Geologist/ Environmental consultant

Period: July 2011 to April 2016

Key responsibilities: Conducted all environmental work (comment on EMP's,

comment on new legislation, submission to NWRMS

parliamentary sub-committee, submissions to legal advisors and other NGO's) for TKAG.

Lobby Minister Anton Bredell for the establishment of the CoCT sludge to land application monitoring committee for Melkbosstrand / Philidelphia area.

Oversee BAR for Melkbosstrand High School Sports Fields and completed ECO work.

Geological work: Gemological work (evaluation and certification) of diamonds for clients. Registration process for Diamond Regulator and Mining Right Conversion from Old Order Mining Right.

Prospecting work on site for diamond bearing gravels.

Reason for leaving: Moved back into full time formal employment sector

4.3 Enspire Environmental

Designation: Director

Period: June 2010 to July 2011

Key responsibilities: Manage all aspects of business for the KZN South Coast

region: BAR's; EIA's; WULA's; S30 applications; S24G applications; waste management; auditing; ECO work, water management, preparation and submission of tender documents for large local government projects. Public Participation is conducted as part of BAR, EIA and WULA

processes.

Reason for leaving: Relocated from KZN to Cape Town and resigned as

Director of company

4.4 SSI Environmental

Designation: Associate

Period: March 2008 to May 2010

Key responsibilities: Develop client relations and deliver service to clients on

the Kwa-Zulu Natal South Coast in the following areas:

BAR's; EIA's; WULA's; S30 applications; S24G applications; waste management; auditing; ECO work, water management, preparation and submission of tender

documents for large local government projects in KZN and Nelson Mandela Metro. Green city competition coordinator

on behalf of NMM.

Office manager: Business development, management of

staff, budget reporting.

Compilation of water management plan and strategy for

OR Tambo Airport.

Public Participation is conducted as part of BAR, EIA and

WULA processes.

Reason for leaving: Had to downscale on amount of travelling due to the birth

of my son.

4.5 Toyota South Africa Manufacturing (Durban)

Designation: Environmental Manager

Period: January 2006 to February 2008

Key responsibilities: Implement, maintain and audit EMS for various plants

making up the Toyota SA manufacturing operations. Responsible for water management on site – effluent treatment plants, resource measurement, recycling

opportunities and reduction in usage.

Implementation of anti-pollution measures on site (moving pipelines overhead, interception trenches and containment

pits).

Reporting environmental performance to top management.

Budget compilation and tracking.

HSE advisor to new Warehouse Project. CMA

representation on behalf of TSAM.

Reason for leaving: Head hunted by consulting firm

4.1 AngloGold Ashanti: Environmental Management Department

Designation: Environmental Coordinator: Water
Period: November 2001 to December 2005

Throughout this period, I was involved in the following key projects:

Project / Technical Area Personal Involvement Water management strategy addressing mine Compiled and interpreted historical data relating to dewatering in the KOSH area fissure water quality, volumes and water balances; This project involved developing a water Interpreted the 3D geological mining model for management strategy to address the risk of deepinter-basin water transfer; level gold mines in the Klerksdorp, Orkney, Developed flow models; Stilfontein, Hartebeesfontein (KOSH) area flooding Generated options for re-use of the fissure water; should neighbouring mines cease dewatering Compiled a regional water management strategy operations for AGA mining area; Facilitated KOSH Inter-Mine Forum meetings; Created awareness with DWAF and DME at national and regional levels in regards the strategy and obtained their process requirements. Water management strategy to allow for Investigated pillar stabilities, fissure water sources closure of the West Wits area and water balances; This project involved developing water Identified major environmental liabilities for management strategy to allow for closure of deep-AngloGold Ashanti and for the area; level gold mines in the West Wits Area. Compiled a water management strategy linked to closure plans and the re-watering of underground compartments. Water Management Conducted a financial evaluation on the proposed Waste Discharge Charge System (WDCS) and the local council takeover as water services provider; Facilitated the compilation of catchment models for the Vaal River Area: Managed the compilation of clean/dirty water assessments on all 25 AngloGold Ashanti SA business units; Managed the compilation of a groundwater liability report covering AngloGold Ashanti SA Region; Participated in workshops for Integrated Water Management policy for the Mining Sector on behalf of AGA; Contributed to water management assessments for closure of Savuka Mine and Domain 3 area.

Represented the company at various fora,

	 including Randwater; FWRDWA Licensing Sub-Committee, Kromdraai Licensing Forum; KOSH Inter-Mine Forum and WISA Mine Water Division. Compiled water discharge licence application for West Wits Area; Coordinated studies and funding agreement for Yellowfish genetic research projects; Compiled the "Water management' section of the Global reporting Initiative for AngloGold Ashanti SA; Compiled environmental performance assessment reports for WUDL boreholes and extent of compliance reports for three business units.
 Environmental Impacts Assessments (EIAs) EIAs were compiled for these two projects in the Vaal River Area: Reworking of Rock Dumps (R150M) Re-commissioning of West Pay Dam Tailings Storage Facility (R20M) 	 Compiling background information for the EIAs; Coordinating consultation meetings with key government departments; Internal review of the draft EIA reports; Ensuring project deadlines and budgets were met.
Emergency Preparedness Planning	 Assisted with emergency preparedness planning for tailings storage facilities in the West Wits Area.

Reason for leaving: To expand my career experience beyond the mining sector

4.2 AngloGold Limited: Corporate Office

Designation: Executive Assistant to Executive Officer SA Region

(Appointed on AngloGold Ashanti's Highflyer Program)

Period: August 2000 – October 2001

Key responsibilities: I was responsible for the following:

- Sourcing and compiling required information for the Executive of SA Region
- Coordinating and recording SA Exco, Management and Strategic Meetings for Executive
- Compiling the weekly Gold and Safety Report
- Compiling the Business Plan: 2002 for SA Region operations.

Reason for leaving: Completed the Highflyer Program

4.3 AngloGold Limited: Tau Lekoa Mine

Designation: Geologist (Manager in Training)

Period: June 1999 – August 2000

Key responsibilities: I was responsible for the following:

 Assisting the Senior Geologist with structural mapping underground, interpretation and providing an advisory service to the Mining Department.

 Managing own section in regards scheduling of work which included mapping, interpretation and advice;

• Logging of drilling core and interpretation thereof.

Reason for leaving: Selected for Highflyer Program (see above)

4.4 AngloGold Limited: Great Noligwa Mine

Designation: Geologist (Manager in Training)

Period: May 1998 – June 1999

Key responsibilities: I was responsible for the following:

 Assisting the Senior Geologist with structural mapping underground, interpretation and providing an advisory

service to the Mining Department.

Logging of drilling core and interpretation thereof.

Reason for leaving: Career development opportunity within the company.

5. COURSE / CONFERENCE PARTICIPATION

5.1 Short courses completed

Technical skills

- Waste management for Environmental Managers (PUCHO, 2002)
- Water Quality Management (Technikon Pretoria, 2002)
- Water Quality Management for Environmental Managers (PUCHO, 2002)
- Water Quality Monitoring (PUCHO, 2003)
- Introduction to GIS (PUCHO, 2001)
- MS Word, Excel, Access, PowerPoint, Projects, ArcGIS, ArcView, ArcInfo
- Air Quality Modeling (PU, 2007)
- Pump Course (SAIME, 2007)
- Windeed (2008)
- Internal Project Management SSI (Modules: General business principles;
 General contract principles; Risk Awareness; OHS; Service Quality) (2008)
- Biodiversity Offset training workshop (SANBI, 2018)
- Water Governance (2019)

Environmental processes

- Environmental Risk Assessment (PUCHO, 2001)
- Environmental Impact Assessment (PUCHO, 2001)
- Environmental Law (PUCHO, 2001)
- Environmental Auditing (PUCHO, 2001)
- Issue-based Risk Assessment (ATDS Learning Centre, 2000)
- New EIA Regulations (2006)

Project-management and leadership

- Business Presentation Skills (Maccauvlei Training Centre, 1999)
- Industrial Relations (Maccauvlei Training Centre, 2000)
- Finance for Non-Financial Managers (Maccauvlei Training Centre, 1999)
- Leadership for Middle Managers (Maccauvlei Training Centre, 1999)
- Middle Management (Maccauvlei Training Centre, 1999)
- Emotional Intelligence Course (AngloGold Ashanti, 2004)

Geological

- Diamond Drilling Techniques (ATDS Learning Centre, 1999)
- Rough Diamond Evaluation Course (Harry Oppenheimer Training School, 2011)

6. LIST OF PROJECTS TO DATE

Year	Role of EAP
2009	Review of BAR, EMP, PPP for all aspects
	of application
2009	Review of BAR, EMP, PPP for all aspects
	of application
2009	Review of BAR, EMP, PPP for all aspects
	of application
2009	Review of BAR, EMP, PPP for all aspects
	of application
2009	Review of BAR, EMP, PPP for all aspects
	of application
	2009

	T	
in Umzinto Main Road &		
Alexandra Crescent,		
Umdoni Local Municipality.		
KZ 212PR1& KZ212PR13:	2009	Review of BAR, EMP, PPP for all aspects
Consolidated Basic		of application
Assessment for Stormwater		
control and damage repairs		
in Park Rynie Beachfront		
Parking and Lotus Park		
Basic Assessment for the	2010	Review of BAR, EMP, PPP for all aspects
2008 Flood Disaster		of application
Project, KZ212 UMZ6		
(Esperanza)		
Tidal Surge Rehabilitation	2008	Compilation of application, PPP, all aspects
work for Northern and		of applications
Southern Beaches		
(Hibberdene Main Beach,		
Umzumbe Main Beach,		
Pumula, Banana Beach,		
Sunwich Port Main Beach,		
South Port Main beach,		
Umtentweni, Silver Beach,		
Shelley Beach, Peter Pan		
Beach, Glenmore and		
Munster, Palm Beach,		
Southbroom)		
Hibiscus Coast Tidal Surge	2008	Compilation of application, PPP, all aspects
port Shepstone: Elizabeth		of applications
drive Rehabilitation project		
Tidal Surge Rehabilitation	2008	Compilation of application, PPP, all aspects
of Central Beaches located		of applications
at St Michael's on Sea,		
Uvongo, Manaba, Margate		
and Ramsgate		

Proposed residential Grieg	2008	Compilation of application, PPP, all aspects
house in Kelso	2000	of application
	2040	
Basic assessment for the	2010	Compilation of application, PPP, all aspects
re-development of Marlicht		of application
Holiday Resort in Margate,		
KwaZulu Natal		
Mbango Sewer Line	2008	Compilation of application, PPP, all aspects
		of application
Proposed Rehabilitation of	2010	Review of BAR, EMP, PPP for all aspects
Rural Roads within		of applications
Hibiscus Coast Local		
Municipality.		
Ugu District Municipality –	2008	Review of BAR, EMP, PPP for all aspects
Scottburgh Sewage Works		of application
Tidal Surge Repairs		
Down and Down and of Tidal	0040	Deview of DAD, FAID, DDD for all assessed
Proposed Removal of Tidal	2010	Review of BAR, EMP, PPP for all aspects
Pool in Southbroom,		of application
Hibiscus Coast Local		
Municipality		
Umdoni Beach	2008	Compilation of application, PPP, all aspects
Rehabilitation –		of application
Phase 2		
Agulhas Erf 854 Setback	2016	Compilation of application, PPP, all aspects
Line Application		of application
Basic Assessment P90 of	2016-2017	Compilation of application, collation of
Farm 587, Hemel en Aarde		specialist input, PPP, EMPs, all aspects of
		application
S102 amendment (Scoping	2016-2019	Verification of S102 process with DMR;
and EIA) Steyns Quarry,		Compilation of scoping and EIA reports,
Botrivier		collation of all specialist input, PPP, all
		aspects of application process (both NEMA
		and MPRDA processes)
Basic Assessment for On	2018	Compilation of application, PPP, EMPs, all
The Earth Tented Camp,	2010	aspects of application
The Earth Tenteu Camp,		aspects of application

Elgin		
Basic Assessment P1 of	2016-2017	Compilation of application, collation of
Farm 627 Phillipskop,		specialist input, PPP, EMPs, all aspects of
Stanford		application
Basic Assessment P58 of	2016-2017	Compilation of application, collation of
Farm 406, Slanghoek		specialist input, PPP, EMPs, all aspects of
		application
Basic Assessment P18 of	2018-2019	Compilation of application, collation of
Farm 238, Stormsvlei		specialist input, PPP, EMPs, all aspects of
·		application
Keurboomen Mine Permit	2016-2017	Compilation of application, collation of
application RE of P6 of		specialist input, PPP, EMPs, all aspects of
Farm 191, Swellendam		application (both NEMA and MPRDA
(Basic Assessment)		processes)
S24G authorization for	2018 to	Compilation of S24G application, collation
Avontuur Chicken Farm,	2021	of specialist input, PPP, EMPs, all aspects
Stormsvlei		of application and administration fine.
WULA/ GA/ ELU for:	2016 to	Compilation of all information for DWS;
a) Cilmor distribution	2023	project management of specialists;
centre Shoprite		justification of ELU using historical
b) Shoprite Constantia		photography and water use rights; Public
centre		Participation for WULA
c) Shoprite GB Mall		
d) Shoprite Vergelegen		
Mall		
e) Shoprite Delft Mall		
f) Shoprite		
Boschenmeer Mall		
g) George quarry		
h) Botrivier sandmine		
i) Lomond Wine		
Estate		
j) Plattekloof Farm		
Riversdale		
k) De Berg Farm		

		T	,
	Riversdale		
l)	Groote Fontein		
	Farm, Stilbaai		
m)	Brown dog Farm,		
	Franskraal		
n)	Ocean Mushrooms		
	Botrivier		
0)	Elgin Free Range		
	Farm		
	Karwyderskraal		
p)	Shoprite Noordhoek		
q)	Slanghoek Mountain		
	Resort		
r)	PEPKOR main site		
	Parow		
s)	PEPKOR DC Cape		
	Town		
WSI and Brine		2018 to	All aspects of project- compilation of WSI
authorizations for Shoprite		2021	and brine disposal applications.
GB Mall and Constantia			
Mall			
Water	Tribunal appeals	2019–2021	Shoprite Checkers (Pty) Ltd - Representing
			client during hearings and compilation and
			submission of appeal documentation.
GA for Curro Delft site		2020- 2021	Compilation and submission of all
			documentation to DWS.
Basic Assessment for dam		2019 to	Compilation of application, collation of
expansion Dasbosch farm,		2021	specialist input, PPP, EMPs, all aspects of
Porterville			application
Basic Assessment for dam		2019 to	Compilation of application, collation of
expansion Montdry,		2021	specialist input, PPP, EMPs, all aspects of
Barrydale			application
Setback Line Application		2022	Compilation of application, PPP, and
Erf 954, L'Agulhas			impact assessment
	-		

	1	
Riverstone Farm	2022	Assessment of existing lawful uses and
Franschoek Water Due		development of water management and
Diligence		authorization strategy
Diepgat Farm Hemel-en	2022	Assessment of existing lawful uses and
Aarde Valley Water Due		development of water management and
Diligence		authorization strategy
Caledon Mixed use	2022	Compilation of technical report, application
Development WULA		process on e-wulaa
Keurboomen Mine Closure	2022	Compilation of closure plan associated with
Plan		identified risks and PPP – management of
		all aspects of closure process
Registration of General	2022	Registration of 3 General Authorizations for
Authorizations for Baleia		various water uses on site – management
Wines		of registration process on e-wulaa
Delft Mall WULA audit	2023	Audit of site against Water Use Licence and
		submission of findings and
		recommendations to DWS
GB Mall WULA audit	2023	Audit of site against Water Use Licence and
		submission of findings and
		recommendations to DWS
Elgin Free Range Chicken	2023	Audit of site against Water Use Licence and
WULA audit		submission of findings and
		recommendations to BOCMA.
Riverstone ELU verification	2023	Verification and Validation of ELU water
		uses on site and submission to DWS
Cape Winelands Airport	2022 - 2023	EIA for Cape Winelands Airport project
1		(includes compilation of application,
		collation of specialist input, PPP, EMPr, all
		aspects of application)
Water Tribunal Appeals for	2023	Representing client during hearings and
Dasbosch and Driebos		compilation and submission of appeal
Farms, Porterville		documentation.
i aims, i orterville		dodinionation.

Rooiels Basic Assessment	2023	Compilation of application, collation of
		specialist input, PPP, EMPr, all aspects of
		application
Greenacres Shoprite WULA	2022-2023	Compilation of all information for DWS;
		project management of specialists; Public
		Participation for WULA

NOTE: PPP in text refers to Public Participation Process (inclusive of stakeholder meetings, advertising, compilation of IAP register and Comments and Response)

7. AFFILIATIONS AND MEMBERSHIPS:

Fellow Member WISA

Member IAIAsa

Registered Environmental Assessment Practitioner: Number 2019/367 (EAPASA)

SACNASP Registration - Pri.Sci.Nat (118385)

SUMMARISED CURRICULUM VITAE OF LINDSAY SPEIRS DU TOIT

PERSONAL INFORMATION

FIRST NAMES Lindsay Justine **GENDER** Female Speirs Du Toit **MARITAL STATUS** Married **SURNAME ID NUMBER** 7809220230087 **DEPENDENTS** One DATE OF BIRTH 22/09/1978 **HOME LANGUAGE** English South African Afrikaans **NATIONALITY SECOND LANGUAGE TELEPHONE NUMBER** 083 2898 727 **HEALTH** Excellent **DRIVERS LICENSE** Code 08

QUALIFICATIONS

INSTITUTIONQUALIFICATIONYEAR OBTAINEDMilnerton High SchoolMatric (with exemption)1996University of StellenboschBA1999Majors: Archaeology; Psychology; Geography and Environmental StudiesEnvironmental StudiesUniversity of StellenboschBA Honours2000

Spatial Analysis and Decision Making in GIS and Environmental Management

University of Stellenbosch MA 2003

Environmental Geography

Thesis Title: Agritourism: Market Segementation Profile of

Potential and Practising Agritourists.

REGISTRATIONS AND MEMBERSHIPS:

Registered EAP with EAPASA – Registration No. 2019/1470 Member of IAIA

EMPLOYMENT HISTORY:

Period: June 2020 to present

Company: Self employed (trading as Earth Grace Environmental Consultancy)

Position: Registered Environmental Assessment Practitioner (EAP)

- Conducting Environmental Processes and Compiling Reports (Basic Assessment, Scoping/EIA, Section 24Gs, Amendment Applications);
- Facilitation of Public Participation Processes
- Opportunity and Constraints Analyses
- Regulation 43 Audits
- Applicability Checklists
- Section 30A Applications and Site Monitoring

Period: January 2004 to June 2020

Company: Doug Jeffery Environmental Consultants (Pty) Ltd.

Position: Senior Consultant

Responsibilities at Doug Jeffery Environmental Consultants:

- Compilation of Reports (Basic Assessment Reports, Scoping Reports, Environmental Impact Assessment Reports, Environmental Management Programmes, Maintenance Management Plans, Ad Hoc Setback Line Reports, Applicability Checklists, Terms of References, Section 24G Reports);
- · Quoting for new applications;
- · Conducting site verification visits;
- Facilitation of Environmental Processes (Basic Assessment, Scoping/EIA, Section 24Gs, Amendment Applications);
- Facilitation of Public Participation Processes
- Liaison and consultation with Authorities, Applicants, Specialists, Consultants and the Public;
- Training Junior Staff;
- · Compiling Templates.

COMPUTER LITERACY:

MS Word; Excel; Access, Power Point, Projects, Adobe, Corel Draw, SPSS; Idrisi; Arcview; PC Arc/Info, QGIS.