

Jarranhnup Piggery
ENVIRONMENTAL AUDIT REPORT

Final Report: 6 DECEMBER 2025

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Abbreviations Used

The following abbreviations (in alphabetical order) have been used below:

Advertising on Road and Ribbon Development Act, 21 of 1940	ARRDA
Department of Environmental Affairs and Development Planning	DEA&DP
Environmental Management Programme for the Rendering Facility	EMPr
Hazardous Chemical Substances	HCS
Hazardous Chemical Substances Regulations	HCSR
National Atmospheric Emission Inventory System	NAEIS
National Atmospheric Emission Reporting Regulations GNR 283 in GG 38633	NAERR
National Environmental Management Act	NEMA
Occupational Health and Safety Act, 85 of 1993	OHSA
Record of Decision	RoD
Water Use Licence – 02/G40G/AGIAE/10115	WUL

1. Audit Objectives

The objective of this audit was to determine the extent of Jarrahnup piggery compliance with the conditions set out in:

- Water Use Licence (02/G40G/AGIAE/10115);

2. Audit Scope

Enviro-EAP was required to conduct an independent external annual audit of the site in terms of the conditions and requirements of the Water Use Licence (02/G40G/AGIAE/10115)

The audit process followed was based on the requirements and guidelines of SANS 19011:2018 and entailed audit preparation, audit execution and the submission of an audit report.

It must be noted that the auditor relied on the information and documentation supplied to the auditor by operations representatives, as well as from information gathered during a site inspection.

3. Identification of the Audit Client

The Audit Client is Jarrahnup Piggery Facility.

4. Identification of the Auditors

The audit was conducted by a member of Enviro-EAP's qualified team of auditors. The audit was conducted by:

Nicolaas Willem Hanekom – Environmental Auditor

5. Date and Site of Audit

The audit was conducted on the 28 August 2025. Information received was verified in November 2025. The activities at the farm, were audited.

6. Audit Criteria

The activities at the Facility were audited against the conditions set out in the Water Use Licence (02/G40G/AGIAE/10115) Registration number 22070198.

7. Audit Findings

WATER USE LICENCE. LICENCE NUMBER: 02/G40G/AGIAE/10115 : 02 DECEMBER 2020				
CONDITION	DOCUMENT REFERENCE	FINDING NC (Non-compliant) PC (Partially compliant) C (Compliant) NA (Not Audited)	Compliance Rating NC - 0 PC - 1 C - 2 NA -	AUDITORS COMMENT
This licence is subject to all applicable provisions of the National Water Act, 1998 {Act 36 of 1998}.	Appendix 1 Condition 1			
The Licensee must provide a BBBEE certificate within 12 months of the issuance of the license showing at least 51% BBBEE shareholding.	Appendix 1 Condition 2	C	2	The Licensee did provide a BBBEE certificate within 12 months of the issuance of the license showing at least 51% BBBEE shareholding during 2022 audit report.
All wastewater dams must be lined with an appropriate lining to prevent any possible leachate and / or groundwater and soil contamination.	Appendix 1 Condition3	C	2	All Wastewater dams are lined with an appropriate lining to prevent any possible leachate and / or groundwater and soil contamination.

				
The monitoring plan / protocol must establish adequate on-site monitoring for continued water quality impacts on soil and watercourses / water resources.	Appendix 1 Condition 4	C	2	The monitoring plan / protocol was established adequate on-site monitoring for continued water quality impacts on soil and watercourses / water resources
Continued soil analysis must be done as per the recommendations made in the soil study report dated 30/11/2019 with reference Soil report 11 2019 v2.docx.	Appendix 1 Condition 5	C	2	Continued soil analysis was done on 17 January 2025 as per the recommendations made in the soil study report. Refer to Addendum A Soil monitoring report.
A 25m Buffer on all drainage channels and 45 m for the Bot River must be implemented.	Appendix 1 Condition 6	C	2	A 25m Buffer on all drainage channels and 45 m for the Bot River was implemented.
Regular slurry dam wall inspections must be undertaken.	Appendix 1 Condition 7	C	2	Regular slurry dam wall inspections are undertaken.
Disturbed soils and stockpiled soils must be protected from erosional features.	Appendix 1 Condition 8	NA	NA	No soil was stockpile during the time of this audit.

The license and conditions may be amended subject to any future related court proceedings and/or rulings.	Appendix 1 Condition 9	C	2	Application for amendment was submitted and in process.
All waste and wash water should be contained in concrete canals including run <i>off</i> water from the grower camps.	Appendix 1 Condition 10	C	2	In concrete channel encased in plastic to avoid any seepage. Flows after plug is pulled into underground conservancy tanks. From the conservancy tank it is spread onto the agricultural dry lands in summer as per the sludge disposal management plan and in winter all sludge is then transported in a 10 000 liter vacuum tanker and transported to the holding dam from where it goes through the separator and solids are removed and the residue is pumped into the holding dam. Further channels and catchment ponds were constructed to catch rainwater runoff from the paddocks and prevent seepage into the surrounding agricultural fields. Runoff into these ponds is collected with the honey sucker tank and disposed at the waste screen and into the sludge pond.
The irrigation pond should be lined with HDPE liner and should have at-least 0.8m free board at all times.	Appendix 1 Condition 11	C	2	The irrigation pond is lined with HDPE liner and have at-least 0.8m free board at all times.

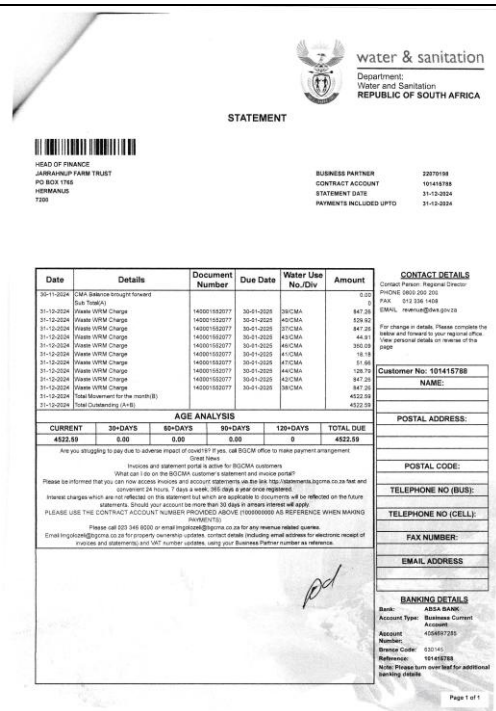
All uncontaminated run off from upstream of the irrigation dam should be diverted around the dam.	Appendix 1 Condition 12	C	2	All uncontaminated run off from upstream of the irrigation dam is diverted around the dam
The Irrigation should be managed and scheduled to limit surface run off and deep percolation using moisture probes and acceptable irrigation scheduling methodologies.	Appendix 1 Condition 13	C	2	All piggery slurry was disposed as sludge. The sludge disposal (Irrigation) is managed and scheduled to limit surface run off and deep percolation using moisture probes and acceptable irrigation scheduling methodologies
The boreholes must be equipped with an observation tube (40 mm Class 10 PVC) to enable the water levels to be recorded easily and for easy installation of data loggers; a flow meter (pulse signal) and a sampling tap. An adjustable timer switch should also be installed to ensure the borehole does not pump for longer than 12 hours continuously.	Appendix 1 Condition 14	C	2	All was installed and monitoring was done. Photograph: Pump control box and metering  Photograph: 40 mm Class 10 PVC

				
During summer, the water level should be measured daily (towards the end of the 12-hour pumping cycle) and recorded in a database. Note this is a conservative safe yield (for use throughout the year). It is feasible that more groundwater can be abstracted and to accurately determine how much more water can be abstracted the borehole should be equipped with a continuous water level data logger.	Appendix 1 Condition 15	C	2	The water level is measured daily (towards the end of the 12-hour pumping cycle) and recorded in a database at the end of the month. Note this is a conservative safe yield (for use throughout the year). It is feasible that more groundwater can be abstracted and to accurately determine how much more water can be abstracted the borehole should be equipped with a continuous water level data logger. The piggery abstracted and Water Usage from the Main Borehole from 1 & 2 from 1 July 2024 to 30 June 2025. Meter Reading 1 July 2024 - 122584 The meter broke and was replaced in February 2025, but the reading is not available. The new meter installed in

				March 2025 reading was 1071 (new meter used). Meter Reading 30 June 2025 was 6010. Total Water Used: The total usage from 1 March to 30 June was 6010m³. A estimate needed to be calculated for the water consumption due to the meter readings not available, the consumption was calculated using previous years usage which is approximately 34 481 m³ which is much less than the licensed 53 000m³.
The appropriate borehole pump must be installed, i.e. not an over-sized pump that is choked with a gate valve. If the monitoring shows that more water can be abstracted, then the duration of pumping time will be increased (not the flow rate).	Appendix 1 Condition 16	C	2	The water level is measured daily (towards the end of the 12-hour pumping cycle) and recorded in a database at the end of the month. Note this is a conservative safe yield (for use throughout the year). It is feasible that more groundwater can be abstracted and to accurately determine how much more water can be abstracted the borehole should be equipped with a continuous water level data logger.

				
The borehole and pump should be serviced annually. A water sample should also be collected annually, and the flow rate and volume of water abstracted recorded monthly (along with the measured water level).	Appendix 1 Condition 17	C	2	The borehole and pump is checked and serviced annually.
The responsibility for complying with the provisions of the licence is vested in the Licensee and not any other person or body.	Appendix 1 Condition 18	NA		
The Licensee must immediately inform the Provincial Head of any change of	Appendix 1 Condition 19	NA		

name, address, premises and/or legal status.				
If the property in respect of which this licence is issued is subdivided or consolidated, the Licensee must provide full details of all changes in respect of the properties to the Provincial Head within 60 days of the said change taking place.	Appendix 1 Condition 20	NA	NA	The property and operation details did not change.
If a Water User Association is established in the area to manage the resource, membership of the Licensee to the Association is compulsory. Rules, regulations and water management stipulation of such association must be adhered to.	Appendix 1 Condition 21	NA	NA	No water user association established in the area.
The Licensee shall be responsible for any water use charges and/or levies imposed by a Responsible Authority.	Appendix 1 Condition 22	C	2	Last statement was 21/12/2024

				 The image shows a 'STATEMENT' form from the Department of Water and Sanitation, Republic of South Africa. It includes a barcode, contact details for the business partner, a table of transactions with columns for Date, Details, Document Number, Due Date, Water Use No./Gltv, and Amount. The table lists several transactions from 2024, including 'M1 Balance brought forward' and 'M1 Water Charge'. Below the table is an 'AGE ANALYSIS' section with columns for CURRENT, 30-DAYS, 60-DAYS, 90-DAYS, 120-DAYS, and TOTAL DUE. The form also includes sections for postal address, telephone numbers, fax number, email address, and banking details.
While effect must be given to the Reserve as determined in terms of the Act, where a lower confidence determination of the Reserve has been used in issuance of this licence, the licence conditions may be amended should a higher confidence reserve be conducted.	Appendix 1 Condition 23	NA	NA	A lower confidence determination of the Reserve was not used in issuance of this licence and the licence conditions was not amended.
The licence shall not be construed as exempting the Licensee from compliance with the provisions of any	Appendix 1 Condition 24	C	2	The piggery operations did receive municipal consent and does not trigger

other applicable Act, Ordinance, Regulation or By-law.				an Environmental Authorization requirement.
The licence and amendment of this licence are also subject to all the applicable procedural requirements and other provisions of the Act, as amended from time to time.	Appendix 1 Condition 25	C	2	The piggery operations did receive municipal consent and does not trigger an Environmental Authorization requirement. All building plans related to erf 781 are approved by Theewaterskloof municipality and awaiting approval.
The Licensee shall conduct an annual internal audit on compliance with the conditions of this licence. A report on the audit shall be submitted to the Provincial Head within one month of the finalization of the audit.	Appendix 1 Condition 26	PC	1	The first internal audit and external audits that was conducted in May 2022. No internal audit was conducted thereafter.
The Licensee shall appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. Both these audits may be subjected to external audit.	Appendix 1 Condition 27	C	2	The first external audit was conducted in May 2022 and submitted to BOCMA in July 2022. This second external audit was July 2023. The third one in August 2024. This is the four external audit in 2025.
Any incident that causes or may cause water pollution must be reported to the Provincial Head or a designated representative within 24 hours.	Appendix 1 Condition 28	C	2	No incident that could cause water pollution was recorded at the time of the audit or that the auditor is aware of that needed reporting.
The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of / amongst other things.	Appendix 1 Condition 29	NA	NA	

Shortage of water; Inundation of flood; Any <i>force majeure</i> event; Siltation of the river or dam basin; and Required Reserve releases.				
APPENDIX II: Section 21(a) of the Act: Taking water from a water resource				
This licence authorises Jarrahnup Trust Piggery to abstract a maximum volume of 56 000 m ³ /a of water on for on Remainder of Farm 781, Caledon as detailed in Table 2.	Appendix II: Condition 1	C	2	The water level is measured daily (towards the end of the 12-hour pumping cycle) and recorded in a database at the end of the month. Note this is a conservative safe yield (for use throughout the year). It is feasible that more groundwater can be abstracted and to accurately determine how much more water can be abstracted the borehole should be equipped with a continuous water level data logger. The piggery abstracted and Water Usage from the Main Borehole from 1 & 2 from 1 July 2024 to 30 June 2025. Meter Reading 1 July 2024 - 122584 The meter broke and was replaced in February 2025, but the reading is not

				available. The new meter installed in March 2025 reading was 1071 (new meter used). Meter Reading 30 June 2025 was 6010. Total Water Used: The total usage from 1 March to 30 June was 6010m³. A estimate needed to be calculated for the water consumption due to the meter readings not available, the consumption was calculated using previous years usage which is approximately 34 481 m³ which is much less than the licensed 53 000m³.
The quantity of water authorised to be taken in terms of this licence may not be exceeded.	Appendix II: Condition 2	C	2	The water level is measured daily (towards the end of the 12-hour pumping cycle) and recorded in a database at the end of the month. Note this is a conservative safe yield (for use throughout the year). It is feasible that more groundwater can be abstracted and to accurately determine how much more water can be abstracted the borehole should be equipped with a continuous water level data logger. The piggery abstracted and Water Usage from the Main Borehole from 1 & 2 from 1 July 2024 to 30 June 2025.

				Meter Reading 1 July 2024 - 122584 The meter broke and was replaced in February 2025, but the reading is not available. The new meter installed in March 2025 reading was 1071 (new meter used). Meter Reading 30 June 2025 was 6010. Total Water Used: The total usage from 1 March to 30 June was 6010m³. A estimate needed to be calculated for the water consumption due to the meter readings not available, the consumption was calculated using previous years usage which is approximately 34 481 m³ which is much less than the licensed 53 000m³.
This licence does not imply any guarantee that the said quantities and qualities of water will be available at present or at any time in the future.	Appendix II: Condition 3	NA	NA	
The above mentioned volume may be reduced when the licence is reviewed.	Appendix II: Condition 4	NA	NA	
The Licensee shall continually investigate new and emerging technologies and put into practice water efficient devices in an endeavour to conserve water at all times.	Appendix II: Condition 5	C	2	The Licensee continually investigate new and emerging technologies and put into practice water efficient devices in an endeavour to conserve water at all times.

The Licensee shall install appropriate water measuring devices to measure the amount of water abstracted within six months of the licence being issued. The Licensee shall ensure that all measuring devices are properly maintained and in good working order and must be easily accessible. This shall include a programme of checking, calibration, and/ or renewal of measuring devices. All water taken from the resource shall be measured, recorded and reported as follows: • The daily quantity of water taken must be metered or gauged and the total recorded at the last day of each month; • The Licensee shall keep record of all water taken and a copy of the records shall be forwarded to the Provincial Head on or before 25 January and 25 July of each year.	Appendix II: Condition 6	PC	1	The water level is measured daily (towards the end of the 12-hour pumping cycle) and recorded in a database at the end of the month. Note this is a conservative safe yield (for use throughout the year). It is feasible that more groundwater can be abstracted and to accurately determine how much more water can be abstracted the borehole should be equipped with a continuous water level data logger. The piggery abstracted and Water Usage from the Main Borehole from 1 & 2 from 1 July 2024 to 30 June 2025. Meter Reading 1 July 2024 - 122584 The meter broke and was replaced in February 2025, but the reading is not available. The new meter installed in March 2025 reading was 1071 (new meter used). Meter Reading 30 June 2025 was 6010. Total Water Used: The total usage from 1 March to 30 June was 6010m³. A estimate needed to be calculated for the water consumption due to the meter readings not available, the consumption was calculated using previous years usage which is
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				approximately 34 481 m ³ which is much less than the licensed 53 000m ³ .
No water taken may be used for purposes other than intended in this licence, without written approval by the Minister or his/her delegated nominee.	Appendix II: Condition 7	C	2	No water taken is used for purposes other than intended in this licence.
Notices prohibiting unauthorised persons from entering the certain areas, as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence of these areas.	Appendix II: Condition 8	C	2	Notices prohibiting unauthorised persons from entering the certain areas, as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry was displayed along the boundary fence of these areas. 
The Licensee shall establish a programme of formal Information Management System, which maintains a database on water supply, distribution and delivery infrastructure.	Appendix II: Condition 9	C	2	The Licensee established a programme of formal Information Management System, which maintains a database on water supply, distribution and delivery infrastructure.

The Licensee shall establish and implement a continual process of raising awareness amongst itself, its workers and stakeholders with respect to Water Conservation and Water Demand Management initiatives.	Appendix II: Condition 10	C	2	The Licensee established and implemented a continual process of raising awareness amongst itself, its workers and stakeholders with respect to Water Conservation and Water Demand Management initiatives.
The Licensee must submit a full pump tests report of all the boreholes they are abstracting within one year of licence being issued.	Appendix II: Condition 11	C	2	The Licensee conducted a full pump tests report in February 2023. Another test was done on 13 May 2025 by De Villiers Visser.
Groundwater model must be calibrated to quantify the pollution plume migration rate and direction annually. The model must determine the cone of depression radius, and the private groundwater users potentially impacted.	Appendix II: Condition 12	C	2	Groundwater monitoring was conducted to determine if pollution is detected. No pollution was detected so no model to determine the cone of depression radius, and the private groundwater users potentially impacted was required.
The Licensee must ensure that the drinking water quality supplied meets National Standard for drinking quality: SANS 0241.	Appendix II: Condition 13	C	2	The Licensee ensured that the drinking water quality supplied meets National Standard for drinking quality: SANS 0241.

APPENDIX III: Section 21(c) of the Act: Impeding or diverting the flow of water in a watercourse and Section 21(i) of the Act: Altering the bed, banks, course or characteristic of a watercourse				
This licence authorises Jarrahnup Trust Piggery for Section 21(c) and (i) water use activities for the construction facilities as set out in Table 4. within quaternary catchment G40G and in the water use licence application reports submitted to the Department (refer condition 1.2):	Appendix III: Condition 1.1	NA	NA	No construction occurred.
The Licensee must carry out and complete all the activities listed under condition 1.1 according to the following: 1.2.1 Reports submitted to the Department or the Provincial Head, specifically : 1.2.1.1 Water Use Licence Application Geohydrological Assessment: Farm RE/781 Jarrahnup, Bot River (GEOSS Report No 2018/02/-52) dated 10/04/2018 compiled by GEOSS. 1.2.1.2 Water Use License Application Report for Water Uses at the Jarrahnup Farm Piggery on the Remaining Extent of Farm No 781,	Appendix III: Condition 1.2	NA	NA	No construction occurred.

Caledon dated 01/10/2019 compiled by Enviroroots. 1.2.1.3 Desert Star Piggeries (Pty) Ltd Section 27 Motivation for Water Uses at the Jarrahnup Farm Piggery on the Remaining Extent of Farm No 781, Caledon dated 01/10/2019 compiled by Enviroroots. 1.2.1.4 Pick n Pay Full Farm Audit Sow Crate Friendly Evaluation dated 15/12/2015 compiled by T.A. Gous 1.2.1.5 Riparian Assessment Desert Star Piggeries Botrivier in the Western Cape Province dated May 2018 compiled by Oasis Environmental Specialists. 1.2.1.6 Management Plan for Desert Star Piggeries TIA Jarrahnup Piggery 3rd Draft compiled By Desert Star Piggeries 1.2.1.7 Roelcor: Desert Star (Jarrahnup) Piggery Operations - Specialist Report on Water Use and Waste Water Handling Practices dated 24/05/2018 compiled by Dr. J.A. Meyer. 1.2.1.8 Terrain Plan dated 07/04/2018 compiled by Anton Reinke Irrigation (Pty) Ltd.				
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1.2.1.9 Design drawings for concrete foundation, steel plan, admin block, feeding sheds dated 01/01/2015 compiled by Design Cooperative. 1.2.1.10 Comments to Soil Results Roelcor: Desert Star (Jarrahup) Piggery Operations: On the remainder of the farm Caledon 781 dated compiled by Dr. J.A. Meyer. 1.2.1.11 Civil Diagrams for the proposed wastewater dams compiled by Ingerop dated 01/09/2017. 1.2.1.12 Method statement for construction of proposed wastewater dams compiled by K. Williams dated 03/09/2020. 1.2.1.13 Detailed layout plan indicating all wastewater conveyance infrastructure compiled by Design Cooperative dated 15/07/2019				
Conditions of this licence; and	Appendix III: Condition 1.3	NA	NA	No construction occurred.
Any other written direction issued by the Provincial Head in relation to this licence.	Appendix III: Condition 1.4	NA	NA	No construction occurred.
No activity must take place within the 1:100 year flood line or the delineated riparian habitat, whichever is the greatest, or within 500 m radius from	Appendix III: Condition 1.5	NA	NA	No construction occurred.

the boundary of any wetland unless authorised by this licence.				
The conditions of the authorisation must be brought to the attention of all persons (employees, sub-consultants, contractors etc.) associated with the undertaking of these activities and the Licensee must take such measures that are necessary to bind such persons to the conditions of this licence.	Appendix III: Condition 1.6	NA	NA	No construction occurred.
A copy of the water use licence and reports set out under condition 1.2 of this Appendix must be on site at all times.	Appendix III: Condition 1.7	C	2	At the time of the audit, a copy of the license was on the premises.
A suitably qualified person(s), appointed by the Licensee, and approved in writing by the Provincial Head, must be responsible for ensuring that the activities are undertaken in compliance with the specifications as set out in reports submitted to the Department or the Provincial Head and the conditions of this licence.	Appendix III: Condition 1.8	C	2	Nicolaas Hanekom, from Enviro-EAP (Pty) Ltd, a suitably qualified person(s), was appointed by the Licensee and the BOCMA was informed of this together with a monitoring plan which was approved in February 2022.
Buffers of 30m must be implemented between the wetland and the irrigation area and the pasture area.	Appendix III: Condition 1.9	C	2	Buffers of 30m was implemented between the wetland and the irrigation area and the pasture area
Ecological class of rivers and wetlands (PES of B) must not to be lowered.	Appendix III: Condition 1.10	C	2	Monitoring in terms of the approved monitoring plan just commences in

Recommended Ecological Class (REC) for wetland must be set as class B.				February 2022 and to date the ecological class of the rivers and wetlands was not lowered. This report is available as a baseline report to be used should construction be required.
A layout plan confirming that the 1:100 year floodline of the watercourse upstream of the dam wall do not affect any public property must be submitted to the Department within 30 days of issuance of water use licence.	Appendix III: Condition 1.11	C	2	A layout plan (SDP) confirming that the 1:100 year floodline of the watercourse upstream of the dam wall that do not affect any public property was submitted to the Department during the water use license application process.
Detailed design drawings of all the infrastructure of impeding and/or diverting flow of watercourses on the property must be submitted to the Provincial Head within three (3) months of date the issuance. The foregoing must indicate the regulated activities, marking the limits of disturbance in relation to the impacted watercourse; morphology of the watercourse; site specific impacts; and environmental management, particularly erosion and sediment, controls and measures;	Appendix III: Condition 2. 2.FURTHER STUDIES AND INFORMATION REQUIREMENTS	C	2	A layout plan (SDP) and detail drawings was submitted during the WUL application to BOCMA and the infrastructure did not deviate from these drawings.
2.1.2 No fundamental alterations of the site design plan(s) and drawings are allowed, unless a modification is	Appendix III: Condition 2. 2.FURTHER	C	2	A layout plan (SDP) and detail drawings was submitted during the WUL application to BOCMA and the

requested and granted by the Provincial Head in writing; and	STUDIES AND INFORMATION REQUIREMENTS			infrastructure did not deviate from these drawings.
2.1.3 No site activities must occur beyond the proposed site location of the erosion and sedimentation controls and marked limits of disturbance.	Appendix III: Condition 2. 2.FURTHER STUDIES AND INFORMATION REQUIREMENTS	C	2	A layout plan (SDP) and detail drawings was submitted during the WUL application to BOCMA and the infrastructure did not deviate from these drawings.
2.2 If the Licensee is not the end user/beneficiary of the water use related infrastructure and will not be responsible for long term maintenance and management of the infrastructure, the Licensee must provide a programme for hand over to the successor-in-title including a brief management/maintenance plan and the agreement for infrastructure along with allocation of responsibilities, within three (3) months of the date of issuance of this licence.	Appendix III: Condition 2. 2.FURTHER STUDIES AND INFORMATION REQUIREMENTS	NA	NA	No construction occurred.
2.3 An Environmental Management Plan (EMP) and rehabilitation plan for the decommissioning of any of the water use activities listed in Table 1 must be submitted five (5) years before	Appendix III: Condition 2. 2.FURTHER STUDIES AND INFORMATION REQUIREMENTS	NA	NA	No decommissioning.

commencing with closure to the Provincial Head for a written approval.				
2.5 A Storm Water Management Plan must be updated and drawn up on A1 paper and submitted to the Provincial Head for written approval within 3 months of licence being issued. Clean water dirty water must be separated.	Appendix III: Condition 2. 2.FURTHER STUDIES AND INFORMATION REQUIREMENTS	C	2	A storm water management plan was submitted during the WUL application to BOCMA and the infrastructure did not deviate from these drawings.
2.6 Storm Water management plan should be designed in a way that aims to ensure that post-development run-off does not exceed pre-development values in: Peak discharge for any given storm, Total volume of run-off for any given storm, Frequency of run-off volumes, Pollutant and debris concentrations reaching watercourses, Demonstrate minimal soil and vegetation clearance practices Demonstrate an effective re-vegetation campaign for bare areas, Velocity of outgoing storm water shall not exceed the velocities of incoming water in order to reduce erosion impacts, and	Appendix III: Condition 2. 2.FURTHER STUDIES AND INFORMATION REQUIREMENTS	C	2	A storm water management plan was submitted during the WUL application to BOCMA and the infrastructure did not deviate from these drawings.

Increase in run-off due to a higher water table resulting from tree clearing practices.				
3.1 Storm Water Management 3.1.1 Storm water management practices must be constructed, operated and maintained in a sustainable manner throughout the project and for the water use activities set out in condition 1.1 and must include but are not limited to the following: 3.1.1.1 Increased runoff due to vegetation clearance (promoting limiting vegetation clearance at all times) and/or soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the watercourse(s); 3.1.1.2 Storm water must be diverted from construction works, access roads, linear infrastructure and reptile ponds and must be managed in such a manner as to disperse runoff and to	Appendix III: Condition 3.	C	2	A storm water management plan was submitted during the WUL application to BOCMA and the infrastructure did not deviate from these drawings. The storm water management actions as per the plan was implemented.

prevent the concentration of storm water flow; and 3.1.1.3 The velocity of storm water discharges must be attenuated and the banks of the watercourses protected;				
3.2 Structures and Materials 3.2.1 Necessary erosion prevention measures must be employed to ensure the sustainability of all structures. 3.2.2 The height, width and length of structures must be limited to the minimum dimension necessary to accomplish the intended function. 3.2.3 Structures must not be damaged by floods exceeding the magnitude of floods occurring on average once in every 100 years. 3.2.4 Structures must be non-erosive, structurally stable and must not induce any flooding or safety hazard.	Appendix III: Condition 3.	C	2	No erosion was recorded at the time of the audit. The infrastructure constructed was done in accordance with the plans submitted to BOCMA.

3.2.5 Structures must be inspected regularly for accumulation of debris, blockage, erosion of abutments and overflow areas - debris must be removed and damages must be repaired and reinforced immediately. 3.2.6 Any access roads, bridges, pathways or other linear crossings should be: 3.2.6.1 Non-erosive, structurally stable and should not induce any flooding or safety hazard; 3.2.6.2 Any damage is repaired immediately to prevent further damage; 3.2.6.3 Non-polluting with respect to silt and litter that can be deposited into a watercourse; 3.2.6.4 Watercourse crossings to facilitate the movement of aquatic and non- aquatic organisms and fauna; 3.2.6.6 Crossing surfaces must be tarred, paved or concreted along the extent of the watercourse and extent at least 100m beyond the extent of the watercourse to minimise impacts on the characteristics of the watercourse;				
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3.2.6.7 Where any road is within the 100m buffer zone of the watercourse, this portion of the road shall be concreted, paved or tarred; and 3.2.6.8 Not consist of any polluting material.																		
3.2.7 Landscape maintenance plan must be submitted for approval by Provincial Head within 6 months of licence being issued.	Appendix III: Condition 3.	C	2	Landscape maintenance plan must be submitted for approval by Provincial Head within 6 months of licence being issued. The landscape plan is submitted as Addendum B in this audit report.														
3.3.1 The Licensee shall sample the water quality monthly for the mentioned variables (Table 5) at least at the monitoring points both upstream and downstream of the activities (Table 5) and report to the Provincial Head within thirty (30) days after the results of each sampling event is received: <table><tr><th>Variable</th><th>Limit</th></tr><tr><td>Flow (l/s)</td><td>Condition 3.4.8</td></tr><tr><td>Temperature (°C)</td><td><10% variation</td></tr><tr><td>pH</td><td>6.0–8.5</td></tr><tr><td>Electrical conductivity (EC) (mS/m)</td><td><70</td></tr><tr><td>Suspended solids (SS) (mS/m)</td><td><25</td></tr><tr><td>Dissolved oxygen (mg/l)</td><td>6</td></tr></table>	Variable	Limit	Flow (l/s)	Condition 3.4.8	Temperature (°C)	<10% variation	pH	6.0–8.5	Electrical conductivity (EC) (mS/m)	<70	Suspended solids (SS) (mS/m)	<25	Dissolved oxygen (mg/l)	6	Appendix III: Condition 3.	PC	1	Water sampling and monitoring was done. However, it was not done for all the parameters and 4 sites. Some months sites 1 and 4 was not sampled, although the water courses had water. Refer to monitoring report for more details. Some of the parameters were out of the license specification, but monitoring is continued with to determine natural conditions.
Variable	Limit																	
Flow (l/s)	Condition 3.4.8																	
Temperature (°C)	<10% variation																	
pH	6.0–8.5																	
Electrical conductivity (EC) (mS/m)	<70																	
Suspended solids (SS) (mS/m)	<25																	
Dissolved oxygen (mg/l)	6																	

Turbidity (NTU)	<5				
Alkalinity (mg CaCO3/l)	<100				
P04 (mg/l)	<0.5				
N03/N02 (as N)	<6				
NH3 (as N) (mg/l)	<10				
BTEX, TPH (mg/l)	<1				
Faecal coliforms	<130				
3.3.2 Monitoring must continue for three (3) years after the issuance of this licence for the activities listed in condition 1.1	Appendix III: Condition 3.	C	2	Water sampling and monitoring was done. Refer to monitoring report for more details. Some of the parameters were out of the license specification, but monitoring is continued with to determine natural conditions.	
3.3.1 Monitoring must be undertaken as set out in section 5.	Appendix III: Condition 3.	C	2	Water sampling and monitoring was done. Refer to monitoring report for more details. Some of the parameters were out of the license specification, but monitoring is continued with to determine natural conditions.	
3.3.4 Activities that lead to elevated levels of turbidity of any watercourse(s) must be prevented, reduced, or otherwise remediated. Activities must be scheduled to take place during the dry seasons when flows are lowest where reasonably possible. If this is not possible and if management measures have not been	Appendix III: Condition 3.	C	2	Water sampling and monitoring was done. Refer to monitoring report for more details. Some of the parameters were out of the license specification, but monitoring is continued with to determine natural conditions.	

provided for in the reports submitted to the Provincial Head, the Licensee must submit such to the Provincial Head for a written approval before these activity commence. Natural in stream hydrology is to be used to determine which months constitute the low flow months.				
3.3.5 The Licensee must ensure that the quality of the water to downstream water users does not decrease because of the water use activities listed under condition 1.1.	Appendix III: Condition 3.	C	2	Water sampling and monitoring was done. Refer to monitoring report for more details. Some of the parameters were out of the license specification, but monitoring is continued with to determine natural conditions.
3.3.6 Pollution of and disposal/spillage of any material into the watercourse must be prevented, reduced, or otherwise remediated through proper operation, maintenance and effective protective measures.	Appendix III: Condition 3.	C	2	Water sampling and monitoring was done. Refer to monitoring report for more details. Some of the parameters were out of the license specification, but monitoring is continued with to determine natural conditions.
3.3.7 Vehicles and other machinery must be serviced well above the 1:100 year flood line or delineated riparian habitat, whichever is the greatest. Oils and other potential pollutants must be disposed off at an appropriate licensed site, with the necessary agreement from the owner of such a site.	Appendix III: Condition 3.	NA	NA	No construction occurred.

3.3.8 Any hazardous substances must be handled according to the relevant legislation relating to transport, storage and use of the substance and all storage facilities must be equipped with large, clearly readable Material Safety Data Sheets (MSDS).	Appendix III: Condition 3.	NA	NA	No construction occurred.
3.3.9 All reagent storage tanks and reaction units must be supplied with a bunded area built to cater for at least 110% of the capacity of the facility and provided with sumps and pumps to return the spilled material back into the system. The system must be maintained in a state of good repair and standby pumps must be provided.	Appendix III: Condition 3.	NA	NA	No construction occurred.
The Licensee shall actively participate in any Catchment Management Agency's related activity	Appendix III:	NA	NA	No catchment management agency related activity identified to date.
The Licensee has to indicate to the Responsible Authority within sixty (60) days after issuance of this licence, the strategic placement of bio-swale, bio-filters, silt, litter and hydrocarbon (oil) traps to minimise the risk of pollutants entering the natural drainage system of the area.	Appendix III:	C	2	No strategic placement of bio-swale, bio-filters, silt, litter and hydrocarbon (oil) traps to minimise the risk of pollutants entering the natural drainage system of the area were required or recommended to date.

3.4.1 The Licensee must determine flood lines (1:50 and 1:100 year) to ensure risks are adequately managed. Flood lines must be clearly indicated on the site plan(s) and drawings along with all wetland boundaries.	Appendix III:	C	2	A layout plan (SDP) confirming that the 1:100 year floodline of the watercourse upstream of the dam wall that do not affect any public property was submitted to the Department during the water use license application process.
3.4.1 The activities must be conducted in a manner that does not negatively affect catchment yield, hydrology and hydraulics. The Licensee must ensure that the overall magnitude and frequency of flow in the watercourse(s) does not decrease, other than for natural evaporative losses and authorised attenuation volumes.	Appendix III:	NA	NA	No construction occurred.
3.4.1 Appropriate design and mitigation measures must be developed to minimise impacts on the natural flow regime of the watercourse i.e. through placement of structures/supports and to minimise turbulent flow in the watercourse.	Appendix III:	C	2	Appropriate design and mitigation measures was developed to minimise impacts on the natural flow regime of the watercourse.
3.4.4 Structures must be designed in a way to prevent the damming of stream/river water and not impact on the flow of the water, during the	Appendix III:	C	2	No structures were constructed.

construction and operational phases of all developments.				
The development may not impede natural drainage lines	Appendix III:	C	2	No structures were constructed.
The diversion structures may not restrict river flows by reducing the overall river width or obstructing river flow	Appendix III:	C	2	No structures were constructed.
3.4.4 The characteristics of streambeds are likely to be altered locally. In particular the rock and rubble created during the construction process is likely to have sharp edges, and not smooth surfaces that are typically associated with river rocks and pebbles. All rock and rubble must be removed from the watercourse once construction has been completed. Any rock placed in the watercourse to enhance the dissolved oxygen content of the water must adhere to the same criteria, namely only smooth rock surfaces to be placed within the watercourse.	Appendix III:	C	2	No structures were constructed.
3.4.4 The Licensee shall determine flow requirements for endemic aquatic organisms and the associated habitat (riparian and in-stream) by a registered, professional, independent	Appendix III:	NA	NA	Nicolaas Hanekom, from Enviro-EAP (Pty) Ltd, a suitably qualified person(s), was appointed by the Licensee and the BOCMA was informed of this together with a monitoring plan which was

and qualified aquatic ecologist and hydrologist within one (1) year after the issuance of this licence and submit the report to the Provincial Head for a written approval. Reporting on the flow requirements as per condition 3.3.1 of this Appendix.				approved in February 2022. This report is available for baseline purposes should construction commenced again.
Activities (including spill clean-up) must start up-stream and proceed into a down- stream direction, so that the recovery processes can start immediately, without further disturbance from upstream works.	Appendix III:	C	2	No incidents of spills that required clean up was recorded.
Operation and storage of equipment must not take place within the 1:100 year flood line or delineated riparian habitat, whichever is the greatest unless authorised in this license.	Appendix III:	C	2	A layout plan (SDP) confirming that the 1:100 year floodline of the watercourse upstream of the dam wall that do not affect any public property was submitted to the Department during the water use license application process.
Activities must not occur in sensitive riffle habitats	Appendix III:	NA	NA	No construction occurred.
Indigenous riparian vegetation, including dead trees, outside the limits of disturbance indicated in the site plans must not be removed from the area.	Appendix III:	NA	NA	No construction occurred.
Alien and invader vegetation must not be allowed to further colonise the	Appendix III:	NA	NA	No construction occurred.

area, and all new alien vegetation recruitment must be sustainably eradicated or controlled according to a respective management plan as formally approved by the Provincial Head in writing within one (1) month after the issuance date of this licence.				
Existing vegetation composition must be maintained or improved by maintaining the natural variability in flow fluctuations. Rehabilitated areas shall have vegetation basal cover of at least 15% at all times.	Appendix III:	NA	NA	Existing vegetation composition was maintained by maintaining the historic quality of the water courses before the license was issued
Recruitment and maintaining of a range of size classes of dominant riparian species in perennial channels must be stimulated.	Appendix III:	NA	NA	No construction occurred.
Encroachment of additional exotic species and terrestrial species in riparian zones must be discouraged.	Appendix III:	NA	NA	No construction occurred.
Accumulation of woody debris on terraces by periodic flooding must be discouraged.	Appendix III:	NA	NA	No construction occurred.
Existing flood terraces and deposition of sediments on these terraces to ensure optimum growth, spread and recruitment of these species must be maintained.	Appendix III:	NA	NA	No construction occurred.

All reasonable steps must be taken to minimise noise and mechanical vibrations in the vicinity of the watercourse. Noise levels (noise resulting from the activities listed in Table 2 and associated activities) to be below 35dB from 18:00 - 06:00 daily.	Appendix III:	NA	NA	No construction occurred.
Necessary erosion prevention mechanisms must be employed to ensure the sustainability of all structures and activities and to prevent instream sedimentation.	Appendix III:	NA	NA	No construction occurred.
Soils that have become compacted through the water use activities must be loosened to an appropriate depth to allow seed germination.	Appendix III:	NA	NA	No construction occurred.
Slope/bank stabilisation measures must be implemented with a 1:3 ratio or flatter and vegetated with indigenous vegetation immediately after the shaping.	Appendix III:	NA	NA	No construction occurred.
Stockpiling of removed soil and sand must be stored outside of the 1:100 flood line or delineated riparian habitat, whichever is the greatest, to prevent being washed into the river and must be covered to prevent wind and rain erosion.	Appendix III:	NA	NA	No construction occurred.

The indiscriminate use of machinery within the instream and riparian habitat will lead to compaction of soils and vegetation and must therefore be strictly controlled.	Appendix III:	NA	NA	No construction occurred.
The overall macro-channel structures and mosaic of cobbles and gravels must be maintained by ensuring a balance (equilibrium) between sediment deposition and sediment conveyance maintained. A natural flooding and sedimentation regime must thus be ensured as far as reasonably possible.	Appendix III:	NA	NA	No construction occurred.
As much indigenous vegetation growth as possible should be promoted within the proposed development area in order to protect soil and to reduce the percentage of the surface area which is paved/hardened/compacted.	Appendix III:	NA	NA	No construction occurred.
Run-off from paved/hardened/compacted surfaces should be slowed down by the strategic placement of berms.	Appendix III:	NA	NA	No construction occurred.
The Licensee shall protect the banks of the watercourse against instability and erosion and ensure a healthy and sufficient bank side vegetation cover.	Appendix III:	NA	NA	No construction occurred.

A specific management program addressing this concern shall be developed by a professional, qualified, independent and registered ecologist and aquatic specialist and submitted to the Provincial Head for written approval within three (3) months after the issuance of this licence				
Plant Species Plan must be drawn up in conjunction with a landscape architect or botanist and approved by Provincial Head and implemented within 6 months of licence being issued.	Appendix III:	NA	NA	No construction occurred.
The Licensee must take all reasonable steps to allow movement of aquatic species, including migratory species. The Licensee shall appoint a professional, qualified, independent and registered ecologist and aquatic specialist to determine the impact of the weirs on aquatic biota migration and submit a report for written approval to the Provincial Head within six (6) months after the issuance of the licence. The Licensee shall implement the recommendations endorsed by the Provincial Head. Reporting on biota component must be captured	Appendix III:	NA	NA	No construction occurred.

separately in the reporting requirement of condition 5.1 of Appendix IV. The report must also assess the reintroduction of endemic aquatic species in this environment (note condition 5.1 REC value).				
All reasonable steps must be taken not to disturb the breeding, nesting and/or feeding habitats and natural movement patterns of aquatic biota.	Appendix III:	NA	NA	No construction occurred.
The current level of diversity of biotopes and communities of animals, plants and microorganisms must be maintained.	Appendix III:	NA	NA	No construction occurred.
The Licensee must embark on a systematic long-term rehabilitation programme to restore the watercourse to environmentally acceptable and sustainable conditions, which must include, but not be limited to the rehabilitation of disturbed and degraded riparian areas to restore and upgrade the riparian habitat integrity to sustain a bio-diverse riparian ecosystem.	Appendix III:	NA	NA	No construction occurred.
All disturbed areas must be re-vegetated with an indigenous seed mix in consultation with an indigenous plant expert, ensuring that during	Appendix III:	NA	NA	No construction occurred.

rehabilitation only indigenous shrubs, trees and grasses are used in restoring the biodiversity.				
An active campaign for controlling invasive species must be implemented within disturbed zones to ensure that it does not become a conduit for the propagation and spread of invasive exotic plants.	Appendix III:	NA	NA	No construction occurred.
Rehabilitation must be concurrent with construction.	Appendix III:	NA	NA	No construction occurred.
Topsoil must be stripped and redistributed.	Appendix III:	NA	NA	No construction occurred.
Compacted and disturbed areas must be shaped to natural forms and to follow the original contour. In general cut and fill slopes and other disturbed areas must not exceed 1:3 (v:h) ratio, it must be protected, vegetated, ripped and scarified parallel with the contour.	Appendix III:	NA	NA	No construction occurred.
The Provincial Head must sign a release form indicating that rehabilitation was done satisfactory according to specifications as per this license.	Appendix III:	NA	NA	
A photographic record must be kept as follows and submitted with reports as set out in section 5:	Appendix III:	C	2	Monitoring is done and photographic record hold. Refer to the monitoring plan for more detail.

Dated photographs of all the sites to be impacted before construction commences; Dated photographs of all the sites during construction on a monthly basis; and Dated photographs of all the sites after completion of construction, seasonally				
Rehabilitation structures must be inspected regularly for the accumulation of debris, blockages instabilities and erosion with concomitant remedial and maintenance actions.	Appendix III:	NA	NA	
Rehabilitation Plan must be updated and drawn on a drawing for approval by provincial Head within 6 months of licence being issued	Appendix III:	NA	NA	
Experienced environmental rehabilitation personnel as well as the correct equipment for environmental rehabilitation must be available.	Appendix III:	NA	NA	No construction occurred.
A comprehensive and appropriate environmental assessment and monitoring programme (including bio-monitoring and eco-toxicology) to determine the impact, change, deterioration and improvement of the aquatic system associated with the	Appendix III:	NA	NA	No construction occurred.

activities listed under condition 1.1 and other existing activities as well as compliance to these water use licence conditions must be developed and submitted to the Provincial Head for a written approval before commencement and must subsequently be implemented.				
Six (6) monthly monitoring reports for Groundwater and surface water must be submitted to the Provincial Head until otherwise agreed in writing with the Provincial Head.	Appendix III:	NA	NA	No construction occurred.
A qualified and responsible scientist must be retained by the Licensee who must give effect to the various licence conditions and to ensure compliance thereof pertaining to all activities impeding and/or diverting flow of watercourses as well as alterations to watercourses on the property as set out in condition 1.1.	Appendix III:	NA	NA	No construction occurred.
The Licensee shall conduct an internal and external audit as per condition 11 and 12 of Appendix 1 and the audit report must include: Reporting in respect of the monitoring programme referred to in condition 5.1 of Appendix IV and all other	Appendix III:	NA	NA	No construction occurred.

reporting and compliance conditions outlined in this licence; A record of implementation of all mitigation measures including a record of corrective actions; and Compensation measures for damage where mitigation measures have failed to adequately protect the in-stream and riparian habitat or any other characteristic of the watercourses				
The Licensee must apply in writing to the Provincial Head for alternative reporting arrangements for which written approval must be provided.	Appendix III:	NA	NA	
A comprehensive ground water and surface water monitoring and remediation plan must be provided within 6 months of licence being issued. Such plan must detail how the possible pollution effects from the dirty water impoundment facilities that do not have a barriers system that complies with the requirements of the current Regulations will be remediated and how future pollution from the same facilities will be prevented, in accordance with the requirements of section 19 of the National Water Act (1998).	Appendix III:	NA	NA	No construction occurred.

The Licensee must attempt to prevent adverse affect on other water users. All complaints must be investigated by a suitable qualified person and if investigations prove that the Licensee has impaired the rights of other water users, the Licensee must initiate suitable compensative measures.	Appendix III:	NA	NA	No construction occurred.
If surface and/or groundwater pollution has occurred or may possibly occur, the Licensee must conduct, and/or appoint specialists to conduct necessary investigations and implement additional monitoring, pollution prevention and remediation measures to the satisfaction of the Provincial Head.	Appendix III:	NA	NA	No construction occurred.
The Licensee shall keep all records relating to the compliance or non-compliance with the conditions of this licence in good order. Such records shall be made available to the Provincial Head within 14 (fourteen) days of receipt of a written request by the Department for such records.	Appendix III:	NA	NA	
The Licensee shall keep an incident report and complaints register, which must be made available to any external auditors and the Department.	Appendix III:	NA	NA	No construction occurred.

The water user must ensure that there is a budget sufficient to complete and maintain the water use and for successful implementation of the rehabilitation programme as set out in this licence.	Appendix III:	NA	NA	No construction occurred.
The Department may at any stage of the process request proof of budgetary provisions for rehabilitation and closure of project.	Appendix III:	NA	NA	
APPENDIX IV: Section 21 (e) of the Act: Engaging in a controlled activity; irrigation of any land with waste or water containing waste QUANTITY OF WATER CONTAINING WASTE FOR IRRIGATION				
Water Use as part of piggery operations: Wastewater Management and Disposal 19 924m3/a	Appendix IV:	C	2	Here is the detailed summary of the Biodegradable effluent that is stored in the lined dam and what was spread onto the fields.  One of the fields that effluent was disposed on.

				Refer to Addendum B attached.																										
The quantity of wastewater authorised to be irrigated in terms of this licence must not be exceeded.	Appendix IV:	C	2	The quantity of wastewater authorised to be irrigated in terms of this licence was not exceeded																										
This licence authorises to irrigate a total surface area of 230.2 hectares (ha) of pastures / grazing	Appendix IV:	C	2	Here is the detailed summary of the Biodegradable effluent that is stored in the lined dam and what was spread onto the fields. Refer to Addendum C attached.																										
The quality of the wastewater to irrigate with must not exceed special effluent standard (GNR 1091) detailed in Table 7	Appendix IV:	PC	1	Here is the detailed summary of the Biodegradable effluent that is stored in the lined dam and what was spread onto the fields. Refer to Addendum C attached.																										
<table><tr><th>Parameter</th><th>Limits</th></tr><tr><td>pH</td><td>5.5-9.5</td></tr><tr><td>Electrical</td><td>70 mS/m</td></tr><tr><td>Suspended solids</td><td>25 mg/l</td></tr><tr><td>Chemical oxygen</td><td>75 mg/l</td></tr><tr><td>Orthophosphates (as</td><td>10 mg/l</td></tr><tr><td>Nitrate (as N)</td><td>15 mg/l</td></tr><tr><td>Ammonia (as N)</td><td>6 mg/l</td></tr><tr><td>E.coli(counts/100ml)</td><td>150 mg/l</td></tr><tr><td>Chloride as Free</td><td>0,25 mg/l</td></tr><tr><td>Fluoride</td><td>1 mg/l</td></tr><tr><td>Soap, Oil and</td><td>2.5mg/1</td></tr><tr><td>Faecal coliforms</td><td>1000 per 100ml</td></tr></table>	Parameter	Limits	pH	5.5-9.5	Electrical	70 mS/m	Suspended solids	25 mg/l	Chemical oxygen	75 mg/l	Orthophosphates (as	10 mg/l	Nitrate (as N)	15 mg/l	Ammonia (as N)	6 mg/l	E.coli(counts/100ml)	150 mg/l	Chloride as Free	0,25 mg/l	Fluoride	1 mg/l	Soap, Oil and	2.5mg/1	Faecal coliforms	1000 per 100ml				
Parameter	Limits																													
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Soap, Oil and	2.5mg/1																													
Faecal coliforms	1000 per 100ml																													
The quantity of water containing waste irrigated must be metered and recorded daily.	Appendix IV:	C	2	Here is the detailed summary of the Biodegradable effluent that is stored in																										

				the lined dam and what was spread onto the fields. Refer to Addendum C attached.
Monitoring for the quantity of the water containing waste for irrigation must be done at the point where the effluent is piped into the irrigation dam.	Appendix IV:	C	2	Monitoring was done at the point of collection in the tanker.
Water quantity measuring, recording and integrating devices must be maintained in a sound state of repair and calibrated by a competent person at intervals of not less than two years. Calibration certificates must be available for inspection by the Provincial Head or his/her representative upon request.	Appendix IV:	C	2	Water quantity measuring, recording and integrating devices was maintained in a sound state of repair and calibrated by a competent person at intervals of not less than two years. Calibration certificates must be available for inspection by the Provincial Head or his/her representative upon request. The first calibration certificates are due in 2024.
Monitoring points for quality must be at the outlet point of the irrigation dam where the wastewater will be abstracted for irrigation.	Appendix IV:	C	2	Monitoring is done directly out of the dam. Sludge is pumped out of dam in 10 000 liter tanker and disposed onto paddocks.
The date, time and monitoring point in respect of each sample taken must be recorded together with the results of the analysis.	Appendix IV:	C	2	Refer to monitoring report.
Monitoring points must not be changed prior to notification to and	Appendix IV:	C	2	The monitoring points in the plan approve was not changed.

written approval by the Head of Provincial Operation.																						
4.2.1 The samples taken at outlet point of the irrigation dam shall be analysed for the variables at the following required frequencies: Table 8: Monitoring variables and frequency <table><tr><th>Variable</th><th>Frequency</th></tr><tr><td>pH</td><td>Monthly</td></tr><tr><td>Electrical Conductivity</td><td>Monthly</td></tr><tr><td>Chemical oxygen</td><td>Monthly</td></tr><tr><td>Faecal Coliforms(as</td><td>Monthly</td></tr><tr><td>Ammonia (as N)(mg/l)</td><td>Monthly</td></tr><tr><td>Nitrate (as N)(moll)</td><td>Monthly</td></tr><tr><td>Orthophosphate (as P)</td><td>Monthly</td></tr><tr><td>Suspended</td><td>Monthly</td></tr></table>	Variable	Frequency	pH	Monthly	Electrical Conductivity	Monthly	Chemical oxygen	Monthly	Faecal Coliforms(as	Monthly	Ammonia (as N)(mg/l)	Monthly	Nitrate (as N)(moll)	Monthly	Orthophosphate (as P)	Monthly	Suspended	Monthly	Appendix IV:	C	1	Refer to monitoring report for more details. Application for amendment of the WUL was submitted to BOCMA to amend this table. Monitoring sampling of sludge disposed in terms of the guidelines was only sampled for monitoring during the months sludge was disposed. The sludge disposed will meet the amended WUL parameters.
Variable	Frequency																					
pH	Monthly																					
Electrical Conductivity	Monthly																					
Chemical oxygen	Monthly																					
Faecal Coliforms(as	Monthly																					
Ammonia (as N)(mg/l)	Monthly																					
Nitrate (as N)(moll)	Monthly																					
Orthophosphate (as P)	Monthly																					
Suspended	Monthly																					
Ground water monitoring shall be undertaken as set out in condition 4.2 of Appendix VI.	Appendix IV:	C	2	Ground water monitoring was undertaken as set out in condition 4.2 of Appendix VI.																		
Irrigation shall be practiced in accordance with the guidelines prescribed in the document titled "Guide: Permissible Utilisation and Disposal of Treated Sewage Effluent", issued by the former Department of Health under reference 11 and dated 30 May 1978, or in accordance with	Appendix IV:	C	2	Irrigation is practiced in accordance with the guidelines prescribed in the document titled "Guide: Permissible Utilisation and Disposal of Treated Sewage Effluent.																		

any relevant regulations promulgated under section 26 of the Act.				
Irrigation with waste shall be practiced in a systematic manner and precautions shall be taken so as to prevent - Water logging and pooling of waste in any location Pollution of underground water or surface water due to seepage or otherwise Fly breeding, public health hazard, odour or secondary pollution Runoff from the irrigation area because of wet weather or any other conditions whatsoever and The site of the irrigation area shall be adequately fenced to prevent the entry of animals and unauthorised persons.	Appendix IV:	C	2	Here is the detailed summary of the Biodegradable effluent that is stored in the lined dam and what was spread onto the fields. Ferer to Addendum C attached.
Notices manufactured of durable weatherproof material prohibiting unauthorised entry and warning against the use of water containing waste for drinking and washing purposes shall be displayed at prominent places along the fence and at entrance gates. Such notices shall	Appendix IV:	C	2	Notices manufactured of durable weatherproof material prohibiting unauthorised entry and warning against the use of water containing waste for drinking and washing purposes is displayed at prominent places along the fence and at entrance

be worded in the official languages applicable in the area.				gates. Such notices are worded in the official languages applicable in the area
Pipelines used for the conveyance of waste shall be painted in a conspicuous colour or manufactured of a coloured material distinctly different from the colour of the pipelines in which drinking water is flowing to avoid the possibility of any cross-connections of the different pipelines.	Appendix IV:	C	2	All effluent created by the pigs are conveyed in underground cover 160 mm blue class 9 PVC pipes into underground conservancy tanks. All waste in the enclosed sheds are stored in channels and then conveyed into underground conservancy tanks. The farrow house number 1, which houses the sows and their litter, and weaned piglets is also in a shed. All of their waste is directly conveyed through 160mm class 9 blue PVC pipe directly to the holding sump at the separation plant. Please take note that there is no open channels to conveyed effluent.
All stop-valves and taps on the pipelines conveying the effluent shall be of a type that can be opened and closed by means of a loose wrench. This wrench shall be in the safekeeping of a responsible member of the staff to prevent unauthorised use thereof.	Appendix IV:	C	2	Farrow house number 1 is the only area where stop-valves are used. All stop-valves come complete with a wheel to close and open. This is managed by one person, who is responsible for opening and closing the valve.
Notices manufactured of a durable weatherproof material warning against the use of water containing waste for drinking and washing purposes shall be displayed at	Appendix IV:	C	2	Notices manufactured of durable weatherproof material prohibiting unauthorised entry and warning against the use of water containing waste for drinking and washing

prominent places where the waste is being reused and at all taps. Such notices shall be worded in the official languages applicable in the area.				purposes is displayed at prominent places along the fence and at entrance gates. Such notices is worded in the official languages applicable in the area
APPENDIX V Section 21(g) of the Act: Disposing of waste in a manner which may detrimentally impact on a water resource				
This Licensee is authorised to dispose treated wastewater in to oxidation dam, abattoir fresh water dam, manure dams, French drains and stockpiles in terms of water uses activities detailed in Table 9.	Appendix V:	C	2	Here is the detailed summary of the Biodegradable effluent that is stored in the lined dam and what was spread onto the fields. Refer to Addendum C attached.
Mortalities Composting Area	Appendix V:	C	2	Mortalities are composted at the compost facility which is bunded, on a permeable surface and no signs of pollution detected at the time of the audit.
Solids Fraction Composting Area	Appendix V:	C	2	Mortalities are composted at the compost facility which is bunded, on a permeable surface and no signs of pollution detected at the time of the audit.
Temporary storage in Canals underneath	Appendix V:	C	2	Temporary storage in Canals underneath
Loading Bay	Appendix V:	C	2	Loading Bay
Sludge pond 1	Appendix V:	C	2	Sludge pond 1
Irrigation pond	Appendix V:	C	2	Irrigation pond

Pre separation mixing sump.	Appendix V:	C	2	Pre separation mixing sump.						
Temporary storage canals	Appendix V:	C	2	Temporary storage canals						
Sludge pond	Appendix V:	C	2	Sludge pond						
Temporary storage canals	Appendix V:	C	2	Temporary storage canals						
Temporary storage canals	Appendix V:	C	2	Temporary storage canals						
Temporary storage canals	Appendix V:	C	2	Temporary storage canals						
The quantity of waste/wastewater authorised to be disposed of in terms of this licence must not be exceeded	Appendix V:	C	2	Here is the detailed summary of the Biodegradable effluent that is stored in the lined dam and what was spread onto the fields. Refer to Addendum C attached.						
The Licensee shall conduct ground water monitoring on a quarterly basis for the variables shown in Table 10 and the results must be submitted to the Provincial Head	Appendix V:	C	2	Refer to monitoring report for more details.						
<table><tr><td>Variables</td><td>Frequency</td></tr><tr><td>Sodium (moll)</td><td>Quarterly</td></tr><tr><td>Electricity Conductivity</td><td>Quarterly</td></tr></table>	Variables	Frequency	Sodium (moll)	Quarterly	Electricity Conductivity	Quarterly				
Variables	Frequency									
Sodium (moll)	Quarterly									
Electricity Conductivity	Quarterly									

Magnesium (mg/l)	Quarterly				
Calcium(mg/l)	Quarterly				
Chloride (moll)	Quarterly				
Sulphate (mo/l)	Quarterly				
Nitrate(mg/l)	Quarterly				
Fluoride (mg/l)	Quarterly				
pH	Quarterly				
Ecoli	Count/100ml				
Ortho-Phosphate (as P) (mg/l)	Monthly				
Ammonia (as N) (mg/l)	Monthly				
Monitoring network must be set up as an early warning system to detect any polluted seepage that might occur from the wastewater system		Appendix V:	C	2	Nicolaas Hanekom, from Enviro-EAP (Pty) Ltd, a suitably qualified person(s), was appointed by the Licensee and the BOCMA was informed of this together with a monitoring plan which was approved in February 2022. The monitoring points in the plan approve was not changed.
If ground water pollution have occurred or may possibly occur, the Licensee must conduct necessary investigations and implement		Appendix V:	C	2	To date no ground water pollution was detected.

additional monitoring and rehabilitation measures which must be to the satisfaction of the Provincial Head.				
The Licensee must develop and submit to the Provincial Head within six (6) months of issuance of the Licence a bio-monitoring programme that will include the compilation of an initial database from which the scope and frequency of future bio-monitoring can be developed. This initial assessment must lead to the establishment of a reliable site-specific long-term bio-monitoring programme. This programme must be able to qualify and quantify the impact on biological systems in the water environment in the area directly affected by activities as well as downstream from these activities.	Appendix V:	C	2	Nicolaas Hanekom, from Enviro-EAP (Pty) Ltd, a suitably qualified person(s), was appointed by the Licensee and the BOCMA was informed of this together with a monitoring plan which was approved in February 2022. The monitoring points in the plan approve was not changed.
A competent and capable aquatic scientist must be appointed by the Licensee to submit a monitoring programme for aquatic macro-invertebrates and habitat integrity. Aquatic macro-invertebrates must be sampled using the latest SASS (South African Scoring System) method.	Appendix V:	C	2	Nicolaas Hanekom, from Enviro-EAP (Pty) Ltd, a suitably qualified person(s), was appointed by the Licensee and the BOCMA was informed of this together with a monitoring plan which was approved in February 2022. The monitoring points in the plan approve was not changed.

Habitat Integrity must be assessed using the Rapid Bio-assessment Analysis (C.J. Kleynhans 1999) method described by the Department (SASS 2002)				
After any incident, SASS surveys must be conducted annually in autumn, spring and summer at a site upstream and downstream of the disturbance until the impacts of the incident are not noticeable anymore. An annual report on the SASS surveys must be submitted to the Provincial Head.	Appendix V:	C	2	Nicolaas Hanekom, from Enviro-EAP (Pty) Ltd, a suitably qualified person(s), was appointed by the Licensee and the BOCMA was informed of this together with a monitoring plan which was approved in February 2022. The monitoring points in the plan approve was not changed.
Storm water leaving the Licensee's premises shall in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas of a combination thereof which is produced, used, stored dumped or spilled on the premises.	Appendix V:	C	2	At the time of the audit, no evidence was found of contaminated storm water leaving the premises.
Increased runoff due to vegetation clearance and soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the streams.	Appendix V:	C	2	No increased runoff due to vegetation clearance and soil compaction was recorded during the audit, and steps are taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the streams.

The Licensee shall ensure that no stormwater will ingress into the wastewater system and that no wastewater ingress into the stormwater system.	Appendix V:	C	2	The Licensee ensured that no stormwater will ingress into the wastewater system and that no wastewater ingress into the stormwater system.
Wastewater impoundments must be designed, constructed and managed to ensure that there is sufficient capacity to contain the 1:50 year flood event, with a minimum of 0.8 m freeboard. Freeboard will be defined as the difference between the water level and the crest of the overflow.	Appendix V:	C	2	Wastewater impoundments was designed, constructed and managed to ensure that there is sufficient capacity to contain the 1:50 year flood event, with a minimum of 0.8 m freeboard.
Wastewater systems must be properly maintained on a continuous basis.	Appendix V:	C	2	Wastewater systems is properly maintained on a continuous basis.
Storm water shall be diverted from the impoundments and roads and shall be managed in such a manner as to disperse runoff and to prevent the concentration of the stormwater flow.	Appendix V:	C	2	Storm water is diverted from the impoundments and roads and are managed in such a manner as to disperse runoff and to prevent the concentration of the stormwater flow.
Cut-off drains shall be provided around the properties to prevent storm-water ingress into the surrounding of the works. These drains shall be designed to contain the maximum runoff, which could be expected over a period of 24 hours with a frequency of once in every 20 years.	Appendix V:	C	2	Cut-off drains is provided around the properties to prevent storm-water ingress into the surrounding of the works. These drains was designed to contain the maximum runoff, which could be expected over a period of 24 hours with a frequency of once in every 20 years.

The Licensee shall conduct regular inspections upstream to ensure that stormwater does not ingress into the wastewater system.	Appendix V:	C	2	The Licensee conducts regular inspections upstream to ensure that stormwater does not ingress into the wastewater system
Accurate and up-to-date records must be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records must be available for inspection by the Provincial Head upon request.	Appendix V:	C	2	Accurate and up-to-date records is kept of all system malfunctions resulting in non-compliance with the requirements of this licence. No system malfunctions recorded to date.
The records shall be tabulated under the following headings with a full explanation of all the contributory circumstances: Operating errors Mechanical failures (including design, installation or maintenance) Environmental factors (e.g. floods) Loss of supply services (e.g. power failure) Other causes	Appendix V:	C	2	The records is tabulated under the following headings with a full explanation of all the contributory circumstances: Operating errors Mechanical failures (including design, installation or maintenance) Environmental factors (e.g. floods) Loss of supply services (e.g. power failure) Other causes
The Licensee must, within 14 days, or a shorter period of time, as specified by the Provincial Head, from the occurrence or detection of any incident referred above, submit an action plan, which must include a detailed time schedule, to the	Appendix V:	NA	NA	No incident recorded to date.

satisfaction of the Provincial Head of measures taken to: Correct the impacts resulting from the incident; Prevent the incident from causing any further impacts; and Prevent a recurrence of a similar incident.				
The Licensee must notify by the Provincial Head within 24 hours of the occurrence or potential occurrence of any incident which has the potential to cause, or has caused water and environmental pollution, health risks or which is a contravention of the licence conditions.	Appendix V:	NA	NA	No incident recorded to date.
The Licensee must develop and implement an Emergency and Contingency Plan.	Appendix V:	C	2	The Licensee developed a plan which is ready to be implement if an Emergency occurs. Part of the emergency response plan is to investigate and do inspections. Refer to Addendum D.
4.1 The Licensee must implement and promote an environmental call and reporting centre where the following can be reported: Illegal disposals of waste and/or littering;	Appendix V:	NA	NA	No incident recorded to date.

Broken, ruptured or leaking pipelines wasting potable water; Open or leaking taps on the property of the Licensee; Open manholes; Leaking or broken sewerage lines and pipes; Overflowing manholes and pump stations; Possible offenders of any environmental regulations, by-laws and/or ordinances; and Any other aspect that might hamper the effective management of the water resources.				
The Licensee must compile an environmental call and reporting centre protocol, that must be included in the Plan, and which will investigate every complaint within 24 hours of it being reported.	Appendix V:	C	2	The Licensee compiled an environmental call and reporting centre protocol and which will investigate every complaint within 24 hours of it being reported.
The Licensee must rectify all valid issues reported within 7 days of the issue being reported to the Licensee. All incidents shall be recorded in an incident register which will include reasons for non-rectification of issues raised.	Appendix V:	NA	NA	No issued reported to date.

Statistical summary of malfunctions and incidents shall be included in the Annual Report.	Appendix V:	NA	NA	No issued reported to date.
The sites must be adequately fenced to prevent entry of animals and unauthorised persons.	Appendix V:	C	2	The sites is adequately fenced to prevent entry of animals and unauthorised persons
Strict access procedures must be followed in order to gain access to property. Access must be limited to authorised employees of the Licensee and their Contractors only.	Appendix V:	C	2	Strict access procedures is followed in order to gain access to property. Access is limited to authorised employees of the Licensee and their Contractors only
Notices manufactured of durable weatherproof material prohibiting unauthorised entry and warning against the use of water containing waste for drinking and washing purposes must be displayed at prominent places along all fences and at entrance gates. Such notices must be worded in the official languages applicable in the area.	Appendix V:	C	2	Notices manufactured of durable weatherproof material prohibiting unauthorised entry and warning against the use of water containing waste for drinking and washing purposes is displayed at prominent places along all fences and at entrance gates. Such notices is worded in the official languages applicable in the area.
The licensee shall not irrigate with blood water or put it on the pit/well.	Appendix V:	C	2	The licensee did not irrigate with blood water or put it on the pit/well

8. Conclusion

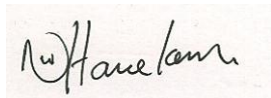
The auditor would like to thank Jarranhup representatives for their input during the audit.

The facility's overall compliance with the conditions contained in the Water Use Licence (WUL) and Environmental Management Programme (EMPr) was found to be good. No changes to the EMPr are required and the auditor found that the EMPr and its actions are still implementable. The EMPr is discussed weekly on management meetings. Any actions required, is implemented immediately. Here is the detailed summary of the Biodegradable effluent that is stored in the lined dam and what was spread onto the fields. Please refer to Appendix C for volumes of sludge generated and disposed of.

An amendment of the water use license application is in process to change these parameters to be in line with the standard and requirements developed between South African Pork Association (SAPO) and the DWS water research committee since it is impossible to treat sludge to this irrigation standards and the sludge is disposed under the sludge guidelines and parameters in line with the SAPO and DWS guidelines which is in line with the sludge disposal guidelines. The sludge disposed will meet the amended WUL parameters.

It must be noted that the Bot River and Swart river is approximately 2,5km away from the piggery operations and the upstream and neighbouring farms impact the water quality of the to rivers.

The water quality monitoring and sampling in the rivers needs to be consistently sampled. Some of the parameters analyzed differ between months and the Leeu River Border and Ampies House Botriver Border was not sampled during the winter months of 2024. It is crucial and important that all four points water samples be collected and analyses when it has water in it to sample. The non-sampling and analyses of some of the points has an impact on the monitoring program. A letter was submitted to BOCMA requesting changes to the monitoring sampling points



Nicolaas Hanekom Pri Sci Nat (Ecology).

Registration number 004415

Registered Environmental Assessment Practitioner: 2020/1146

13 September 2025

Dear Mr van Staden

I write to you as a Trustee of the Jarrahup Farm Trust in regard to the 4 monitoring points to take monthly water samples.

I have enclosed a map and have marked the points where monitoring takes place as the following:

- a. Up stream of the Botriver
- b. Down stream of the Botriver
- c. Down at "Joe's" house
- d. Down at Rupert's border

Since the floods in 2023 which caused major damage to the Botriver , Swartriver and especially the Leeurivier .

During the course of the floods, reeds ,broken bows and trees have banked up on the side of the river to the height of 1,5 to 2 meters making inaccessible to collect samples from the river.

The danger now , even if we could try and climb over them, is snakes.

Already a 1.5 meter puffadder was caught down at "Joe's" house down near the reeds where we normally access the river.

It has to be reported that the staff are unwilling to go into those reeds to collect samples of water due to the danger of being bitten by a snake.

As the Piggery is situated some 2 km from the Botriver and that the Piggery has completed all remedial requirements so that no pollution , especially to the river and the neighbours occurs.

Over the past years the Maremma Housing estate is nearing completion and they border on the river. Further up the Botriver there is farming activity of a Dairy, live stock etc.

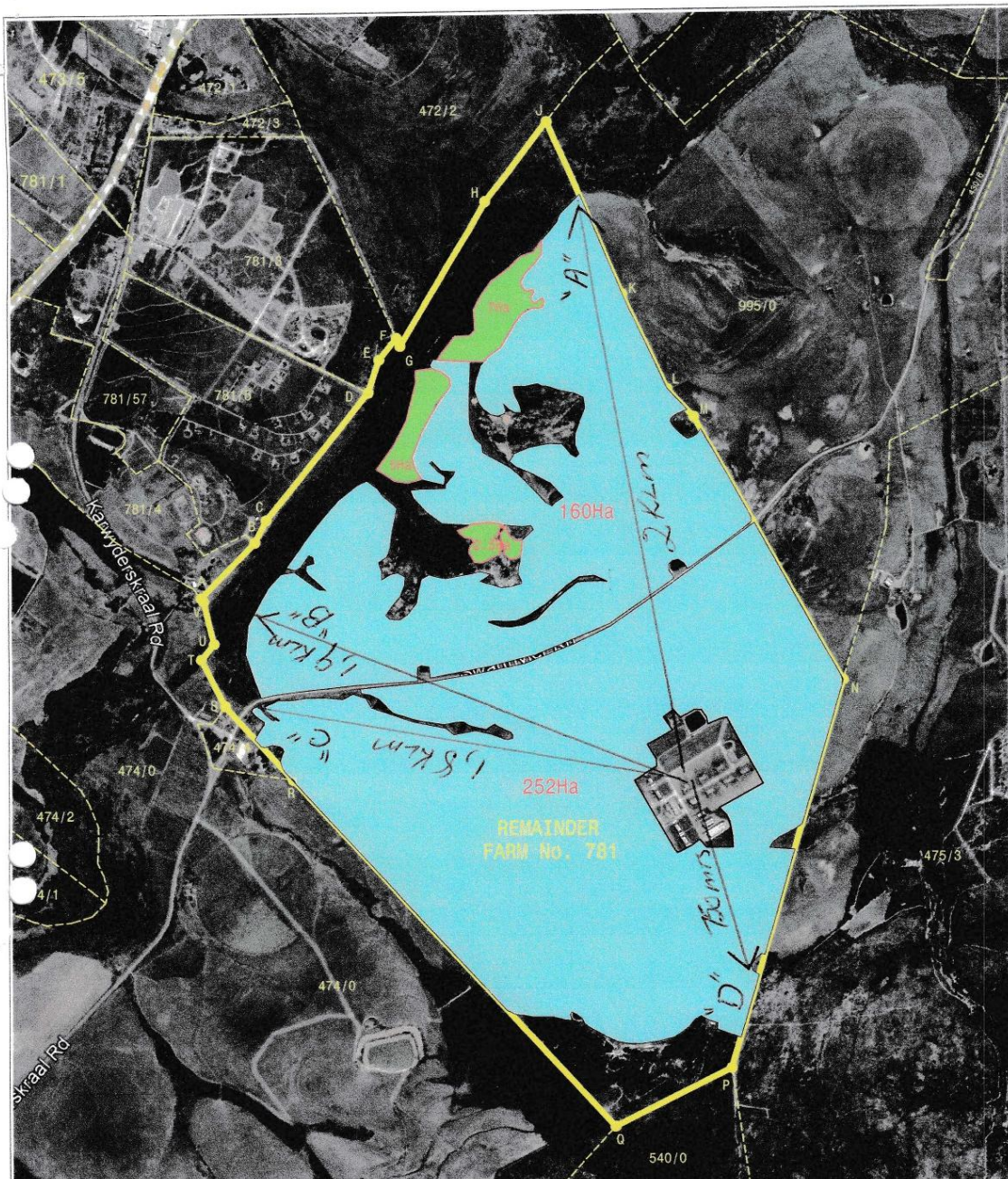
In most instances point c. " Joe's" house and d. Rupert's border, has no running water to collect samples.

We would appreciate if these monitoring points due to the above reasons, be uplifted.

Your consideration in this matter will be much appreciated.

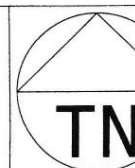
Kind Regards

Kevin Williams



Notes:

The figure A B C D E F G H J K L M N P Q R S T U V represents the correct boundary of Remainder Farm No. 781, Caledon.
Reconstructed from Survey Records E1771/2001, E1928/2001, E1465/2002 and E853/2012 lodged with the office of the Surveyor-General Cape Town.



Elmare Walker-Williams

From: Jan van Staden <jstaden@bocma.co.za>
Sent: Friday, 19 September 2025 07:54
To: Elmare Walker-Williams
Cc: Rafeeq Le Roux
Subject: RE: Water Monitoring Points on Jarrahnup Farm

Good morning

The office acknowledges receiving the letter about the monitoring points.
During the process to renew of the license, the number and locations of the monitoring points will be evaluated for practicality and purpose.

Regards

Jan van Staden
Breede-Olifants Catchment Management Agency
Cnr Mountain Mill & East Lake Road
WORCESTER
6850

Tel: 023 346 8000
Cell: 0828487488



From: Elmare Walker-Williams <earthco@whalemail.co.za>
Sent: Saturday, 13 September 2025 10:24
To: Jan van Staden <jstaden@bocma.co.za>
Subject: FW: Water Monitoring Points on Jarrahnup Farm

Good Morning Mr van Staden

Please find attached my letter plus map.

Kind Regards
Kevin Williams

From: Elmare Walker-Williams [<mailto:earthco@whalemail.co.za>]
Sent: Saturday, 13 September 2025 09:22
To: 'earthco@whalemail.co.za'
Subject: Water Monitoring Points on Jarrahnup Farm