

**PROPOSED REPAIR AND UPGRADE OF THE EXISTING
DEGRADED STORMWATER INFRASTRUCTURE ALONG MAIN
ROAD ("MR") 269 AT KM 4.95 AND KM 5.67 AND ALONG
DIVISIONAL ROAD ("DR") 1257 AT KM 1.47, HEMEL & AARDE
VALLEY, BETWEEN SANDBAAI AND CALEDON.**

**EXTERNAL ENVIRONMENTAL AUDIT REPORT IN TERMS
OF REGULATION 34 OF THE NEMA EIA REGULATIONS,
2014 (AS AMENDED).**

DEA&DP AMENDED EIA REF. NO.
16/3/3/5/E2/15/1016/21

NEAS AMENDED REF. NO.
WCP/EIA/AMEND/0000519/2021



**Prepared for:
Department of Transport and Public
Works**

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KAPPEC

27 June 2025

DETAILS OF THIS REPORT

Status of this Report	Final Regulation 34 External Compliance Audit Report.
Date Submitted	27 June 2025
Public Review Period	Not Applicable
Report Title	Proposed Repair and Upgrade of the Existing Degraded Stormwater Infrastructure along Main Road ("MR") 269 at km 4.95 and km 5.67 and along Divisional Road ("DR") 1257 at km 1.47, Hemel & Aarde Valley, between Sandbaai and Caledon.
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 The logo for KAPP Environmental Consultants features a stylized green leaf and blue water droplet icon to the left of the word "KAPP" in large, bold, dark grey letters. Below "KAPP" is the text "ENVIRONMENTAL CONSULTANTS" in a smaller, all-caps, dark grey font.	

DISCLAIMER

This report has been prepared for the Department of Transport and Public Works, represented by Mr. L. Truter and is subject to and issued in accordance with the agreement with Kapp Environmental Consultant (Pty) Ltd. (KAPPEC).

The opinions expressed in this report have been based on the information supplied to KAPPEC by the Client and the relevant Environmental Practitioner. The Author has exercised all due care in reviewing the supplied information, but conclusions from the review are reliant on the accuracy and completeness of the supplied data. KAPPEC does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. KAPPEC accepts no liability or responsibility whatsoever for it in respect of any use of or reliance upon this report by any third party.

Opinions presented in this report apply to the site conditions and features as they existed at the time of the writing of this report, and those reasonably foreseeable.

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LETTER OF UNDERTAKING AND STATEMENT OF INDEPENDENCE

I Renier Kapp, as the appointed independent Environmental Practitioner hereby declare that I:

- Will perform the work relating to the appointment in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- Other than fair remuneration for work performed/to be performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity;
- Work performed for this study was done in an objective manner irrespective of how such findings may be favourable or not to the applicant;
- declare that there are no circumstances that may compromise my objectivity in performing such work;
- All facts and findings will be presented in an objective manner in accordance with my professional experience and information derived from the study;
- have expertise in conducting the independent audit, including knowledge of the relevant legislation and any guidelines that have relevance to the development; and
- All particulars furnished in this report are true and correct.



(Renier Kapp)

Signature of the Principle Environmental Assessment Practitioner

Kapp Environmental Consultants (Pty) Ltd (KAPPEC)

Name of Company

27 June 2025

Date

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ABBREVIATIONS

MMP	Maintenance Management Plan
DEFF	Department of Environment, Forestry and Fisheries
DWS	Department of Water Affairs and Sanitation
EA	Environmental Authorization
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Programme
DEO	Designated Environmental Officer
KAPPEC	Kapp Environmental Consultants
I&AP	Interested and Affected Parties
RE	Resident Engineer

APPENDICES

Appendix A:	Site Photographs
Appendix B:	Locality Map
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INTRODUCTION

Kapp Environmental Consultants (Pty) Ltd. (KAPPEC) has been appointed by the Department of Transport and Public Works, represented by Mr. L. Truter (the Applicant) as the independent environmental assessment practitioners to undertake an external compliance audit in fulfilment of Condition 16 of the Environmental Authorization (the EA) and Regulation 34 of the NEMA EIA Regulations, 2014 (as amended).

The original Environmental Authorisation (EA) was granted to the Department of Transport and Public Works on August 4, 2016 (DEA&DP EIA Ref: 16/3/3/1/E4/5/1007/16) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and The Environmental Impact Assessment Regulations, 2014. In 2021, Condition 2 was subsequently amended to extend the validity period. The condition was revised from:

“The Environmental Authorisation is valid for a period of five years from the date of issue within which commencement must occur”

to:

“The holder must commence with the listed activities on site within a period of five (5) years from the date of issue of this Amended Environmental Authorisation.”

This amendment was necessary because the Western Cape Government: Department of Public Works planned to put the project out to tender in 2021, meaning that work at the approved sites could not begin before the original EA's lapsing date of 4 August 2021.

The amended EA was therefore granted to the Department of Transport and Public Works on May 13, 2021 (DEA&DP EIA Ref: 16/3/3/5/E2/15/1016/21) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and Part 1 of The Environmental Impact Assessment Regulations, 2014 (as amended).

This external audit, conducted in alignment with the National Environmental Management Act (NEMA), is to increase the contractor's compliance rating in terms of the approved Environmental Authorization and the EMP. The body of this report will incorporate the auditable conditions and requirements contained in both the EA and the EMP. The conditions of the EA have been summarized in the report including its corresponding level of compliance with each condition.

The methodology followed for conducting the environmental audit included:

- Compilation of background information for site visit
- Site Visit (24th of February)
- Documentation audit
- Compilation of environmental audit report
- Submission of environmental audit report (27 June 2025)

The items have been included in table format and compliance will be indicated based on assigned colour significance as per Table 1 below:

TABLE 1: COMPLIANCE RATING

Colour	Compliance Rating Significance
GREY	A grey item indicates that a compliance rating is not relevant or unknown. Item is listed for awareness although it cannot be rated at the time of completing the report.
GREEN	An item is marked green to indicate complete compliance in line with the EMP.
YELLOW	An item is marked yellow to indicate sufficient compliance although possibly not as prescribed in the EMP.
ORANGE	An item is marked orange to indicate a non-compliance although the resulting impact is not deemed significant.
RED	An item is marked red to indicate a significant or ongoing non-compliance which needs to be addressed as per the EAP instruction.

PROJECT DESCRIPTION

The Department of Transport and Public Works is undertaking the upgrade of stormwater infrastructure along Main Road (MR) 269 and Divisional Road (DR) 1257 in the Hemel & Aarde Valley, Western Cape, between Sandbaai and Hermanus. This project aims to replace and upgrade severely degraded culverts to enhance flood management, improve road safety, and protect the surrounding environment from erosion.

MR 269 Stormwater Infrastructure Upgrades:

Culvert at Km 4.95:

- Existing infrastructure: Two 900mm diameter pipe culverts, with collapsed inlet and outlet structures and signs of road surface damage.
- Proposed upgrade: Replace with two new 1800mm x 1800mm box culverts with reinforced inlet and outlet structures.
- Erosion protection: Gabions will be installed at both ends to safeguard against flood erosion and embankment degradation.
- Traffic management: Stop-and-go traffic control will be implemented during construction to ensure safety and minimize disruption.

Culvert at Km 5.67:

- Existing infrastructure: A 2400mm wide x 1500mm high box culvert with a 750mm arched in-situ box culvert experiencing erosion at both the inlet and outlet structures.
- Proposed upgrade: Extend the existing culvert and install guardrails at the culvert opening for enhanced road safety.
- Erosion protection: Gabions will be constructed at both ends to stabilize the embankments and prevent flood-related erosion.
- Traffic management: Stop-and-go traffic control will be implemented during construction to ensure road safety.

DR 1257 Stormwater Infrastructure Upgrades:

Culvert at Km 1.47:

- Existing infrastructure: Three 600mm diameter pipe culverts that have failed structurally, with severe erosion on the outlet side and inadequate capacity for peak flood management.
- Proposed upgrade: Replace with three 1050mm diameter pipe culverts and install a stepped concrete energy dissipating structure at the outlet to manage water flow and prevent further erosion.
- Temporary bypass: A 300m temporary bypass road will be constructed north of the existing road, passing through disturbed agricultural land and approximately 43m of natural indigenous vegetation before reconnecting with DR 1257.

- Erosion protection: Gabions will be installed at the inlet and outlet structures to protect the culverts and embankments from erosion.

Environmental and Rehabilitation Measures:

- **Vegetation Management:** The project area is highly infested with Kikuyu grass and alien vegetation. A search and rescue operation will be conducted to recover endemic species within the construction footprint. Rescued plants will be taken to GNEC's rehabilitation nursery for propagation and replanting.
- **Rehabilitation Objectives:**
 - Stabilize all eroded embankments.
 - Minimize further erosion and prevent loss of endemic vegetation.
 - Reintroduce native wetland vegetation to improve the ecological value of the area.
 - Enhance visual appeal and biodiversity.
 - Improve road safety for vehicles crossing the culverts.
 - Increase the flow capacity to manage peak stormwater events effectively.

The proposed upgrades are essential for improving road safety, preventing flood damage, and ensuring long-term environmental sustainability within the Hemel & Aarde Valley. The project will be executed with minimal disruption to traffic and will incorporate ecological restoration efforts to maintain the natural integrity of the area.

LISTED ACTIVITIES

Government Notice No. R. 983 of 4 December 2014

Activity Number: 19

Activity Description:

The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from —

(i) a watercourse:

(ii) the seashore; or

(iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an 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; or

(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.

The proposal entails the repair and upgrading of existing stormwater infrastructure.

REGULATION 34 EXTERNAL AUDIT REQUIREMENTS

This section will attempt to detail the content requirements to be included as part of a Regulation 34 Audit Report as outlined in terms of Appendix 7 of Regulation 982 of the 2014 EIA Regulations.

Environmental audit report

The environmental audit report must provide recommendations regarding the need to amend the EMPr, and where applicable, the closure plan.

Objective of the environmental audit report

The objective of the environmental audit report is to

- a) report on —
 - i. the level of compliance with the conditions of the environmental authorisation and the EMPr, and where applicable, the closure plan; and
 - ii. the extent to which the avoidance, management and mitigation measure provided for in the EMPr, and where applicable, the closure plan achieve the objectives and outcomes of the EMPr, and closure plan;

- b) identify and assess any new impacts and risks as a result of undertaking the activity;
- c) evaluate the effectiveness of the EMPr, and where applicable, the closure plan; and
- d) identify shortcomings in the EMPr, and where applicable the closure plan, and
- e) identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr, and where applicable, the closure plan.

Content of environmental audit reports

(1) An environmental audit report prepared in terms of these Regulations must contain –

- a) details of the –
 - i. independent person who prepared the environmental audit report; and
 - ii. expertise of the independent person that compiled the environmental audit report;
- b) a declaration that the independent auditor is independent in a for as may be specified by the competent authority;
- c) an indication of the scope of, and purpose for which, the environmental audit report was prepared;
- d) a description of the methodology adopted in preparing the environmental audit report;
- e) an indication of the ability of the EMPr, and where applicable, the closure plan 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, EMPr, and where applicable, the closure plan;
- f) a description of any assumptions made, and any uncertainties or gaps in knowledge;
- g) a description of any consultation process that was undertaken during the course of carrying out the environmental audit report;
- h) a summary and copies of any comments that were received during any consultation process; and
- i) any other information requested by the competent authority.



FIGURE 1: LOCALITY MAP

CONDITIONS OF AUTHORISATION

TABLE 2: ENVIRONMENTAL AUTHORISATION CONDITIONS AND COMPLIANCE

No.	EA CONDITIONS	COMPLIANCE FINDING
1.	The holder is authorised to undertake the listed activity specified in Section B above in accordance with, and restricted to, Alternative I, described in the BAR dated 22 April 2016 at the sites as described in Section C above.	The preferred alternative, as authorised, is being implemented on-site.
2.	The Environmental Authorisation is valid for a period of five years from the date of issue within which commencement must occur.	The original Environmental Authorisation (EA) was issued on 4 August 2016. Condition 2 was subsequently amended to extend the validity period. The condition was revised from: <i>“The Environmental Authorisation is valid for a period of five years from the date of issue within which commencement must occur”</i> to: <i>“The holder must commence with the listed activities on site within a period of five (5) years from the date of issue of this Amended Environmental Authorisation.”</i> This amendment was necessary because the Western Cape Government: Department of Public Works planned to put the project out to tender in 2021, meaning that work at the approved sites could not begin before the original EA's lapsing date of 4 August 2021.
3.	The holder shall be responsible for ensuring compliance with the conditions by any person acting on his/her behalf, including an agent,	Noted, the holder holds all responsibility for the actions undertaken by anyone on site.

	sub-contractor, employee or any person rendering a service to the holder.	
4.	Any changes to, or deviations from the scope of the alternative described in section B above must be accepted or approved, in writing, by the Competent Authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the Competent Authority may request information, in order to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.	Noted. No changes or deviations from the scope of the project description have occurred since the EA was obtained/approved.
5.	Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities. 5.1 The notice must make clear reference to the site details and EIA Reference number given above. 5.2 The notice must also include proof of compliance with the following conditions described herein: Conditions: 7 and 13.	A notification of commencement was sent to DEA&DP on the 6 th of October 2021 and made clear reference to the site details and EIA Reference, although the letter of commencement did not include proof/comments of compliance with conditions 7 and 13.
6.	Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of operational activities specified in the EA.	A notification of commencement was sent to DEA&DP on the 6 th of October 2021, making clear reference that construction will commence within two weeks (therefore around the 20 th of October 2021, 14 days prior).
7.	The holder must in writing, within 14 (twelve) calendar days of the date of this decision –	The I&AP Notification letter after the approval of the EA was sent on the 11 th of August 2016 (3 days after the EA was granted).

	7.1 notify all registered Interested and Affected Parties (“I&APs”) of – 7.1.1 the outcome of the application; 7.1.2 the reasons for the decision as included in Annexure 3; 7.1.3 the date of the decision; and 7.1.4 the date when the decision was issued. 7.2 draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, 2014 (as amended) detailed in Section G below; 7.3 draw the attention of all registered I&APs to the manner in which they may access the decision and; 7.4 provide the registered I&APs with: 7.4.1 the name of the holder (entity) of this Environmental Authorisation, 7.4.2 name of the responsible person for this Environmental Authorisation, 7.4.3 postal address of the holder, 7.4.4 telephonic and fax details of the holder, 7.4.5 e-mail address, if any, of the holder, and 7.4.6 contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the 2014 National Appeals Regulations (as amended).	All of the required information was provided as stipulated in this condition.
8.	The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered I&APs of this decision. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental	The holder commenced with the approved listed activities in October 2021, 5 months after the amended EA was received. No appeals were lodged against the EA.

	Authorisation is suspended until the appeal is decided i.e. the listed activities, including site preparation, must not commence until the appeal is decided.	
9.	The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.	From the available ECO audit reports as well as the observations from site audit, the contractor has implemented the EMPr on-site. The final amended EMPr was submitted and approved in November 2024.
10.	The Maintenance Management Plan ("MMP"), included as part of the EMPr, read in conjunction with the additional information dated 10 June 2016. is herewith agreed to in terms of the NEMA EIA Regulations, 2014 relating to Activity 19 of GN No. R. 983. The maintenance work specified in the MMP therefore does not require a separate Environmental Authorisation prior to the undertaking thereof.	It is noted that the MMP was approved for the maintenance works as specified in the MMP which will not require a separate EA in future.
11.	The Rehabilitation Plan submitted as part of the Freshwater Ecosystem Assessment dated November 2015 must be implemented.	The Rehabilitation Plan was utilized for rehabilitation activities as part of the culvert upgrades. Please refer to the Rehabilitation Completion report which is herewith attached as Appendix H.
12.	The EMPr, MMP and Rehabilitation Plan must be included in all contract documentation for all phases of implementation.	It is unclear whether this condition was complied with. The ECO did not obtain any proof that these documents were included in the contract documentation.
13.	The holder must appoint a suitably experienced environmental control officer ("ECO"), or site agent where appropriate, before commencement of any land clearing or construction activities to ensure compliance with the EMPr, MMP, Rehabilitation Plan and the conditions contained herein.	Nica Kotze from Guillaume Nel Environmental Consultants was appointed as ECO on the site and compiled monthly reports to DEA&DP.
14.	A copy of the Environmental Authorisation, EMPr, MMP,	Per the available ECO audit reports, the ECO noted that an

	Rehabilitation Plan, audit reports and compliance monitoring reports must be kept at the site of the authorised activity, and must be made available to anyone on request, including on a publicly accessible website.	Environmental File was available at the contractors' camp and the Environmental Authorisation (EA) was placed in the file together with the Environmental Management Programme (EMPr) as well as the induction register and audit reports. The method statements were also placed in the file and previously received by the ECO.
15.	Access to the site referred to in Section C must be granted, and the environmental reports mentioned above must be produced, to any authorised official representing the Competent Authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.	Access to the site referred to in Section C is always available to anyone wishing the access. The environmental reports will be presented to the Competent Authority who requests to see it.
16.	In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation, the EMPr, MMP and the Rehabilitation Plan, and submit Environmental Audit Reports to the Competent Authority. The Environmental Audit Report must be prepared by an independent person and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014. The holder must submit an Environmental Audit Report for the construction phase within 3 months of completion of construction to the Competent Authority and thereafter, every 3 months for a period of 1 year. The final Environmental Audit Report must be submitted to the Competent Authority three months after commencement of operations. The holder must, within 7 days of the submission of each	Kapp Environmental Consultants (Pty) Ltd has been appointed on behalf of the Department of Transport and Public Works (the Applicant) as the independent environmental assessment practitioners to undertake the required external compliance audit in fulfilment of Condition 16 of the Environmental Authorization (the EA) and Regulation 34 of the NEMA EIA Regulations, 2014 (as amended).

	of the above-mentioned reports to the Competent Authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and on a publicly accessible website.	
17.	Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape. Heritage remains include: meteorites, archaeological and/or palaeontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.	No heritage remains have been exposed during excavations as of yet.
18.	A qualified archaeologist and/or palaeontologist must be contracted where necessary (at the expense of the holder) to remove any heritage remains. Heritage remains can only be disturbed by a suitably qualified heritage specialist working under a directive from the relevant heritage resources authority.	No heritage remains have been exposed during excavations as of yet.
19.	Construction activities that will occur within or directly adjacent to the river may only take place outside the rainy season or periods of rainfall.	Based on the ECO reports provided and the EA checklist, it is noted that the construction activities did commence during the dry summer season although extended into the wetter winter months in order to complete the works.

SITE AUDIT FINDINGS

A detailed site visit was conducted on the 24th of February 2025 to assess the completion of the works as outlined in Section B of the Environmental Authorization dated 04 August 2016 (16/3/3/1/E4/5/1007/16). The audit focussed mainly on the authorized activities as applied for and authorized which includes the three culverts, however, aspects relating to the larger contract was also visited during the audit.

The contractor's main site camp is located off Hermanus Way at the northern end of the contract in Caledon. The site camp comprises an existing PGWC facility which includes storage areas and offices with all the required infrastructure permanently in place. Three stockpile areas were also noted during the audit, although only stockpiles 2 and 3 are attributed to the upgrading of the stormwater infrastructure as included in the EA. Stockpile area 1 is located immediately north of the site camp area off Hermanus Way and this area has historically been utilized for material stockpiling of this nature.

The culvert along DR1257 has been upgraded with a temporary bypass created to accommodate traffic during the works. The three 600mm diameter pipe culverts which failed structurally have been replaced with three 1050mm diameter pipe culverts and a stepped concrete energy dissipating structure at the outlet to manage water flow and prevent erosion. Gabions were installed at the toe of the outlet structure to protect the embankment from erosion.

A search and rescue operation were conducted within the natural vegetation area which had to be cleared to accommodate the temporary bypass road. A search and rescue completion report has been compiled by GNEC (herewith included as Appendix I) and the rescued plants were temporarily stored at the GNEC nursery along the MR269 nearby. These plants along with additional suitable species were utilized as part of the rehabilitation of this section and a rehabilitation completion report was compiled by GNEC to document the rehabilitation process followed. The rehabilitation completion report is herewith included as Appendix H.

The culvert at Km 5.67 has been completed and the adjacent material stockpile has been removed and rehabilitated. The culvert has been extended, and guardrails have been installed at the culvert opening for enhanced road safety. Extensive gabion work has been completed both along the eastern and western road shoulders and at the inlets/outlets to stabilize the embankments and prevent flood-related erosion. Stockpile area 2 was located on existing agricultural fields towards the immediate northeast of the works at the culvert. All temporarily stockpiled material has been removed, and the soil has been ripped as per the EMPr requirement.

The culvert at Km 4.95 on the Hemel and Aarde road has been upgraded, and the areas shaped to allow for natural stormwater flows. Two 900mm diameter pipe culverts have been replaced with two new 1800mm x 1800mm box culverts with reinforced inlet and outlet structures. Gabions were installed at both ends to safeguard against flood erosion and embankment degradation.

Stockpile area 3 was previously utilized as a stockpile and site camp area as part of this contract. The site is now again in use for this purpose as part of a concurrent contract for the emergency flood damage repairs to the Hartbees River causeway. Thus, the current status of this stockpile and site camp is no longer associated with this audit findings. Due to flood damage from the Hartbees River along the shoulder of the road, a temporary bypass measure has been put in place and only the southern lane of the MR269 is operational at this stage until the flood damage has been reconstructed as part of a concurrent separate contract.

The road surface upgrades have all been completed at the time of audit. The only road section to be completed include the section of the road where the bypass road has been utilized and forms part of a separate contract. At some sections of the road the new road markings are yet be painted.

It was noted during the audit that along several stretches of the road reserve that alien tree clearing has been undertaken. Trees have been felled, and the stumps were treated to prevent regrowth (blue).

The upgrading of the culverts as authorized in the scope of works per Section B of the Environmental Authorization has been completed in line with the requirements. The search and rescue activities and the required rehabilitation activities in line with the rehabilitation plan has been completed. Please also refer to the photo pages herewith attached as Appendix A.

ENVIRONMENTAL MANAGEMENT PLAN COMPLIANCE

TABLE 3: ENVIRONMENTAL MANAGEMENT PLAN COMPLIANCE

No.	EMP REQUIREMENT	COMPLIANCE FINDING
1.	Site Demarcation and No-Go/Sensitive Areas	
1.1	The surveys for the overall project area and construction footprint as approved in the Environmental Authorisation (EA) must be clearly demarcated before the contractors set up their crew camps or begin construction.	The construction footprint was demarcated with permanent fencing prior to clearing. The construction activities as per the project description in the EA have been completed at the time of the site visit.
1.2	Topsoil stockpiles must be clearly demarcated as no-go areas.	The ECO noted that the topsoil was temporarily stockpiled adjacent to the works areas (windrowed) and placed back immediately after completion of the culverts. Topsoil stockpiles were no longer present to audit although it is evidenced in the available ECO reports. Please also refer to the method statement as implemented by the contractor - <i>Clearing and Stockpiling (1.11-1.18)</i> .
2.	Flora	
2.1	Prior to construction all the alien vegetation needs to be removed from site. (Eg; Kikuyu Grass) Consult the ECO in this regard.	During the September 2024 ECO visit, all alien clearing was concluded. Alien trees have also been cleared, and the stumps were treated with a herbicidal paint to prevent regrowth. (Please refer to the photos pages herewith included as Appendix A).
2.2	Prior to construction a search and rescue need to be conducted to remove all possible endemic species within the construction footprint. Needs to be conducted by a qualified Horticulturist. Rescued endemic species needs to be taken to GNEC's on-site rehabilitation nursery (Hemel & Aarde Valley) where the plants will be grown and multiplied by a qualified Horticulturist.	Guillaume Nel Environmental Consultants (GNEC) were appointed to conduct a search and rescue operation for endemic species within the construction footprint of the by-pass road. The search and rescue activities were carried out on the 4 th and 5 th of November 2021. During this operation, 105 individuals of <i>Zantedeschia aethiopica</i> ,

		20 individuals of <i>Isochyrolepis subverticillata</i> , 12 <i>Aloe arborescens</i> , and 912 <i>Carpobrotus edulis</i> were sustainably removed and relocated to the GNEC rehabilitation nursery. At the nursery, these species were bagged and will be cultivated and propagated for future rehabilitation purposes. <i>Searsia augustifolia</i> , <i>Athanasia trifurcata</i> , and <i>Stoebe plumosa</i> seeds were also collected and stored in seed containers at the nursery to be used for rehabilitation after construction.
2.3	Adjacent natural areas need to be clearly cordoned off and seen as no go areas. This needs to be done in accordance with the ECO before any construction activities may commence.	The adjacent natural areas along the road reserve is/was fenced off with road reserve boundary fencing and this is used as the no-go area boundaries.
2.4	Vegetation in the construction footprint should be brush-cut instead of bulldozed. This will enable re-sprouting species to regenerate.	Noted. The works area footprints were demarcated although it is unclear whether this requirement was met, given that all the activities on site had been completed at the time of the audit.
2.5	The disturbance footprint should be as narrow as possible.	All construction activities and the rehabilitation of stockpile areas and road reserves had been concluded at the time of audit.
3.	Stockpiles	
3.1	All stockpiled material must be easily accessible on site without any environmental damage of the surrounding properties.	Topsoil stockpiles had been previously placed adjacent to the construction areas and replaced in the same areas once construction was completed. Material stockpiles and larger topsoil stockpiles had been adequately placed within the Site Camp and Satellite Camp. Readily disturbed agricultural areas and areas previously utilized as stockpile/site camps were utilized. <i>Please refer to the photo pages included in Appendix A.</i> At the time of audit, all stockpiles relating to the project had been utilized or removed from site.
3.2	All temporarily stockpiled material must be stockpiled in such a way that the spread of materials is minimised. In the case of strong wind	During the site visit, material stockpiles were observed at the Satellite Camp. Some of these stockpiles were covered with

	and/or rain all stockpiled material must be covered with a tarpaulin in order to prevent erosion. All exposed soils must be protected for the duration of the construction phase with a suitable geotextile (e.g. Geojute or hessian sheeting) in order to prevent erosion and sedimentation of the watercourses in close proximity to these stockpiles.	tarpaulins and no areas of erosion were noted. These stockpiles no longer form part of this contract.
3.3	The stockpiles may only be placed within the demarcated areas, outside of delineated watercourses, the location of which must be approved by the RE, EO, or ECO.	All construction activities and the rehabilitation of stockpile areas and road reserves had been concluded at the time of audit. During the site visit, a material stockpile was noted at the satellite camp, although this is not part of this contract. Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports.
3.4	Stockpiles must not be higher than 1.5m to avoid compaction thereby maintaining the soil integrity and chemical composition.	Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports. The method statement from the contractor further outlined that <i>1.13. The topsoil material will be removed and placed on a stockpile for later use in areas agreed to with Site Management. Stockpiles shall be no more than 1.5m high and shall not be subject to compaction greater than 1 500kg/m².</i>
3.5	Soils from different horizons must be stockpiled such that topsoil stockpiles do not get contaminated by sub-soil material.	The ECO noted that the topsoil was temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts. Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports.
3.6	Topsoil stockpiles must be monitored for invasive exotic vegetation growth. Contractors must remediate as and when required in consultation with the EO, RE and ECO.	The ECO noted that the topsoil was temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts. Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports.
3.7	No plant, workforce or any construction related activities may be	Complied with, stockpiles were positioned away from the entrance

	allowed onto the topsoil stockpiles.	and traffic areas within both the Site Camp and Satellite Camp.
3.9	Soil should not be stored for longer than three months.	Stockpiles were temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts. No soil stockpiles have remained on site.
4.	Topsoil Management	
4.1	Before stockpiling the topsoil, all alien vegetation needs to be removed. Consult ECO in this regard.	Stockpiles were temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts. No soil stockpiles have remained on site. Per the method statement, <i>"Remove alien vegetation from topsoil before temporarily stockpiling"</i> . Reference was also made to the removal of especially <i>Cynodon dactylon</i> (kikuyu).
4.2	Topsoil needs to be windrowed on site, and needs to be clearly seen as no go areas.	The ECO noted that the topsoil was windrowed adjacent to the works areas and placed back immediately after completion of the culverts. Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports. The method statement obtained for topsoil management clearly indicates that topsoil stockpiles were treated as no-go areas.
4.3	Topsoil needs to be protected and preserved for rehabilitation purposes.	The ECO noted that the topsoil was windrowed adjacent to the works areas and placed back immediately after completion of the culverts. Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports. The method statement obtained for topsoil management clearly indicates that topsoil stockpiles were treated as no-go areas.
4.4	The topsoil is to be stored in a weed-free environment in heaps not exceeding 1.5m in height.	The topsoil stockpiles did not exceed the 1.5m height restriction as outlined and undertaken in the method statements from the contractor.
4.5	Stockpiles may not be ridden on by any machinery or walked on by staff.	Stockpiles were windrowed on site and according to the contractor method statements and ECO reports were marked as no-go area

		with no evidence of disturbance observed. No topsoil stockpiles have remained on site at the time of audit.
4.6	Topsoil needs to be clearly seen as no go areas, and protected, seeing that it is a crucial element during the rehabilitation process.	Topsoil and material stockpiles had been placed adjacent to the construction areas, adequately placed within the development footprint currently within the Site Camp and Satellite Camps. Readily disturbed agricultural areas and areas previously utilized as stockpile/site camps were utilized. The ECO noted that some of the topsoil was temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts. The contractor method statement notes that topsoil will be placed and levelled by mechanical means in the areas required for rehabilitation. Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports. All rehabilitation efforts have been completed at the time of audit.
5.	Oil and Chemicals	
5.1	These substances must be confined to specific and secured areas within the contractor's camp, and in a way that does not pose a danger of pollution even during times of high rainfall. These areas must be imperviously bunded with adequate containment (at least 1.1 times the volume of the fuel) for potential spills or leaks.	No oil and chemicals have remained on site, although one site camp is still in place which is now utilized by a contractor for a separate contract associated with emergency floor repair and maintenance.
5.2	Drip trays (minimum of 10cm deep) must be placed under all machinery and vehicles. The surface area of the drip trays will be dependent on the vehicle and must be large enough to catch any hydrocarbons that may leak from the vehicle while standing. The	No handling of hazardous material that requires bunded areas, drip trays, or mortar boards was active during the site audit as activities have been completed. The fuel browser was located within the roofed structures as the Site Camp off Hermanus Way

	depth of the drip tray must be determined considering the total amount / volume of oil in the vehicle. The drip tray must be able to contain the volume of oil in the vehicle.	on an impermeable surface.
5.3	Any spills larger than 100ℓ should be reported to all local authorities. Spill kits must be available on site and in all vehicles that transport hydrocarbons for dispensing to other vehicles on the construction site. Spill kits must be made up of material/product that is in line with environmental best practice (sunsorb is a recommended product that is environmentally friendly).	No spills have been recorded or reported, the necessary spill kits are located at the site camp.
5.4	All spilled hazardous substances must be contained in impermeable containers for removal to a General & Hazardous Waste Landfill site, (this includes contaminated soils, and drenched spill kit material).	No handling of hazardous material that requires bunded areas, drip trays, or mortarboards was active during the site audit as activities have been completed. Lockable storage containers are available on-site at the site camp in good condition for all the chemicals and oils. The fuel bowser was located within the roofed structures as the Site Camp of Hermanus Way on an impermeable surface.
6.	Method Statements The ECO will evaluate the method statement and ensure that it covers the handling of the following aspects: • Emergency spills procedures for the contamination of soils from spills and fire. • Handling & storage of oils and chemicals. • Cement and concrete batching, which includes the storage, washing & disposal of cement, packaging, tools and plant. • Diesel tanks and refuelling procedures. • Crew camps and construction laydown areas. • Workshop maintenance and cleaning of plant.	Method statements were available on file on site. The contractor submitted the following method statement to the ECO. • Dust Control • Earthworks and Excavations • Fuel Storage and Spills • Incident Reporting and Recording • Integrated Waste Management • Management of Contaminated Water • Material Handling • Site Clearing and Stockpiling

		• Site Establishment • Surveying
7.	Cement	
7.1	It is suggested that ready-mix cement be used as far as possible to minimize the possible impact on the surrounding environment.	No batching or pouring of concrete was observed during the audit as activities have been completed. No significant concrete spills were observed during the audit. All the culverts have been upgraded and rehabilitation completed.
7.2	Cement must be mixed and transported in leak and splash proof containers.	No cement work was observed during the audit as activities have been completed. No cement spills were observed during the audit.
7.3	Should a cement spill occur, then the spilled material, as with all waste materials, must be removed completely and spoiled in a designated spoils site.	No cement work was observed during the audit as activities have been completed. No cement spills were observed during the audit.
7.4	The mixing of concrete shall only be done at selected sites on mortar boards or similar structures to contain run-off into natural vegetation, soils and streams.	No cement work was observed during the audit as activities have been completed. No cement spills were observed during the audit.
7.5	Mixing of cement directly on soil will not be tolerated.	No cement work was observed during the audit as activities have been completed. No cement spills were observed during the audit.
7.6	Cleaning of cement mixing and handling equipment shall be done using proper cleaning trays.	No empty cement bags were observed during the site audit, apart from within a bin in at the site camp off Hermanus Way.
7.7	All empty containers must be stored in a dedicated area and later removed from the site for appropriate disposal at a Licensed Landfill site. All empty cement bags are to be picked up immediately to ensure that cement dust is not blown away.	No empty cement bags were observed during the site audit, apart from within a bin in at the site camp off Hermanus Way.
7.8	Empty cement bags are to be stored in a weather and scavenger proof bin, in order to prevent leaching and groundwater contamination.	No empty cement bags were observed during the site audit, apart from within a bin in at the site camp off Hermanus Way.
7.9	Any spillage that may occur must be investigated and immediate	No batching or pouring of concrete was observed during the audit

	remedial action shall be taken.	as activities have been completed. No significant concrete spills were observed during the audit.
7.10	The visible remains of concrete, either solid, or from washings, shall be physically removed immediately and disposed of as waste to a Licensed Landfill site.	No significant concrete spills have occurred on site to date.
7.11	Washing of the remains into the ground is unacceptable.	No significant concrete spills have occurred on site to date.
8.	Dangerous and Toxic Materials	
8.1	Materials such as fuel, oil, paint, herbicide and insecticides must be sealed and stored in bermed areas or under lock and key, as appropriate, in well-ventilated areas.	Limited oils and chemicals have remained on site, although one site camp is still in place which is now utilized by a contractor for a separate contract associated with emergency floor repair and maintenance. Containers are in place at this satellite camp. A fuel browser was still located within the roofed structure at the Site Camp off Hermanus Way on an impermeable surface (please refer to the photo pages attached as Annexure A). No handling of hazardous material that requires bunded areas, drip trays, or mortar boards was active during the site audit as activities have been completed.
8.2	Storage facilities should be bunded, roofed, secure, rain, wind and tamper-proof.	A fuel browser was still located within the roofed structure at the Site Camp off Hermanus Way on an impermeable surface (please refer to the photo pages attached as Annexure A).
8.3	Storage areas shall display the required safety signs depicting “no smoking”, “No Naked lights” and “Danger” containers shall be clearly marked to indicate contents as well as safety requirements.	Permanent safety signs are still on display at the site camp off Hermanus Way.
8.4	Sufficient care must be taken when handling these materials to prevent pollution. Training on the handling of dangerous and toxic materials must be conducted for all staff prior to the commencement	Oils and chemicals are stored at the site camp area in suitable and lockable containers. No pollution of oils and/or chemicals have occurred on site.

	of construction. In the case of pollution of any surface or groundwater, the Regional Representative of the Department of Water Affairs and Forestry (DWAF) and Breede Overstrand Catchment Management Agency (BOCMA) must be informed immediately.	
9.	Bulk Storage of Fuels and Oils	
9.1	Bulk fuel storage tanks on the site shall be on an impervious surface that is bunded and able to contain at least 110% of the volume of the tanks.	No bulk fuel storage tanks were observed on-site during the audit. The fuel browser was located within the roofed structures as the Site Camp off Hermanus Way on an impermeable surface.
9.2	Bulk fuel storage tanks shall be located in a portion of the construction camp where they do not pose a high risk in terms of water.	No bulk fuel storage tanks were observed on-site during the audit. The fuel browser was located within the roofed structures as the Site Camp off Hermanus Way on an impermeable surface.
9.3	Bulk fuel storage tanks shall be placed so that they are out of the way of traffic, so that the risk of the tanks being ruptured or damaged by vehicles is minimised.	No bulk fuel storage tanks were observed on-site during the audit. The fuel browser was located within the roofed structures as the Site Camp off Hermanus Way on an impermeable surface.
9.4	Bulk fuel storage should be covered during the rainy season.	The fuel browser was located within the roofed structures as the Site Camp off Hermanus Way on an impermeable surface.
10.	Use of Dangerous and Toxic Materials	
10.1	The contractor shall keep the necessary materials and equipment on-site to deal with spills/fires of the materials present should they occur.	Firefighting equipment and an oil spill kit were noted on-site at the site camp. No spills have been recorded or reported on-site, and activities have been completed.
10.2	The contractor shall set up a procedure for dealing with spills/fires, which will include notifying the ECO and the relevant authorities prior to commencing construction. These procedures must be developed in consultation and approval by the appointed EO. All staff should receive some form of fire training.	No incident have been recorded to date and activities on site have now been completed.
10.3	Fire buckets and hoses shall be in good working order and easily accessible on site.	Firefighting equipment was noted to still be in place at the contractors camp off Hermanus Way as well as at the satellite

		camp which is now utilized for a different contract.
11.	Contractors Camp Site and Crew Camps	
11.1	The Contractor shall, in conjunction with the EO, designate the restricted eating area for eating during normal working hours. Two refuse bins with lids must be provided and cleaned on a daily basis. The bins are to be secure, wind, weather and scavenger proof. Designated areas for smoking must be provided.	Noted, the a Site and Satellite Camp has been established and is in good and clean condition, all eating to occur within the site camp. Bins have been provided within the site camp. No litter was observed during the site audit. The contractor's main site camp was located off Hermanus Way at the northern end of the contract in Caledon. The site camp comprises an existing PGWC facility which includes storage areas and offices with all the required infrastructure permanently in place. A satellite site camp towards the south of the contract was also previously utilized as part of this contract. The site is now again in use for this purpose as part of a concurrent contract for the emergency flood damage repairs to the Hartbees River causeway. Thus, the current status of this site camp is no longer associated with this audit findings.
11.2	No fires are to be lit outside of a facility designed to contain fires. The adequacy and positioning of these structures must be determined in consultation with the EO and ECO.	No evidence of fires was observed during the site audit.
11.3	No animals, domestic or otherwise are allowed on the premises. The feeding, or leaving of food, for stray or other animals in the area is strictly prohibited.	No evidence of domestic animals was observed during the site audit.
11.4	Litter (even if originating outside the camp) and concrete bags etc. must be picked up and put into suitably closed bins. The contractor shall provide labourers to clean up the contractor's camp and	Bins have been provided within the site camp. No litter was observed during the site audit. Illegally dumped black bags were observed along the rehabilitation section of DR 1257 where the

	construction site on a daily basis. These areas shall then be inspected by the contractor or his/her ESO to ensure compliance with this requirement. Rubble and litter must be removed every two weeks or more often as the need arises and be disposed of at a registered landfill site as designated by the Beaufort West Local Municipality's solid waste removal department.	temporary bypass was in place. The contractor to please remove those prior to close-out.
11.5	Accommodation for members of the workforce will not be permitted on site unless authorisation has been given in terms of the Environmental Authorisation issued for the site.	Noted, no accommodation facilities were provided during the contract.
11.6	Dedicated wash areas must be situated away from surface water sources.	Noted, no specific washing areas were observed during the site audit, and none specified from the ECO reports.
11.7	The contractor's camp shall be monitored for dust fallout and dust suppression applied as required. This may include the laying of gravel; the use of grey water can be considered as an option if the required permits have been acquired.	No dust fallout has been reported at the site camps and given the nature of both these camps was unlikely to occur.
11.8	The contractor's camp, offices and storage facilities shall be located within the site boundaries. If this is not feasible an alternative should be designated in consultation with the ECO.	Complied with, the site camp is located within an existing fenced developed area.
11.9	The contractor shall be responsible for cleaning the contractor's camp and construction site of all structures, equipment, residual litter and building materials at the end of the construction period and, the topsoil restored in areas where landscaping is to take place.	The contractor's main site camp was located off Hermanus Way at the northern end of the contract in Caledon. The site camp comprises an existing PGWC facility which includes storage areas and the site camp was in a clean and orderly condition at the time of audit. A satellite site camp towards the south of the contract was also previously utilized as part of this contract. The site is now again in use for this purpose as part of a concurrent contract for the emergency flood damage repairs to the Hartbees River causeway. Thus, the current status of this site camp is no longer

		associated with these audit findings.
12.	Ablution Facilities	
12.1	The contractor will be responsible for providing all sanitary arrangements for his and the sub-contractors team. A minimum of one chemical toilet shall be provided per 15 persons .	Chemical toilets were provided by the contractor within the Site Camp and Satellite Camp as well as at construction sites. Toilets have since been removed following the completion of construction activities.
12.2	Sanitary arrangements shall be to the satisfaction of the ECO and the local authority. The contractor shall keep the toilets in a clean, neat and hygienic condition. The contractor shall supply toilet paper at all toilets at all times . Toilet paper dispensers shall be provided in all toilets.	Chemical toilets were provided by the contractor within the Site Camp and Satellite Camp as well as at construction sites. Toilets have since been removed following the completion of construction activities.
12.3	Toilets provided by the contractor must be easily accessible and a maximum of 150m from the works area to ensure they are utilised. All toilets will be located within the contractor's camp. Should toilets be needed elsewhere, their location must first be approved by the ER, ECO.	Chemical toilets were provided by the contractor within the Site Camp and Satellite Camp as well as at construction sites. Toilets have since been removed following the completion of construction activities.
12.4	The contractor (who must use reputable toilet-servicing company) shall be responsible for the cleaning, maintenance and servicing of the toilets. The contractor (using reputable toilet-servicing company) shall ensure that all toilets are cleaned and emptied before the builders' or other public holidays.	Chemical toilets were provided by the contractor within the Site Camp and Satellite Camp as well as at construction sites. Toilets have since been removed following the completion of construction activities.
12.5	Toilets out on site must be secured to the ground and have a sufficient locking mechanism operational at all times.	Chemical toilets were provided by the contractor within the Site Camp and Satellite Camp as well as at construction sites. Toilets have since been removed following the completion of construction activities.
13.	Dust	
13.1	Water abstraction for dust control from any river is strictly prohibited. Potable water cannot (as far as possible) be used	No water abstraction from rivers occurred during construction. Alternative water sources was required to be obtained by the

	as a means of dust suppression, alternative measures must be sourced. The use of 'grey' water must be investigated as an alternative. The contractor will be responsible to source this water and obtain the required approvals.	contractor. Excessive dust was not observed during the construction phase nor during the site audit and activities have now been completed.
13.2	The construction camp shall be watered during dry and windy conditions to control dust fallout.	Excessive dust was not observed during the construction phase nor during the site audit and activities have now been completed.
13.3	All vehicles transporting material that can be blown off (e.g. soil, rubble etc.) must be covered with a tarpaulin, and speed limits of 20 km/h must be adhered to.	Construction activities have been completed, and no trucks have remained on site.
14.	Noise	
14.1	Work hours during the construction phase shall be strictly enforced unless permission is given (07H00 – 18H00). Permission shall not be granted without consultation with the local industries and businesses by the EO. No work to be done on Sundays. The EO must inform the residents of houses and businesses adjacent to the development in writing 24 hours prior to any planned activities that will be unusually noisy or any other activities that could reasonably have an impact on the adjacent sites. These activities could include, but are not limited to use of pneumatic jack-hammers and compressors etc. No noise louder than 70dB from the ambient noise level.	All construction activities have been restricted to working hours and no evidence exists to the contrary as no noise complaints have been received.
14.2	Noise reduction is essential and Contractors shall endeavour to limit unnecessary noise, especially loud talking, shouting or whistling, radios, sirens or hooters, motor revving, etc. The use of silent compressors is a specific requirement. All machinery to be muffled where possible.	Noted, no noise complaints have been received.

15.	Hydrology	
15.1	Increased run-off during construction must be managed using suitable structures as required to ensure flow velocities are reduced; this must be done in consultation with the Resident engineer as well as the ECO. The Contractor shall take reasonable measures to control the erosive effects of storm water runoff (If and where applicable).	No temporary run-off structures have been necessary.
15.2	Storm water, wherever possible, should be allowed to soak into the land in the area on which the water fell.	Noted, no stormwater was observed during the site audit.
15.3	The contractor shall ensure that excessive quantities of sand, silt and silt-laden water do not enter the River system.	No excessive sand or silt build-up was observed along the upgraded culverts.
15.4	Run-off from hard surfaces needs to be channelled away from sensitive slopes and to be designed to reduce runoff water flow speeds.	Side drains have been constructed and drainage lines upgraded and rehabilitated.
16.	Fires	
16.1	No fires will be allowed on site. The Contractor shall ensure that there is appropriate fire-fighting equipment available on site at all times.	The appropriate fire-fighting equipment is located at the Site Camp in good condition.
17.	Erosion and Sedimentation	
17.1	Silt traps needs to be installed within the watercourse before construction may commence.	The contractor provided a method statement to this effect indicating that <i>“a bund will be constructed at areas where the Contractor is doing works close to a water source to prevent any materials from flowing into the water source”</i> . No erosion or sedimentation was observed during the site audit and activities have been completed.
17.2	To reduce the loss of material by erosion, the contractor shall ensure that disturbance on site is kept to a minimum. The contractor shall be responsible for rehabilitating all eroded areas in such a way that	Noted, no erosion or sedimentation was observed during the site audit. The rehabilitation plan has been implemented and completed per the rehabilitation completion report.

	the erosion potential is minimised after construction has been completed. (Please refer to rehabilitation section as part of this EMP and Rehabilitation Plan.)	
18.	Fauna	
18.1	All construction workers must be informed that the intentional killing of any animal is not permitted as faunal species are a benefit to society. Poaching is illegal and it must be a condition of employment that any employee caught poaching will be dismissed. Employees must be trained on how to deal with fauna species as intentional killing will not be tolerated. In the case of a problem animal e.g. a large snake a specialist must be called in to safely relocate the animal if the EO or ECO is not able to.	The workers have been informed of such and no reports on killings or poaching were provided to the ECO. Environmental induction was also undertaken prior to commencement
18.2	All possible sensitive faunal species found within the construction footprint must be rescued and relocated to the natural adjacent areas. Consult the ECO.	No record or reporting of sensitive faunal species were obtained prior or during the site visit.
20.	Visual Impact	
20.1	Shade cloth must be utilised to conceal and minimise the visual impact of contractor camps, lay down and storage areas.	The contractor's main site camp was located off Hermanus Way at the northern end of the contract in Caledon. The site camp comprises an existing formally developed PGWC facility which includes a permanent vibracrete wall. A satellite site camp towards the south of the contract was also previously utilized as part of this contract. The site is now again in use for this purpose as part of a concurrent contract for the emergency flood damage repairs to the Hartbees River causeway. Thus, the current status of this site camp is no longer associated with these audit findings. No shade cloth was observed at this facility.
20.2	Rubble and litter must be removed every two weeks or more often as the need arises and be disposed of at a registered landfill site as	No rubble or litter was observed during the site audit and the construction activities have now been completed at the time of

	designated by the Overstrand Municipality, Solid Waste removal department.	audit.
20.3	The contractor must rehabilitate the construction camp and any other disturbed areas once construction activities have terminated. (Please refer to the rehabilitation procedures and rehabilitation plan as part of this EMP).	Noted, the rehabilitation plan has been implemented and completed per the rehabilitation completion report.
20.4	Compacted areas will be ripped and windrowed topsoil be placed back on the disturbed areas to ensure recovery of the natural vegetation cover.	All construction and rehabilitation have now been completed. It was noted that the stockpile areas along Bouchard Finlayson have been ripped.
20.5	Topsoil need to be placed back in such a way that it blends in with the natural contour and surrounding of the natural environment.	The ECO noted that some of the topsoil was temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts. The contractor method statement notes that topsoil will be placed and levelled by mechanical means in the areas required for rehabilitation. Topsoil stockpiles were no longer present to audit although evidenced in the available ECO reports. All rehabilitation efforts have been completed at the time of audit.
20.6	Once construction is complete, rehabilitation of un-built areas must be undertaken in order to restore the aesthetic & ecological value of the area.	Noted, the rehabilitation plan has been implemented and completed per the rehabilitation completion report.
21.	Soil and Ground Water	
21.1	The surface 0.25m of topsoil is to be kept separate from the excavated subsurface layers.	The ECO noted that some of the topsoil was temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts.
21.2	Topsoil is to be replaced in the location it was removed from after construction activities is completed, such that the surface layers are replaced so that they again form the surface layers here following	The ECO noted that some of the topsoil was temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts.

	construction activities.	
22.	Traffic	
22.1	Traffic will be managed with a Stop & Go system. A specific area for delivery vehicles needs to be clearly specified to all contractors.	All construction activities have been completed and no construction related traffic will occur.
23.	Waste	
23.1	Any illegal dumping of waste will not be tolerated. Proof of legal dumping must be able to be produced on request.	Illegally dumped black bags were observed along DR 1257. The contractor to please remove those prior to close-out.
23.2	All refuse bins must have a lid secured so that animals cannot gain access. Sufficient closed containers must be strategically located around the construction site to handle the amount of litter, wastes, rubbish, debris and builders wastes generated on the site.	No rubble or litter was observed during the site audit and the construction activities have now been completed at the time of audit.
23.3	Chemical containers and packaging brought onto the site must be removed for disposal at a suitable site.	Empty bitumen containers are located within the formal Site Camp off Hermanus Way and are periodically disposed of.
23.4	A skip, with a cover, must be used to contain refuse from campsite bins, rubble and other construction material.	Waste facilities were in place within the formal Site Camp off Hermanus Way. All activities have now been completed and no additional waste to be generated.
24.	Rehabilitation	
24.1	Rehabilitation can commence immediately after construction. Should rehabilitation be done during the summer, the necessary watering arrangements needs to be done. Rehabilitated areas need to be watered 2 times week.	Guillaume Nel Environmental Consultants (GNEC) were appointed to conduct a search and rescue operation for endemic species within the construction footprint of the by-pass road. The search and rescue activities were carried out on the 4th and 5th of November 2021. During this operation, 105 individuals of <i>Zantedeschia aethiopica</i>, 20 individuals of <i>Isochyrolepis subverticillata</i>, 12 <i>Aloe arborescens</i>, and 912 <i>Carpobrotus edulis</i> were sustainably removed and relocated to the GNEC rehabilitation nursery. At the nursery, these species were bagged and will be cultivated and

		propagated for future rehabilitation purposes. <i>Searsia augustifolia</i>, <i>Athanasia trifurcata</i>, and <i>Stoebe plumosa</i> seeds were also collected and stored in seed containers at the nursery to be used for rehabilitation after construction. Rehabilitation of the wetland area and storm water drainage line as well as the dry embankments adjacent to the Culvert at Km 1.47 along DR125721 was conducted and the details of the completed outlined in the Rehabilitation Completion Report dated September 2023. <i>The report is herewith included as Appendix H.</i> <u>Rehabilitation of the wetland area and storm water drainage line.</u> Plants used during rehabilitation include: • <i>Cyprus textilis</i> • <i>Wachendorfia thyrsifolia</i> • <i>Aristea capitata</i> <u>Rehabilitation of the dry embankments.</u> Plants used during rehabilitation: • <i>Chasmanthe floribunda</i> • <i>Aristea capitata</i> • <i>Pelargonium cucullatum</i> • <i>Carpobrotus edulis</i> • <i>Watsonia</i> sp. • <i>Osteospermum moniliferum</i>
24.2	After construction the site needs to be ripped, levelled and shaped in such a way that it blends in with the natural contour of the site and	It was noted during the site visit that the stockpile areas along Bouchard Finlayson have been ripped and shaped.

	surrounding area.	The ECO noted that some of the topsoil was temporarily stockpiled adjacent to the works areas and placed back immediately after completion of the culverts. The contractor method statement notes that topsoil will be placed and levelled by mechanical means in the areas required for rehabilitation. All construction and rehabilitation have now been completed.
24.3	Since some of the slopes are steep, erosion control, along with preservation of the topsoil would be very important for rehabilitation. Stabilization should be done by ensuring that the velocity of surface runoff is reduced through naturally aligned terracing. Terracing can be done by using hand labor to create natural terraces, as done at the Spookfontein wetland (Figure 6.2 and 6.3 Freshwater Specialist Report) on the same road (MR269).	The contractor provided a method statement to this effect indicating that <i>“a bund will be constructed at areas where the Contractor is doing works close to a water source to prevent any materials from flowing into the water source”</i> . Gabions have been installed according to specifications along with cement structures to decrease runoff and facilitate erosion control surrounding the culverts.
24.4	The topsoil then needs to be spread over the naturally looking prepared slopes.	Stockpiled topsoil was utilized as part of the rehabilitation activities.
24.5	Rehabilitation needs to be done with endemic wetland species.	Rehabilitation of the wetland area and storm water drainage line as well as the dry embankments adjacent to the Culvert at Km 1.47 along DR125721 was conducted and the details of the completed outlined in the Rehabilitation Completion Report dated September 2023. <i>The report is herewith included as Appendix H.</i>

CONCLUSION

Based on the information obtained and a site visit conducted on the 24th of February 2025, the applicant has sufficiently complied with the conditions of the Environmental Authorisation and EMPr. Furthermore, the EMP is considered adequate and effective to manage and mitigate the activities.

No specific contradictions between the EA and EMP were noted.

This external audit report did not identify any significant non-compliance with the conditions of the Environmental Authorisation.

Any partial non-compliance with the EMPr have been noted within Table 4.

The outcome of this audit has not found insufficient mitigation of environmental impacts associated with the undertaking of the listed activities, nor has it found insufficient levels of compliance with the Environmental Authorisation. As such a public participation process in terms of Regulation 34(5) will not be undertaken.

In compliance with regulation 34(6) the holder of the EA must within 7 days of the date of submission of an environmental audit report to the competent authority, notify all potential and registered interested and affected parties of the submission of that report, and make such report immediately available –

- (a) to anyone on request; and
- (b) on a publicly accessible website, where the holder has such a website.

Compiled by:

A handwritten signature in black ink, appearing to be 'Renier Kapp', written over a light blue grid background.

Renier Kapp
for KAPPEC

APPENDIX A – SITE PHOTOGRAPHS

Site Camp

The Site Camp is located off Hermanus Way at the northern end of the contract in Caledon. The site camp comprises an existing PGWC facility which includes storage areas and offices with all the required infrastructure permanently in place.







Stockpile Area 1 on Hermanus Way

Stockpile area 1 is located immediately north of the site camp area off Hermanus Way. It is noted that this area has historically been utilized for material stockpiling of this nature.

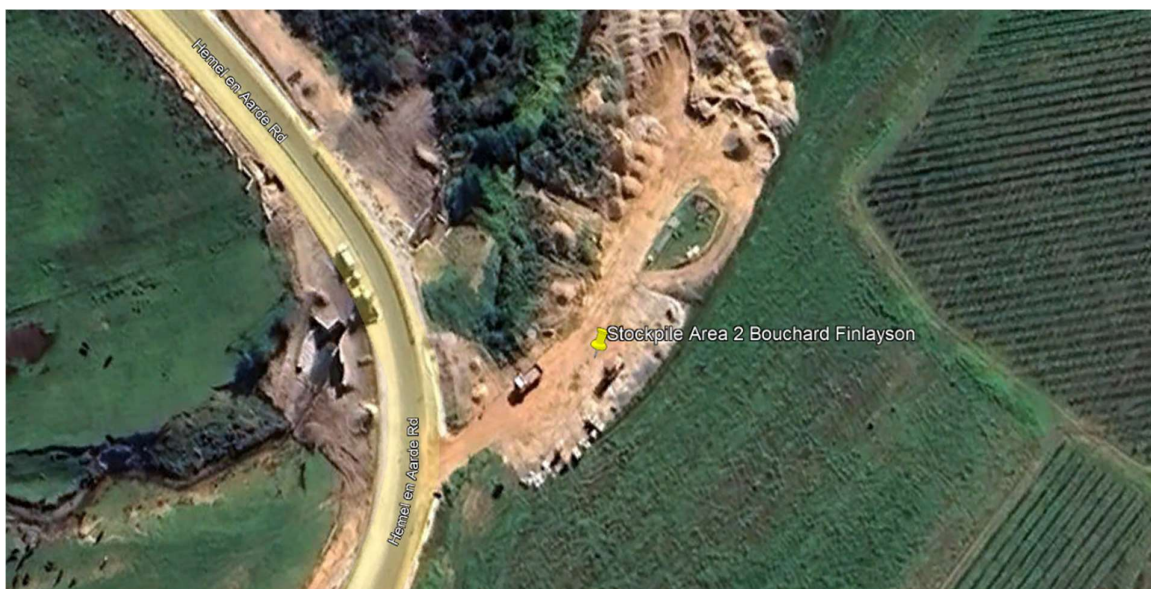






Stockpile Area 2 at Culvert Km 5.67

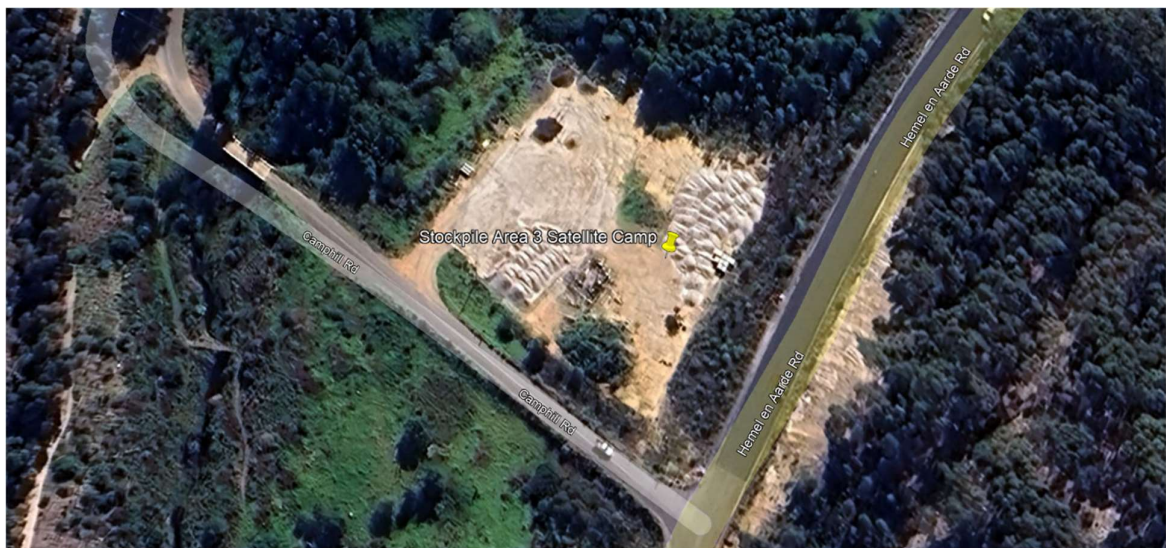
Stockpile area 2 was located on existing agricultural fields along the Hemel and Aarde Road where the works were to be undertaken near the box culvert at Km 5.67. All stockpiled material has been removed, and the soil has been ripped as per the EMPr requirement.





Stockpile and site camp Area 3 Satellite Camp

This site was previously utilized as a stockpile and site camp area as part of the contract. The site is now again in use for this purpose as part of a concurrent contract for the emergency flood damage repairs to the Hartbees River causeway. Thus, the current status of this stockpile and site camp is no longer associated with this audit findings.

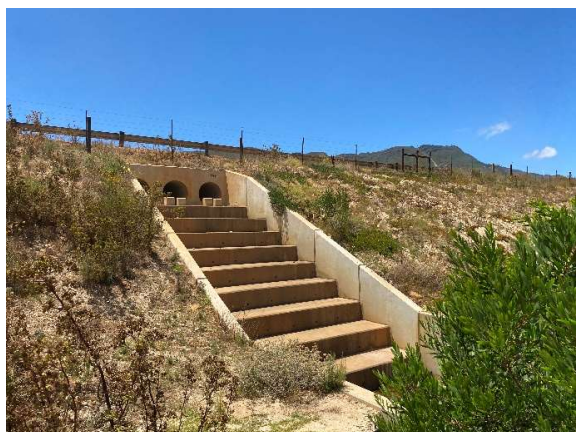




Culvert Upgrade and Rehabilitation at DR 1257 km 1.47

The culvert along the DR 1257 has been upgraded and the cleared surrounding area has been rehabilitated with indigenous natural vegetation. The three 600mm diameter pipe culverts that failed structurally have been replaced with three 1050mm diameter pipe culverts and a stepped concrete energy dissipating structure at the outlet to manage water flow and prevent erosion. Gabions were installed at the toe of the outlet structure to protect the embankment from erosion.







Culvert Upgrade at MR269 Km 5.67

The culvert at Km 5.67 has been completed and the adjacent material stockpile has been removed and rehabilitated. The culvert has been extended, and guardrails have been installed at the culvert opening for enhanced road safety. Extensive gabion work has been completed both along the eastern and western road shoulders and at the inlets/outlets to stabilize the embankments and prevent flood-related erosion.





Culvert Upgrade at MR269 Km 4.95

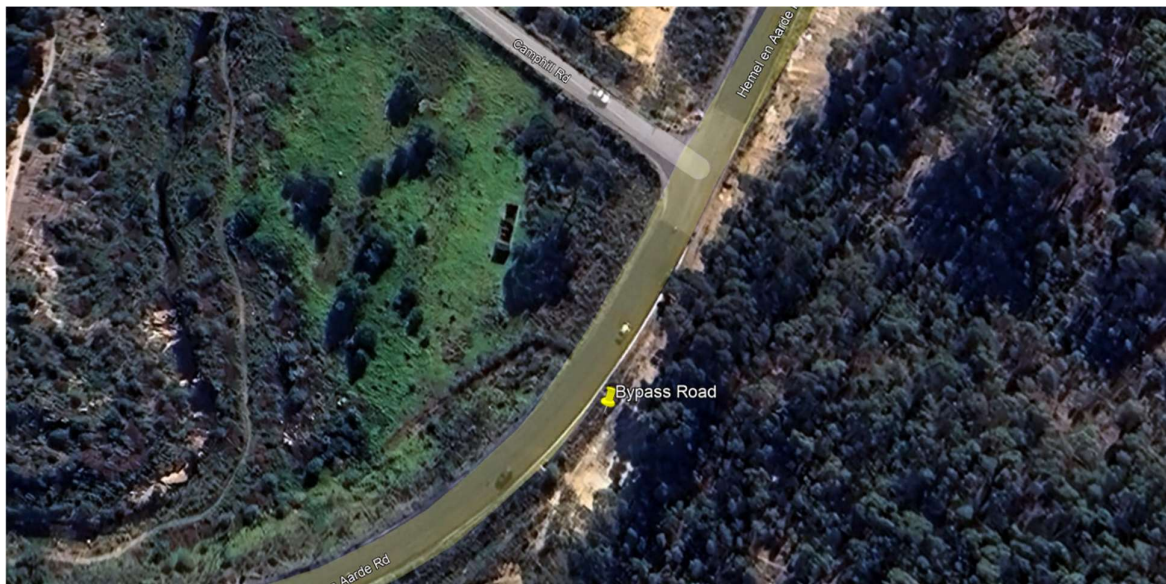
The culvert at Km 4.95 on the Hemel en Aarde road has been upgraded, and the areas shaped to allow for natural stormwater flows. Two 900mm diameter pipe culverts have been replaced with two new 1800mm x 1800mm box culverts with reinforced inlet and outlet structures. Gabions were installed at both ends to safeguard against flood erosion and embankment degradation.





Bypass Road

Due to flood damage from the Hartbees river along the shoulder of the road, a temporary bypass measure has been put in place and only the southern lane of the MR269 is operational at this stage until the flood damage has been reconstructed as part of a concurrent separate contract.





Roadway Conditions

The road surface upgrades have all been completed at the time of audit. The only road section to be completed include the section of the road where the bypass road have been utilized and forms part of a separate contract. At some sections of the road the new road markings are yet to be painted.



Invasive Tree removal

It was noted during the audit that along several stretches of the road reserve that alien tree clearing has been undertaken. Trees have been felled and the stumps were treated to prevent regrowth (blue).

