

**THE UPGRADE OF PROTEA AND MAINTENANCE TO WAARBURGH ROAD NEAR
JOOSTENBERG VLAKTE, WESTERN CAPE**

EA DEA&DP Ref: 16/3/3/1/B3/28/1089/19

MMP DEA&DP Ref: 16/3/3/6/3/B3/28/1402/18

Contract No: C1049.03

FORMAL ECO AUDIT REPORT

Prepared for:

Western Cape Government: Department of Infrastructure

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8 November 2024



ABBREVIATIONS

DEA&DP	Department of Environmental Affairs and Development Planning
DWS.....	Department of Water Affairs and Sanitation
EA	Environmental Authorization
EAP	Environmental Assessment Practitioner
ECO.....	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr.....	Environmental Management Programme
ER	Employer's representative
DEO	Designated Environmental Officer
GNEC	Guillaume Nel Environmental Consultants
I&AP	Interested and Affected Parties

INTRODUCTION

This Environmental Control Officer (ECO) Report is distributed to the project team after the site audit was undertaken. The contractor has 3 working days after this report is distributed to provide a close out report with photographic evidence of how the findings in this report were rectified or what measures have been taken to rectify, if required.

The ECO Report is compiled in order to ensure continuous improvement with regards to environmental related matters. The aim is furthermore, to increase the contractor's compliance rating in terms of the environmental approvals, and to advise on environmental matters which might occur during construction activities. This ECO report incorporates the monthly environmental findings and furthermore may include corrective measures/actions which were taken by the contractor.

CLOSE OUT ON FINDINGS REQUIRED

	Finding	Close Out Recommendation
1.	Waste management Litter and rubble disposal receipts are required to be forwarded to the ER and ECO for record keeping.	No receipts were received to date. Please forward disposal receipts for record purposes.

PROJECT DESCRIPTION

The holder is herein authorised to undertake the following alternative that includes the listed activities as it relates to the development.

The proposal entails the resurfacing of Protea Road from a gravel to a tar-surfaced road and the upgrading of associated stormwater infrastructure. This includes upgrades to four culverts that are located in a watercourse at the following locations:

1. Km 1.3112 culvert

- The existing in-situ culvert structure, located in the Klapmuts River, will be retained and cleared of all debris.
- An additional in-situ culvert will be placed adjacent to the existing structure to allow for additional flow capacity.
- The outlet structure will be connected to the existing lined open drain.

2. Km 2.312 culvert

- The existing culvert located in a channelled valley bottom wetland, will be replaced with four 1500mm x 900 mm box culverts.
- New inlet and outlet structures will be constructed and reno-mattresses (approximately 13m x 1.5m) will be installed for erosion protection.
- A drop inlet will be constructed to retain the existing water levels.

3. Km 4.326 culvert

- The existing 600mm diameter culvert, located in an unchannelled valley bottom wetland, will be replaced with a 1200mm x 900mm box culvert.
- New inlet and outlet structures will be constructed and reno-mattresses (approximately 7m x 1.5m) will be installed for erosion protection.

4. Km 5.102 culvert

- The existing 600mm diameter culvert, located in an unchannelled valley bottom wetland, will be replaced with a new 600mm diameter pipe culvert.
- New inlet and outlet structures will be constructed and reno-mattresses (approximately 6m x 1.5m) will be installed for erosion protection.

The works proposed on Waarburgh Road is periodic maintenance.

FINDINGS IN TERMS OF THE APPROVED EMPR DURING THE SITE VISIT

Requirement	ECO comments and/or recommendation	Compliance
Please refer to approved EMPr for detailed requirements It is important to note that only Protea Road has an EMPr and the requirements below only relates to Protea		Compliant
		Partial-Complaint
		Non-Compliant
		Require Confirmation
		Premature
		Not Auditable
PRE-CONSTRUCTION (PLANNING) PHASE EMPr		
Visual Impact	No lighting is used on site other than at the site camp area for security.	Compliant
Traffic Impact	Access to the site can be taken from the R44 or the R304.	Compliant
Project contract and programme	The EMPr forms part of the contract document and has been provided to the contractor, please refer to extract below. A copy of the EMPr is kept at the site office within the environmental file.	Compliant

Site demarcation and development	All areas outside the construction footprint need to be clearly seen as no go areas. Existing fence lines are used as limit of construction.	Compliant
Emergencies, non-compliance and communication	Method statements were received and are placed in the environmental file at the site office.	Compliant
Flora	Prior to construction a search and rescue was conducted within the construction footprint of the road reserve and related culverts. The rescued material is currently stored in GNEC's nursery and will be replanted on site after the completion of the works.	Compliant
CONSTRUCTION PHASE EMPr		
Stockpiles	All stockpiled material is easily accessible on site without any environmental damage of the surrounding properties. All temporarily stockpiled material must be stockpiled in such a way that the spread of materials is minimised. Stockpiles must please be monitored for dust and only stockpiled in approved areas.	Compliant
Topsoil management	Topsoil has been stripped at a few locations along the site and currently stockpiled at Stockpile Area 1 and 2.	Compliant

	 Where possible topsoil has been windrowed, but due to limited space on site stockpiling is preferred. <u>It is important to keep record of where topsoil from different sections is stockpiled to ensure the correct topsoil is returned to the same area.</u>	
Oil and chemicals	Oils and chemicals are stored at the site camp area in appropriate containers. No large spills happened on site to date.	Compliant
Cement	No batching or pouring of concrete was noted during the audit. No concrete spills took place to date on site, apart from the small concrete remains during the pouring of concrete which must be picked up on the day the concrete was poured.	Compliant

Dangerous and Toxic Materials	Oils and chemicals are stored at the site camp area in appropriate containers. No large fuel storage takes place on site. A bunded area with 110% storage capacity has been constructed for the bitumen tanker. 	Compliant
Bulk storage of fuels and oils	No large fuel storage takes place on site. It should be noted that Environmental Authorisation is required for the storage of Diesel and/or Petrol with volumes greater than 30 000 litres.	Not Auditable
Use of dangerous and toxic materials	No spills happened on site to date; spill kits are available for oil and hydrocarbon spills. Firefighting equipment must be available on site.	Compliant
Eating areas and camp followers	Eating areas has been set up on site.	Compliant

	No fires are to be lit outside of a facility designed to contain fires.	
Toilets and ablution facilities	A few mobile toilets were noted on site.  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. Toilets provided by the contractor must be easily accessible and a maximum of 150m from the works area to ensure they are utilised.	Compliant
Waste management Please refer to the waste minimization plan as part of the EMP.	Litter and rubble disposal receipts are required to be forwarded to the ER and ECO for record keeping. No receipts were received to date.	Partial compliant

	<u>Should rubble not be proposed to be disposed at a registered landfill site (for example a farmer wants the rubble), authorisation is required from Western Cape Government: Environmental Affairs and Development Planning: Waste Department</u> Bins were placed at the closures. 	
Dust	Dust suppression was not required during the wet winter months due to the wet site conditions. No dust was noted during the audit.	Compliant
Workshop equipment, maintenance and storage	No workshop area has been set up on site. All maintenance and washing of vehicles and equipment shall be done off-site as far as possible. During servicing of vehicles or equipment, a suitable drip tray shall be used to prevent spills onto the soil. Leaking equipment shall be repaired immediately or be removed from site to facilitate repair.	Compliant

Noise	All construction plant is in good working order to the knowledge of the ECO. No noise complaints were received to date.	Compliant
Crew camps	No workers are accommodated on site. Laydown areas area situated outside watercourses.	Compliant
Fires	No waste has been burned on site. No fires are to be lit outside of a facility designed to contain fires. The Contractor shall ensure that there is appropriate fire-fighting equipment available on site at all times.	Compliant
Erosion and sedimentation	To reduce the loss of material by erosion, the contractor shall ensure that disturbance on site is kept to a minimum. The disturbance especially includes the movement of heavy vehicles. The contractor shall be responsible for rehabilitating all eroded areas in such a way that the erosion potential is minimised after construction has been completed.	Compliant
Fauna	No fauna species have been found on site according to the knowledge of the ECO. All activities on site must comply with: The regulations of the Animal Protection Act, 1962 (Act No. 71 of 1962); and Marine Living Resources Act, 1998 (Act No. 18 of 1998).	Compliant
Flora	Rehabilitation of the intact and semi-intact habitat area to take place in accordance with the Rehabilitation Plan compiled by GNEC.	Compliant

	Species found during the spring botanical survey (conducted by Capensis) should be search and rescued and replanted once construction have been completed. This activity is stipulated in the Rehabilitation Plan compiled by GNEC. Any other problem plants must be included in an alien management programme for the site. Eradication must occur every 6 months. Prior to construction a search and rescue for endemic species was conducted within the construction footprint of the road reserve and related culverts. The rescued material is currently stored in GNEC's nursery and will be replanted on site after the completion of the works. Alien clearing was done as part of the clear and grub, the contactor was advised that all alien plant material must be disposed at landfill site and not stockpiled on site. The contractor confirmed the alien plant material was taken to Wellington Landfill Site.	
Heritage	No heritage remains has been found to date according to the knowledge of the ECO. The protocols will be followed should any heritage remains be found.	Not Auditable
No-go / sensitive areas	All areas outside the approved development area are strict No-Go areas. Existing fence lines are used as limit of construction.	Compliant
Access route/haul roads	Existing access roads and farm roads are used to gain access to the site.	Compliant
Crime, safety and security	Security is available on site after working hours. No staff is accommodated on site.	Compliant

Visual impact	Litter and rubble must be regularly removed from site. The site camp is not situated next to the main road with no visual impact and cannot be seen from the main road, shade cloth was not erected around the site camp.	Compliant
Hydrology	All work within watercourses should be done during the dry season and consideration has not been given to any temporary water diversions. No works have taken place in watercourses according to the knowledge of the ECO. Limit vehicle / machinery activity within the freshwater resources to what is absolutely essential. Excavated materials should not be contaminated, and it should be stored in the minimum surface area. Ensure sediment control devices are in place prior to the start of excavation activities. Maintain sediment / erosion control devices to minimise risk of sedimentation of the downstream areas.	Premature
Soil	Topsoil has been stripped at a few locations along the site and currently stockpiled at Stockpile Area 1 and 2. The topsoil must be spread after the completion of the works as part of the rehabilitation works. <u>It is important to keep record of where topsoil from different sections is stockpiled to ensure the correct topsoil is returned to the same area.</u>	Compliant
OPERATIONAL PHASE EMPr		

Waste management	No waste will be generated by the use of the road and structures during the operational phase. All litter and rubble will be removed before the contractor leaves the site.	Not Auditable
Rehabilitation Measures	All disturbed areas must be shaped and reinstated to the natural levels. All compacted areas must be ripped to allow the regrowth of flora where applicable. Please refer to the Culvert Rehabilitation Plan. • A detailed rehabilitation plan has been compiled with all the specialist mitigations and recommendations. • Rehabilitation must take place with endemic species from the list provided. • Rehabilitation practices must be done by a qualified Botanist/Horticulturist/Rehabilitation Specialist. Successful rehabilitation will ensure: • Ensure vegetation cover of disturbed areas with endemic species to prevent invasive vegetation establishing in the bare areas. • Prevent/minimize erosion. • Prevent/minimize the loss of topsoil due to erosion. • Prevent/minimize the loss of endemic vegetation due to erosion. • Prevent and minimize siltation of nearby non-perennial watercourse/wetland • Will positively contribute to the ecological and biodiversity value of area.	Premature
Maintenance	Hot spots for the build-up of debris and excess sediment must be identified and when necessary, debris/excess sediment must be removed by hand to prevent future flooding and	Premature

Responsible authority: Department of Transport and Public Works. Periodic maintenance activities when required. Potential Future maintenance of the existing infrastructure (including their Inlets, Outlets, Barrels, headwalls, wingwalls, apron slabs, including Erosion Protection.	potential damage to infrastructure. In this regard, special mention is made of periods following high rainfall and subsequent high instream water volumes. Alien Vegetation Management • The watercourses must be monitored for alien vegetation encroachment and all alien vegetation/weeds must be removed according to a suitable alien vegetation control plan.	
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FINDINGS IN TERMS OF THE GRANTED ENVIRONMENTAL AUTHORISATION DURING THE SITE VISIT

EA Condition No.	Description of each Condition	Comments on Compliance
		Compliant
		Partial-Complaint
		Non-Compliant
		Require Confirmation
		Premature
		Not Auditable
1	The holder is authorised to undertake the listed activities specified in Section B above in accordance with and restricted to the Preferred Alternative, as described in the BAR dated March 2020 on the site as described in Section C above	Holder of the EA to please take note
2	The Environmental Authorisation is valid for a period of five years from the date of issue, within which commencement must occur.	Compliant The EA was issued on 12 June 2020 and the commencement with the works started in March 2024, within 5 years after the EA was issued.
3	The development must be concluded within ten years from the date of commencement of the listed activities.	Holder of the EA to please take note

4	The holder shall be responsible for ensuring compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.	Holder of the EA to please take note
5	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.	Holder of the EA to please take note
6	Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activity. 6.1 The notice must make clear reference to the site details and EIA Reference number given above. 6.2 The notice must also include proof of compliance with the following conditions described herein: Conditions: 7, 8, 12 and 19.	Compliant A notification of commencement was sent to DEA&DP on the 14th of September 2023 and made clear reference to the site details and EIA Reference, it also included proof/comment of compliance with conditions 7, 8, 12 and 19. The notification was done prior to the

		commencement of the flora search and rescue operation.
7	The holder must in writing, within 14 (fourteen) calendar days of the date of this decision– 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; 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,	Compliant The I&AP’s were notified of the EA on the 17th of June 2020, 5 days after the EA was granted.

	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).	
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 Authorisation is suspended until the appeal is decided i.e. the listed activities, including site preparation, must not commence until the appeal is decided.	Compliant As mentioned above, the EA was issued on 12 June 2020 and commencement of works started in March 2024 more than 3 years later.
9	The draft Environmental Management Programme (“EMPr”) submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.	Compliant The approved EMPr is implemented on site.
10	The MMP adopted as part of this Environmental Authorisation must be implemented.	Note The holder of the EA to please take note especially with regards to future maintenance activities.

11	The EMPr and MMP must be included in all contract documentation for all phases of implementation.	Compliant The enigeer confirmed the EMPr is included in the contract documentation.
12	The holder must appoint a suitably experienced environmental control officer (“ECO”) before commencement of any land clearing or construction activity to ensure compliance with the EMPr and the conditions contained herein.	Compliant Guillaume Nel Environmental Consultants have been appointed as ECO on the site.
13	A copy of the Environmental Authorisation, EMPr, MMP, audit reports and compliance monitoring reports must be kept at the site of the authorised activities, and must be made available to anyone on request, including a publicly accessible website.	Compliant Environmental file is available on site
14	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.	Compliant Access to the site referred to in Section C is granted, the environmental reports will be presented to the Competent Authority who requests to see it.

15	In terms of Regulation 34 of the NEMA EIA Regulations, 2014 (as amended), the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation, the EMP, MMP, and submit Environmental Audit Reports to the Competent Authority. The Environmental Audit Report must be prepared by an independent person (not the ECO appointed in terms of condition 12 above) and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended). The holder must undertake an environmental audit every year for the duration of the construction phase and submit Environmental Audit Reports annually to the Competent Authority during the construction phase. The final Environmental Audit Report must be submitted to the Competent Authority within three months after operation commenced. The holder must, within 7 days of the submission of each 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 (if applicable).	Premature An external auditor will be appointed, and a Regulation 34 Audit will be done every year during the duration of construction. The final Regulation 34 Audit must be submitted to the Competent Authority within 3 months after operation commenced. A quote will be sourced and submitted to the client for the external audit.
16	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	Note No heritage remains has been found to date. Protocols will be followed should any heritage remains be found.

	with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.	Contractor to please take note of the protocols.
17	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.	Note A qualified archaeologist and/or paleontologist will be contracted where necessary..
18	The relevant requirements with respect to occupational health and safety must be adhered to at all times.	Compliant A health and safety consultant has been appointed and conducts monthly inspections.
19	A search and rescue exercise must be undertaken for the species identified in the spring survey, as recorded and outlined in the Botanical Statement dated 31 October 2019, compiled by Capensis, before commencement of construction activities.	Compliant A search and rescue was done and the plant material currently stored in GNEC nursery prior to replanting on site.
20	The Rehabilitation Report for Protea Road dated April 2019, compiled by Guillaume Nel Environmental Consultants must be implemented once all construction activities are concluded.	Premature

	The results of the implementation of the rehabilitation measures must be included in the annual independent audits to be conducted in terms of condition 15 above.	The rehab plan will be implemented after the completion of works in the respective areas.
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PROGRESS

Traffic has been placed on the sections which were recently surfaced. The next sections to be surfaced soon were progressing well.



The cutting on Protea Road commenced and progressed well.



The concrete lined side drains were also underway.



CONCLUSION

The contractor is herewith requested to please submit a close out report with photographic evidence of rectification for each of the abovementioned findings, if required, within 3 working days from the date of this report or indicate what measures are being done to rectify the findings.

Compiled by:



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