

**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:

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ABBREVIATIONS

BGCMA	Breede-Gouritz Catchment Management Agency
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 Consulting
I&AP	Interested and Affected Parties

INTRODUCTION

This 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, 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
	No close out required	

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.

GENERAL FINDINGS DURING SITE VISIT ON THE 24TH OF JUNE 2024

Environmental File

According to condition 13 of the approved Environmental Authorisation (EA), a copy of the EA, Maintenance Management Plan (MMP), Environmental Management Programme (EMPr), audit reports and compliance monitoring reports must be kept at the site of the authorised activities and be made available to anyone on request.

Compliance:

The contractor is requested to please keep an environmental file with the above-mentioned documents at the site office.

An environmental file is available on site.

Alien clearing

According to the approved EMPr, alien clearing must be done in terms of the Rehabilitation Report.

Compliance:

No alien clearing was done to date.

The contractor was advised to please first conduct alien clearing prior to the stripping of the topsoil to prevent alien vegetation within the stockpiled topsoil.

No-Go areas

All areas outside the approved footprint area are strict No-Go areas. Areas where construction will take place within watercourses must be demarcated, to limit the construction footprint within the watercourse. No construction machinery or work force is allowed in the No-Go areas.

If any material enters the watercourse, it must be removed as soon as possible.

Topsoil is also seen as a No-Go area as it is a very valuable resource for rehabilitation.

Compliance:

A search and rescue operation were undertaken at the watercourses where vegetation removal is proposed, and plant material currently being stored in nursery prior to rehabilitation.

All areas outside the approved footprint must be seen as No-Go areas.

Where fences are present, please use fence as limit of construction.

Spoil areas

Please ensure that any proposed spoil areas (other than approved landfill sites) are scanned and approved by the ER and ECO prior to the commencement of spoiling. The scanning is to ensure that no environmental legislation is contravened with the spoiling of the material.

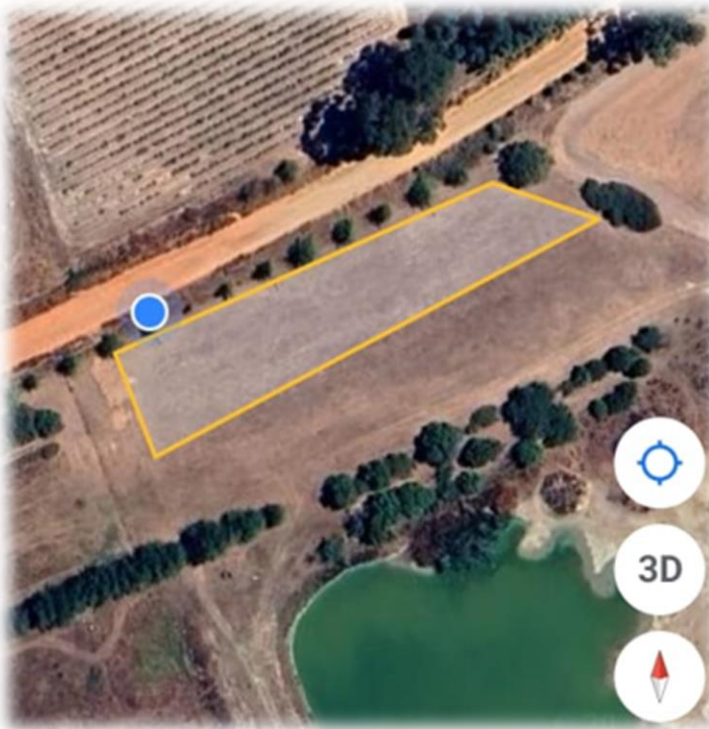
Compliance:

The following spoil areas has been identified by the contractor. It is important to note the spoiling is only for clean natural material removed from the road alignment.

Spoil Area No.	Comment	ECO Recommendation
1.	Spoil Area 1 along DR1098 at Approx km11.5 (berm) Existing ploughed farmland. The proposal is to create a berm for the farmer along the road with material cut from the road upgrade, only natural material is allowed in the berm and no rubble may be used in the berm. GPS Coordinates: 33°49'19.42"S 18°45'39.74"E 	The ECO do not object to area being used as spoil area as the area is existing ploughed farmland. No indigenous vegetation is proposed to be cleared and no watercourses are nearby. Permission letter, prior to spoiling, and happy letter, after spoiling, is required from property owner.
2.	Spoil Area 2 along DR1098 at Approx km8.3	According to google earth it is unsure of the site

Existing farmland with only short grass present, it is unsure if the site was lawfully cleared in the preceding 10 years, but no evidence of indigenous vegetation was noted during the visit. The proposal is to spoil clean material removed from the cuttings and to spread the existing topsoil over the area. Only the area should be used as indicated below.

GPS Coordinates: 33°48'51.18"S 18°47'40.53"E



was cleared in the preceding 10 years. No indigenous vegetation was available during the visit as seen on the photograph. Only the area should be used as seen left.

Permission letter, prior to spoiling, and happy letter, after spoiling, is required from property owner.

- Spoiling has commenced at Spoil Area 1 for the berm.

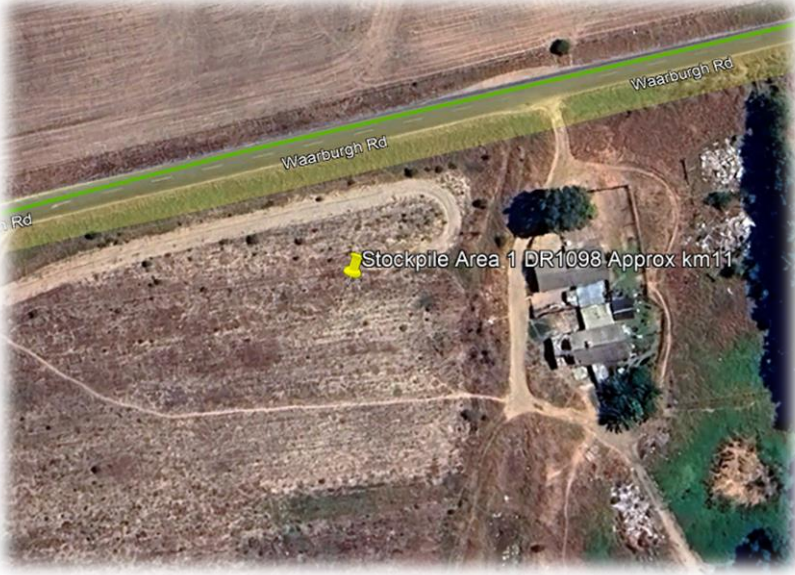
Stockpile areas

Please ensure that any proposed stockpile areas (especially where clearance of vegetation is required) are scanned and approved by the ER and ECO prior to the commencement of clearance. The scanning is to ensure that no environmental legislation is contravened at the proposed stockpile areas. This includes proposed topsoil stockpile areas.

Compliance:

The following stockpile areas have been proposed by the contractor.

Stockpile Area No.	Comment	ECO Recommendation
1.	Stockpile Area 1 on DR1098 at approx. km11 (LHS) Existing farmed area. According to google earth, the area has recently been used for farming (plough land) The contractor already used the area during the 1st ECO visit and area was not scanned prior to the start of using the area. 	Permission letter, prior to stockpiling, and happy letter, after stockpiling, is required from property owner.

	 	
2.	Stockpile Area 2 on DR1098 at approx. km12 (LHS) Existing disturbed area, highly invested with alien vegetation. According to google earth the area was recently cleared. The contractor already used the area during the 1st ECO visit and area was not scanned prior to the start of using the area.	Permission letter, prior to stockpiling, and happy letter, after stockpiling, is required from property owner.



The contractor is advised to please inform the ER and ECO of potential stockpile areas prior to the start of using the area.

Topsoil

Topsoil must be deemed to be the top layer of soil containing organic material, nutrients and plant/grass seed. For this reason, it is an extremely valuable resource for the rehabilitation of vegetation of disturbed areas. All topsoil should be windrowed (preferred option) or stockpiled and be reinstated after construction. Please ensure that topsoil is not contaminated with construction material. If topsoil is to be stockpiled the stockpiles may not be higher than 2m, to prevent the crushing of seeds.

Compliance:

Topsoil has been stripped at a few locations along the site and currently stockpiled at Stockpile Area 1 and 2 above.



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.

If topsoil is windrowed and kept next to the where the works take place, no damage is allowed to the topsoil. This is to prevent high hydroseeding cost at the end of construction.

Bitumen handling area

Any bitumen handling must take place on an impermeable surface to prevent bitumen and associated chemicals from infiltrating the soil.

The entire site must be monitored for any bitumen spillages and all bitumen spillages must be disposed of at a registered Hazardous Waste Landfill site or recycled. No bitumen spillages/remains may be spoiled on site.

Should the washing of slurry truck chutes be required, a proper impermeable sump area must be created and regularly cleaned to prevent the area from overflowing.

Compliance:

Stockpile Area 2 has been identified to be used as bitumen handling area. The contractor is advised to please ensure impermeable area is created underneath the bitumen tanks to prevent bitumen spills.



A hard stand area was created for the pre-coating of the seal stone and is sufficient.



Fuel storage

If fuel is to be stored on site, the bowser and or tank will be maintained by the fuel supplier and/or contractor and is to be kept clean and leak free. The bowser is to be kept on site with a drip tray at all times or bunded to 110% if it is a large tank. Please ensure that drip trays are used during the refuelling of construction plant and placed underneath compressors, generators and stationary machinery.

Compliance:

No large-scale fuel storage is proposed according to the ECO knowledge.

Dust/mud

Dust suppression needs to be monitored and applied at areas where activities are currently active. Please ensure that roads under traffic surrounding the site must please be regularly cleaned to ensure that construction related sand/mud does not cause a danger to traffic.

Compliance:

The road surface was clean during the audit, please ensure that areas to the stockpile and spoil sites are kept clean from mud/sand to prevent the material being a danger to traffic.

Cement

Small- and large-scale cement batching must be done on mortarboards and/or on plastic sheeting that serves an impermeable surface to prevent cement water from infiltrating the soil. Please ensure that mortarboards and plastic sheeting is properly positioned to prevent any surface runoff. No cement batching may be done directly on the soil as cement water is highly alkaline and may change the pH of the soil causing decreased soil fertility. Mostly ready-mix concrete should preferably be used on site. The entire site must be monitored for any concrete spillages, all spillages must be disposed of at a registered Waste Landfill site. No concrete spillages/remains may be spoiled on site. No washing of concrete truck chutes is allowed on site without the proper impermeable sump area.

Compliance:

No batching or pouring of concrete was done during the audit. Stabilization of the subbase on certain section has been done to date.

The contractor was advised to please pick up empty cement bags on the day they were used to prevent them from blowing around on site.



Litter

An integrated litter management approach, which is based on waste minimization and incorporated reduction, recycling, re-use and disposal, must be implemented where appropriate.

All construction litter must be placed within a litter structure, skips or bins. The litter structures must be properly enclosed to prevent any litter from blowing around on site. Please monitor the soil around the enclosure for any excessive cement water potentially flowing into the surrounding natural vegetation.

Please ensure that empty cement bags are removed to the site camp on the day they were used. Please ensure that empty cement bags (when placed in a litter structure) is placed in black bags prior

to being stored in the litter structure to prevent any cement leaching from the empty bags. Please ensure that regular chicken parades are done to remove litter.

Please try to limit the usage of danger tape and rather use colourful rope, colourful droppers or netting as demarcation method as danger tape tears very easily in windy conditions and becomes a maintenance issue.

Please forward recycling, disposal etc. proof to the ECO for record keeping.

Compliance:

A litter structure was noted at Stockpile Area 2. The contractor is advised to regularly please remove litter from the litter structure to be disposed at a registered landfill site. Please forward proof of appropriate disposal to the ECO and ER.



Rubble

An integrated rubble management approach, which is based on waste minimization and incorporated reduction, recycling, re-use and disposal, must be implemented where appropriate.

The contractor was advised to stockpile their rubble to be removed from site in a secure location to minimize the spread thereof. Any bitumen products/milled asphalt are hazardous waste and must be disposed at a registered Hazardous waste facility or reused. Concrete rubble may be disposed at a general waste facility. Please ensure that rubble is stockpiled in a secure location and removed regularly. Please forward recycling, disposal etc. proof to the ECO for record keeping.

Compliance:

Millings were temporarily stockpiled at Stockpile Area 2 and will be reused in the layer works.

The contractor confirmed the stockpile of millings on Protea Road will also be reused in the layer works.

The contractor was advised to please ensure that the rubble is disposed appropriately if not reused. Please forward rubble disposal receipts to the ECO for record keeping.

Erosion and sedimentation control

Sediment traps have to be utilized during all dewatering activities or works within watercourses to prevent siltation of watercourses. Sediment traps either have to partially filter the suspended solids or allow settlement in a manageable location. Please ensure that sediment traps are being used during dewatering activities and that sediment traps are used during the works within watercourses.

Compliance:

No dewatering of works within watercourses were done during the audit.

PROGRESS

Layer works have commenced on the 1st sections of the road and progressing well as well as the temporary widening for the bypass to allow half width construction of the road.



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 has been taken to rectify the findings.

Compiled by:

Divan Opperman

for GNEC