



**EIA REFERENCE:** 16/3/3/1/E2/37/1077/18  
**NEAS REFERENCE:** WCP/EIA/0000499/2018  
**ENQUIRIES:** D'mitri Matthews  
**DATE OF ISSUE:** 2019 -04- 05

The Director  
Department of Transport and Public Works  
Private Bag X9185  
**CAPE TOWN**  
8000

**Attention: Ms M. Hofmeyr**

Tel.: (021) 483 5713  
Fax: (021) 483 2205

Dear Sir

**APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND THE ADOPTION OF A MAINTENANCE MANAGEMENT PLAN ("MMP") IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): UPGRADE OF CULVERTS AT KM 5,707, KM 10,59, KM 17,89, KM 26,03, KM 47,76 AND KM 48,89, FROM KM 0,00 TO KM 58,58 ALONG MAIN ROAD 267 BETWEEN STANFORD AND RIVIERSONDEREND**

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation and to **adopt the MMP**, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 4 of the Environmental Impact Assessment Regulations, 2014, (as amended), you are instructed to ensure, within 14 days of the date of the Environmental Authorisation, that all registered Interested and Affected Parties ("I&APs") are provided with access to and reasons for the decision, and that all registered I&APs are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the National Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

  
**MR. ZAABIR TOEFY**

**DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)**  
**DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

CC: (1) Mr C. Dippenaar (Guillaume Nel Environmental Consultants)  
(2) Mr. B. Kondokter (Overstrand Municipality)  
(3) Mr F. Kotze (Overberg District Municipality)  
(4) Mr J. Viljoen (Theewaterskloof Municipality)  
(5) Mr. C. van der Walt (Department of Agriculture)  
(6) Ms. C. Rampartab (CapeNature)  
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## **ENVIRONMENTAL AUTHORISATION**

### **APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND THE ADOPTION OF A MAINTENANCE MANAGEMENT PLAN ("MMP") IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): UPGRADE OF CULVERTS AT KM 5,707, KM 10,59, KM 17,89, KM 26,03, KM 47,76 AND KM 48,89, FROM KM 0,00 TO KM 58,58 ALONG MAIN ROAD 267 BETWEEN STANFORD AND RIVIERSONDEREND**

With reference to your application for the abovementioned, find below the outcome with respect to this application.

## **DECISION**

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), the Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in Section B below with respect to the Preferred Alternative Design, described in the Basic Assessment Report ("BAR"), dated 30 November 2018.

In terms of the NEMA, viz, the EIA Regulations, 2014 (as amended) (in Government Gazette No. 40772 of 7 April 2017) the Competent Authority hereby **adopts the MMP** for the maintenance of the storm water infrastructure along Main Road 267, from Km 0,00 to Km 50,58, between Stanford and Riviersonderend, included in the BAR dated 30 November 2018.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in Section E below.

## **A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION**

Department of Transport and Public Works  
% Ms M. Hofmeyr  
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**CAPE TOWN**  
8000

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 Fax: (021) 483 2205

The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as "**the holder**".

**B. LIST OF ACTIVITIES AUTHORISED**

Listed activities	Activity/Project Description
EIA Regulations Listing Notice 1 of 2014: Activity Number 19: The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.	The proposal entails the upgrading of culverts, which includes expansions to wingwalls, construction of gabions, removal of built up debris and other repair work that will require the infilling of more than 10m <sup>3</sup> of material within a watercourse.

The abovementioned list is hereinafter referred to as "**the listed activity**".

The holder is herein authorised to undertake the following alternative:

The proposal entails the upgrading of culverts, which includes:

	Inlet	Outlet	Barrel	Wing-walls	Embankments
Km 5,707	<ul style="list-style-type: none"> <li>Extension of the barrel.</li> <li>Construction of a new wing-wall.</li> <li>Construction of a new headwall.</li> <li>Construction of a new apron slab.</li> </ul>	<ul style="list-style-type: none"> <li>Extension of the barrel.</li> <li>Construction of a new wing-wall.</li> <li>Construction of a new headwall.</li> <li>Construction of a new apron slab.</li> </ul>	<ul style="list-style-type: none"> <li>Cracks on existing barrel to be repaired.</li> </ul>	-	-
Km 10,59	<ul style="list-style-type: none"> <li>Clearing of debris.</li> </ul>	<ul style="list-style-type: none"> <li>Clearing of debris.</li> </ul>	Existing cracks less than 0,4mm to be sealed using an approved crack	Existing cracks greater than 0,4mm (up to 2mm) to be filled by cutting a v-notch and	<ul style="list-style-type: none"> <li>Installation of gabion boxes and renomattressing at the inlet of the waterway to</li> </ul>

			injection technique and product.	repairing it with an approved repair product.	channel flow through the culvert and stop scour behind wing-walls. • Installation of guard rails.
Km 17,89	Extension of the barrel and reconstruction of the wing-walls to suit the embankment fill.	Extension to the barrel also required to suit the embankment fill.	Construct a new invert slab (floor) to prevent potential settlement of material.	<ul style="list-style-type: none"> <li>• Waterway (upstream)-construction of an apron slab, shaping of the embankments and approach waterway using gabions and reno-mattressing.</li> <li>• Wing-walls (upstream)-extend barrel length and reconstruction of the wing-walls.</li> </ul>	-
	<b>Inlet</b>	<b>Outlet</b>	<b>Barrel</b>	<b>Wing-walls</b>	<b>Embankments</b>
Km 26,03	Increasing the headwall height to retain the embankment fill.	Clearing of debris and increasing the headwall height to retain embankment fill.	<ul style="list-style-type: none"> <li>• Construction of an invert slab and apron slab to protect exposed wall foundations.</li> <li>• Existing cracks greater than 0,4mm (up to 2mm) to be filled by cutting a v-notch and repairing it with an approved repair product.</li> </ul>	Existing cracks greater than 0,4mm (up to 2mm) to be filled by cutting a v-notch and repairing it with an approved repair product.	-
Km 47,76	Increasing the height of the headwall and wing-walls to retain embankment fill. Sealing of the existing cracks in headwall.	<ul style="list-style-type: none"> <li>• Extension of the barrel and construction of new wing-walls at the outlet on independent foundations.</li> <li>• Construction of an apron slab and cut-off beams at the outlet with reno-</li> </ul>	Cracks to be repaired.	-	Installation of guardrails.

		mattressing beyond wing-walls to avoid settlement of material.			
Km 48,89	<ul style="list-style-type: none"> <li>• Extension of the barrel.</li> <li>• Construction of new wing-walls from extended barrels.</li> <li>• Clearing of debris.</li> </ul>	<ul style="list-style-type: none"> <li>• Waterway (outlet)- install concrete pipes below farm road to allow flow.</li> </ul>	<ul style="list-style-type: none"> <li>• Repair spalling to concrete.</li> <li>• Remove build-up of debris.</li> </ul>	-	Installation of guardrails.

### C. SITE DESCRIPTION AND LOCATION

The listed activity will be undertaken along Main Road 267, between Stanford and Riversonderend, at the following co-ordinates:

Km 5,707:

Latitude (S)	Longitude (E)
34° 25' 31.33"	19° 30' 55.16"

Km 10,59:

Latitude (S)	Longitude (E)
34° 24' 38.34"	19° 33' 48.00"

Km 17,89:

Latitude (S)	Longitude (E)
34° 23' 27.96"	19° 37' 45.59"

Km 26,03:

Latitude (S)	Longitude (E)
34° 20' 31.47"	19° 41' 19.13"

Km 47,76:

Latitude (S)	Longitude (E)
34° 11' 34.97"	19° 47' 39.14"

Km 48,89:

Latitude (S)	Longitude (E)
34° 10' 58.36"	19° 47' 49.95"

Refer to Annexure 1: Locality Map

The above is hereinafter referred to as "**the site**".

### D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Guillaume Nel Environmental Consultants

% Mr C. Dippenaar/Mr G. Nel

P. O. Box 2632

**PAARL**

7620

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Tel.: (021) 870 1874

Fax: (021) 870 1873

## **E. CONDITIONS OF AUTHORISATION**

### **Scope of authorisation**

1. The holder is authorised to undertake the listed activity specified in Section B above in accordance with, and restricted to, Preferred Alternative Design described in the BAR dated 30 November 2018 at the site as described in Section C above.
2. The holder must commence with the listed activity on site within a period of **five (5) years** from the date of issue of this Environmental Authorisation.
3. The development must be concluded within **10 years** from the date of commencement of the listed activity.
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.
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.

### **Written notice to the Competent Authority**

6. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities. The notice must:
  - 6.1 make clear reference to the site details and EIA Reference number given above; and
  - 6.2 include proof of compliance with the following conditions described herein:

Conditions: 7 and 12

### **Notification and administration of appeal**

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; 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).
8. The listed activity, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notifies 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 activity, including site preparation, must not commence until the appeal is decided.

#### **Management of activity**

9. The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
10. The MMP adopted as part of this Environmental Authorisation must be implemented.
11. The EMPr and MMP must be included in all contract documentation for all phases of implementation.

#### **Monitoring**

12. 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 and the conditions contained herein.
13. A copy of the Environmental Authorisation, EMPr, MMP, 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.
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.

#### **Auditing**

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 EMPr 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 (as amended).

The ECO must conduct fortnightly site audits. Bi-monthly ECO Audit Reports must be submitted to the Competent Authority for the construction phase. The final Environmental Audit Report must be submitted to the Competent Authority three months after construction is completed.

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).

### **Specific Conditions**

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 paleontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artefacts 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.

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.

### **F. GENERAL MATTERS**

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activity.
2. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.
3. If the holder does not commence with the listed activity within the period referred to in Condition 2, this Environmental Authorisation shall lapse for that activity, and a new application for Environmental Authorisation must be submitted to the Competent Authority. If the holder wishes to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the Competent Authority prior to the expiry date of the Environmental Authorisation.
4. The holder must submit an application for amendment of the Environmental Authorisation to the Competent Authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is



proposed, an application for Amendment in terms of Part 1 of the EIA Regulations, 2014 (as amended) must be submitted.

Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the Competent Authority must only be notified of such changes.

5. The manner and frequency for updating the EMPr is as follows:  
Amendments to the EMPr must be done in accordance with Regulations 35 to 37 of the EIA Regulations, 2014 (as amended) or any relevant legislation that may be applicable at the time.

## **G. APPEALS**

Appeals must comply with the provisions contained in the National Appeal Regulations 2014 (as amended).

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date on which notification of the decision was sent to the holder by the Competent Authority –
  - 1.1. submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
  - 1.2. submit a copy of the appeal to any registered I&APs, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.
2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date on which the holder of the decision sent notification of the decision to the registered I&APs–
  - 2.1. submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
  - 2.2. submit a copy of the appeal to the holder of the decision, any registered I&AP, any Organs of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.
3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered I&AP and the Organs of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.
4. The appeal and the responding statement must be submitted to the address listed below:

By post:                   Western Cape Ministry of Local Government, Environmental Affairs and  
Development Planning  
Private Bag X9186  
CAPE TOWN  
8000

By facsimile:           (021) 483 4174; or

By hand: Attention: Mr Jaap de Villiers (Tel: 021 483 3721)  
Room 809  
8<sup>th</sup> Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

**Note:** For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to Jaap.DeVilliers@westerncape.gov.za.

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from Appeal Authority at: Tel. (021) 483 3721, E-mail Jaap.DeVilliers@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

#### H. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this Environmental Authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully



**MR. ZAHIR TOEFY**

**DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)**  
**DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

DATE OF DECISION: 05/04/2019

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(2) Mr. B. Kondokter (Overstrand Municipality)	Fax: (028) 384 8337
(3) Mr F. Kotze (Overberg District Municipality)	Fax: (028) 425 1014
(4) Mr J. Viljoen (Theewaterskloof Municipality)	Fax: (028) 214 1289
(5) Mr. C. van der Walt (Department of Agriculture)	Fax: (021) 808 5092
(6) Ms. C. Rampartab (CapeNature)	Fax: (021) 866 1523
(7) Mr. R. le Roux (BGCMA)	Fax: (023) 347 2012

## ANNEXURE 1: LOCALITY MAP

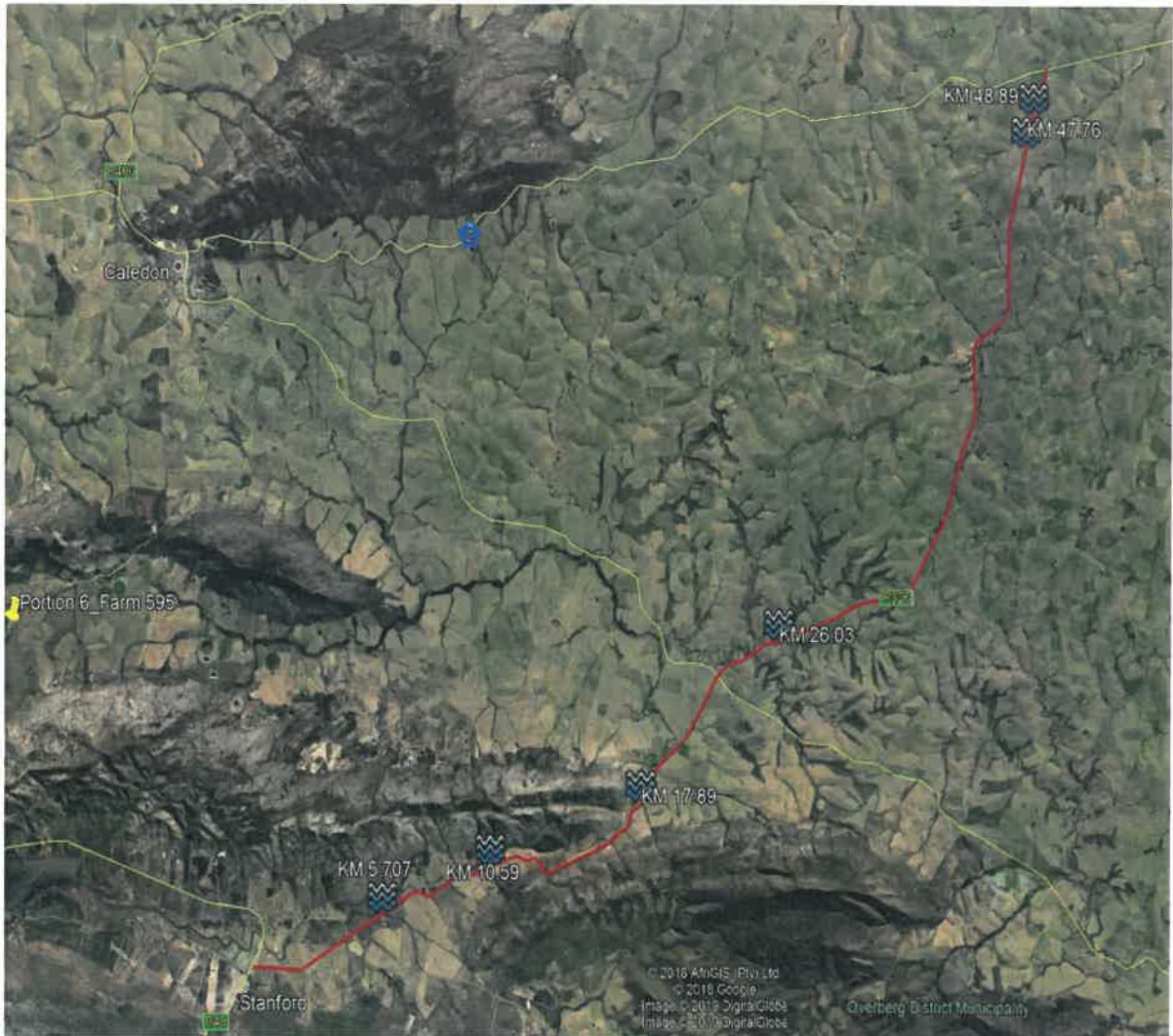


Figure 1: Locality map depicting the location of the six culverts requiring upgrades and repair work.

## **ANNEXURE 2: REASONS FOR THE DECISION**

In reaching its decision, the Competent Authority considered, amongst others, the following:

- a) The information contained in the Application Form dated October 2018, the final BAR dated 30 November 2018 and the EMPr and MMP submitted together with the final BAR;
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation and Alternatives (dated March 2013);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including Section 2 of NEMA;
- d) The comments received from I&APs and responses to these, included in the BAR dated 30 November 2018; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

No site visits were conducted. The Competent Authority had sufficient information before it to make an informed decision without conducting a site visit.

All information presented to the Competent Authority was taken into account during the consideration of the application for Environmental Authorisation. A summary of the issues that were considered to be the most significant for the decision is set out below.

### **1. Public Participation**

The public participation process included:

- identification of and engagement with I&APs;
- giving written notice to the owners and occupiers of land adjacent to the site where the listed activity is to be undertaken, the municipality and ward councillor, and the various Organs of State having jurisdiction in respect of any aspect of the listed activity, on 15 August 2018, 17 August 2018 and 26 October 2018;
- the placing of a newspaper advertisement in the 'Hermanus Times' on 16 August 2018;
- fixing notice boards at the sites where the listed activity is to be undertaken on 17 August 2018; and
- making the pre-application draft BAR available to I&APs for public review from 17 August 2018 and the in-process draft BAR from 26 October 2018.

The Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements and all the comments raised and responses thereto were included in the comments and response report.

The Competent Authority notes the Environmental Assessment Practitioner's responses to the issues raised during the public participation process and has included appropriate conditions in this Environmental Authorisation and in the EMPr.

## 2. Alternatives

The proposal entails the upgrading of culverts, which includes:

	<b>Inlet</b>	<b>Outlet</b>	<b>Barrel</b>	<b>Wing-walls</b>	<b>Embankments</b>
Km 5,707	<ul style="list-style-type: none"> <li>• Extension of the barrel.</li> <li>• Construction of a new wing-wall.</li> <li>• Construction of a new headwall.</li> <li>• Construction of a new apron slab.</li> </ul>	<ul style="list-style-type: none"> <li>• Extension of the barrel.</li> <li>• Construction of a new wing-wall.</li> <li>• Construction of a new headwall.</li> <li>• Construction of a new apron slab.</li> </ul>	<ul style="list-style-type: none"> <li>• Cracks on existing barrel to be repaired.</li> </ul>	-	-
Km 10,59	<ul style="list-style-type: none"> <li>• Clearing of debris.</li> </ul>	<ul style="list-style-type: none"> <li>• Clearing of debris.</li> </ul>	Existing cracks less than 0,4mm to be sealed using an approved crack injection technique and product.	Existing cracks greater than 0,4mm (up to 2mm) to be filled by cutting a v-notch and repairing it with an approved repair product.	<ul style="list-style-type: none"> <li>• Installation of gabion boxes and reno-mattressing at the inlet of the waterway to channel flow through the culvert and stop scour behind wing-walls.</li> <li>• Installation of guard rails.</li> </ul>
Km 17,89	Extension of the barrel and reconstruction of the wing-walls to suit the embankment fill.	Extension to the barrel also required to suit the embankment fill.	Construct a new invert slab (floor) to prevent potential settlement of material.	<ul style="list-style-type: none"> <li>• Waterway (upstream)-construction of an apron slab, shaping of the embankments and approach waterway using gabions and reno-mattressing.</li> <li>• Wing-walls (upstream)-extend barrel length and reconstruction of the wing-walls.</li> </ul>	-
	<b>Inlet</b>	<b>Outlet</b>	<b>Barrel</b>	<b>Wing-walls</b>	<b>Embankments</b>
Km 26,03	Increasing the headwall height to retain the embankment fill.	Clearing of debris and increasing the headwall height to retain embankment fill.	<ul style="list-style-type: none"> <li>• Construction of an invert slab and apron slab to protect exposed wall foundations.</li> <li>• Existing cracks greater than 0,4mm (up to 2mm) to be filled by cutting a v-</li> </ul>	Existing cracks greater than 0,4mm (up to 2mm) to be filled by cutting a v-notch and repairing it with an approved repair product.	-

			notch and repairing it with an approved repair product.		
Km 47,76	Increasing the height of the headwall and wing-walls to retain embankment fill. Sealing of the existing cracks in headwall.	<ul style="list-style-type: none"> <li>• Extension of the barrel and construction of new wing-walls at the outlet on independent foundations.</li> <li>• Construction of an apron slab and cut-off beams at the outlet with renomattressing beyond wing-walls to avoid settlement of material.</li> </ul>	Cracks to be repaired.	-	Installation of guardrails.
Km 48,89	<ul style="list-style-type: none"> <li>• Extension of the barrel.</li> <li>• Construction of new wing-walls from extended barrels.</li> <li>• Clearing of debris.</li> </ul>	<ul style="list-style-type: none"> <li>• Waterway (outlet)- install concrete pipes below farm road to allow flow.</li> </ul>	<ul style="list-style-type: none"> <li>• Repair spalling to concrete.</li> <li>• Remove build-up of debris.</li> </ul>	-	Installation of guardrails.

Two design alternatives were investigated and are discussed below:

Preferred Alternative Design (Herewith Authorised):

This alternative entails the construction of impermeable concrete wing-walls at the upstream side of the roads.

This alternative is preferred because the impermeable concrete wing-walls are able to channel storm water more effectively during storm events, which will ensure that the structural integrity of the road, the culvert and the embankment is not compromised. Furthermore, it will protect the embankment against environmental impacts such as erosion. This option will be less expensive because there is no requirement to demolish and reconstruct the wing-walls using gabions, which also results in less disturbance to the watercourses.

Alternative Design

This alternative entails demolishing the existing wing-walls and constructing new wing-walls using gabions at the upstream side of the roads.

This alternative is not preferred because it will compromise the structural integrity of the road, the culvert and the embankment, since the permeable nature of gabions may cause erosion to the embankment and the area at the wing-walls. In addition, this alternative will result in more disturbance to the embankment and watercourse since the existing wing-walls will need to be demolished and re-constructed. This alternative will also be more expensive.

### "No-Go" Alternative

The "no-go" option, not to upgrade the culverts, will result in the road remaining unsafe for motorists, the continued erosion of the watercourse embankments, degradation of the culverts and the inability of the culverts to convey storm water adequately due to debris build up.

## **3. Impact Assessment and Mitigation measures**

### 3.1 Activity Need and Desirability

Main Road 267 is used daily by motorists. The degradation of the culverts along Main Road 267, caused by erosion, poses a safety hazard to motorists using this road, therefore necessitating the proposed repairs and upgrades. The upgrade, repair of the culverts and rehabilitation of the watercourses at the culverts will ensure: that erosion and degradation at these structures are minimised; safer utilisation of the road for motorists; more effective flow during peak storm water flow; and the re-introduction of endemic species to the areas that will improve the ecological state at the affected areas.

### 3.2 Biodiversity and Biophysical Impacts

Even though the culverts are located within Ecological Support Areas and ecosystems classified as critically endangered in terms of Section 52 of the National Environmental Biodiversity Act 2004 (Act No. 10 of 2004), all work will take place within the road reserve. The road reserve has been disturbed by construction and maintenance of the road, overgrazing, trampling by livestock and erosion at the culverts. According to the Freshwater Impact Assessment dated 3 August 2018, compiled by Johann Killian of Bio-Consulting, the present ecological state of the watercourses at five of the culverts is largely modified with the exception of the culvert at Km 26,03, which is moderately modified. The ecological importance and sensitivity of the watercourses at the culverts is classified as low. The impacts on the watercourses according to the Department of Water and Sanitation risk rating has also been rated as low. Through the implementation of the EMP, inclusive of a rehabilitation plan (accepted in Condition 9) and the recommendations of the specialist, the impacts on watercourses will be mitigated and the ecological state of the watercourses will be improved.

In addition, CapeNature has agreed with the findings and mitigation measures as stipulated in the Freshwater Impact Assessment and has no objection with respect to the proposed development.

A Water Use Licence Application ("WULA") in terms of the National Water Act, 1998 (Act 38 of 1998) has been submitted to the Breede Gouritz Catchment Management Agency, for the proposed upgrading of the culverts.

A MMP has been compiled to address future maintenance activities taking place in the affected watercourse. The maintenance of the structures authorised in this Environmental Authorisation forms part of this MMP. It must be noted that the accepted maintenance activities only relate to the activities described in the MMP. Should any new activities and associated infrastructure, not included in the MMP, require maintenance and if any of the applicable listed activities are triggered, an Environmental Authorisation must be obtained prior to the undertaking of such activities. It remains the responsibility of the proponent to determine if any other listed activities are triggered and to ensure that the necessary Environmental Authorisation is obtained.

The fact that the MMP is adopted by the Competent Authority does not absolve the applicant from its general "duty of care" set out in Section 28(1) of the NEMA, which states that *"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from*

occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment." (Note: When interpreting their "duty of care" responsibility, cognisance must be taken of the principles of sustainability contained in Section 2 of NEMA).

The development will result in both negative and positive impacts.

**Negative Impacts:**

- Impacts on watercourses are anticipated but will be managed in terms of the approved EMPr.
- Traffic impacts limited to the construction phase are anticipated.

**Positive impacts:**

- The safety of the road for motorists will be improved.
- The upgraded culverts will accommodate the peak storm water flow through the culverts more effectively.
- Through the rehabilitation at the culverts, the ecological and visual value of the areas will be improved.
- Temporary employment opportunities will be created during the construction phase.

**4. National Environmental Management Act Principles**

The NEMA Principles (set out in Section 2 of the NEMA, which apply to the actions of all Organs of State, serve as guidelines by reference to which any Organ of State must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between organs of state through conflict resolution procedures; and
- the selection of the best practicable environmental option.

**5. Conclusion**

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, the Competent Authority is satisfied that the proposed listed activity will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the NEMA and that any potentially detrimental environmental impacts resulting from the listed activity can be mitigated to acceptable levels.

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