



**REFERENCE:** 16/3/3/1/F5/25/1081/22  
**NEAS REFERENCE:** WCP/EIA/0001185/2022  
**DATE:** 18 May 2023

The Head of Department  
Western Cape Government: Department of Transport and Public Works  
3<sup>rd</sup> Floor, 9 Dorp Street  
**CAPE TOWN**  
8000

**Attention: Mrs. Wandie Olivier**

Cell: 082 775 1853

Email: wandie.olivier@westerncape.gov.za

Dear Sir

**APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2014: THE PROPOSED REPAIR WORK TO CULVERT C10286 ON DIVISIONAL ROAD ("DR") 1123/SLENT ROAD IN THE SWARTLAND MUNICIPAL AREA**

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 4 of the EIA Regulations, 2014, 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 Appeal Regulations, 2014, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached Environmental Authorisation.

Yours faithfully

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

CC: (1) Ms T Solomon (Infinity Environmental (Pty) Ltd)  
(2) Mr A Zaayman (Swartland Municipality)

Email: tarryn@infinityenv.co.za  
Email: alwynzaayman@swartland.org.za





**REFERENCE:** 16/3/3/1/F5/25/1081/22  
**NEAS REFERENCE:** WCP/EIA/0001185/2022  
**ENQUIRIES:** Samornay Smidt  
**DATE OF ISSUE:** 18 May 2023

## ENVIRONMENTAL AUTHORISATION

### APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED REPAIR WORK TO CULVERT C10286 ON DIVISIONAL ROAD ("DR") 1123/SLENT ROAD IN THE SWARTLAND MUNICIPAL AREA

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 activity specified in section B below with respect to the Preferred Design Alternative, as described in the Basic Assessment Report ("BAR"), dated January 2023.

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

Western Cape Government: Department of Transport and Public Works  
c/o Mrs. Wandie Olivier  
3rd Floor, 9 Dorp Street  
**CAPE TOWN**  
8000

Cell.: 082 775 1853  
Email: wandie.olivier@westerncape.gov.za

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

## B. LIST OF ACTIVITIES AUTHORISED

Listed Activity	Activity/Project Description
<p>EIA Regulations Listing Notice 1 of 2014 –</p> <p><b>Activity Number: 19</b></p> <p>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 –</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(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.</p>	<p>More than 10m<sup>3</sup> of material will be removed from and/or deposited into the watercourse to repair the erosion damage to the culvert.</p>

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

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

The proposal entails the upgrading of Culvert C10286 on DR1123 comprising the following as remedial action to the scour damage of the riverbed downstream:

- Installation of gabion mattresses (in line with the Western Cape Government standard drawing WCS/60/4/C1).
- Clearing of silt deposits at the upstream end of the culvert and inside the barrel of the middle Armco Culvert.
- Clearing of vegetation on both the upstream and downstream ends of the culvert.
- Repair of the corroded floor of the culvert which will entail (Option 1):
  - Clear silt and vegetation in barrels.
  - Cut and remove corroded steel floor.
  - Apply anti-corrosion to the remaining Armco steel barrel.
  - Where required, backfill with bedding material and shape.
  - Install an *in-situ* concrete invert slab to mitigate steel corrosion.
  - Backfill scour damage downstream of the culvert and across the riverbed.
  - Install gabion mattresses upstream and downstream of the culvert.
  - Install gabion baskets to form wingwalls.
  - Remove vegetation from concrete face at the inlet and outlet ends.
  - Damaged concrete shall be neatly cut and repaired with cementitious repair mortar.

- Gabion mattresses will be installed upstream and downstream of the culverts to address scour damage.

### C. SITE DESCRIPTION AND LOCATION

The listed activity will be undertaken on Farm No. 994 along Divisional Road (DR) 1123/ Slent Road.

The SG21 digit code is: C0460000000099400000

Co-ordinates:

Latitude	Longitude
33° 34' 20.20" S	18° 52' 43.57" E

Refer to Annexure 1: Locality Map and Annexure 2: Site Plan.

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

### D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Infinity Environmental (Pty) Ltd  
 c/o Tarryn Solomon  
 Suite 17  
 Private Bag X11  
**MOWBRAY**  
 8000

Cell: (076) 223 4533  
 Email: tarryn@infinityenv.co.za

### 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 the Preferred Design Alternative, as described in the BAR dated January 2023 on the site as described in Section C above.
2. The holder must commence with, and conclude, the listed activity within the stipulated validity period which this Environmental Authorisation is granted, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority

This Environmental Authorisation is granted for-

- (a) A period of **five years** from the date of issue, during which period the holder must commence with the authorised listed activity.
- (b) A period of **ten (10) years**, from the date the holder commenced with the authorised listed activity, during which period the authorised listed activity must be concluded.

3. 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.
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.

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

5. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activity.
  - 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: 6, 7 and 10.

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

6. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision—
  - 6.1 notify all registered Interested and Affected Parties ("I&APs") of –
    - 6.1.1 the outcome of the application;
    - 6.1.2 the reasons for the decision as included in Annexure 3;
    - 6.1.3 the date of the decision; and
    - 6.1.4 the date when the decision was issued.
  - 6.2 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;
  - 6.3 draw the attention of all registered I&APs to the manner in which they may access the decision;
  - 6.4 provide the registered I&APs with:
    - 6.4.1 the name of the holder (entity) of this Environmental Authorisation,
    - 6.4.2 name of the responsible person for this Environmental Authorisation,
    - 6.4.3 postal address of the holder,
    - 6.4.4 telephonic and fax details of the holder,
    - 6.4.5 e-mail address, if any, of the holder, and

6.4.6 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).

7. The listed activity, 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 activity, including site preparation, must not commence until the appeal is decided.

### **Management of activity**

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

### **Monitoring**

10. 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.
11. The ECO must conduct fortnightly site visits, and report on compliance with the EMPr to this Department and the relevant authorities, in writing, on a quarterly basis during the construction phase.
12. A copy of the Environmental Authorisation, EMPr, 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 a publicly accessible website.
13. 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**

14. 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** (other than the ECO appointed in terms of condition 10 above or the appointed Environmental Assessment Practitioner) and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended).

The holder must undertake environmental audits and submit an environmental audit to the Department every six months for the duration of the construction phase. The final Environmental

Audit Report must be submitted to the Competent Authority within three months after completion of the construction phase.

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**

15. 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.

16. 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.
17. The relevant requirements with respect to occupational health and safety must be adhered to at all times.

### **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 those activities, 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 Marius Venter (Tel: 021 483 2659)  
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 [DEADP.Appeals@westerncape.gov.za](mailto:DEADP.Appeals@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 [DEADP.Appeals@westerncape.gov.za](mailto:DEADP.Appeals@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. ZAAHIR TOEFY**

**DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)**

**DATE OF DECISION: 18 MAY 2023**

CC: (1) T Solomon (Infinity Environmental (Pty) Ltd)  
(2) A Zaayman (Swartland Municipality)

Email: [tarryn@infinityenv.co.za](mailto:tarryn@infinityenv.co.za)  
Email: [alwynzaayman@swartland.org.za](mailto:alwynzaayman@swartland.org.za)

# ANNEXURE 1: LOCALITY MAP



## ANNEXURE 2: SITE PLAN



- NOTES**
1. GENERAL
  2. ALL DIMENSIONS UNLESS SPECIFIED
  3. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  4. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  5. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL WATER SUPPLY REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  6. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ROAD REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  7. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  8. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL SAFETY REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  9. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL HEALTH REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  10. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL FIRE REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  11. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL POLLUTION REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  12. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL CONSUMER PROTECTION REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  13. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL LABOR REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  14. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL TAX REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  15. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL CUSTOMS REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  16. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL INTELLECTUAL PROPERTY REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  17. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL STATUTE REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  18. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL CONSTITUTION REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  19. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL BILL OF RIGHTS REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE
  20. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL DEPARTMENTAL REGULATIONS AND ALL APPLICABLE STANDARDS AND CODES OF PRACTICE

ITEM	PROPOSED REPAIR ACTION	DESCRIPTION
1	CRACKS IN CONCRETE	CRACKS IN CONCRETE
2	SCOUR DAMAGE UPSTREAM	SCOUR DAMAGE UPSTREAM
3	SCOUR DAMAGE DOWNSTREAM	SCOUR DAMAGE DOWNSTREAM
4	VEGETATION GROWTH	VEGETATION GROWTH
5	STEEL FLOOR CORRODED	STEEL FLOOR CORRODED
6	STEEL FLOOR CORRODED	STEEL FLOOR CORRODED
7	CRACKS IN CONCRETE	CRACKS IN CONCRETE
8	CRACKS IN CONCRETE	CRACKS IN CONCRETE
9	CRACKS IN CONCRETE	CRACKS IN CONCRETE
10	CRACKS IN CONCRETE	CRACKS IN CONCRETE
11	CRACKS IN CONCRETE	CRACKS IN CONCRETE
12	CRACKS IN CONCRETE	CRACKS IN CONCRETE
13	CRACKS IN CONCRETE	CRACKS IN CONCRETE
14	CRACKS IN CONCRETE	CRACKS IN CONCRETE
15	CRACKS IN CONCRETE	CRACKS IN CONCRETE
16	CRACKS IN CONCRETE	CRACKS IN CONCRETE
17	CRACKS IN CONCRETE	CRACKS IN CONCRETE
18	CRACKS IN CONCRETE	CRACKS IN CONCRETE
19	CRACKS IN CONCRETE	CRACKS IN CONCRETE
20	CRACKS IN CONCRETE	CRACKS IN CONCRETE

THE DRAWING IS THE PROPERTY OF THE CLIENT AND IS TO BE USED ONLY FOR THE PROJECT AND AT THE LOCATION SPECIFIED THEREON. IT IS TO BE KEPT IN GOOD AND SAFE CONDITION AND IS NOT TO BE REPRODUCED, COPIED, EITHER WHOLLY OR IN PART, OR TRANSMITTED IN ANY MANNER, IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS DRAWING AND FOR THE REPAIR OF ANY DAMAGE TO IT. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE LOSS OR THEFT OF THIS DRAWING. THE CLIENT SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS DRAWING AND FOR THE REPAIR OF ANY DAMAGE TO IT. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE LOSS OR THEFT OF THIS DRAWING.

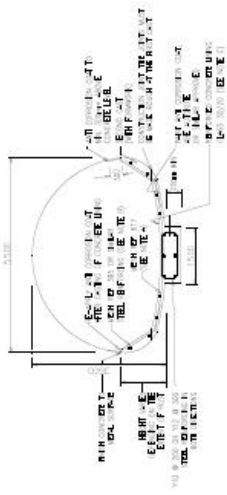


FIGURE 1: CRACK REPAIR SECTION



SCOUR DAMAGE DOWNSTREAM



SCOUR DAMAGE UPSTREAM



VEGETATION GROWTH



CRACKS IN CONCRETE



PLAN VIEW OF CULVERT

NO.	DATE	REVISION	BY	CHECKED	APPROVED

**hho**  
 HHO CONSULTANTS  
 REG. NO. 10056  
 118, 120 & 122, GARDEN STREET, CAPE TOWN, SOUTH AFRICA  
 TEL: 021 463 8888  
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 WWW.HHOCONSULTANTS.CO.ZA

CONSULTING ENGINEERS

WESTERN CAPE GOVERNMENT  
 DEPARTMENT OF TRANSPORT AND PUBLIC WORKS

APPROVED:   
 (Signature)  
 PROJECT MANAGER

THE PERIODIC MAINTENANCE OF DR 01123 -  
 DRAKENSTEIN MUNICIPALITY

SCALE: 1:500  
 PROJECT NO. DR 01123  
 CONTRACT NO. DR 01123  
 SHEET NO. 1 OF 1  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: [Date]

## **ANNEXURE 3: REASONS FOR THE DECISION**

In reaching its decision, the Competent Authority considered, *inter alia*, the following:

- a) The information contained in the Application Form dated 25 October 2022 and the EMPr submitted together with final BAR on 31 January 2023.
- 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 the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- d) The comments received from I&APs and responses to these, included in the BAR dated January 2023; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

All information presented to the Competent Authority was taken into account in 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;
- fixing notice boards at the site where the listed activity is to be undertaken and public areas on 24 October 2022;
- 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 24 October 2022;
- the placing of a newspaper advertisement in the 'Swartland Gazette' on 25 October 2022; and
- circulating the in-process draft BAR to I&APs from 25 October 2022.

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

Specific alternatives, management and mitigation measures have been considered in this Environmental Authorisation and EMPr to adequately address the concerns raised.

### **2. Alternatives**

Upgrades to Culvert C10286 are required due to corrosion of the steel pipe floor, erosion of the waterway upstream and downstream of culvert, vegetation growth in the culvert headwalls, a damaged guardrail, and damage to the concrete structure. Three options were investigated for the upgrading of the culvert. Option 1 was selected as the only feasible option since repairing the corroded floor of the culvert will ensure the longevity and functioning of the culvert and will have a limited biophysical impact.

#### Option 1 (Rehabilitation of culvert - Preferred activity alternative)

Option 1 entails the repair of the corroded floor. The following activities are proposed:

- Clear silt and vegetation in barrels.
- Cut and remove corroded steel floor.
- Apply anti-corrosion to the remaining Armco steel barrel.
- Where required, backfill with bedding material and shape.
- Install an *in-situ* concrete invert slab to mitigate steel corrosion.
- Backfill scour damage downstream and across the riverbed.
- Install gabion mattresses upstream and downstream of the culvert.
- Install gabion baskets to form wingwalls.
- Remove vegetation from the concrete face at the inlet and outlet ends.
- Damaged concrete shall be neatly cut and repaired with cementitious repair mortar.

#### Option 2 (In-situ replacement of culvert - Concrete Lining of the Barrel)

This option would entail a new culvert being cast *in-situ* while the existing steel barrel would remain as permanent formwork. The proposal entails the following:

- Cut and remove corroded steel floor.
- Where required, backfill with bedding material and shape.
- Apply anti-corrosion to the remaining Armco steel barrel and use as outer formwork.
- Install inner formwork and reinforcement.
- Cast *in-situ* concrete to form a new 250mm thick culvert.
- Construct concrete wingwalls and headwalls.
- Backfill scour damage and install gabion mattresses upstream and downstream.
- Remove vegetation from concrete face at the inlet and outlet ends.
- Damaged concrete shall be neatly cut and repaired with cementitious repair mortar.

#### Option 3 (Full culvert replacement - New Precast Portal Culvert)

This option would entail the replacement of the existing Armco culverts with new precast portal culverts. The proposal entails the following:

- Cut and remove corroded steel floor.
- Where required, backfill with bedding material and shape.
- Apply anti-corrosion to the remaining Armco steel barrel and use as outer formwork.
- Install inner formwork and reinforcement.
- Cast *in-situ* concrete to form a new 250mm thick culvert.
- Construct concrete wingwalls and headwalls.
- Backfill scour damage and install gabion mattresses upstream and downstream.
- Remove vegetation from concrete face at the inlet and outlet ends.
- Damaged concrete shall be neatly cut and repaired with cementitious repair mortar.

#### Preferred Design Alternative (Herewith authorised)

The proposal entails the upgrading of the Culvert C10286 on DR1123 comprising of the following as remedial action to the scour damage of the riverbed downstream:

- Installation of gabion mattresses (in line with the Western Cape Government standard drawing WCS/60/4/C1).
- Clearing of silt deposits at the upstream end of the culvert and inside the barrel of the middle Armco Culvert.
- Clearing of vegetation on both the upstream and downstream ends of the culvert.
- Repair of the corroded floor of the culvert which will entail (Option 1):
  - Clear silt and vegetation in barrels.

- Cut and remove corroded steel floor.
- Apply anti-corrosion to the remaining Armco steel barrel.
- Where required, backfill with bedding material and shape.
- Install an *in-situ* concrete invert slab to mitigate steel corrosion.
- Backfill scour damage downstream and across the riverbed.
- Install gabion mattresses upstream and downstream of the culvert.
- Install gabion baskets to form wingwalls.
- Remove vegetation from the concrete face at the inlet and outlet ends.
- Damaged concrete shall be neatly cut and repaired with cementitious repair mortar.
- Gabion mattresses will be installed upstream and downstream of the culverts to address scour damage.

The erosion damage downstream of the culvert can cause the barrel to dislodge when a major flood event occurs, and the upgrades are therefore required to repair the culvert and enable the continued safe use of the road. The freshwater specialist confirmed that with implementation of the recommended mitigation measures, the proposed upgrade work will pose a low risk to the receiving environment. The preferred design is the most feasible option for the long-term protection of the infrastructure and would allow ongoing use of the road. Other design options would result in over-or-under design of the required repair work and was therefore not considered further.

#### "No-Go" Alternative

The no-go alternative was considered. However, if the repair work is not undertaken, ultimately, the culvert and associated section of the road would fail and become unsafe for road users and very likely completely impassable over time.

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

#### 3.1 Activity need and desirability

The Department of Transport and Public Works needs to undertake urgent repair works at Culvert C10286 located at km 0.98 on DR01123/Slent Road, due to extensive damage at the culvert outlet and to enable the continued and safe use of the road. The proposed upgrading of this culvert forms part of several culvert upgrades along DR01123/ Slent Road. The culverts need repair and maintenance work, while the road requires reseal and minor repairs. Without the required repairs, the consequent further deterioration of the culvert will compromise the roadway and pose a safety risk to the road users. The proposed project therefore aims to strengthen the failing infrastructure in order to improve public safety. The proposed activity is consistent with the Swartland Spatial Development Framework and Integrated Development Plan that identify replacement of pipes and culverts as part of civil infrastructure improvements that should be actioned to curtail further deterioration. The associated short-term biophysical impacts can be adequately managed, mitigated and rehabilitated during and at the end of the construction period. The maintenance work on the culvert will ensure that the road remains safe and available for public use well into the future.

#### 3.2 Biophysical Impacts

The site at which the culvert is located is identified as an Ecological Support Area 2 in the Western Cape Biodiversity Spatial Plan (2017). Historically, the site contained Swartland Shale Renosterveld vegetation, which is classified as critically endangered. The site has, however, been completely transformed by past agricultural activities and no indigenous vegetation remains at the culvert. The adjacent land is intensively farmed, primarily for wine grapes, and little to no natural vegetation occurs at the culvert.



DR01123 lies within the upper catchment of the Sand River and there are several small seasonal tributaries of the Sand River that are crossed by the road. Culvert C10286 is located in a tributary of the Bot River (a tributary of the Sand River), which is considered to be in a moderately to seriously modified present ecological condition and is of moderate ecological importance and sensitivity. The proposed works are not located within a Freshwater Ecosystem Priority Areas ("FEPA") River sub-catchment, however, an artificial wetland in the vicinity of the culvert associated with dams adjacent to the road is mapped as a FEPA. The proposed upgrading of the culvert is not expected to impact on this artificial wetland. Based on the findings of the Aquatic Biodiversity Compliance Statement dated October 2022, compiled by Bluescience, the risk of the proposed works impacting the ecological integrity and functioning of these aquatic ecosystems is low. The identified impacts can be mitigated to a low and very low significance, which is acceptable from a freshwater perspective. These mitigation measures have been included in the EMPr for management of the short-term, localised impacts of the works on the watercourse. In addition, the positive impacts associated with the proposed works include better erosion control of the waterway upstream and downstream of culvert C10286 in the operational phase.

A Water Use Licence Application ("WULA") in terms of the National Water Act, 1998 (Act 38 of 1998) was submitted to the Department of Water and Sanitation that will further consider the watercourse related impacts. Continued and future maintenance of this culvert is also addressed in the Maintenance Management Plan for culverts along DR01123 that was adopted by the Competent Authority on 6 April 2023.

**Negative Impacts:**

- The development will have a limited negative biophysical impact due to the potential construction phase impacts on the watercourse present on the site. These impacts will, however, be mitigated to a satisfactory level with the implementation of the recommended mitigation measures and adherence to the EMPr.

**Positive impacts:**

- The proposed repair works will protect the culvert from further erosion and deterioration, which will ensure structural stability and that the road remains safe and available for public use well into the future.
- The proposed works will provide temporary employment opportunities.

#### **4. National Environmental Management Act Principles**

The National Environmental Management 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 National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activity can be mitigated to acceptable levels.

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