



Land Management  
(Region 3)



REFERENCE: 16/3/1/1/D3/4/0008/13  
NEAS REF: WCP/EIA/0001146/2013  
ENQUIRIES: Shireen Pullen  
DATE OF ISSUE: 2014-10-13

The Head of Department  
Western Cape Government: Department of Transport and Public Works  
PO Box 2603  
**CAPE TOWN**  
8000

Attention: Mr. L. Truter

Tel: (021) 483 2020  
Fax: (021) 483 2205

Dear Sir

**APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND EXEMPTION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT AMENDMENT REGULATIONS, 2010: PROPOSED UPGRADE OF DR1688 AND DR1699 BETWEEN CALITZDORP AND OUDTSHOORN, WESTERN CAPE**

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

**ENVIRONMENTAL AUTHORISATION AND EXEMPTION**

**DECISION**

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2010, ("NEMA EIA Regulations") the competent authority herewith **grants environmental authorisation and exemption** to the applicant to undertake the list of activities specified in section B below with respect to the preferred alternative described in the Final Basic Assessment Report ("BAR") dated 13 June 2014.

**The granting of this environmental authorisation (hereinafter referred to as the "environmental authorization") is subject to compliance with the conditions set out in section E below.**

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

The Head of Department  
% Mr. L. Truter

4th Floor, York Park Building,  
93 York Street, George, 6529  
tel: +27 44 805 8600 fax: +27 44 874 2423

Private Bag X6509, George, 6530  
[www.westerncape.gov.za/eadp](http://www.westerncape.gov.za/eadp)

Western Cape Government: Department of Transport and Public Works  
 PO Box 2603  
**CAPE TOWN**  
 8000

Tel: (021) 483 2020  
 Fax: (021) 483 2205

The abovementioned authority is the holder of this environmental authorisation and is hereinafter referred to as "the applicant".

## **B. LIST OF ACTIVITIES AUTHORISED**

### **Government Notice No. R544 of 18 June 2010 –**

**Activity Number: 11**

**Activity Description:**

*"The construction of:*

- (i) canals;*
- (ii) channels;*
- (iii) bridges;*
- (iv) dams;*
- (v) weirs;*
- (vi) bulk storm water outlet structures;*
- (vii) marinas;*
- (viii) jetties exceeding 50 square metres in size;*
- (ix) slipways exceeding 50 square metres in size;*
- (x) buildings exceeding 50 square metres in size; or*
- (xi) infrastructure or structures covering 50 square metres or more*

*where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line";*

**Activity Number: 18**

**Activity Description:**

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

- (i) a watercourse;*
- (ii) the sea;*
- (iii) the seashore;*
- (iv) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater-*

but excluding where such infilling, depositing, dredging, excavation, removal or moving

- (i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or*
- (ii) occurs behind the development setback line.*

**Activity Number: 39****Activity Description:**

"The expansion of

- (i) canals;
- (ii) channels;
- (iii) bridges;
- (iv) weirs;
- (v) bulk storm water outlet structures;
- (vi) marinas;

within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line";

**Government Notice No. R546 of 18 June 2010--****Activity Number: 16****Activity Description:****The construction of:**

- (i) jetties exceeding 10 square metres in size;
- (ii) slipways exceeding 10 square metres in size;
- (iii) buildings with a footprint exceeding 10 square metres in size; or
- (iv) infrastructure covering 10 square metres or more

where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

**Activity Number: 24****Activity Description****The expansion of**

- (a) jetties where the jetty will be expanded by 10 square metres in size or more;
- (b) slipways where the slipway will be expanded by 10 square metres or more;
- (c) buildings where the buildings will be expanded by 10 square metres or more in size; or
- (d) infrastructure where the infrastructure will be expanded by 10 square metres or more

where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

**(d) In Western Cape**

- I. In an estuary;
- II. All watercourses;
- III. Outside urban areas, in:
  - (aa) A protected area identified in terms of NEMPAA, excluding conservancies;
  - (bb) National Protected Area Expansion Strategy Focus areas;

- (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;
  - (dd) Sites or areas identified in terms of an International Convention;
  - (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;
  - (ff) Core areas in biosphere reserves;
  - (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;
  - (hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.
- IV. Inside urban areas:
- (aa) Areas zoned for use as public open space;
  - (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.

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

The applicant is herein authorised to undertake the following alternative related to the listed activities:

#### **Preferred Alternative**

This alternative entails the rehabilitation and surfacing of Divisional Road 1688 (Old Concrete Road) and surfacing of Divisional Road 1699 (Station Road) near Calitzdorp.

#### **DR1688:**

- The rehabilitation of Section 1 of DR1688 from km 1.07 to km 4.68 to a Class 3 road with 2 x 3.4m surfaced lanes, 2 x 0.9m surfaced shoulders and 2 x 0,6m gravel shoulder using.
- The widening of the existing degraded culverts to tie in with the new cross section.
- The rehabilitation of Section 2 of DR1688 from km 4.68 to km 15.18 to a Class 4 road with 2 x 3.4m surfaced lanes and 2 x 0.9m gravel shoulders using.
- The rehabilitation of Section 3 of DR1688 from km 15.18 to km 43.07 to a Class 4 road with 2 x 3.4m surfaced lanes and 2x 0.9 gravel shoulders using -
  - A minimum design speed of 80km/h
  - 100km/h Maximum speed signage.
- The rehabilitation and minor adjustments to the alignment of DR1688 to provide a roadway with an 80km/h design speed where economically feasible.

#### **DR1699:**

- The upgrade of DR 1699 from km 0.00 to km 1.20 to a Class 4 road with 2 x 3.1m surfaced lanes and 2 x 0.9m gravel shoulders.
- A minimum design speed of 50km/h.
- 60km/h Maximum speed signage.

- The upgrade of DR 1699 with minor changes to the alignment to provide for a design speed of 50km/h.

The proposed development also includes erosion protection, which will entail the upgrading, repair and widening of the culverts to accommodate the increased surface water runoff.

### C. PROPERTY DESCRIPTION AND LOCATION

The general gradient of the site is flat with a plain landscape. The geological formation of the site is Fossiliferous shales, mudstones and siltstones of the Devonian Bokkeveld Group (Ceres and Traka Subgroups). Also present are mudstones and sandstones as well as subordinate shale of the Kirkwood Formation together with conglomerates of the Enon Formation (both of the Mesozoic Uitenhage Group). Soils developing over these substrates are of varied structure and texture, but mainly loamy-silty and deep in places. Ag and Fc land types are equally important (and dominated) in the region.

The proposed activities will take place on Divisional Road 1688, which starts at the intersection with Trunk Road 31/6 in Calitzdorp and continues for 43.07 km in a South Easterly direction towards Oudtshoorn where it again ties in with Trunk Road 31/6, better known as Route 62. It continues on Divisional Road 1699, which starts at the intersection with Divisional Road 1688 and continues for 1.20km to where it intersects with Divisional Road 1661 near the Calitzdorp Station.

#### Co-Ordinates

Points	Latitude (S):			Longitude (E):		
	°	'	"	°	'	"
Coordinates of DR1688 (Start):	33°	32'	43.61"	21°	41'	43.61"
Coordinates (Middle):	33°	37'	14.01"	21°	53'	14.08"
Coordinates (End):	33°	36'	12.10"	22°	05'	18.86"
Coordinates of DR1699 (Start):	33°	32'	18.18"	21°	41'	02.62"
Coordinates (Middle):	33°	32'	32.50"	21°	41'	18.21"
Coordinates (End):	33°	32'	43.61"	21°	41'	35.01"

hereinafter referred to as "the site".

### D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Guillaume Nel Environmental Consultants

% Mr. C. Dippenaar

PO Box 2632

**PAARL**

7620

Tel: (021) 870 1874

Fax: (021) 870 1873

### E. CONDITIONS OF AUTHORISATION

1. This environmental authorisation is valid for a period of **five years** from the date of issue. The holder must commence with all of the listed activities within the said period or this environmental authorisation lapses and a new application for

environmental authorisation must be submitted to the competent authority, unless the holder has lodged a valid application for the amendment of the validity period of this environmental authorisation, before the expiry of this environmental authorisation. In such instances, the validity period will be automatically extended ("the period of administrative extension") from the day before this environmental authorisation would otherwise have lapsed, until the amendment application for the extension of the validity period is decided. The listed activities, including site preparation, may not commence during the period of administrative extension.

2. The listed activities, including site preparation, may not commence within 20 (twenty) calendar days of the date of issue of this environmental authorisation. In the event that an appeal notice and subsequent appeal is lodged with the competent authority, the effect of this environmental authorisation may be suspended until such time as the appeal is decided.
3. The applicant must in writing, within 12 (twelve) calendar days of the date of this decision and in accordance with regulation 10(2)–
  - 3.1 notify all registered interested and affected parties of –
    - 3.1.1 the outcome of the application;
    - 3.1.2 the reasons for the decision as included in Annexure 1;
    - 3.1.3 the date of the decision; and
    - 3.1.4 the date of issue of the decision.
  - 3.2 draw the attention of all registered interested and affected parties to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of the Environmental Impact Assessment Regulations, 2010 detailed in section F below;
  - 3.3 draw the attention of all registered interested and affected parties to the manner in which they may access the decision. and
  - 3.4 publish a notice in the newspapers contemplated in regulation 54(2)(c) and (d), and which newspaper was used for the placing of advertisements as part of the Public Participation Process, that –
    - 3.4.1 informs all interested and affected parties of the decision;
    - 3.4.2 informs all interested and affected parties where the decision can be accessed; and
    - 3.4.3 informs all interested and affected parties that an appeal may be lodged against the decision in terms of Chapter 7 of the Regulations;
4. Seven calendar days' notice, in writing, must be given to the competent authority before commencement of construction activities.
  - 4.1. The notice must make clear reference to the site details and EIA Reference number given above.
  - 4.2. The notice must also include proof of compliance with the following conditions described herein:

Conditions: 2, 11 and 16

5. This environmental authorisation is only for the preferred alternative described in Section B above, which entails the following rehabilitation and upgrades to:

**DR1688:**

- The rehabilitation of Section 1 of DR1688 from km 1.07 to km 4.68 to a Class 3 road with 2 x 3.4m surfaced lanes, 2 x 0.9m surfaced shoulders and 2 x 0.6m gravel shoulder using.
- The widening of the existing degraded culverts to tie in with the new cross section.
- The rehabilitation of Section 2 of DR1688 from km 4.68 to km 15.18 to a Class 4 road with 2 x 3.4m surfaced lanes and 2 x 0.9m gravel shoulders using.
- The rehabilitation of Section 3 of DR1688 from km 15.18 to km 43.07 to a Class 4 road with 2 x 3.4m surfaced lanes and 2x 0.9 gravel shoulders using.
- A minimum design speed of 80km/h
- 100km/h Maximum speed signage.
- The rehabilitation and minor adjustments to the alignment of DR1688 to provide a roadway with an 80km/h design speed where economically feasible.

**DR1699**

- The upgrade of DR 1699 from km 0.00 to km 1.20 to a Class 4 road with 2 x 3.1m surfaced lanes and 2 x 0.9m gravel shoulders.
  - A minimum design speed of 50km/h.
  - 60km/h Maximum speed signage.
  - The upgrade of DR 1699 with minor changes to the alignment to provide for a design speed of 50km/h.
6. A Botanist must be appointed to conduct a Botanical survey and search and rescue during the Spring season. The Botanical Assessment must establish whether there are any plants or Geophytes of significant conservation value that needs to be protected. The Botanist must also compile a list of species of conservation value and specify a suitable receptor site to where these species can be re-located.
7. Upon completion of the gravel mining and the reinstatement of the topsoil, seeds of locally indigenous pioneer grass species must be sown in order to reduce erosion and control later temporary invasions of annual alien weed species.
8. The holder is 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.
9. Any changes to, or deviations from the scope of the description set out in condition 5 and 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 such information as it deems necessary 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.

10. The applicant must notify the competent authority in writing, within 24 hours thereof if any condition herein stipulated is not being complied with.
11. The Final Environmental Management Programme" ("EMP") submitted as part of the application for environmental authorisation must be amended to incorporate the following aspects and be re-submitted to this Department for approval. The EMP must
  - 11.1 incorporate all the conditions given in this Environmental Authorisation;
  - 11.2 clearly indicate the areas of disturbance on the final plan;
  - 11.3 clearly identify the areas on a map that will be demarcated and not disturbed;
  - 11.4 include a species list based on the findings of the botanical assessment that was done for the proposed route;
  - 11.5 clearly describe the search & rescue protocol for plants of significant conservation value and the receptor sites to where the plants will be re-located
  - 11.6 articulate the mitigation measures to minimise and prevent disturbance of potentially sensitive areas where;
  - 11.7 include a rehabilitation plan for all areas that have been disturbed;
  - 11.8 Describe the level and type of competency required of the Environmental Control Officer ("ECO"), or Environmental Site Agent where applicable;
  - 11.9 Determine the frequency of site visits; and
  - 11.10 Incorporate and take due cognizance of the mitigation measures that must be implemented based on the findings of the Botanical Assessment that will be undertaken to inform the plant search and rescue operation, prior to construction and operational activities commencing.
  - 11.11 Should any plants or geophytes of significant conservation value be found along the road verges/shoulders it should be managed in accordance with the search and rescue protocol described in the Environmental Management Programme.

An application for amendment to the EMP must be submitted to the competent authority if any further amendments are to be made to the EMP, other than those mentioned above, and this may only be implemented once the amended EMP has been authorised by the competent authority. The EMP must be included in all contract documentation for all phases of implementation.

12. A copy of the environmental authorisation and the EMP must be kept at the site where the listed activities will be undertaken. Access to the site referred to in section C above must be granted and, the environmental authorisation and EMP 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. The environmental authorisation and EMP must also be made available for inspection by any employee or agent of the applicant who works or undertakes work at the site.
13. Should any detail with respect to the environmental authorisation have to be amended, added; substituted; corrected; removed or updated; including the transfer of rights and obligations attached to this Environmental Authorisation, the holder of the environmental authorisation must –
  - 13.1 submit an originally signed notification to the competent authority detailing the aforementioned; and



- 13.2 receive written confirmation from the competent authority permitting such changes to the Environmental Authorisation or transfer of rights and obligations, prior to such changes to the Environmental Authorisation being effected.
14. Non-compliance with a condition of this environmental authorisation or EMP may result in suspension of this environmental authorisation and may render the holder liable for criminal prosecution.
  15. Notwithstanding this environmental authorisation, the holder must comply with any other statutory requirements that may be applicable to the undertaking of the listed activities.
  16. The holder must appoint a suitably experienced environmental control officer ("ECO") for all phases of implementation before commencement of any land clearing or construction activities to ensure compliance with the EMP and the conditions contained herein.
  17. An integrated waste management approach, which is based on waste minimisation and incorporates reduction, recycling, re-use and disposal, where appropriate, must be employed. Any solid waste must be disposed of at a landfill licensed in terms of the applicable legislation.
  18. No surface or ground water may be polluted due to any actions on the site. The applicable requirements with respect to relevant legislation pertaining to water must be met.
  19. The applicable requirements with respect to relevant legislation pertaining to occupational health and safety must be adhered to.
  20. Should any heritage remains be exposed during excavations or any actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape (in accordance with the applicable legislation). 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: archaeological remains (including fossil bones and fossil shells); 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; rock art and rock engravings; shipwrecks; and graves or unmarked human burials.

A qualified archaeologist must be contracted where necessary (at the expense of the applicant and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority.

## F. APPEALS

Appeals must comply with the provisions contained in Chapter 7 of the Environmental Impact Assessment Amendment Regulations, 2010.

### 1. An appellant must –

- 1.1. submit a notice of intention to appeal to the Minister, within 20 (twenty) calendar days of the date of the decision;

- 1.1.1 If the appellant is an applicant, the appellant must provide each person and organ of state which was a registered interested and affected party in relation to the applicant's application, within 10 days of having submitted the notice with the Minister, with—
  - (a) a copy of the notice lodged with the Minister; and
  - (b) a notice indicating that the appeal submission will be made available on the day of lodging it with the Minister and where and for what period the appeal submission will be available for inspection by such person or organ of state.
- 1.1.2 If the appellant is a person other than an applicant, the appellant must provide the applicant, within 10 days of having lodged the notice with the Minister, with—
  - (a) a copy of the notice lodged with the Minister and
  - (b) a notice indicating where and for what period the appeal submission will be available for inspection by the applicant.
- 1.2. submit the appeal within 30 (thirty) calendar days after the lapsing of the 20 (twenty) calendar days contemplated in regulation 60(1), for the submission of the notice of intention to appeal; and
- 1.3 that a responding statement may be made on the appeal within 30 (thirty) calendar days from the date the appeal submission was lodged with the Minister and
- 1.4 if a respondent introduces any new information not dealt with in the appeal submission of the appellant, the appellant is entitled to submit an answering statement to such new information to the Minister within 30 days of receipt of the responding statement.
2. A person, organ of state or applicant who submits a responding or answering statement in terms of regulation 63 must within 10 (ten) calendar days of having submitted the responding or answering statement, serve a copy of the statement on the other party.
3. All notice of intention to appeal and appeal forms must be submitted in hard copy by means of one of the following methods:
  - 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

**NO** appeal, responding and answering statement may be lodged by e-mail.

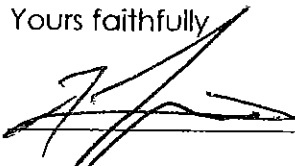
4. A prescribed notice of intention to appeal form and appeal form as well as assistance regarding the appeal processes is obtainable from the office of the Minister at: Tel. (021) 483 3721, E-mail Jaap.DeVilliers@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

**G. 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. KOBUS MUNRO**

**DIRECTOR: LAND MANAGEMENT (REGION 3)**

DATE OF DECISION: 13.10.2014

Copied to: Mr. G. Nel      Environmental Assessment Practitioner      Fax: (021) 870 1873  
 Mr. G. Fourie      Kannaland Municipality      Fax: (044) 213 3295

**FOR OFFICIAL USE ONLY**

**EIA REFERENCE NUMBER**

16/3/1/1/D3/4/0008/13

**NEAS EIA REFERENCE NUMBER**

WCF/EIA/0001/46/2013

## **ANNEXURE 1: REASONS FOR THE DECISION**

**In reaching its decision, the competent authority, *inter alia*, considered the following:**

- a) The information contained in the application form received by the competent authority on 01 March 2013, the Final Basic Assessment Report ("BAR") dated 13 June 2014 and the EMP submitted together with the aforementioned BAR ;
- b) Relevant information contained in the Departmental information base, including, the Guidelines on Public Participation, Alternatives and Exemptions (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 interested and affected parties and the responses provided thereon, as included in the aforementioned BAR dated 13 June 2014; and
- e) The sense of balance of the negative and positive impacts and proposed mitigation measures.

Date of Site Visit: 21 July 2014

Persons Present: Shireen Pullen (DEA&DP) and Clyde Lamberts (CapeNature)

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 which, according to the competent authority, were the most significant reasons for the decision is set out below.

### 1. Public Participation

#### **The public participation process included:**

- 6 February 2014 - 20 March 2014: Public Participation held for the proposed upgrade of Divisional Road 1688 and Divisional Road 1699);
- 6 February 2014: Newspaper advertisement of the proposal was placed in the "Oudtshoorn Herrie";
- 6 February 2014: 8 Site Notices were erected at visible and accessible locations along the DR 1688 and DR1699:
  - 1 Site Notice at the beginning of DR1699
  - 1 Site Notice at the end of DR1699
  - 6 Site Notices on visible locations along DR1688
- 6 February 2014: Provincial Authorities, Local Authorities, Service Providers, Ward Councillors, Non-governmental organizations, and directly adjacent landowners were notified via post;
- 24 April 2014 - 21 May 2014: Second round of public participation process was held for a 21 day period; and
- 24 April 2014 - 21 May 2014: A copy of the Basic Assessment Report was made available at the Caltizdorp and Oudtshoorn Public Library.

### 3. Alternatives

#### **Layout Alternative 1 (Preferred Alternative):**

Divisional Road 1688 starts at the intersection with Trunk Road 31/6 in Caltizdorp and continues for 43.07 km in a South Easterly direction towards Oudtshoorn where it again ties in with Trunk Road 31/6, better known as Route 62. Divisional Road 1699 starts at the intersection

with Divisional Road 1688 and continues for 1.20km to where it intersects with Divisional Road 1661 near the Calitzdorp Station.

### **DR1688**

Upgrading of DR1688 will entail:

DR1688 consist of a severely degraded concrete block road. This road was identified to be upgraded to a surfaced road.

- Section 1 of DR1688 from km 1.07 to km 4.68 will be rehabilitated to a Class 3 road with 2 x 3.4m surfaced lanes, 2 x 0.9m surfaced shoulders and 2 x 0.6m gravel shoulder using. Existing degraded culverts will be widened to tie in with the new cross section.
- Section 2 of DR1688 from km 4.68 to km 15.18 will be rehabilitated to a Class 4 road with 2 x 3.4m surfaced lanes and 2 x 0.9m gravel shoulders using.
- Section 3 of DR1688 from km 15.18 to km 43.07 will be rehabilitated to a Class 4 road with 2 x 3.4m surfaced lanes and 2x 0.9 gravel shoulders using -
  - A minimum design speed of 80km/h.
  - 100km/h Maximum speed signage.
- DR 1688 will be rehabilitated and minor adjustments will be made to the alignment to provide a roadway with an 80km/h design speed where economically feasible.

The existing compacted and degraded road verges/shoulders are large enough for the proposed upgrade and widening without entering the adjacent areas towards the fence line and inwards containing natural vegetation. The upgrade and widening activities of DR1688 will remain within the existing compacted road verges/shoulders. No significant vegetation will be impacted upon.

### **DR1688 Horizontal Alignment**

The current horizontal alignment was checked from the survey and the minimum curve radii were evaluated to determine the original design speed. The curves at km 1.20 and km 2.00 comply with a 60km/h and 70km/h design speed respectively. These two curves will not be altered due to lateral space constraints and as it is still close to the town of Calitzdorp it will only be signed at a lower speed limit than the rest of the roadway. The rest of the horizontal alignment allows for an 80km/h and in most cases 100km/h design speeds to be used with minimal adjustments. An 80km/h design speed will be used to evaluate and adjust the current horizontal alignment where necessary.

### **DR1688 Vertical Alignment**

Vertically, the 43km roadway will need substantial adjustment. The foremost problem in this regard is the flat longitudinal grades that are prevalent on long sections of road. A minimum grade of 0.35% is prescribed by the PGWC Geometric Design Manual. To improve drainage along the route this value will be observed as an absolute minimum. It must be noted that it was necessary to deviate from the existing vertical alignment in certain areas to correct curves and straighten wave like features of the roadway. However, approximately 85% of the roadway is within 150mm from the original levels. The localised areas where corrections are need are tabled below.

Another improvement to the vertical alignment will be to fit vertical curves inside a coinciding horizontal curve, if any. This will only be done where economically feasible. Again when considering the K-values and curve lengths for each crest or sag, consideration will be given to the validity of a design speed criteria. The effect will be to rather use desirable K-values instead of minimum K-values for the 80km/h design speed.

### **DR1699**

DR 1699 is 1.20 km in length and was identified to be upgraded from a gravel road to a surfaced standard road. Upgrading of

#### DR1699 will entail:

DR 1699 from km 0.00 to km 1.20 will be upgraded to a Class 4 road with 2 x 3,1m surfaced lanes and 2 x 0.9m gravel shoulders using -

- A minimum design speed of 50km/h.
- 60km/h Maximum speed signage.

DR 1699 will be upgraded, but very little changes will be made to the alignment and a design speed of 50km/h will be used. The existing compacted road verges/shoulders is large enough for the proposed upgrade without entering the adjacent areas which might contain natural vegetation. The upgrade and widening activities of DR1699 will remain within the existing compacted/degraded road verges/shoulders.

#### **Bridges**

Localised repairs and maintenance of the following four bridges are situated along DR1688:

Km	Description and Size	River	Road Width
14.83	B0474-2X9.6mx2.4m	Breelaagte River	6.0m
19.53	B0473-9.8mx2.4m	Dongaskloof River	6.0m
25.73	B1730 2x13.0mx2.4m	Vlei River	5.4m
38.85	B1731 3x6.8m	Wynands River	5.4m

#### **Culverts**

The following culverts exceeding 1.0m in size are situated along DR1688 will be repaired and if necessary upgraded to comply with the Branch's minimum standards. It is envisaged that the culverts that are extended with Armco sheeting be repaired with concrete extensions. The following 23 large culverts exceeding 1.0m in size are situated along DR1688.

Km	Description & Size	Km	Description & Size	Km	Description & Size
2.95	4/1.20m PC	23.98	2.40m BC AR	32.41	2/2.50m BC
3.64	2/1.8m BC	27.2	C11065 3.1m BC	38.54	2.1m BC
5.48	C11067 2/4.6m BC CW	27.23	1.0m BC	38.71	1.80m BC
14.81	C11066 4.6m BC	28.57	2.70m AR + 2.40m BC	39.19	1.5m BC
17.9	2/2.50m BC	29.62	1.20m AR	39.63	C11064 2.5m BC

20.6	2.40m BC	29.76	2/2.70m BC	40.2	1.00m BC
21.52	2.40m BC	30.01	1.5m BC	41.92	1.00m BC
22.9	2/1.90m BC	31.02	1.25m BC		

According to the Basic Assessment Report traffic impacts are expected during the construction phase since there will be more large construction vehicles using the roads. A stop-go system needs to be implemented during the construction phase. No additional traffic impacts are expected during the operational phase. There will be noise impacts during the construction phase but since these will only be temporary the noise impacts are not expected to be significant seeing that the upgrade will take place in a farming environment situated outside of any towns. No additional noise impacts are expected during the operational phase, when compared to the current situation. Visual impacts are expected during the construction phase, however since these impacts will only be temporary they are not expected to be significant. No visual impacts are expected during the operational phase. In fact the visual impact will be improved due to the proposed road, road verges, and storm water infrastructure upgrade. Since the road and road reserves have already be severely degraded and disturbed due to erosion, road construction, road verge/shoulder maintenance and agricultural activities, it is not expected that any artefacts of historical or archaeological significance will be found on these sites.

### **Design Alternative 1 (Preferred Design)**

Headwalls at the upstream side of the roads will be constructed with concrete. This will ensure that the structural integrity of the roads will be better protected against the negative structural impacts of water.

### **Design Alternative 2**

Headwalls at the upstream side of the roads will be constructed with gabions. This will help groundwater flow, but may have a negative impact on the structural integrity of the roads.

### **By Pass Alternatives**

#### **By Pass Alternative (Preferred Bypass)**

During the upgrade of DR1699 and DR1688 the traffic needs to be managed. It is recommended that a stop and go approach will be implemented to adequately manage the traffic with half width construction. This alternative will both benefit the residents and public that resides in the surrounding area, as well as the natural environment.

Residents and Public: Farmers utilising the DR1699 and DR1688 will still be able to gain full access to their farms. People utilising this road to travel from Calitzdorp and Oudtshoorn to De Hoop will still be able to reach their destination without making use of long detours.

Natural Environment: The stop and go alternative is an environmental friendly alternative. No deviation road needs to be constructed. The disturbance to the road will be much less.

#### **By Pass Alternative Closing of Existing Road:**

In this alternative, DR1699 and DR1688 will be closed off. Traffic will be diverted to access the town of De Hoop and the Calitzdorp Spa via the R62.

Although farm owners will be allowed to enter the Construction Site to gain access to their properties, it might happen at certain stages that access will be difficult and dangerous.

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

##### **4.1. Activity Need and Desirability**

This existing road has been identified by the Department of Transport and Public Works as a degraded road that urgently needs to be upgraded. The existing road is highly degraded in its current form and is not cable to accommodate the increasing volume of traffic in the area. These roads are regarded as a safety hazard for all road users. The proposed upgrade of the roads will ensure a much safer utilization of DR1699 and DR1688.

Agricultural vehicles will be able to safely travel on the upgraded road without obstructing oncoming traffic. With the Calitzdorp Spa, a popular tourist facility in close proximity the proposed development will result in safe access for people travelling to and from the Spa. The overall safety of the road is needed and will be accomplished by the proposed development.

##### **4.2. Regional/ Planning Context**

The site is partially inside the Calitzdorp Urban Edge and to a larger extends outside the urban edge of Calitzdorp and Oudtshoorn. The proposed development is in line with the PSDF as it will improve and upgrade road and storm water infrastructure thereby contributing to the existing road infrastructure. The existing road DR1688 and DR1699 is highly degraded in its current form and is not cable to accommodate the increasing volume of traffic in the area.

The proposal is also in line with the Municipality's Integrated Development Plan (IDP) as it will contribute to the infrastructure of the municipalities by improving (surfacing the roads DR1699 and DR1688, upgrading and repairing the existing degraded and eroded culverts and bridges) the existing road infrastructure and adding to it. The proposed road upgrade is encouraged and supported as it will improve the condition of the road and will improve the safety of all pedestrians and motorists using the road.

##### **4.3. Socio Economic**

According to the Basic Assessment Report the current state of the DR1688 and DR1699 is degraded and is not able to accommodate the increasing volume of traffic in the area. It therefore poses a safety hazard for all road users. The proposed upgrade and rehabilitation of the roads will ensure a wider road with a much safer utilization of DR1688 and DR1699. The proposed development will contribute to the following socio-economic aspects:

- Better and safer access to the farms along DR1688 and DR1699.
- Agricultural vehicles will be able to safely travel on the upgraded road without obstructing oncoming traffic.



- Safe access for people travelling to the Calitzdorp Spa.
- A safer utilization of the alternative historic scenic route to Oudtshoorn/Calitzdorp.
- A safer strategic route for Tourism.
- Safer travelling between the towns of Calitzdorp, De Hoop and Oudtshoorn.

Although not a huge contributing factor, the proposed development will create jobs during the construction phase, something greatly needed in the current economic climate.

#### 4.4 Cumulative

The proposed development will result in positive cumulative impacts as it will increase the safety of people travelling on this road.

#### 4.5. Biophysical Impacts

According to the EAP and the botanical specialist, no significant vegetation of conservational importance was identified within the proposed construction footprint (road verges and road shoulders). It was found that the road and road verges/shoulders has been severely eroded and degraded due to erosion, road construction, road maintenance and agricultural activities and is mostly covered in bare soil or is already covered in concrete. It is therefore expected that the proposed upgrade will not have any significant impact on the vegetation of the area.

The adjacent natural vegetation from the fence line inwards falls way outside the construction footprint. A search and rescue operation should however be conducted during Spring, before construction activities commence. This will be carried out by a qualified Botanist. Should any plants or geophytes of significant conservation value be identified along the road verges/shoulders, the Botanist needs to compile a list of these plants and specify a suitable receptor site where it can be replanted.

Notwithstanding the above, CapeNature requested that a botanical survey be done during spring and prior to the decision being issued. The EAP agreed and indicated that such a survey be done prior to the commencement of construction activities.

The visual and ecological value of the road verges/shoulders will be improved due to the fact that the existing degraded road verges/shoulders will be upgraded and rehabilitated by means of hydro seeding the road verges/shoulders with endemic seeds as per the specification of a qualified Botanist.

No significant impacts are expected on any fauna either. Should any fauna species be found within the road verges/shoulders they will be re-located to the adjacent natural areas.

The proposed roads to be upgraded also cross a few non-perennial watercourses along its route. Due to the fact that the DR1699 and 1688 needs to be widened; most of the existing culverts needs to be repaired and widened. It's highly recommended that these existing degraded culverts be upgraded to ensure adequate flow and erosion management during times of high rainfall.

The area at the culverts which will be disturbed as a result of the construction activities will be rehabilitated by means of hydro seeding these areas with carefully selected endemic seeds as per the specifications of a qualified Botanist (Please refer to the EMP).

Due to the fact that the road and road verges have been severely disturbed and degraded as a result of erosion, road construction, road maintenance and agricultural activities, it is not expected to yield any archaeological material, therefore no impacts are expected on any cultural areas either.

#### 4.6. Biodiversity

According to the Basic Assessment report the site is not located in an Ecological Support Area ("ESA") and Critical Biodiversity Area ("CBA") according to national vegetation map the vegetation that would previously have occurred on the sites would be Muscadel Riviere, Eastern Little Karoo and Gamka Thicket. Muscadel Riviere is an endangered vegetation type and both Eastern Little Karoo and Gamka Thicket is Least Threatened.

Muscadel Riviere occurs over flat, in places very broad alluvia originally supporting a complex of riverine thickets dominated by *Acacia karroo* and accompanying succulent gannabos (*Salsola species*) and low vygie shrublands. Today the typical landscape view of these alluvia is dominated by extensive vineyards and orchards, with a narrow alley of alien woody species (*Eucalyptus species*, *Salix babylonica*) fringing the riverbanks.

Eastern Little Karoo vegetation occurs in irregular flat plains and undulating piedmont hills covered by dense succulent shrubland dominated by Aizoaceae (*Ruschia*, *Drosanthemum*) and Crassulaceae (*Cotyledon*, *Crassula*, *Tylecondon*) and nonsucculent, mainly shrubs such as *Nymania*, *Pteronia* and *Rhus*. The spring displays of annual and geophyte flora are spectacular in years with good rain.

Gamka Thicket occurs in undulating to steep foothills and valleys dominated by a low succulent thicket, sometimes quite open. In its pristine condition dense stands of spekboom (*Portula cariaafr*) occur, often with *Euclea undulata*, *Gloveria integrifolia*, *Pappea capensis* and *Rhus glauca*. Shrubs are also abundant, stem- and leaf-succulents are often prominent, and the grass component is poorly developed, with *Cenchrus ciliaris*, *Ehrharta calycina*, *Eragrostis plana* and *Sporobolus fimbriatus* occasionally abundant after a good rain.

The roads and road verges/shoulders within the construction footprint has either been severely eroded and degraded due to road construction, road verge/shoulder maintenance, erosion and agricultural activities and is mostly covered in bare soil patches. No plants with significant conservation value have been identified within the construction footprint. A Botanical Assessment will be conducted during Spring.

#### 4.7. Freshwater Specialist Report

According to the freshwater assessment, the route runs approximately parallel to and north of the Olifants River. With the exception of rivers that are already spanned by bridges, all of the watercourses transected by the road now form part of the leiwater irrigation system that is a feature of the agricultural practices along the Olifants River. This established network of canals and connecting culverts now constitutes a lattice of man-made streams through the area, providing a substantial degree of artificial stream environment for biota.

The specialist assessment also states that since the road has been in existence for years already, any ecological impacts associated with the road are already in place and will remain the same post-upgrade. The aquatic environments intersected by the road have, with the exception of five watercourses that are spanned by bridges,

become part of the extensive irrigation system serving the area. The resultant, interconnected system of canals and channels, many of which have well-developed riparian vegetation, has replaced the natural condition with an artificial matrix of streamlines, as well as a perennial (aseasonal) water availability in some areas.

The assessment concludes that if the development is undertaken in accordance with standard road building techniques and drainage management as per, for example, SANRAL guidelines, and duly supervised by an Environmental Control Officer, it should not pose any threat to any of the aquatic environments as described in this report.

#### 4.8 Visual

The proposed development is only for the rehabilitation and upgrade of an existing road and therefore the visual and ecological value of the road verges/shoulders and culverts will be improved due to the fact that these existing degraded areas will be upgraded and rehabilitated by means of hydro seeding these areas with endemic seeds as per the specification of a qualified Botanist. The rehabilitation will ensure less erosion to these areas and will positively contribute to the ecological value of these areas.

### 5. Impact Assessment and significance

The proposed road to be upgraded cross a few non-perennial watercourses along its route. Due to the fact that the road needs to be widened; most of the existing culverts needs to be repaired and widened. The watercourses will be demarcated and treated as no-go areas. No significant riparian plant species will be impacted upon by the proposed upgrade

A Botanist has been appointed to conduct a Botanical survey and a search and rescue during the Spring season, before construction activities commences. The Botanical survey will establish if there are any plants or Geophytes of significant conservation value that needs to be protected. The Botanist will compile a list of species of conservation value should any be found during the survey. The Botanist will specify a suitable receptor site to where these species can be re-located.

Traffic impacts are expected during the construction phase since there will be more large construction vehicles using the roads and a stop-go system will be implemented during the construction phase. There will be an impact on the traffic utilizing the Roads during the construction phase, but this will only be temporary. During the upgrade phase of the roads the traffic needs to be managed. It is recommended that a stop and go approach will be implemented to adequately manage the traffic. During the operation phase the proposed upgrade will ensure less accidents and safer utilization of the road. No additional traffic impacts are expected during the operational phase.

There will be noise impacts during the construction phase but since these will be temporary the noise impacts are not expected to be significant. No additional noise impacts are expected during the operational phase, when compared to the current situation.

Visual impacts are expected during the construction phase, however, since these impacts will only be temporary they are not expected to be significant. No significant visual impacts are expected during the operational phase. The visual impact of the upgraded road reserves/shoulders, culverts, bridges as well as the upgraded roads will drastically be improved compared to the current degraded state.

Since the road and road reserves have already be severely disturbed, compacted and degraded it is not expected that any artefacts of historical or archaeological significance will be found on these sites.

### **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.

### **The development will result in both negative and positive impacts.**

#### **Negative Impacts:**

Negative impacts include loss of indigenous vegetation, loss of stockpiled topsoil, dust and noise nuisance, possible interruption of services and traffic, erosion and visual impacts. However, with the implementation of the mitigation measures suggested in the BAR and the EMP, these impacts will all be manageable and of low significance. The proposed development will also result in a low negative impact on the watercourse should all mitigation measures be implemented.

#### **Positive impacts:**

Positive impacts that will result from the development are increased road safety to road users as a result of the much needed re-graveling and maintenance of the DR 1688 and DR 1699. An efficient and well maintained road is of the utmost importance to the community to aid socio-economic development. Therefore, this development will have a positive socio-economic impact.

**In view of the above, the NEMA principles, compliance with the conditions stipulated in this environmental authorisation, and compliance with the EMP, the competent authority is satisfied that the proposed listed activities 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 activities can be mitigated to acceptable levels.**