



**Western Cape
Government**

Final Basic Assessment Report

DR 1797 Road Upgrade Project

DEA&DP Reference Number: 16/3/3/1/D1/9/0011/20

Hatch project number: H357403

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30 November 2020



BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

NOVEMBER 2019

(For official use only)	
Pre-application Reference Number (if applicable):	
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number)

The DR 1797 Road is located on the DR 1797, which is a minor road off the N2 Highway in the Bitou Local Municipality of the Western Cape. This road is a dual lane, single carriageway and is situated in the jurisdiction of the Garden Route District Municipality (formerly known as the Eden District Municipality).

The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a surfaced road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well.

Table 1-1: Property Information for the DR 1797

Province:	Western Cape
District Municipality:	Garden Route District Municipality
Local Municipality:	Bitou Local Municipality
Ward Number:	Ward 1
Area / Town / Village:	Redford Rd (DR 1797 Rd)
Physical Address:	DR 1797
Property Description:	Existing gravel road
21 Digit Surveyor General Number:	Refer to Appendix L for the Property Information
Coordinates:	Refer to Appendix L for the Property Information

Purpose and Content of this Document

Hatch Africa (Pty) Ltd. (Hatch) is appointed by the Western Cape Government: Department of Transport and Public Works (WCG) to conduct both the engineering and construction management, as well as the associated environmental approval process, for the upgrade of the DR 1797 Road (the project) in the Western Cape Province, South Africa.

The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a surfaced road (Special Class 4). The project is located on the DR 1797, which is a minor road off the N2 Highway in the Bitou Local Municipality of the Western Cape. This road is a dual lane, single carriageway and is situated in the jurisdiction of the Garden Route District Municipality (formerly known as the Eden District Municipality). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well.

In terms of the National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA) Environmental Impact Assessment (EIA) Regulations, 4 December 2014 (as amended 2017) (Government Notice Regulation (GNR) 982), the upgrade of the DR 1797 triggers Activity 12 and Activity 19 of Listing Notice 1 (GNR 983). The project thus requires an environmental authorisation (EA) by means of a Basic Assessment (BA) process. The Competent Authority will be the Western Cape Department of Environmental Affairs & Development Planning (DEA&DP).

In accordance with the NEMA EIA Regulations, Interested and Affected Parties (I&APs) have the opportunity to verify that all the issues they raised have been captured, understood, interpreted, contextualized and considered, and to comment on the findings in the report. This is the main purpose of this report; the Final Basic Assessment Report (BAR). The objective of the Final BAR is:

- To determine the policy and legislative context within which the proposed project is located and how the activity complies with and responds to the policy and legislative context
- To identify the alternatives considered, including the activity, location, and technology alternatives
- To describe the need and desirability of the proposed alternatives
- Through the undertaking of an impact and risk assessment process, inclusive of cumulative impacts, to determine the potential impact of the proposed project on the receiving environment and propose measures to avoid, manage or mitigate the impacts
- To assess the receiving environment in terms of the current state
- To meaningfully engage stakeholders at all levels throughout the project, to ensure that the views from I&APs, i.e. the general public, nearby communities, relevant authorities and community-based and non-governmental organisations, on the project are taken into consideration by decision-makers
- To provide and satisfy all of the requirements in terms of Appendix 1 of the NEMA EIA Regulations in order to equip the Competent Authority to make an informed decision with regards to the project.

The public was invited to comment the Draft Basic Assessment Report that was available for public review from 30 September 2020 to 2 November 2020. The Draft BAR is available on the Hatch Website at the following weblink <https://www.hatch.com/Draft-Basic-Assessment-Report-for-the-Upgrade-of-the-DR1797>.

After the public comment period, the Draft BAR was updated with I&AP comments, and this report, Final BAR will be submitted to the DEA&DP for their consideration in consultation with various other authorities, after which a decision will be issued by the DEA&DP.

If you have any further enquiries, please feel free to contact:

Hatch – Attention Michelle Miles
58 Emerald Parkway Road, Greenstone Hill, Johannesburg
Tel: (011) 612 4587 or Cell: 083 602 4988
Email: michelle.miles@hatch.com

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.
2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".
3. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.
4. All applicable sections of this BAR must be completed.
5. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.
6. This BAR is current as of **November 2019**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at <http://www.westerncape.gov.za/eadp> to check for the latest version of this BAR.
7. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.
8. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.
9. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.
10. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.
11. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.
12. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.
13. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link

<https://screening.environment.gov.za/screeningtool> to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

14. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA'), the submission of the Report must also be made as follows, for-
Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS

CAPE TOWN OFFICE: REGION 1 and REGION 2 (Region 1: City of Cape Town, West Coast District) (Region 2: Cape Winelands District & Overberg District)	GEORGE OFFICE: REGION 3 (Central Karoo District & Garden Route District)
<p>BAR must be sent to the following details:</p> <p>Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1 or 2) Private Bag X 9086 Cape Town, 8000</p> <p>Registry Office 1st Floor Utilitas Building 1 Dorp Street, Cape Town</p> <p>Queries should be directed to the Directorate: Development Management (Region 1 and 2) at: Tel: (021) 483-5829 Fax (021) 483-4372</p>	<p>BAR must be sent to the following details:</p> <p>Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530</p> <p>Registry Office 4th Floor, York Park Building 93 York Street George</p> <p>Queries should be directed to the Directorate: Development Management (Region 3) at: Tel: (044) 805-8600 Fax (044) 805 8650</p>

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
<p>Locality Map:</p>	<p>The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following:</p> <ul style="list-style-type: none"> • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. <p>For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken.</p> <p>Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and</p>

	Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	<p>Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following:</p> <ul style="list-style-type: none"> • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development must be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): <ul style="list-style-type: none"> o Watercourses / Rivers / Wetlands o Flood lines (i.e., 1:100 year, 1:50 year and 1:10 year where applicable); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"); o Ridges; o Cultural and historical features/landscapes; o Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow <p>A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.</p>
Site photographs	<p>Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as Appendix C. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.</p>
Biodiversity Overlay Map:	<p>A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as Appendix D.</p>
Linear activities or development and multiple properties	<p>GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system.</p> <p>Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix.</p> <p>For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as Appendix A3.</p>

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment

NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

Note: The Appendices must be attached to the BAR as per the list below. Please use a ✓ (tick) or a x (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			✓ (Tick) or x (cross)
Appendix A:	Maps		
	Appendix A1:	Locality Map	✓
	Appendix A2:	Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning	x
	Appendix A3:	Map with the GPS co-ordinates for linear activities	✓
Appendix B:	Appendix B1:	Site development plan(s)	✓
	Appendix B2	A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;	✓
Appendix C:	Photographs		✓
Appendix D:	Biodiversity overlay map		✓
Appendix E:	Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.		
	Appendix E1:	Final comment/ROD from HWC	✓
	Appendix E2:	Copy of comment from Cape Nature	✓
	Appendix E3:	Final Comment from the DWS DWS has been contacted and comment has been provided. Refer to Appendix F for response to comment.	✓
	Appendix E4:	Comment from the DEA: Oceans and Coast	x
	Appendix E5:	Comment from the DAFF	x
	Appendix E6:	Comment from WCG: Transport and Public Works WCG: Transport and Public Works is the client and provide comments in that capacity- Hatch Appointment Letter Attached.	✓

	Appendix E7:	Comment from WCG: DoA WCG: DoA contacted no comment received from department.	✓
	Appendix E8:	Comment from WCG: DHS	x
	Appendix E9:	Comment from WCG: DoH	x
	Appendix E10:	Comment from DEA&DP: Pollution Management	x
	Appendix E11:	Comment from DEA&DP: Waste Management	x
	Appendix E12:	Comment from DEA&DP: Biodiversity	x
	Appendix E13:	Comment from DEA&DP: Air Quality	x
	Appendix E14:	Comment from DEA&DP: Coastal Management	x
	Appendix E15:	Comment from the local authority	✓
	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management) Bitou Local Municipality contact – Awaiting feedback	✓
	Appendix E17:	Comment from the District Municipality	x
	Appendix E18:	Copy of an exemption notice	x
	Appendix E19:	Pre-approval for the reclamation of land	x
	Appendix E20:	Proof of agreement/TOR of the specialist studies conducted.	✓
	Appendix E21:	Proof of land use rights	x
	Appendix E22:	Proof of public participation agreement for linear activities	✓
Appendix F:	Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.		✓
Appendix G:	Specialist Report(s)		✓
Appendix H:	EMPr		✓
Appendix I:	Screening tool report		✓

Appendix J:	The impact and risk assessment for each alternative	✓
Appendix K:	Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline	x
Appendix L	Property Information	✓
Appendix M	Environmental Application	✓
Appendix N	Pre-Application Process	✓
Appendix O	EAP's CV	✓

SECTION A: ADMINISTRATIVE DETAILS

	CAPE TOWN OFFICE:		GEORGE OFFICE:
Highlight the Departmental Region in which the intended application will fall	REGION 1 (City of Cape Town, West Coast District)	REGION 2 (Cape Winelands District & Overberg District)	REGION 3 (Central Karoo District & Garden Route District)
Duplicate this section where there is more than one Proponent	Western Cape Provincial Government: Department of Transport and Public Works		
Name of Applicant/Proponent:	Azni November		
Name of contact person for Applicant/Proponent (if other):	Not Applicable		
Company/ Trading name/State Department/Organ of State:	Not Applicable		
Company Registration Number:	Not Applicable		
Postal address:	9 Dorp Street		
	Cape Town	Postal code: 8001	
Telephone:	(021) 483 0536	Cell: Not applicable	
E-mail:	Azni.November@westerncape.gov.za	Fax: Not applicable	
Company of EAP:	Hatch Africa (Pty) Ltd (Please refer to Appendix O for full EAP CV)		
EAP name:	Michelle Miles		
Postal address:	Hatch, Private Bag X20, Gallo Manor		
		Postal code: 2052	
Telephone:	(011) 612 4587	Cell: 083 602 4988	
E-mail:	Michelle.miles@hatch.com	Fax: Not applicable	
Qualifications:	BSc Honours (Environmental Water Management) BSc (Environmental Science & Geography) (Please refer to Appendix O for full EAP CV)		
EAPASA registration no:	No. 2020/1057		
Duplicate this section where there is more than one landowner	Western Cape Provincial Government: Department of Transport and Public Works		
Name of landowner:	Azni November		
Name of contact person for landowner (if other):	Not Applicable		
Postal address:	9 Dorp Street		
	Cape Town	Postal code: 8001	
Telephone:	(021) 483 0536	Cell: Not applicable	
E-mail:	Azni.November@westerncape.gov.za	Fax: Not applicable	
Name of Person in control of the land:	Azni November		
Name of contact person for person in control of the land:	Azni November		
	9 Dorp Street		

Postal address:		
	Cape Town	Postal code: 8001
Telephone:	(021) 483 0536	Cell: Not applicable
E-mail:	Azni.November@westerncape.gov.za	Fax: Not applicable

Duplicate this section where there is more than one Municipal Jurisdiction	Bitou Local Municipality	
Municipality in whose area of jurisdiction the proposed activity will fall:		
Contact person:	Anjé Taljaard	
Postal address:	Office No. 50, Second Floor, Melville's Corner, 3 Kloof Street, Plettenberg Bay	
		Postal code: 6600
Telephone	(044) 501 3318	Cell: Not applicable
E-mail:	ataljaard@plett.gov.za	Fax: Not applicable

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INCLUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New	<input checked="" type="checkbox"/>	Expansion	<input type="checkbox"/>
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				
The DR 1797 Road is an existing road and is thus deemed a brownfields site; however, road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. The areas outside of the road reserve are considered to be greenfield sites.					
3.	For Linear activities or developments				
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:				
Please refer to Appendix L for the property information.					
3.2.	Development footprint of the proposed development for all alternatives.				9,300 m²
The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.					
However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m².					
Due to the nature of the project, that being an upgrade of the existing DR 1797 Road, no route alternatives were considered.					
3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.				
The surfacing width of the proposed cross section is 7.4 m and consists of two lanes of 3.4 m wide. There will be a shoulder width of 0.3 m and a rounding of 0.6 m.					
3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.				
The DR 1797 Road is situated within the Western Cape Province, just under 20 km from the provincial boarder of the Eastern Cape. The DR 1797 Road falls within The Craggs which is 20 km north of Plettenberg Bay and falls within the Garden Route District Municipality and the Bitou Local Municipality.					
The main access road to the existing DR 1797 Road is off the National (N)2 Highway.					
3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives	Please refer to Appendix L for the property information.			
3.6.	Starting point co-ordinates for all alternatives				
	Latitude (S)	33°	57'	16.9604"	
	Longitude (E)	23°	28'	29.0593"	
	Middle point co-ordinates for all alternatives				
	Latitude (S)	33°	56'	19.9031"	
	Longitude (E)	23°	27'	21.2991"	
	End point co-ordinates for all alternatives				
	Latitude (S)	33°	55'	38.8414"	

	Longitude (E)	23°	26'	11.1616"
Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.				
4.	Other developments (Not Applicable)			
4.1.	Property size(s) of all proposed site(s):			m ²
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):			m ²
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:			m ²
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).			
4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.			
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:			
4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	°	'	"
	Longitude (E)	°	'	"

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.		NO
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2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.		NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	YES	
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	YES	
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.		NO
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")		NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").		NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").		NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.		NO

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
None

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.
<p>The following framework documents have been considered:</p> <p><u>Western Cape Provincial: Spatial Development Framework, March 2014:</u></p> <p>The Western Cape Spatial Development Framework (SDF) focuses on accessibility of smaller communities to improve the economy of these communities, as well as improve access to services and amenities such as hospitals and schools. The DR 1797 Road is in support of the PSDF as this road provides an important</p>

connection for the surrounding community to the N2 National Highway, which provide access to Plettenberg Bay and Knysna.

Eden District Municipality Spatial Development Framework, November 2017:

One of the objectives of the Eden District Municipality SDF, is equitable and inclusive regional accessibility. This objective looks mainly at the development of transport systems within the Eden District Municipality, which must gear the region for increased levels of growth and jobs. The upgrade of the DR 1797 Road is in support of this objective. The DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area.

Bitou Local Municipality Draft Spatial Development Framework, November 2019:

The Bitou Local Municipality SDF highlights municipal land use and spatial structure major road networks, which are important to the municipal area as they provide access to rural parts of the municipality. The DR 1797 Road (Redford Road) has been identified as one of these roads.

Bitou Municipality Revised Integrated Development Plan 2017-2022 (2020/2021):

The Bitou Local Municipality Integrated Development Plan (IDP) outlines the priority projects / actions for implementation within the area. One of these projects under the Roads and Transport Department, is to "Ensure proper maintenance of priority secondary tourism routes: Forest Hall, Redford, Keurbooms, Harkerville, R340". Due to this, the upgrade of the DR 1797 Road (Redford) is within the municipal and provincial plans to be upgraded to maintain tourism routes.

Garden Route Environmental Management Framework:

The Environmental Management Framework (EMF) for the Garden Route: National Lakes Area, was released to the public in January 2010. The EMF covers the towns of Wilderness, Sedgefield and Knysna, as well as parts of the George and Knysna Municipalities. The EMF does not cover the area where the DR 1797 road upgrade will occur and thus does not apply to this project.

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.

Guideline on Alternatives, EIA Guideline and Information Document Series (DEA&DP, 2010a):

The NEMA EIA Regulations states that information on reasonable alternatives should be given. The following alternatives have been considered and are discussed in more detail below:

- Road design and alignment
- No-go alternative.

1. Road Design and Re-alignment

The positive and negative implications to the applicant, the community, the local economy and the biophysical environment must be considered, should WCG be allowed to upgrade the DR 1797 Road. These are discussed in more detail below.

1.1 The Applicant and Local Economy

The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.

The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.

Another objective of the DR 1797 Road upgrade is to provide Expanded Public Works Programme (EPWP) work opportunities, develop emerging Construction Industry Development Board (CIDB) contractors and

contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.

The DR 1797 Road upgrade will result in resurfacing the current gravel road to a bitumen surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.

1.2 The Community

A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:

- The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition
- That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h
- That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic.

Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.

1.3 The Environment

The DR 1797 Road upgrade will require vertical and horizontal realignment to allow for a 60 km/hr design speed and to eliminate a driver's blind rise. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve. The Hatch Engineering Team conducted a survey at the commencement of the project to minimise the overall impact that the route realignment would have on agricultural activities as well as the surrounding environment. The outcome is that areas which will be expropriated, are mainly the property verges to reduce the overall impact on agriculture and avoid socio-economic impacts on the landowners.

The ecological needs and desirability associated with the DR 1797 upgrade are mainly positive. The area drains from the north-east of the DR 1797 Road in a south-westerly direction as there is a mountainous area situated north. Due to this, the only drainage along the DR 1797 Road is through culverts and side drains. The drainage through the DR 1797 Road has not been maintained and the pipe and box culvert barrels will be replaced as part of the road upgrade. The new pipe and box culvert barrels will facilitate a more natural water drainage flow pattern and will thus have a positive impact on the surrounding ecology.

Negative impacts associated with the DR 1797 Road upgrade construction can be easily mitigated.

2. No-Go Alternative

The no-go alternative must be considered for the DR 1797 Road upgrade. The positive and negative implications to the applicant, the community, the local economy and the biophysical environment must be considered, should WCG not be allowed to upgrade the DR 1797 Road. These are discussed in more detail below.

2.1 The Applicant and Local Economy

Should the DR 1797 Road upgrade not proceed an opportunity will be lost to provide smaller communities with improved accessibility and a potential improved economy.

The no-go alternative will entail leaving the DR 1797 gravel road in its present state. This would require an increased amount of maintenance. However, in some instance, the minor culverts could remain blocked due to overgrown vegetation, including alien invasive vegetation, and may result in an impact on drainage water patterns and the roads integrity.

In addition to this the Eden District Municipality as well as the Bitou Local Municipality will not meet their target in terms of their associated IDPs. This could result in the project being delayed which could result in funding being lost for the proposed upgrade activities. If the DR 1797 Rd is upgraded, this could result in potential job opportunity due to the increase in tourism. If the DR 1797 upgrade project does not occur this could result in a loss of tourism which, indirectly, could result in the local economy stagnating.

2.2 The Community

For this project, the no-development option would mean not undertaking the DR 1797 Road upgrade. If the construction of the road upgrade does not take place, job opportunities for the local community, as contractors and sub-contractors are appointed, will not be realised. In addition, the opportunity for skills transfer, and/or possible skill development will not occur. Furthermore, expropriation of land would not be required should the DR 1797 Road upgrade not proceed.

2.3 The Environment

The DR 1797 is an existing gravel road with some minor culverts which allow the flow of drainage water from one side of the road to the other. The current condition of the minor culverts is poor due to build-up of debris and vegetation blockages. Furthermore, the lack of maintenance on these culverts has led to overgrown vegetation, including alien invasive species, and may result in an impact on drainage water patterns and the roads integrity. If the DR 1797 Road is not upgraded the debris build-up and vegetation blockages will remain, resulting in poor drainage water patterns within the area. In addition to this, alien invasive vegetation will not be removed and could spread further within the watercourse as well as along the road reserve.

Furthermore, expropriation of land would not be required should the DR 1797 Road upgrade not proceed. This would have a positive impact on the affected areas as not land would be lost to the realignment of the DR 1797 Road.

DEA (2017), Guideline on Need and Desirability, Department of Environmental Affairs, Pretoria, South Africa:

1. Need and Desirability of the Project

A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:

- The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition
- That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h
- That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic.

Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community.

The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.

Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.

1.1 Ecological Need and Desirability

The DR 1797 is an existing gravel road with some minor culverts which allow the flow of drainage water from one side of the road to the other. The current condition of the minor culverts is poor due to build-up of debris and vegetation blockages. Furthermore, the lack of maintenance on these culverts has led to overgrown vegetation, including alien invasive species, and may result in an impact on drainage water patterns and the roads integrity. If the DR 1797 Road is not upgraded the debris build-up and vegetation blockages will remain, resulting in poor drainage water patterns within the area. In addition to this, alien invasive vegetation will not be removed and could spread further within the watercourse as well as along the road reserve.

1.2 Socio-Economic Need and Desirability

The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.

The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.

Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CDB contractors and contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.

The DR 1797 Road upgrade will result in resurfacing the current gravel road to a bitumen surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.

1.3 Planning Need and Desirability

Western Cape Provincial: Spatial Development Framework, March 2014:

The Western Cape PSDF focuses on accessibility of smaller communities to improve the economy of these communities, as well as improve access to services and amenities such as hospitals and schools. The DR 1797 Road is in support of the PSDF as this road provides an important connection for the surrounding community to the N2 National Highway, which provide access to Plettenberg Bay and Knysna.

Eden District Municipality Spatial Development Framework, November 2017:

One of the objectives of the Eden District Municipality SDF, is equitable and inclusive regional accessibility. This objective looks mainly at the development of transport systems within the Eden District Municipality, which must gear the region for increased levels of growth and jobs. The upgrade of the DR 1797 Road is in support of this objective. The DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area.

Bitou Local Municipality Draft Spatial Development Framework, November 2019:

The Bitou Local Municipality SDF highlights municipal land use and spatial structure major road networks, which are important to the municipal area as they provide access to rural parts of the municipality. The DR 1797 Road (Redford Road) has been identified as one of these roads.

Bitou Municipality Revised Integrated Development Plan 2017-2022 (2020/2021):

The Bitou Local Municipality IDP outlines the priority projects / actions for implementation within the area. One of these projects under the Roads and Transport Department, is to "Ensure proper maintenance of priority secondary tourism routes: Forest Hall, Redford, Keurbooms, Harkerville, R340". Due to this, the upgrade of the DR 1797 Road (Redford) is within the municipal and provincial plans to be upgraded to maintain tourism routes.

Garden Route Environmental Management Framework:

The EMF for the Garden Route: National Lakes Area, was released to the public in January 2010. The EMF covers the towns of Wilderness, Sedgefield and Knysna, as well as parts of the George and Knysna Municipalities. The EMF does not cover the area where the DR 1797 road upgrade will occur and thus does not apply to this project.

Integrated Environmental Management Guideline Series 5: Companion to the NEMA EIA Regulations 2010 (DEA, 2010a):

This Guideline on conjunction with Regulation 19 and Appendix 1 of the NEMA EIA Regulations was considered during the Basic Assessment (BA) process. The BA process encompasses the following:

- Pre-application process
- Application process as described in Regulation 16 – An application for the EA process was submitted to the DEA&DP on 11 September 2020, with acknowledgement received on 21 September 2020 (Appendix M).
- Public participation process (PPP) as described in Regulations 41, 42, 43 and 44

- Compilation of a BAR in accordance with Regulation 19(3) and Appendix 1
- Undertaking of specialist study reports in accordance with Regulation 19(8) and Appendix 6
- Compilation of an Environmental Management Programme (EMPr) in accordance with Regulation 19(4) and Appendix H
- Review and decision taken by the DEA&DP in accordance with Regulation 20.

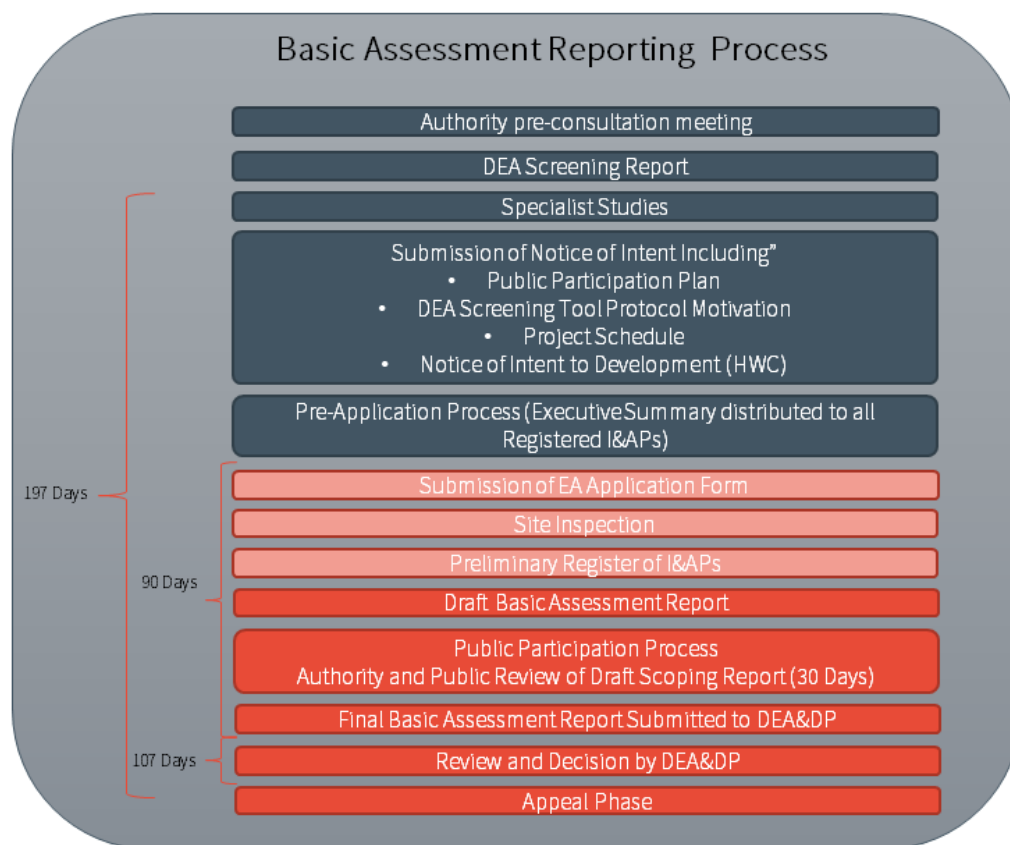


Figure 1: Basic Assessment Process

Integrated Environmental Management Guideline Series 7: Public Participation in the EIA Process (DEA, 2010b):

Public participation was carried out in line with this Guideline refer to Section F: Public Participation.

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form

The key protocol / procedure referred to in the NOI and application form, is the Procedure for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), when applying for environmental authorisation (EA), Governmental Gazette No. 43110, 20 March 2020.

2. Introduction

As of 4 October 2019, it became a compulsory requirement to submit a report generated by the national web-based environmental screening tool in terms of section 24(5)(h) of the NEMA and Regulation 16(1)(b)(v) of the NEMA Environmental Impact Assessment (EIA) Regulations, 2014 (as amended 2017), when submitting an application for EA in terms of regulation 19 and regulation 21 of the NEMA EIA Regulations.

Furthermore, procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the NEMA when applying for EA, were promulgated by the Department of Environment, Forestry and Fisheries (DEFF) on 20 March 2020 (the "procedures"). These procedures prescribe general requirements for undertaking site sensitivity verification and for protocols for the assessment and minimum report content requirements of environmental impacts for environmental themes for activities requiring EA. When the requirements of a protocol apply, the requirements of Appendix 6 of the NEMA EIA Regulations, are replaced by these requirements.

Due to this, the EAP motivated for the required specialist assessments based on the Environmental Screening Tool Report generated for the DR 1797 Road upgrade, as well as the applicable environmental themes which do not require a specialist assessment, but rather a Compliance Statement.

3. Environmental Themes

Based on the procedures, the DEFF Environmental Screening Tool was used to identify sensitivities around the areas to be expropriated. The generated Site Sensitivity Report indicated two areas of "Very High" Sensitivity, namely Agriculture, Aquatic and Terrestrial Biodiversity. Freshwater and botanical specialists were appointment to undertake the necessary specialist studies (for a copy of the specialist studies refer to Appendix G).

The following sub-sections summarise the sensitivities of the 'environmental themes' along the DR 1797 Road, and motivation was given to negate the need for undertaking specialist assessments for those themes with lower sensitivities.

3.1 Agriculture

The DEFF Environmental Screening Tool identified that the areas which are to be expropriated along the DR 1797 Road, range between a "Medium" sensitivity and a "Very High" sensitivity. Based on a desktop assessment, as well as consultation with the engineering team, it has been determined that the expropriation areas will not affect agricultural land. The areas which have been identified for expropriation will remain on the property verges, which is already disturbed land (maximum 3 m from the road reserve).

A desktop assessment was conducted of the area classified as a "Very High" Agricultural Sensitivity. The area is classified as Viticulture; however, after a desktop analysis there are no vines within the expropriation area.

Due to this, the EAP has motivated that an Agricultural Agro-Ecosystems Assessment is not required for this project. However, an Agricultural Compliance Statement will be submitted by a soil scientist or agricultural specialist registered with the South African Council for Natural Scientific Professionals (SACNASP).

3.2 Animal Species

According to the DEFF Environmental Screening Tool, the DR 1797 Road expropriation areas fall within a "Medium" terrestrial animal sensitivity. The DR 1797 is an existing road and the areas to be expropriated have been chosen to reduce the negative impact on the natural environment along the road. The majority of the area to be expropriated is disturbed, with very little or no natural vegetation remaining.

Due to this, the EAP has motivated that a Terrestrial Animal Species Impact Assessment is not required for this project. During construction, a procedure will be included in the Construction Environmental Management Plan (CEMP) to relocate any possible animal species indicated in the DEFF Environmental Screening report (as well as other important species).

3.3 Aquatic Biodiversity

The DR 1797 Road falls within a Freshwater Ecosystem Priority Area, as well as a Strategic Water Source Area. In addition to these areas, there are some culverts which will be replaced as part of the upgrade activities, which has resulted in the need for a specialist study.

There will also be a major culvert constructed due to the realignment and raising of the road at Km 0.75. This culvert will be constructed to accommodate Whiskey Creek.

An aquatic specialist was appointed to conduct an aquatic assessment of the area in accordance with the protocols (for a copy of the specialist study refer to Appendix G).

3.4 Archaeological and Cultural Heritage

Based on the DEFF Environmental Screening Tool, there are three areas which have a "High" Sensitivity classification. Two out of the three "High" sensitivity areas are due to being within 1 km of a protected area and the remaining sensitive area is within 500 m of an Important Wetland.

The DR 1797 is an existing road and the majority of the upgrade activities will remain within the road reserve. No major excavation will be conducted.

A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape (HWC) outlining the project, as well as the history of the area. The HWC indicated that there is no reason to believe that the proposed upgrade of the existing DR 1797 Road will impact on heritage resources, and as such, no further action under Section 38 of the National Heritage Resources Act (Act No. 25 of 1999) is required (refer to response in Appendix E1).

However, should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works will be stopped immediately and HWC notified.

Due to this, the EAP has motivated that a Heritage Specialist Study is not required for this project. During construction, a 'Chance Find Procedure' will be included in the CEMP.

3.5 Civil Aviation

The DEFF Environmental Screening Tool identified the area as a "Medium" sensitivity, as the DR 1797 Road is within 15 km from a Civil Aviation Aerodrome. Based on a desktop assessment, the closest aerodrome to the project site is in Plettenberg Bay.

The upgrade of the DR 1797 Road is not anticipated to have any negative impacts on civil aviation installations, as the road is existing. During the upgrade of the road, the largest machinery which will be used will be an excavator.

The South African Civil Aviation Authority (SACAA) has been emailed and the EAP is awaiting a reply.

3.6 Paleontology

The Paleontology Sensitivity has been classified as "Medium" in terms of sensitivity due to the rock units found within the area. Thus, there is a chance that fossils may be found within the area. However, based on the proposed activities, the majority of the work will remain within the existing road reserve, which is predominately disturbed. A procedure will be included in the CEMP in the case of any fossils being found during the upgrade activities. The area where expropriation will occur, is already transformed by the previous landowners.

Due to this, the EAP has motivated that no additional studies will be required.

3.7 Defence

The DR 1797 is an existing road within a rural area. According to the DEFF Environmental Screening Tool, the area is within a "Low" sensitivity with regards to Defence. As the road is existing and the expropriation areas are not more than 3 m in total, it is anticipated that there will be no negative impact on defence installations.

The Obstacle Evaluation Committee (OEC) has been emailed and the EAP is waiting a reply.

3.8 Terrestrial

According to the DEFF Environmental Screening Tool, the DR 1797 Road intersects with the following terrestrial biodiversity sensitivities:

- Terrestrial Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs)

- Indigenous forest
- Strategic Water Source
- Freshwater Ecosystem.

The existing DR 1797 Road traverses CBAs and ESAs. Due to this, a botanical specialist was appointed to conduct a specialist assessment on the area surrounding the DR 1797 Road, including areas to be expropriated.

North of the DR 1797 Road, the DEFF Environmental Screening Tool indicated a small area where indigenous forest occurs. It should be noted that areas of expropriation will occur within already disturbed areas (areas already cleared as fire breaks) and that no indigenous forest area will be impacted on.

The Strategic Water Source and Freshwater Ecosystem have been assessed by the appointed aquatic specialist (for a copy of the specialist study refer to Appendix G).

A botanical specialist was appointed to conduct a botanical assessment in accordance with the protocols (or a copy of the specialist study refer to Appendix G).

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 1	Describe the portion of the proposed development to which the applicable listed activity relates.
Activity 12	The development of (ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs (a) within a watercourse.	This activity will be triggered due to the development of the major culvert at km 0.705 over a tributary of the Whiskey Creek. The culvert structure will be 5 m wide X 3 m high X 19.5 m long (i.e. ±850 m ²), with the culvert extension outside the road reserve.
Activity 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.	This activity will be triggered as more than 10 m ³ of soil, sand, shells, shell grit, pebbles or rock will be infilled at the tributary of the Whiskey Creek, for the development of the major culvert at km 0.705. In addition, the vertical and horizontal realignment between km 0.00 and km 4.87 will entail cut and fill operations, which may entail the infilling of soil, etc. from water courses along the route.
Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 3	Describe the portion of the proposed development to which the applicable listed activity relates.
Not Applicable	Not Applicable	Not Applicable
Note: <ul style="list-style-type: none"> • The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted. • Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority. 		

List the applicable waste management listed activities in terms of the NEM:WA

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Category A	Describe the portion of the proposed development to which the applicable listed activity relates.
Not Applicable	Not Applicable	Not Applicable

List the applicable listed activities in terms of the NEM:AQA

Activity No(s):	Provide the relevant Listed Activity(ies)	Describe the portion of the proposed development to which the applicable listed activity relates.
Not Applicable	Not Applicable	Not Applicable

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1. Provide a description of the preferred alternative.

Location of Activity

The DR 1797 Road is located on the DR 1797, which is a minor road off the N2 Highway in the Bitou Local Municipality of the Western Cape. This road is a dual lane, single carriageway and is situated in the jurisdiction of the Garden Route District Municipality (formerly known as the Eden District Municipality).

Province:	Western Cape
District Municipality:	Garden Route District Municipality
Local Municipality:	Bitou Local Municipality
Ward Number:	Ward 1
Area / Town / Village:	Redford Rd (DR 1797 Rd)
Physical Address:	DR 1797
Property Description:	Existing gravel road
21 Digit Surveyor General Number:	Refer to Appendix L for the Property Information
Coordinates:	Refer to Appendix L for the Property Information

Refer to Appendix A1 for a map indicating the locality of the DR 1797 Road.

Objective

The WCG's responsibility is to upgrade, rehabilitate and maintain provincial roads within the Western Cape Province, provide EPWP work opportunities, develop emerging CIDB contractors and contribute towards black economic empowerment within the local communities.

The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Crags Petrol Station) to km 4.87, this includes the limit for construction as well.

Expropriation Areas

The DR 1797 Road upgrade will require vertical and horizontal realignment to allow for a 60 km/hr design speed. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation (Appendix B1).

The landowners which will be affected by the expropriation, have already been contacted and are currently in discussions with the WCG.

Current Status of the DR 1797 Road

The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a surfaced road (Special Class 4).

Boundaries of the Site

The project is located on the DR 1797, which is a minor road off the N2 Highway in the Bitou Local Municipality of the Western Cape. This road is a dual lane, single carriageway and is situated in the jurisdiction of the Garden Route District Municipality (formerly known as the Eden District Municipality). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Crags Petrol Station) to km 4.87, this includes the limit for construction as well.

Existing Road Geometry

Generally, the road traverses from a "rolling" to "mountainous" terrain along the route. In terms of the Road Infrastructure Strategic Framework of South Africa, the DR 1797 Road (from km 0.00 to km 4.87) is classified as a Class 4 road.

The average gravel surfacing width is 6.6 m and consists of two lanes with an average lane width of 3.3 m. The typical cross section of the single carriageway of the DR 1797 Road generally conforms to a Class 4

unsurfaced (gravel) cross section. The gravel road consists of 2 m by 3 m wide lanes, with no defined gravel shoulders.

Intersections and Access Roads

The DR 1797 Road starts at the intersection of the N2 Highway (The Craggs) which is km 0.00 (Figure 2). There are 21 property accesses which intersect with the DR 1797 Road and three OP road intersections (Figure 3). All of these intersections are at grade on this section of the DR 1797 Road. All minor and major farm accesses, as well as the three OP road intersections, are to be constructed as part of the upgrade, as specified on the drawings (Appendix B1). The three OP roads (Figure 4) which intersect the DR 1797 are; OP 7230, OP 7229 and OP 7228.



Figure 2: Km 0.00 intersection with the N2 Highway (The Craggs)



Figure 3: OP roads and property access roads



Figure 4: Google Map image of the three OP roads (indicated in blue) which intersect with DR 1797 Road

Side Drains

The drainage along the DR 1797 Road has been compromised due to the lack of maintenance that has resulted in debris build-up and vegetation blockages. The majority of the DR 1797 Road has no side drains (Figure 5), resulting in an increased amount of erosion along the edge of the roadway. As part of the upgrade, subsoil drains and unlined side drains will be constructed along the road edge. Refer to Drawings GD50/093 to GD50/097 (Appendix B1) for the specific location of these side drains.



Figure 5: Various examples of the inadequate side drainage along the DR 1797 Road

Culverts

The area drains from the north-east of the DR 1797 Road in a south-westerly direction as there is a mountainous area situated north (Figure 6). Due to this, the only drainage along the DR 1797 Road is through culverts and side drains. The drainage through the DR 1797 Road has not been maintained and the pipe and box culvert barrels will be replaced as part of the road upgrade. All culvert inlets and outlets will be shaped to ensure free drainage along the road and chevron danger plates will be installed at culvert crossings on each side of the road shoulder.

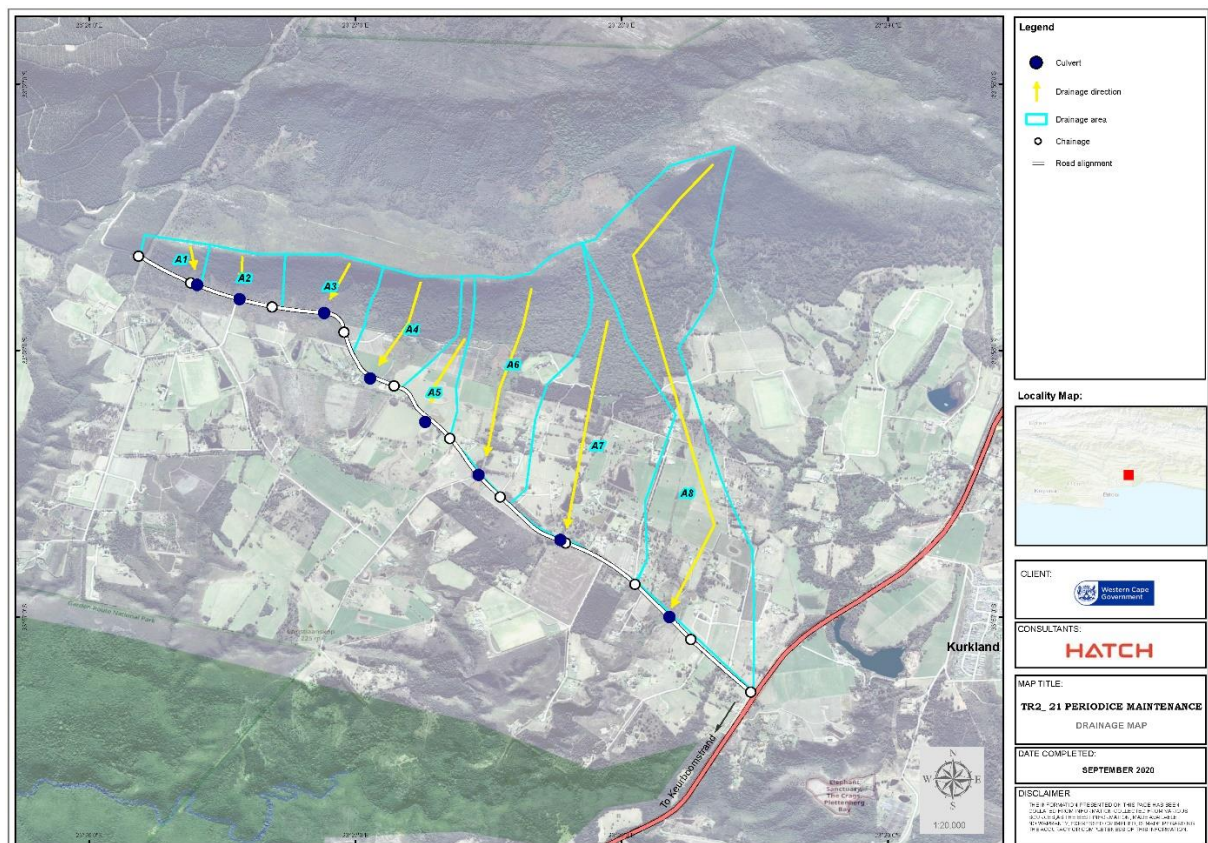


Figure 6: Drainage direction of the area surrounding the DR 1797 and the culverts required

Minor Culverts

A few pipe minor culverts were installed when the DR 1797 Road was originally constructed, however majority of these are in a terrible condition due to a lack of maintenance and are blocked. The minor culverts will be replaced, and additional culverts installed to facilitate drainage. All minor culverts will be replaced like for like

with pipe culverts. Please refer to Drawings GD50/093 to GD50/097 (Appendix B1) for the specific location of these minor culverts.

Major Culverts

Currently, there are no major culverts along the DR 1797 Road. However, the development of a major culvert at km 0.705 over a tributary of the Whiskey Creek, is proposed as part of the road upgrade. This will involve the construction of a new double cell reinforced concrete culvert with cell dimensions of 2.4 m wide x 1.5 m high. Downstream, the culvert will have wing walls and an apron slab with erosion protection works consisting of a gabion mattress. Please refer to Drawings GD50/093 to GD50/097 (Appendix B1) for the specific location of these minor culverts.

Watercourses / Wetlands

The DR 1797 Road crosses over tributaries of the Whiskey Creek River, as well as a tributary of the Keurbooms River, with their instream dams and associated anthropogenic wetland habitats (Figure 7). Based on the Freshwater Specialist Study conducted (Refer to Appendix G) the watercourses along this section of road have been classified as significantly modified, often with the instream dams immediately upstream or downstream of the road. As a result of the agricultural activities and disturbance of the aquatic habitats immediately adjacent to the road, as well as the flatter topography of the road, culverts are subject to high sediment deposition and will require regular maintenance.



Figure 7: Water courses along the DR 1797 Road (refer to Appendix D for the Aquatic & Terrestrial Biodiversity Maps)

Existing Services

Table 1 provides known services that have been identified along the DR 1797 Road.

Table 1: Existing services along the DR 1797 Road

Service	Chainage (km)	Description	Observations
Telkom	km 0.04 km 0.40	Overhead crossings	No Telkom lines are to be relocated

	km 0.88 km 1.04 km 1.39 km 1.72		
Eskom	km 0.38 km 1.68 km 2.52 km 3.01 km 3.41	Overhead crossings	No Eskom lines are to be relocated
Water	No water pipes have been identified; however minor pipes may be present due to the farming activities adjacent to the DR 1797 Road. These will either need to be relocated or accommodated, where applicable.		
Traffic counting stations / loops	No traffic loops have been identified.		
Electrical	No electrical lines have been identified.		

Roadside Furniture

Road Markings

Currently, the DR 1797 is a gravel road and there are no road markings. Once the road has been upgraded to a Special Class 4 road, markings and new road studs will be applied in accordance with the Southern African Development Community (SADC) Road Traffic Signs Manual.

Fencing

Table 2 indicates fencing which either needs to be retained or replaced in areas where the condition is poor.

Table 2: Maintenance of Fence

Fencing (LHS)			
Start km	End km	Length (m)	Type
0.01	0.28	270	Vermine
0.28	0.80	520	Stock
1.04	1.26	220	Stock
1.67	3.42	1,750	Stock
Total LHS (m)		2,760	
Fencing (RHS)			
Start km	End km	Length (m)	Type
0.01	0.13	120	Vermine
0.13	3.42	3,290	Stock
Total RHS (m)		3,410	

Road Signs

Road signs along the DR 1797 Road were observed to be in poor condition (Figure 8). New road signs, as well as the replacement of existing signs, are required as indicated on the drawings (Appendix B1).



Figure 8: Poor quality road signs

Guardrails

Currently, there are no guardrails installed along the DR 1797 Road. Guardrails will be erected in areas which have a high elevation compared to the surrounding land.

Overview of the Proposed Works

The DR 1797 Road surfacing width shall conform to a special Class 4 consisting of 2 m by 3.4 m wide lanes, with a 300 mm gravel shoulder on each side.

Horizontal and Vertical Alignment

Upgrading of the existing gravel DR 1797 Road will require adjustments to the vertical and horizontal alignment. The new alignment shall allow for a 60 km/hr design speed, with advanced warning signage at the sharp curve situated at km 3.4, and will tie into all existing access roads, such as properties and OP Roads, along the section.

4.5.2 Road Works

The following activities will be undertaken:

- Clearing and grubbing
- Accommodation of traffic
- Vertical and horizontal realignment between km 0.00 and km 4.87 which entails cut and fill operations
- Construction of a temporary widening for the accommodation of traffic during half width construction
- Construction of a new pavement between km 0.00 and km 4.87, including the following:
 - Excavation of the wearing course and underlying layers to the required depth
 - Preparation of roadbed
 - Construction of a selected subgrade of at least G7 quality
 - Construction of a C4 stabilised subbase layer
 - Construction of a G4 graded crushed stone base layer
 - Construction of a 20 mm single seal with two layers (Cape seal)
- Construction of a new major culvert at km 0.705
- Construction of side drain structures along the route
- Erecting additional road signs and replacement of missing signs and existing signs in poor condition
- Establishing permanent road markings
- Expropriation of land and fencing where required.

Pavement Design

The type of surfacing and pavement layers are shown (Figure 9) are summarised below. For additional details refer to the drawings GD50/093 to GD50/097 in Appendix B1.

Pavement Structure		
Layer	Thickness	Description
Surfacing	20 mm	S4 20 mm single seal using 65% cationic spray grade emulsion as tack coat and 30% spray-grade emulsion as second application of binder with two layers of slurry (20 mm Cape Seal)
Base	150 mm	G4 crushed stone base compacted to 86% BRD
Subbase	150 mm	C4 stabilised subbase compacted to 97% MDD
Upper Selected Subgrade	150 mm	G7 gravel selected subgrade compacted to 95% MDD
Lower Selected Subgrade	150 mm	G9 gravel selected subgrade compacted to 93% MDD

In wet areas or areas that are unstable, a pioneer layer or rock fill may be required at the bottom of the road formation. In cuttings, the selected subgrade layer may be replaced with a drainage layer.

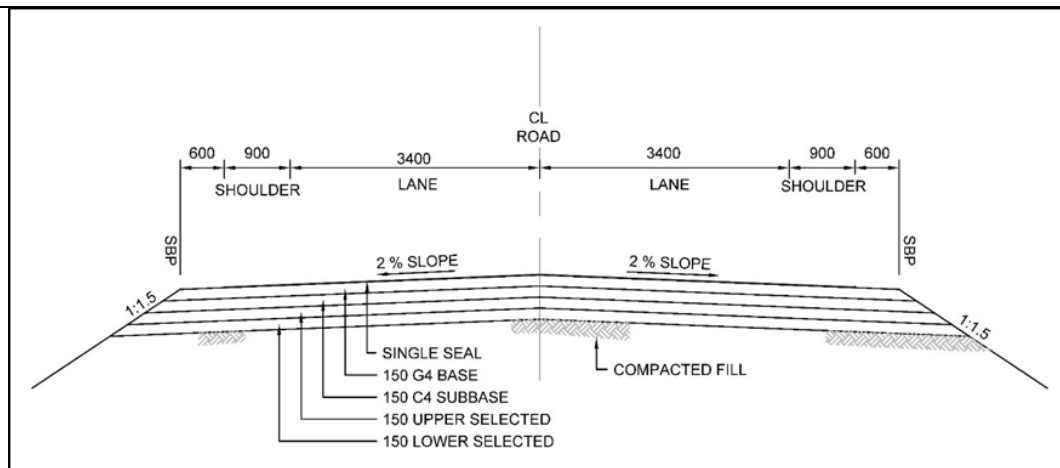


Figure 9: Typical cross section and pavement design

Proposed Construction Strategy

Roadworks

It is envisaged that the upgrade of the DR 1797 Road will be carried out under long term half-width lane closures, commencing at the end of the project at km 4.87 and working back towards the start of the project to allow construction of the major culvert at km 0.705. Traffic shall be controlled by means of a stop-and-go system during the day and a traffic light signalling system at night.

The proposed construction strategy envisaged for the upgrade of the DR 1797 Road per identified period, is to be carried out in the sequence of work noted below however, activities are subject to change should such be necessary.

- Phase 5A (km 3.64 to km 4.87)
 - Installation of moveable temporary barriers and channelization devices on the left hand side (LHS) of roadway
 - Construction of a temporary widening on the LHS
 - Relocation of the moveable temporary barriers and channelization devices to new centreline of roadway
 - Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the right hand side (RHS)
 - Construction of new pavement layers of the lane as specified
 - Construction of a 20 mm single seal with two slurry layers on the RHS
 - Relocation of the moveable temporary barriers and channelization devices to LHS of the newly constructed RHS lane
 - Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the LHS
 - Construction of new pavement layers of the lane as specified
 - Construction of a 20 mm single seal with two slurry layers on the LHS
 - Application of temporary road markings and road studs.
- Phase 5B (km 2.70 to km 3.64)
 - Installation of moveable temporary barriers and channelization devices on LHS of roadway
 - Construction of a temporary widening on the LHS
 - Relocation of the moveable temporary barriers and channelization devices to new centreline of roadway
 - Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the RHS
 - Construction of new pavement layers of the lane as specified
 - Construction of a 20 mm single seal with two slurry layers on the RHS
 - Relocation of the moveable temporary barriers and channelization devices to LHS of the newly constructed RHS lane
 - Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the LHS
 - Construction of new pavement layers of the lane as specified
 - Construction of a 20 mm single seal with two slurry layers on the LHS
 - Application of temporary road markings and road studs.
- Phase 5C (km 1.43 to km 2.70)
 - Installation of moveable temporary barriers and channelization devices on LHS of roadway
 - Construction of a temporary widening on the LHS

- Relocation of the moveable temporary barriers and channelization devices to new centreline of roadway
- Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the RHS
- Construction of new minor culverts
- Construction of new pavement layers of the lane as specified
- Construction of a 20 mm single seal with two slurry layers on the RHS
- Relocation of the moveable temporary barriers and channelization devices to LHS of the newly constructed RHS lane
- Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the LHS
- Construction of new pavement layers of the lane as specified
- Construction of a 20 mm single seal with two slurry layers on the LHS
- Application of temporary road markings and road studs.
- Phase 5D (km 0.00 to km 1.43)
 - Installation of moveable temporary barriers and channelization devices on LHS of roadway
 - Construction of a temporary widening on the LHS
 - Relocation of the moveable temporary barriers and channelization devices to new centreline of roadway
 - Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the RHS
 - Construction of new minor culverts
 - Construction of new pavement layers of the lane as specified
 - Construction of a 20 mm single seal with two slurry layers on the RHS
 - Relocation of the moveable temporary barriers and channelization devices to LHS of the newly constructed RHS lane
 - Excavation of existing pavement layers to the required depth or fill for the proposed new pavement structure on the LHS
 - Construction of new pavement layers of the lane as specified
 - Construction of a 20 mm single seal with two slurry layers on the LHS
 - Final road markings and road studs over the entire length of the road
 - Installation of final road signs and other ancillary works as specified and required.

Drainage

Side Drains

As part of the DR 1797 Road upgrade, unlined side drains (Figure 10) and lined side drains with subsoil drains (Figure 11) will be constructed along the road. Refer to Drawings GD50/093 to GD50/097 (Appendix B1) for the specific location of these side drains.

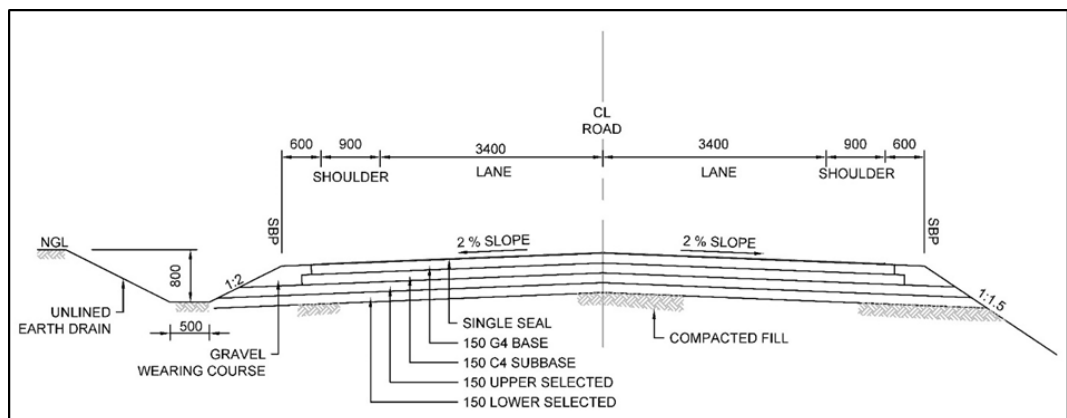


Figure 10: Typical unlined earth drain

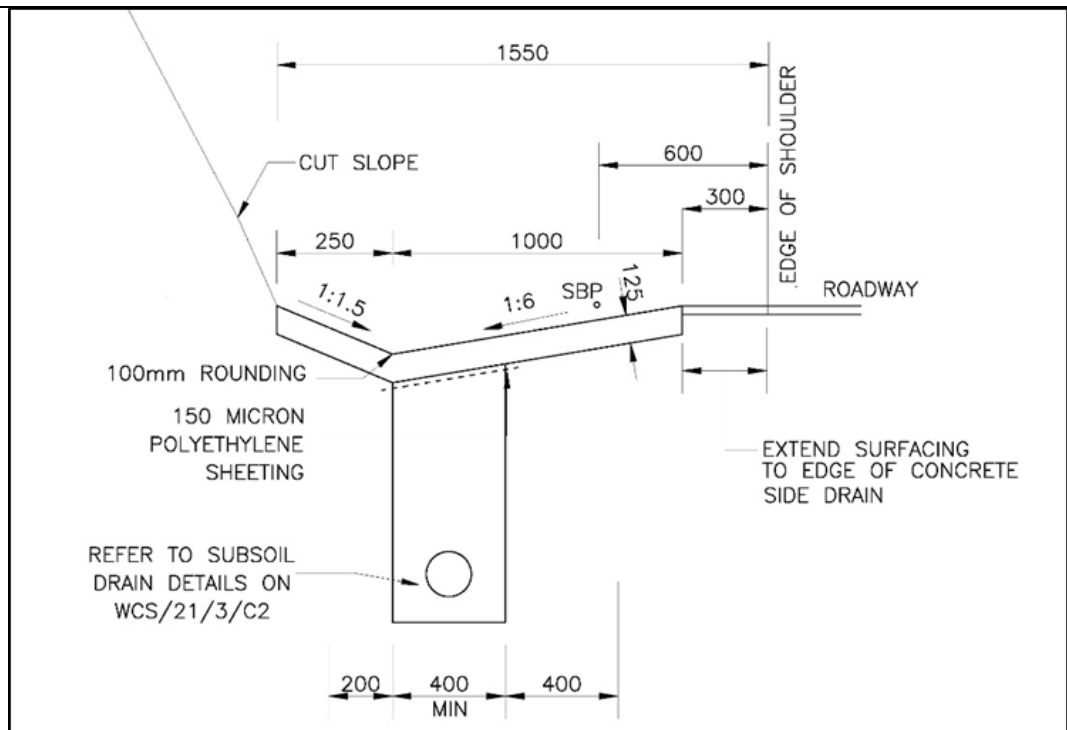


Figure 11: Typical concrete side drain with subsoil drain

Minor Culverts

The minor culverts will be replaced and additional culverts installed to facilitate drainage. All minor culverts will be replaced like for like with pipe culverts. Please refer to Drawings GD50/093 to GD50/097 (Appendix B1) for the specific location of these minor culverts.

Major Culvert

Culvert no. 12270 at km 0.705 over a tributary of the Whiskey Creek will be constructed as follows, as part of the DR 1797 Road upgrade:

- Phase 6 (km 0.50 to km 0.90)
 - Construction of a new double cell reinforced concrete culvert with cell dimensions of 2.4 m wide x 1.5 m high. Downstream, the culvert will have wing walls and an apron slab with erosion protection works consisting of a gabion mattress
 - The culvert is to be constructed in two phases for traffic accommodation purposes. The traffic will be accommodated to either the existing road or on the new culvert, once completed
 - The final road fill on top of the culvert will be 5 m high and traffic will be required to be switched over multiple times as the layer works are constructed. The traffic is to be accommodated on the opposite side to where construction is taking place. No traffic or fill will be allowed on the structure prior to the concrete having achieved its design strength.

Figure 12 indicates the current geometric design (red line) of the area where the major culvert will be installed. The green line indicates the new geometric design of the area where the major culvert is proposed.

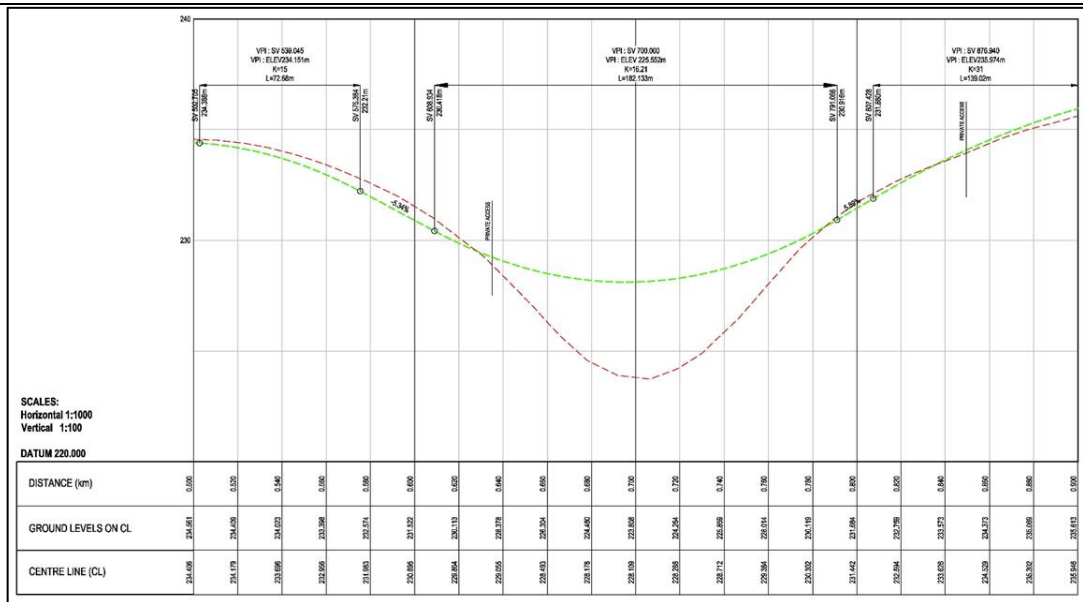


Figure 12: Geometric design of the major culvert proposed

The construction phase of the DR 1797 Road upgrade will involve the following aspects:

- Erection of laydown and material storage area
- Provision of services
- Material supply
- Waste management.

Laydown and material storage area

A laydown area shall be constructed for use and shall be located within a designated area as approved by the EAP and Hatch EPCM team. The defined area and will involve the establishment of a site office and compacted pad, which will be used for various construction activities such as diesel storage, cement storage and mixing. Designated areas of the laydown shall be bunded and lined to prevent any fuel or pollutant spills from entering the surrounding environment. Roofed, lockable storage containers shall be utilised to house all hazardous and sensitive construction materials. Absorbent material shall be accessible and located within easy access to the workers in case of a spillage.

The laydown and material storage area will be fenced off for safety and control requirements.

Provision of Services

Potable Water Supply

It is anticipated that construction activities will require approximately 10,000 litres of water per month, and such water will be sourced from the Bitou Local Municipality. No water will be sourced from onsite watercourses.

Sewerage

Dedicated portable ablution units will be provided for the construction phase and shall be maintained and the contents of such shall be disposed of at a licenced wastewater treatment facility.

Power Source

Power will be provided by diesel generator to the site office and construction working areas.

Waste Management

An area for temporary waste collection and storage shall be demarcated for duration of the construction phase. This waste shall be stored in designated areas in covered, tip proof drums for collection and disposal. Disposal of waste shall be at a licensed landfill site or at a site approved by the DEA&DP in the event that an existing operating landfill site is not within reasonable distance from the site. No waste shall be burned or buried on site. A concerted effort shall be made to collect and separate materials suitable for recycling and disposal of such at recycling centres.

Project Schedule

Environment Authorisation Process Schedule

Table 3 outlines the EA activities / deliverables and scheduled dates.

Table 3: Environment Authorisation Process Schedule

Activity	Start Date – End Date
Basic Assessment Process	29 June 2020 – 7 June 2021
Pre-Application Process	10 July 2020 – 31 August 2020
Executive Summary sent to I&APs	31 August 2020
Environmental Application sent to DEA&DP	14 September 2020
Public Participation Process (30 Days)	30 September 2020 – 2 November 2020
Final BAR & EMPr submitted to DEA&DP	31 October 2020
Submission of General Authorisation in terms of the NWA	December 2020
EA issued	16 April 2021 (expected date)

Construction Schedule

Based on the current planning, construction of the DR 1797 Road upgrade is anticipated to commence at the end of June 2021 and is scheduled for completion mid-September 2022, refer to Table 4.

Table 4: DR 1797 Construction Schedule

Activity	Start Date – End Date
DR 1797 Construction:	22 June 2021 – 16 September 2022
RHS Construction activities	22 June 2021 – 24 February 2022
LHS Construction activities	25 February 2022 – 8 September 2022
Road Signs	5 August 2022 – 15 September 2022
De-Establishment	16 September 2022 – 16 September 2022

2. Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.

The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a surfaced road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The existing road reserve is zoned as Transport.

The DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. The landowners which will be affected by the expropriation, have already been contacted and are currently in discussions with the WCG.

3. Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

Currently, the DR 1797 Road is zoned as Transport, and the upgrade of the road maintains the zoning and thus there is no conflict in this application.

4. Explain how the proposed development will be in line with the following?

- 4.1 The Provincial Spatial Development Framework.

The Western Cape SDF, the PSDF, focuses on accessibility of smaller communities to improve the economy of these communities, as well as improve access to services and amenities such as hospitals and schools. The DR 1797 Road is in support of the PSDF as this road provides an important connection for the surrounding community to the N2 National Highway, which provide access to Plettenberg Bay and Knysna.

- 4.2 The Integrated Development Plan of the local municipality.

The Bitou Local Municipality IDP outlines the priority projects / actions for implementation within the area. One of these projects under the Roads and Transport Department, is to "Ensure proper maintenance of priority secondary tourism routes: Forest Hall, Redford, Keurbooms, Harkerville, R340". Due to this, the upgrade of the DR 1797 Road (Redford) is within the municipal and provincial plans to be upgraded to maintain tourism routes.

- 4.3. The Spatial Development Framework of the local municipality.

The Bitou Local Municipality SDF highlights municipal land use and spatial structure major road networks, which are important to the municipal area as they provide access to rural parts of the municipality. The DR 1797 Road (Redford Road) has been identified as one of these roads.

4.4.	The Environmental Management Framework applicable to the area.
Currently there is no EMF for the area in which the DR 1797 Road falls.	
5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.
<p>The Hatch Engineering Team conducted a survey at the commencement of the project to minimise the overall impact that the route realignment would have on agricultural activities as well as the surrounding environment. The outcome is that areas which will be expropriated, are mainly the property verges to reduce the overall impact on agriculture and avoid socio-economic impacts on the landowners.</p> <p>As part of the planning and design phase of this project the DEFF Environmental Screening Tool was used to identify environmental sensitivities. The outcome of which resulted in the appointment of a botanical specialist to conduct a botanical assessment and an aquatic specialist to conduct an aquatic assessment (for a copy of the specialist study refer to Appendix G).</p>	
6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.
<p>The Western Cape Biodiversity Spatial Plan (WCBSP) provides a map of the areas of biodiversity importance for the province, covering terrestrial, freshwater, coastal and estuarine ecosystems. The map is a product of a provincial wide systematic biodiversity plan that delineates CBA (Terrestrial and Aquatic), ESA (Critical and Other), Other Natural Remaining Areas for each local authority within the province. These are areas that require safeguarding to ensure the continued existence and functioning of species and ecosystems, including the delivery of ecosystem services.</p> <p>The minor tributaries of Whiskey Creek Tributary at the DR1797 Road are all largely mapped as aquatic ESAs in the WCBSP, most of which requires restoration (Figure 11). In addition, the study area is located within the Garden Route Biosphere Reserve and adjacent to the Garden Route National Park and the Whiskey Creek Nature Reserve. Therefore, the proposed works must aim at reducing impacts on the aquatic ESAs.</p> <p>The DR1797 Road is located in a wider area mapped of very high aquatic biodiversity due to the Aquatic CBAs, FEPA Rivers, Wetlands and Estuaries as well as Strategic Water Source Areas occurring in this wider area. The Aquatic CBAs and FEPA mapped features are discussed above. While the DR road is located in a National Strategic Water Source Area (Tsitsikamma) and a Sub-national Groundwater Strategic Water Source Area, the proposed works on the road will not impact on these areas as strategic water source areas.</p>	
7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
Not Applicable	
8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.
The Screening Tool Report has not changed from the original report submitted as part of the application.	
9.	Explain how the proposed development will optimise vacant land available within an urban area.
Not Applicable	
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.
<p>The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a surfaced road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. Thus, the DR 1797 Road upgrade will optimise the use of the existing road infrastructure.</p>	
11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
<p>Potable Water Supply</p> <p>It is anticipated that construction activities will require approximately 10,000 litres of water per month, and such water will be sourced from the Bitou Local Municipality. No water will be sourced from onsite watercourses.</p> <p>The Bitou Local Municipality has been contacted to identify whether there is available water for the project. The project is awaiting a response.</p> <p>Sewerage</p> <p>Dedicated portable ablution units will be provided for the construction phase and shall be maintained and the contents of such shall be disposed of at a licenced wastewater treatment facility.</p> <p>Power Source</p> <p>Power will be provided by diesel generator to the site office and construction working areas.</p>	

Waste Management

An area for temporary waste collection and storage shall be demarcated for duration of the construction phase. This waste shall be stored in designated areas in covered, tip proof drums for collection and disposal. Disposal of waste shall be at a licensed landfill site or at a site approved by the DEA&DP in the event that an existing operating landfill site is not within reasonable distance from the site. No waste shall be burned or buried on site. A concerted effort shall be made to collect and separate materials suitable for recycling and disposal of such at recycling centres.

- | | |
|-----|---|
| 12. | In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K. (Appendix K not used) |
|-----|---|

Need and Desirability of the Project

A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:

- The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition
- That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h
- That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic.

Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community.

The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.

Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.

Ecological Need and Desirability

The DR 1797 is an existing gravel road with some minor culverts which allow the flow of drainage water from one side of the road to the other. The current condition of the minor culverts is poor due to build-up of debris and vegetation blockages. Furthermore, the lack of maintenance on these culverts has led to overgrown vegetation, including alien invasive species, and may result in an impact on drainage water patterns and the roads integrity. If the DR 1797 Road is not upgraded the debris build-up and vegetation blockages will remain, resulting in poor drainage water patterns within the area. In addition to this, alien invasive vegetation will not be removed and could spread further within the watercourse as well as along the road reserve.

Socio-Economic Need and Desirability

The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.

The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.

Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.

The DR 1797 Road upgrade will result in resurfacing the current gravel road to a bitumen surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.

Planning Need and Desirability

Western Cape Provincial: Spatial Development Framework, March 2014:

The Western Cape PSDF focuses on accessibility of smaller communities to improve the economy of these communities, as well as improve access to services and amenities such as hospitals and schools. The DR 1797 Road is in support of the PSDF as this road provides an important connection for the surrounding community to the N2 National Highway, which provide access to Plettenberg Bay and Knysna.

Eden District Municipality Spatial Development Framework, November 2017:

One of the objectives of the Eden District Municipality SDF, is equitable and inclusive regional accessibility. This objective looks mainly at the development of transport systems within the Eden District Municipality, which must gear the region for increased levels of growth and jobs. The upgrade of the DR 1797 Road is in support of this objective. The DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area.

Bitou Local Municipality Draft Spatial Development Framework, November 2019:

The Bitou Local Municipality SDF highlights municipal land use and spatial structure major road networks, which are important to the municipal area as they provide access to rural parts of the municipality. The DR 1797 Road (Redford Road) has been identified as one of these roads.

Bitou Municipality Revised Integrated Development Plan 2017-2022 (2020/2021):

The Bitou Local Municipality IDP outlines the priority projects / actions for implementation within the area. One of these projects under the Roads and Transport Department, is to "Ensure proper maintenance of priority secondary tourism routes: Forest Hall, Redford, Keurbooms, Harkerville, R340". Due to this, the upgrade of the DR 1797 Road (Redford) is within the municipal and provincial plans to be upgraded to maintain tourism routes.

Garden Route Environmental Management Framework:

The EMF for the Garden Route: National Lakes Area, was released to the public in January 2010. The EMF covers the towns of Wilderness, Sedgefield and Knysna, as well as parts of the George and Knysna Municipalities. The EMF does not cover the area where the DR 1797 road upgrade will occur and thus does not apply to this project.

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

A Public Participation Plan was submitted to the DEA&DP as part of the NOI. This plan was accepted and has been followed, where possible.

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

Objectives of Public Participation

The objectives of the PPP for the project, are as follows:

- To provide the opportunity for all role players including potential and registered Interested and Affected Parties (I&APs), EAPs, state departments, organs of state, and the Competent Authority, to obtain clear, accurate and understandable information about the environmental impacts of the proposed project or implications of a decision
- To provide for role-players to voice their support, concerns and questions regarding the project, application or decision

- To provide the opportunity for role-players to suggest ways for reducing or mitigating any negative impacts of the project and for enhancing its positive impacts
- To enable the EAP conducting the PPP to incorporate the needs, preferences and values of potential or registered I&AP's into the project that becomes the subject of an application for an EA
- To provide opportunities for clearing up misunderstandings about technical issues, resolving disputes and reconciling conflicting interests
- To encourage transparency and accountability in decision-making
- To contribute toward maintaining a healthy, vibrant democracy
- To give effect to the requirement for procedural fairness of administrative action as contained in the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000).

Pre-application Meeting and Pre-application Consultation with the DEA&DP

Pre-Application Process

The DEA&DP currently advises EAPs to proceed with a Pre-Application process prior to submitting the Environmental Application. This is to allow all I&APs the opportunity to gain an early understanding of the project, as well as raise any issues prior to the legislative authorisation commencing. The following process was thus followed for the DR 1797 Road upgrade:

Submission of the Notice of Intent

Submission of the Notice of Intent to submit an Application for EA (NOI) to the DEA&DP, which included:

- Public Participation Plan (Appendix E22)
- Screening Assessment and Protocol Motivation (Appendix I)
- Environmental Approvals Schedule (Project Description)
- NID (as required by the HWC) (Appendix E1)
- An Executive Summary of the Draft BAR as part of the Pre-Application Process (Appendix N1).

Consultation with the Competent Authority

The Competent Authority for this project is the DEA&DP and the following officials have been assigned to the project:

Case Officer Details	
Name	Jessica Christie
Contact Number	044 805 8617
Email Address	Jessica.Christie@westerncape.gov.za
Postal Address	Private Bag X6509, GEORGE, 6530
DEA&DP Supervisor	
Name	Francois Naudé
Contact Number	N/A
Email Address	Francois.Naude@westerncape.gov.za
Postal Address	Private Bag X6509, GEORGE, 6530

Pre-Application Meeting

A virtual pre-application meeting, via Microsoft Teams, was requested and scheduled by the EAP with the DEA&DP. The pre-application meeting was held on 6 July 2020, during which the project was presented, as well as the BA process, including the Public Participation Plan. Minutes of the meeting were taken by the EAP and issued to meeting participants for comment.

Please refer to Appendix N2 for the Pre-Application Meeting Minutes.

Identification of Interested and Affected Parties

I&APs will be identified through several mechanisms. These include:

- Networking with local business owners, farmers associations, non-governmental agencies, community based organisations, and local council representatives
- Advertising in the press, placement of community notices, and distribution of BIDs (discussed separately)
- Researching and reviewing of other studies undertaken in the area.

A database of I&APs for the proposed project was developed and will be updated during the PPP. The EAP will endeavour to ensure that individuals / organisations from referrals and networking are notified of the Project.

Preliminary Identification of Interested and Affected Parties

During the initiation of the Project, the Environmental Management Officer for the Bitou Local Municipality was identified as an I&AP. The Environmental Management Officer requested that the Redford Conservancy be added to the I&AP database.

Hatch contacted the Redford Conservancy and requested a list of I&APs who fall within the area of the Project, and such was provided. Further to this, the surrounding landowners of the DR 1797 have been added to the I&AP database.

To date, there have been numerous requests by I&APs to be added to the I&AP database. These I&APs have been registered on the Project (refer to Appendix F).

Interested and Affected Parties Notifications

Written Notification

A letter including the Executive Summary was e-mailed to all registered I&APs as part of the Pre-Application Process. This email included a link to where all I&APs could electronically register on the I&AP database, which was used to distribute the Draft BAR for the 30 day PPP review period.

A letter was emailed to all registered I&APs, indicating the commencement of the PPP, as well as where to send any comments or responses to the Draft BAR.

Advertisement

One advertisement announcing the project, inviting I&APs to register and announcing the availability of the Draft BAR and EMP, was placed in the Knysna-Plett Herald, as this is the most popular newspaper in the area.

Please see Appendix F for the Newspaper Advertisement.

Site Notice

In total, three English site notices announcing the project and inviting I&APs to register and comment on the Draft BAR and EMP, were erected. The three site notices were erected at the following locations:

- Along the DR 1797 Road where the DR 1797 intersects with the N2 Highway
- Halfway along the DR 1797 (km 2)
- At the end of the DR 1797 (km 4).

Please see Appendix F for the Site Notice.

Executive Summary

Hatch distributed an Executive Summary of the Draft BAR and EMP to the DEA&DP and registered I&APs, prior to the submission of the Environmental Application, as part of the Pre-Application Process. The purpose of this Executive Summary was to provide registered I&APs with introductory information on the project, the BA process and the PPP. The Executive Summary also provided registered I&APs who are interested in the project, with the opportunity to provide the EAP with written comments and feedback.

Availability of Draft BAR for Review

The Draft BAR and EMP was made available on Hatch's website for download. The link to the Draft BAR and EMP was sent to I&APs via email.

The 30 day review period of the Draft BAR and EMP, was from 30 September 2020 until 2 November 2020.

Comments and Responses Raised by I&APs

Once the 30 day review period of the Draft BAR and EMP was completed, all comments raised by I&APs were documented, responded to and captured in a Comments and Responses Report, which has been submitted to the DEA&DP as part of this Final BAR and EMP. The EAP responded in writing to each I&AP who submitted comments.

Comments and Response Report

The comments and responses which were raised as part of the Pre-Application Process and the Draft BAR PP Period have been included in Appendix F in this Final BAR.

Final BAR

The Final BAR will be submitted to the DEA&DP once the PPP is complete, and all comments and responses from and to registered I&APs have been incorporated into the Final BAR.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

Department of Environmental Affairs and Development Planning Jessica Christie Jessica.Christie@westerncape.gov.za
Breede-Gouritz Catchment Management Agency Water Use is currently being registered Reference number: CT14022
Heritage Western Cape NID approved Case Officer: Stephanie-Anne Barnardt Stephanie.Barnardt@westerncape.gov.za
Cape Nature Colin Fordham cfordham@capenature.co.za landuseadvice@capenature.co.za
Bitou Local Municipality Anjé Taljaard ataljaard@plett.gov.za
South African Civil Aviation Authority (SACAA) Evelyn Shogole ShogoleE@caa.co.za

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

The following State Departments and Organs of State were not consulted:

- Department of Environmental Affairs: Oceans and Coast – The DR 1797 Road Upgrade does not have an impact on the coast or ocean as it is situated inland.
- WCG: The Department of Human Settlements – The Upgrade of the DR 1797 will not be removing or displacing an informal townships or homesteads. Due to this they were not consulted with.
- WCG: Department of Health – The DR 1797 Road upgrade will not have an impact on any person's health. Due to this they were not consulted with.
- DEA&DP: Air Quality - The DR 1797 Road upgrade will not have an impact on air quality within the area. There will be emissions created as part of the proposed upgrade activities. Due to this they were not consulted with
- Department of Agriculture, Forestry and Fisheries – The DR 1797 Road upgrade will have no impact on the forestry or fisheries, however, there is a potential for a small impact on agriculture. Due to the size of the impact, Western Cape Government: Agriculture, Elsenburg was contacted instead of the National Department.

5. If any of the State Departments and Organs of State did not respond, indicate which.

The following State Departments and Organs of State were consulted:

- WCG: Transport and Public Works – this is the applicant and they have been consulted
- Garden Route District Municipality
- Western Cape Government: Agriculture, Elsenburg
- Department of Social Development.

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

Comments and Responses received to date have been included in the Comments and Responses Report attached in Appendix F.

Note:

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that "Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
 - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
 - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
 - if a facsimile was sent, a copy of the facsimile Report;
 - if an electronic mail was sent, a copy of the electronic mail sent; and
 - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?		NO
1.2.	Provide the name and or company who conducted the specialist study.	Not Applicable	
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.	Not Applicable	
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.	Not Applicable	

2. Surface water

2.1.	Was a specialist study conducted?	YES	
2.2.	Provide the name and/or company who conducted the specialist study.	Name: Ms Toni Belcher , Company: BlueScience (Pty) Ltd	
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.	Objective The objective of this specialist study was to conduct an assessment to identify the status of the various watercourses which the DR 1797 Road intersects. As part of this assessment the following assessment were conducted: <ul style="list-style-type: none"> • Assessment of the Rivers and Tributaries • Habitat Integrity 	

- Ecological Importance and Sensitivity.

Based on these assessments the recommended ecological categories and resources quality objectives was identified.

Methodology

The following techniques and methodologies were utilized to undertake the specialist study:

- Analysis of the aquatic ecosystems was undertaken at a rapid level according to nationally developed methodologies that do not involve detailed habitat and biota assessments.
- The guideline document, "A Practical Field Procedure for the Identification and Delineation of Wetlands and Riparian Areas" document, as published by Department of Water Affairs and Forestry (DWAF) (2005) was followed for the delineation of the wetland areas.
- The wetlands were subsequently classified according to their hydro-geomorphic determinants based on a classification system devised by Kotze et al (2004) and SANBI (2009). Notes were made on the levels of degradation in the wetlands based on field experience and a general understanding of the types of systems present.
- A Present Ecological State (PES) assessment was conducted for each wetland identified and delineated within the study area.
- The river health assessment was undertaken according to the Index of Habitat Integrity.
- The ecological importance and sensitivity assessment of the aquatic features was conducted according to the guidelines as developed by DWAF (1999).

Results

Assessment of the Rivers and Tributaries

Whiskey creek tributary of the keurbooms river

The DR1797 crosses the upper reaches of the Whiskey Creek Tributary. The water courses flow over a flatter plateau through various area of agriculture and small instream dams. Due to this, the watercourses are highly modified.

The vegetation along the watercourses comprises of a mix of alien trees such as cluster pines *Pinus pinaster*, black wattles *Acacia mearnsii* and Eucalyptus trees. There are various dominant indigenous plants species which are situated within the watercourses. The small instream dams are predominantly Water lilies *Nymphaea capensis* and bulrush *Typha capensis*.

Buffels tributary of the Matjies River

The area where the DR 1797 Road joins with the N2 is situated within the catchment of the Buffels Tributary. The Buffels River with its large instream Buffelsrivier Dam is located to the east of the study area with two of its smaller tributaries starting within the Kurland village. The watercourses associated within the river are highly modified. The vegetation within the watercourses are a mix of alien invasive and indigenous vegetation which is covered by invasive alien kikuyu grass *Pennisetum clandestinum*.

Habitat Integrity

A Habitat assessment was conducted to assess and measure the degree of which a river has been modified from its natural state. Based on this assessment the watercourses along the DR 1797 Road are largely severely modified especially as indigenous vegetation has been removed within the riparian areas and alien invasive vegetation has invaded the area.

Ecological Importance and Sensitivity

An Ecological Importance and Sensitivity (EIS) assessment was conducted to assess biotic and habitat determinants of either importance or sensitivity. Based on this assessment the ecological importance and sensitivity of the Whiskey Creek and Buffels Tributaries is Moderate to High.

Recommended ecological categories and resources quality objectives.

Given that the watercourses are in a D/E ecological state and of moderate to high EIS, the recommended Target Ecological Categories (TEC) for the watercourses is moderately modified (C category).

3. Coastal Environment

3.1.	Was a specialist study conducted?		NO
3.2.	Provide the name and/or company who conducted the specialist study.		
	Not applicable.		
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
	Not applicable.		
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
	Not applicable.		
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		
	Not applicable.		

4. Biodiversity

4.1.	Were specialist studies conducted?	YES	
4.2.	Provide the name and/or company who conducted the specialist studies.		
	<p>Name: Dr David Jury McDonald Company: Bergwind Botanical Surveys & Tours</p> <p>Name: Ms Toni Belcher , Company: BlueScience (Pty) Ltd</p>		
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		
	<p>As part of the aquatic specials study conducted, the following information was used as part of assessing the proposed upgrade activities and they influenced the project:</p> <ul style="list-style-type: none"> National Freshwater Ecosystem Priority Areas (FEPA) mapping WCBSP. <p>The proposed works on the road will not impact on the areas mapped as FEPA rivers or wetlands, aquatic CBAs, or the strategic water source areas, however, the proposed works should aim at reducing impacts upon the aquatic ESAs.</p> <p>The botanical specialist identified the vegetation types of the area by using the South African National Biodiversity Institute (SANBI) Vegetation Map of South Africa. In addition to this, the botanical specialist also used the WCBSP and agreed with the aquatic specialist that where possible minimum impact should be done within ecological corridors (ESAs)</p>		
4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.		
	<p>The WCBSP provides a map of the areas of biodiversity importance for the entire province, covering terrestrial, freshwater, coastal and estuarine ecosystems. The map is a product of a provincial wide systematic biodiversity plan that delineates CBA (Terrestrial and Aquatic), ESA (Critical and Other), Other Natural Remaining Areas for each local authority within the province. These are areas that require safeguarding to ensure the continued existence and functioning of species and ecosystems, including the delivery of ecosystem services.</p> <p>The DR 1797 road is located in a wider area mapped of very high aquatic biodiversity due to the Aquatic CBAs, FEPA Rivers, Wetlands and Estuaries as well as Strategic Water Source Areas occurring in this wider area. The Aquatic CBAs and FEPA mapped features are discussed above. While the DR 1797 Road is located in a National Strategic Water Source Area (Tsitsikamma) and a Sub-national Groundwater Strategic Water Source Area, the proposed works will not impact on the strategic water source.</p>		
4.5.	Explain what impact the proposed development will have on the site specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.		
	<p>The minor tributaries of Whiskey Creek Tributary at the road are all largely mapped as aquatic ESAs in the WCBSP, most of which requires restoration (Figure 11). In addition, the study area is located within the Garden Route Biosphere Reserve and adjacent to the Garden Route National Park and the Whiskey Creek Nature Reserve. Therefore, the DR 1797 Road has been designed to- and the construction will be managed to reduce impacts on the aquatic ESAs.</p>		
4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.		
	The proposed upgrade activities do not fall within a Protected Area.		

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.
<p>The DR 1797 Road is an existing road. The upgrade activities will mainly remain within the existing road reserve and follow the existing route. However, to allow for a speed limit of 60km/h as well as reduce the blind spots along the road, horizontal and vertical realignment of the road have been done as part of the engineering design. As part of the design process the engineering team conducted a survey to identify various areas of environmental and socio-economic importance. Based on this survey, various areas were avoided as part of the realignment.</p>	

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.

Landscape/ Topography

The general topography of the area comprises of low hills. The altitude of the works ranges from approximately 295 m above mean sea level (mamsl) and drops down to 235 mamsl at the intersection with the N2 Highway near Kurland. The gradient is relatively flat and, in general, slopes towards the coast in the south, with shallow valleys associated with the small watercourses crossed by the road.

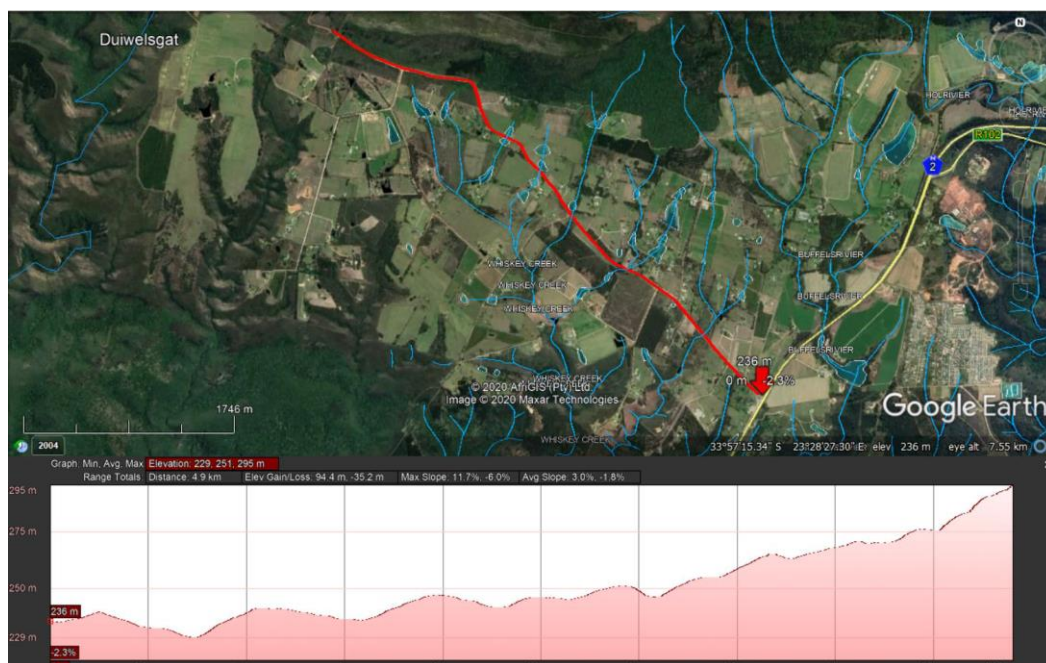


Figure 13: Google Earth image of the study area with the mapped watercourses and the associated elevation profile for the road where the starting point for the road is associated with the left-hand side of the profile. (BlueScience, 2020¹)

Agriculture / Soils

The geology of the area is classified as mainly quartzitic sandstone, with subordinate shale, of the Table Mountain Group Cape Supergroup. The DR 1797 Road, it is rocky with limited soils up until a depth of less than 450 mm. There is a composition of less than 15% (CapeFarmMapper, Accessed September 2022). There are numerous farming activities which occur along the DR 1797 Road. These activities range from cattle farming to viticulture and crop cultivation. It has also been found that there are some small holdings situated along the road.

According to the DEFF web-based screening tool, the majority of the DR 1797 Road and expropriation areas are classified as a low to medium agricultural sensitivity, with some small areas of high and very high sensitivity. There is one area just after km 2 which is classified as high sensitivity.

Due to some areas being classified as high and very high sensitivity, an agricultural desktop assessment was

¹ BlueScience (2020), Freshwater assessment for the periodic maintenance of the DR 1797 near Kurland in the Western Cape

² CapeFarmMapper, Western Cape Department of Agriculture, <https://gis.elsenburg.com/apps/cfm/>, Accessed September 2020

conducted and an agricultural compliance statement has been compiled by a Professional Natural Scientist (Pr.Sci.Nat.) registered under the South African Council for Natural Scientific Professions (SACNASP). Refer to Appendix for G

6. Heritage Resources

6.1.	Was a specialist study conducted?		NO
6.2.	Provide the name and/or company who conducted the specialist study.	Not Applicable	
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.	Not Applicable	

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.	
<p>The DR 1797 is an existing road with the majority of construction activities occurring within the existing road reserve. The expropriation areas will be the only areas outside of the road reserve where construction activities will occur.</p> <p>A desktop assessment was conducted by the EAP, for the expropriation areas, to identify potential areas of archaeological and cultural heritage importance. Based on this assessment, no areas of importance were identified.</p> <p>However, to confirm this, a Notification of Intent to Develop (NID) was submitted to Heritage Western Cape (HWC), outlining the project, as well as the history of the area. HWC confirmed that a Heritage Impact Assessment (HIA) is not required.</p> <p>As part of the construction activities, a "Chance Find Procedure" will be compiled and issued to the contractor for implementation during the upgrade works, in the event that an archaeological or cultural heritage find occurs.</p>	

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
<p>According to the socio-economic profile of the Bitou Local Municipality compiled by the Western Cape Government, the municipality has a population of 56,422 people with a 27.9% unemployment rate.</p> <p>Demographics</p> <p>In 2018, it was estimated that the Bitou Local Municipality had a population of 56,422. Based on the estimated growth rate, this is expected to increase by 8.5% to 61,184 by 2023.</p> <p>The majority of the population within the Bitou Local Municipality is aged between 15 and 65. By 2023, there will be 46.3% of the population which will depend on the working age (15-65 years).</p>	

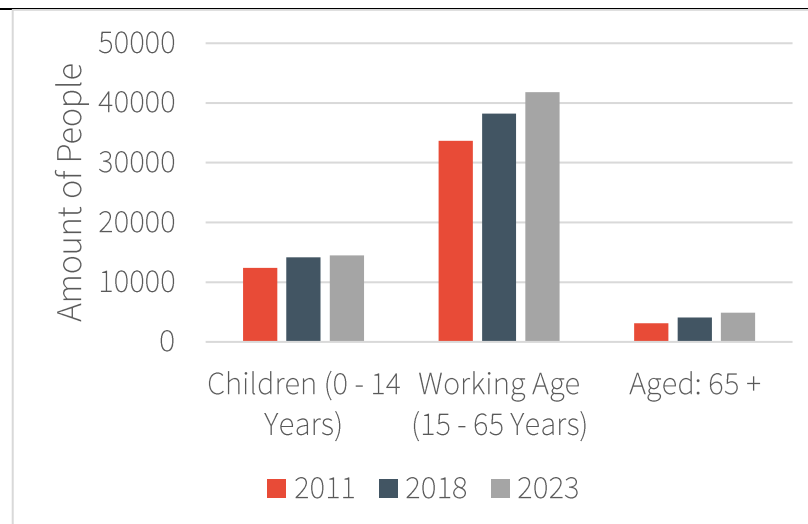


Figure 14: Age Cohorts

Economic Profile

In 2015, the Bitou Local Municipality had a regional Gross Domestic Product (GDP) of about R2.79 Billion. This is mainly due to the tertiary sector within the municipality. It has been estimated that between 2015 and 2016, there was a 1.6% growth. There has also been an increase in the secondary sector (manufacturing, electricity, gas and water, and construction) since the 2008 recession.

Between 2005 and 2010, the unemployment rate was fairly stable; however, thereafter the unemployment rate has steadily increased within the Bitou Local Municipality, as well as the Eden District Municipality and Western Cape Province.

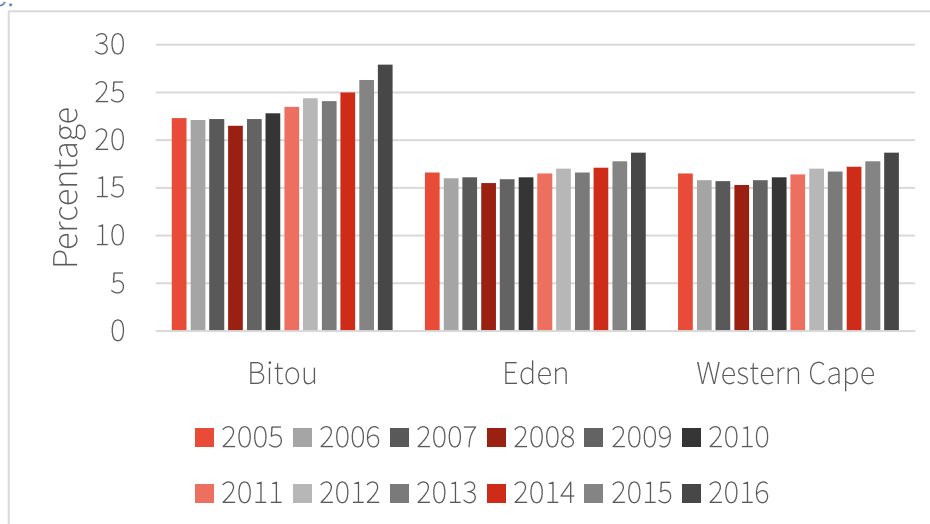


Figure15: Unemployment rate of the Western Cape, Eden District Municipality and Bitou Local Municipality

Education Level

As of 2016, the Bitou Local Municipality had 11 schools, of which 7 had a library. Due to the tough economic climate experienced by South Africa, the proportion of parents not being able to afford school fees, increased slightly from 80% to 81.8% in 2016.

Between 2014 and 2016, the matric pass rate increased from 73.9% to 76.4%; however, the Bitou Local Municipality is still below the district average.

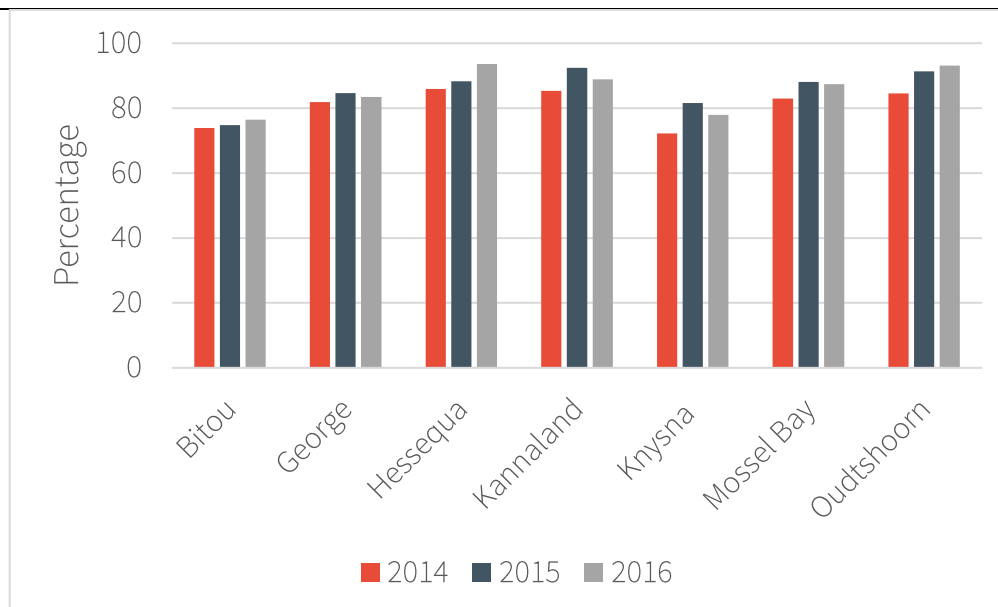


Figure16: Education Level: Matric Pass Rate

8.2.	Explain the socio-economic value/contribution of the proposed development.
<p>The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p> <p>Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.</p>	
8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
<p>Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.</p>	
8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.
<p>The DR 1797 Road Upgrade will not have an impact on people's health and / or well-being.</p>	

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

The NEMA EIA Regulations states that information on reasonable alternatives should be given. The following alternatives have been considered and are discussed in more detail below:

- Road design and alignment
- No-go alternative.

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred property and site alternative.	
<p>The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Crags Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.</p> <p>However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m².</p>	
Provide a description of any other property and site alternatives investigated.	
<p>Due to the DR 1797 road being an existing road no property or site alternatives were considered.</p>	

Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.
<p>The DR 1797 Road upgrade was strategically decided on by the Western Cape Government and the Bitou Local Municipality. A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:</p> <ul style="list-style-type: none"> • The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition • That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h • That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic. <p>Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community.</p> <p>The area where the DR 1797 Road upgrade activities will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The upgrading the DR 1797 Road will provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.</p> <p>DR 1797 Road upgrade in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p>
Provide a full description of the process followed to reach the preferred alternative within the site.
<p>A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:</p> <ul style="list-style-type: none"> • The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition • That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h • That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic. <p>Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community. For engineering details please refer to SECTION E.</p>
Provide a detailed motivation if no property and site alternatives were considered.
<p>The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.</p> <p>However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m².</p> <p>Due to the nature of the project, that being an upgrade of the existing DR 1797 Road, no property or site alternatives were considered.</p>
List the positive and negative impacts that the property and site alternatives will have on the environment.
<p>The positive and negative implications to the applicant, the community, the local economy and the biophysical environment must be considered, should WCG be allowed to upgrade the DR 1797 Road. These are discussed in more detail below.</p> <p><u>The Applicant and Local Economy</u></p> <p>The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.</p> <p>The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p> <p>Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus the DR 1797 Road upgrade will create local employment.</p>

The DR 1797 Road upgrade will result in resurfacing the current gravel road to a bitumen surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.

The Community

A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:

- The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition
- That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h
- That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic.

Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.

The Environment

The DR 1797 Road upgrade will require vertical and horizontal realignment to allow for a 60 km/hr design speed. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve. The Hatch Engineering Team conducted a survey at the commencement of the project to minimise the overall impact that the route realignment would have on agricultural activities as well as the surrounding environment. The outcome is that areas which will be expropriated, are mainly the property verges to reduce the overall impact on agriculture and avoid socio-economic impacts on the landowners.

The ecological needs and desirability associated with the DR 1797 upgrade are mainly positive. The ecological impact will be improved to a much better natural state, as well as allow for ecosystem services to recover within the area due to the improved drainage through the proposed culverts.

The negative impacts associated with the DR 1797 Road upgrade construction can be easily mitigated.

1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred activity alternative.	
Activity alternatives are not applicable to the DR 1797 Road upgrade.	
Provide a description of any other activity alternatives investigated.	
No other activity alternatives have been investigated.	
Provide a motivation for the preferred activity alternative.	
Not applicable.	
Provide a detailed motivation if no activity alternatives exist.	
The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.	
However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m ² .	
Due to the nature of the project, that being an upgrade of the existing DR 1797 Road, no activity alternatives were considered.	
List the positive and negative impacts that the activity alternatives will have on the environment.	
Not applicable.	
1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts
Provide a description of the preferred design or layout alternative.	
The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.	

<p>However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m².</p>
<p>Due to the nature of the project, that being an upgrade of the existing DR 1797 Road, this is the preferred alternative.</p>
<p>Provide a description of any other design or layout alternatives investigated.</p>
<p>No other design or layout alternatives have been investigated.</p>
<p>Provide a motivation for the preferred design or layout alternative.</p>
<p>Preferred alternative: The DR 1797 Road upgrade was strategically decided on by the Western Cape Government and the Bitou Local Municipality. A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:</p> <ul style="list-style-type: none"> • The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition • That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h • That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic. <p>Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community.</p> <p>The area where the DR 1797 Road upgrade activities will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The upgrading the DR 1797 Road will provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.</p> <p>DR 1797 Road upgrade in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p>
<p>Provide a detailed motivation if no design or layout alternatives exist.</p>
<p>The DR 1797 Road upgrade was strategically decided on by the Western Cape Government and the Bitou Local Municipality. A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:</p> <ul style="list-style-type: none"> • The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition • That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h • That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic. <p>Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community.</p> <p>The area where the DR 1797 Road upgrade activities will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The upgrading the DR 1797 Road will provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.</p> <p>DR 1797 Road upgrade in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p>
<p>List the positive and negative impacts that the design alternatives will have on the environment.</p>
<p>Preferred alternative: The positive and negative implications to the applicant, the community, the local economy and the biophysical environment must be considered, should WCG be allowed to upgrade the DR 1797 Road. These are discussed in more detail below.</p> <p><u>The Applicant and Local Economy</u> The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.</p>

The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.

Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus the DR 1797 Road upgrade will create local employment.

The DR 1797 Road upgrade will result in resurfacing the current gravel road to a bitumen surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.

The Community

A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:

- The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition
- That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h
- That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic.

Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.

The Environment

The DR 1797 Road upgrade will require vertical and horizontal realignment to allow for a 60 km/hr design speed. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve. The Hatch Engineering Team conducted a survey at the commencement of the project to minimise the overall impact that the route realignment would have on agricultural activities as well as the surrounding environment. The outcome is that areas which will be expropriated, are mainly the property verges to reduce the overall impact on agriculture and avoid socio-economic impacts on the landowners.

The ecological needs and desirability associated with the DR 1797 upgrade are mainly positive. The ecological impact will be improved to a much better natural state, as well as allow for ecosystem services to recover within the area due to the improved drainage through the proposed culverts.

The negative impacts associated with the DR 1797 Road upgrade construction can be easily mitigated.

- 1.4. **Technology alternatives** (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

The preferred technology is to upgrade the DR 1797 road from a Class 4 (gravel road) to a Special Class 4 (surfaced road). This will allow for a speed limit of 60km/h.

The following outlines the pavement structure which will be constructed:

Pavement Structure		
Layer	Thickness	Description
Surfacing	20 mm	S4 20 mm single seal using 65% cationic spray grade emulsion as tack coat and 30% spray-grade emulsion as second application of binder with two layers of slurry (20 mm Cape Seal)
Base	150 mm	G4 crushed stone base compacted to 86% BRD
Subbase	150 mm	C4 stabilised subbase compacted to 97% MDD
Upper Selected Subgrade	150 mm	G7 gravel selected subgrade compacted to 95% MDD
Lower Selected Subgrade	150 mm	G9 gravel selected subgrade compacted to 93% MDD

Provide a description of any other technology alternatives investigated.
No other technology alternatives were investigated.
Provide a motivation for the preferred technology alternative.
The DR 1797 Road upgrade will result in resurfacing the current gravel road to a surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.
Provide a detailed motivation if no alternatives exist.
The DR 1797 Road upgrade will result in resurfacing the current gravel road to a surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.
List the positive and negative impacts that the technology alternatives will have on the environment.
<p>Preferred alternative:</p> <p>The positive and negative implications to the applicant, the community, the local economy and the biophysical environment must be considered, should WCG be allowed to upgrade the DR 1797 Road. These are discussed in more detail below.</p> <p><u>The Applicant and Local Economy</u></p> <p>The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.</p> <p>The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p> <p>Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.</p> <p>The DR 1797 Road upgrade will result in resurfacing the current gravel road to a bitumen surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.</p> <p><u>The Community</u></p> <p>A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:</p> <ul style="list-style-type: none"> • The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition • That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h • That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic. <p>Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.</p> <p><u>The Environment</u></p> <p>The DR 1797 Road upgrade will require vertical and horizontal realignment to allow for a 60 km/hr design speed. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve. The Hatch Engineering Team conducted a survey at the commencement of the project to minimise the overall impact that the route realignment would have on agricultural activities as well as the surrounding environment. The outcome is that areas which will be expropriated, are mainly the property verges to reduce the overall impact on agriculture and avoid socio-economic impacts on the landowners.</p> <p>The ecological needs and desirability associated with the DR 1797 upgrade are mainly positive. The ecological impact will be improved to a much better natural state, as well as allow for ecosystem services to recover within the area due to the improved drainage through the proposed culverts.</p> <p>The negative impacts associated with the DR 1797 Road upgrade construction can be easily mitigated.</p>

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred operational alternative.	
The DR 1797 Road is a public road and will be used by various people including tourist and surrounding landowners. Due to this, there are no operational alternatives.	
Provide a description of any other operational alternatives investigated.	
Not applicable.	
Provide a motivation for the preferred operational alternative.	
Not applicable.	
Provide a detailed motivation if no alternatives exist.	
The DR 1797 Road is a public road and will be used by various people including tourist and surrounding landowners. Due to this, there are no operational alternatives.	
List the positive and negative impacts that the operational alternatives will have on the environment.	
Not applicable.	
1.6.	The option of not implementing the activity (the 'No-Go' Option).
Provide an explanation as to why the 'No-Go' Option is not preferred.	
<p>The positive and negative implications to the applicant, the community, the local economy and the biophysical environment must be considered, should WCG not be allowed to upgrade the DR 1797 Road. These are discussed in more detail below.</p> <p><u>The Applicant and Local Economy</u></p> <p>Should the DR 1797 Road upgrade not proceed an opportunity will be lost to provide smaller communities with improved accessibility and a potential improved economy.</p> <p>The no-go alternative will entail leaving the DR 1797 gravel road in its present state. This would require an increased amount of maintenance. However in some instance, the minor culverts could remain blocked due to overgrown vegetation, including alien invasive vegetation, and may result in an impact on drainage water patterns and the roads integrity.</p> <p>In addition to this the Eden District Municipality as well as the Bitou Local Municipality will not meet their target in terms of their associated IDPs. This could result in the project being delayed which could result in funding being lost for the proposed upgrade activities. As mentioned in the Section 5.1.2, if the DR 1797 Rd is upgraded this could result in potential job opportunity due to the increase in tourism. If the DR 1797 upgrade project does not occur this could result in a loss of tourism which, indirectly, could result in the local economy stagnating.</p> <p><u>The Community</u></p> <p>For this project, the no-development option would mean not undertaking the DR 1797 Road upgrade. If the construction of the road upgrade does not take place, job opportunities for the local community, as contractors and sub-contractors are appointed, will not be realised. In addition, the opportunity for skills transfer, and/or possible skill development will not occur. Furthermore, expropriation of land would not be required should the DR 1797 Road upgrade not proceed.</p> <p><u>The Environment</u></p> <p>The DR 1797 is an existing gravel road with some minor culverts which allow the flow of drainage water from one side of the road to the other. The current condition of the minor culverts is poor due to build-up of debris and vegetation blockages. Furthermore, the lack of maintenance on these culverts has led to overgrown vegetation, including alien invasive species, and may result in an impact on drainage water patterns and the roads integrity. If the DR 1797 Road is not upgraded the debris build-up and vegetation blockages will remain, resulting in poor drainage water patterns within the area. In addition to this, alien invasive vegetation will not be removed and could spread further within the watercourse as well as along the road reserve.</p> <p>Furthermore, expropriation of land would not be required should the DR 1797 Road upgrade not proceed. This would have a positive impact on the affected areas as not land would be lost to the realignment of the DR 1797 Road.</p>	
1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.
The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.	

However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m².

Due to the nature of the project, that being an upgrade of the existing DR 1797 Road, no alternatives were considered.

1.8. Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.

The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.

However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m².

Due to the nature of the project, that being an upgrade of the existing DR 1797 Road, this is the **preferred alternative**.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).

No "no-go" areas have been identified along the DR 1797 Road. This is due to the majority of the DR 1797 Road being an existing road. Construction activities shall remain within the existing road reserve and expropriation area.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.

Environmental Impact Assessment

The assessment of impacts adheres to the minimum requirements in the NEMA EIA Regulations.

Approach

Prediction of Significant Environmental Issues

Potential environmental issues or impacts associated with the upgrade of the DR 1797 Road, were identified through a review and consideration of the following:

- A review of the WCG Contract Document for the Periodic Maintenance of TR2/12 – Kurland (km 14.14) to Eastern Cape Border (km 37.25). This report described all of the project related components and infrastructure, as well as the activities associated with the project-life cycle
- The nature and profile of the receiving environment which included both a desktop evaluation (available documents, GIS maps)
- Understanding of the direct and indirect impacts of the project as a whole
- Inputs received from the authorities during the pre-application process
- Legal and policy context.

Mitigation of Impacts

A detailed assessment was conducted to evaluate all possible impacts with input from the project team, specialist studies and I&APs, making use of the impact assessment methodology described below. Practical mitigation measures were identified with the following objectives:

- To strive to prevent the occurrence of the impact
- If the impact cannot be prevented, then measures need to be put in place to minimize the significance of the impact.

The mitigation measures have been included in the EMPr (Appendix H).

Impact Rating Methodology

The impact assessment focussed on the direct and indirect impacts associated with the project. Impacts were analysed with regard to their extent, intensity, duration, probability and significance.

The significance of potential impacts that may result from the proposed project was determined to assist decision-makers (typically by a designated authority or state agency, but in some instances, the applicant). The significance of an impact is defined as a combination of the consequence of the impact occurring and the probability that the impact will occur.

The criteria used to determine impact consequence are presented in the table below.

Rating	Definition of Rating	Score
Extent – Physical extent or spatial scale of the impact		
Local	Confined to project or study area or part thereof (e.g. the development site and immediate surrounds)	1
Regional	The region (District Municipality or Quaternary catchment)	2
National	Nationally or beyond	3
Intensity – Impact would be destructive or benign		
Low	Site-specific and wider natural and / or social functions and processes are negligibly altered	1
Medium	Site-specific and wider natural and / or social functions and processes continue albeit in a modified way	2
High	Site-specific and wider natural and / or social functions or processes are severely altered	3
Duration – Timeframe in which the impact would occur		
Short Term	Up to 2 years and reversible	1
Medium Term	2 to 15 years and reversible	2
Long Term	More than 15 years and irreversible	3

The combined score of these three criteria corresponds to a Consequence Rating, as follows:

Combined Score	3-4	5	6	7	8-9
Consequence Rating	Very Low	Low	Medium	High	Very High

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications presented in the table below:

Probability – Likelihood of the impact occurring	
Improbable	< 40% chance of occurring
Possible	40% – 70% chance of occurring
Probable	>70% – 90% chance of occurring
Definite	> 90% chance of occurring

The overall significance of impacts is determined by considering consequence and probability using the rating system prescribed in the table below:

		Probability			
		Improbable	Possible	Probable	Definite
Consequence	Very low	Insignificant	Insignificant	Very low	Very low
	Low	Very low	Very low	Low	Low
	Medium	Low	Low	Medium	Medium
	High	Medium	Medium	High	High
	Very high	High	High	Very high	Very high

Finally, the impacts are also considered in terms of their status (positive or negative impact) and the confidence

in the ascribed impact significance rating. The prescribed system for considering impacts status and confidence (in assessment) is laid out in the table below:

Status of impact	
Indication of whether the impact is adverse (negative) or beneficial (positive)	+ ve (positive – a 'benefit')
	– ve (negative – a 'cost')
Confidence of assessment	
The degree of confidence in predictions based on available information, Hatch's judgment and / or specialist knowledge	Low
	Medium
	High

The impact significance rating should be considered by authorities in their decision-making process based on the implications of ratings described below:

- **Insignificant:** Potential impact is negligible and will not have an influence on the decision regarding the proposed activity / development
- **Very low:** Potential impact is very small and should not have any meaningful influence on the decision regarding the proposed activity / development
- **Low:** Potential impact may not have any meaningful influence on the decision regarding the proposed activity / development
- **Medium:** Potential impact should influence the decision regarding the proposed activity / development
- **High:** Potential impact will affect the decision regarding the proposed activity / development
- **Very high:** Proposed activity should only be approved under special circumstances.

Please refer to the Impact Tables (for No-Go Alternative, Construction Phase and Operation Phase) in Appendix J.

4. Assessment of each impact and risk identified for each alternative

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

(Please refer to the Impact Tables (for No-Go Alternative, Construction Phase and Operation Phase) in Appendix J).

Alternative:	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
OPERATIONAL PHASE	
Potential impact and risk:	
Nature of impact:	
Extent and duration of impact:	

Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.
<p><u>Summary of Impacts</u></p> <p>The following section summarises the potential impacts identified in the specialist studies. The specialist studies are included in Appendix G, with impact management measures included in the Impact Tables in Appendix J.</p> <p><u>Botanical Impacts</u></p> <p>The main potential impacts to the botanical aspects in the area due to the DR 1797 Road upgrade, include:</p> <ul style="list-style-type: none"> • Loss of vegetation type and habitat including plant species due to construction and operational activities of the proposed upgrade of the DR 1797 Road • Disturbance of this would result in the unnecessary loss of semi-natural vegetation. <p>The majority of the area along the DR 1797 Road was classified as disturbed; however, just after km 3 along the boundary of the Simply Green Nursery, two Protected trees namely <i>Afrocarpus falcatus</i> (Outeniqua Yellowwood) and <i>Pittosporum viridiflorum</i> (Cheesewood), were identified. Due to this, a survey has been commissioned to identify whether the trees will be affected by the realignment. If the trees are affected by the road alignment, then a permit will be required prior to removing, cutting or trimming the trees.</p> <p><u>Freshwater Ecology Impacts</u></p> <p>The main potential impacts to the freshwater systems in the area due to the DR 1797 Road upgrade, include:</p> <ul style="list-style-type: none"> • Aquatic habitat modification or loss • Water quality impacts • Flow modification. <p>All of the minor culverts were assessed by the freshwater specialist, where it was identified that all of the watercourses were already severely modified. The specialist suggested that if the culverts were cleared and alien invasive vegetation was removed, then this may have a positive impact on the water courses.</p>	
2.	List the impact management measures that were identified by all Specialist that will be included in the EMP
<p><u>Botanical Management Measures</u></p> <ul style="list-style-type: none"> • Limit vegetation removal to physical footprint of road reserve and expropriation areas. • Prior to the commencement of vegetation clearing, search and rescue for fynbos bulb populations by a trained specialist, horticulturalist or nurseryman and • Where possible, the fynbos bulbs should be stored in a nursery and used as part of rehabilitation t. • Where possible, aloes planted within the road reserve, should be removed and stored in a nursery and used as part of rehabilitation • Where <i>Dovyalis caffra</i> (Kei Apple) has been planted on private property to form security hedges, the plants should be removed and, where possible, kept in a nursery for later replanting. This must be negotiated with the respective landowners. • If avoidance is not possible, impacted protected tree species are to be replaced (like-for-like where possible), in a suitable nearby location. • Protected species permits are required from the DEFF for disturbance (cutting or removal) of the Protected trees. <p><u>Freshwater Management Measures</u></p> <ul style="list-style-type: none"> • Erosion control measures (for wind and water erosion) must be implemented and maintained in areas disturbed by construction such as berms to hinder stormwater flow, revegetation of areas with indigenous vegetation. • Topsoil, soil and subsoil must be stockpiled separately, for rehabilitation purposes. • Stockpiles must not be deposited / stored within riparian areas (watercourses and their banks). • Stockpiles may not be higher than 2 m. • During rehabilitation, prompt and progressive reinstatement of bare areas is required. The topsoil layer is to be replaced on top during reinstatement. 	

- Any disturbed areas caused as a result of the construction activities which may lay bare for an extended period, should be temporarily grassed.
- Checks must be carried out at regular intervals to identify areas where erosion is occurring.
- Where paths may cause erosion, these paths should be relocated and rehabilitated to reduce further erosion.
- Increased sediment loads must be prevented from entering watercourses.
- Limit vegetation removal to physical footprint of road reserve and expropriation areas.
- Upon commencement of construction, a photographic record of invasive alien plants present in the physical footprint of road reserve and expropriation areas must be made.
- After revegetation has been completed, the Contractor must remove weeds and alien invasive plants at the construction sites and adjacent areas on a monthly basis, until the end of the defect's liability period of the contract.
- Within, and in proximity to the wetland, successful re-vegetation, if required, is crucial to stabilise soils and limit infestation by invasive alien plant species. Rehabilitation should be undertaken on a progressive basis in these areas.
- Work within the watercourses and wetland areas must be limited as far as possible to remain within the physical footprint of road reserve and expropriation areas.
- The disturbed areas should be rehabilitated on a progressive basis in these areas to reduce soil erosion and alien invasive vegetation growth.
- Care must be taken to avoid the introduction of alien invasive plant species to the undisturbed areas.
- The upgraded culvert structures should be adequately sized and installed in the watercourses in such a manner so as to not increase the rate of deposition or erosion at the structure.
- Only existing disturbed areas should be utilised as laydown and stockpile areas if required.
- Waste material should be removed to authorized waste facilities.
- Where there are steeper gradients along the road, erosion control measures (for wind and water erosion) must be implemented and maintained such as berms to hinder stormwater flow, revegetation of areas with indigenous vegetation.
- Where possible, the construction should take place during the drier months of the year to minimise the risk of contaminated runoff and sediment washing into the adjacent aquatic habitats.
- Contaminated runoff from the construction site(s) should be prevented from entering the watercourses and wetland areas.
- The laydown area and main construction site for the road upgrade should be located away at least 30 m from the indicated freshwater constraints
- The laydown area and main construction site must be bunded (i.e. natural soil berms) to prevent any run-off from these areas.
- Where construction site(s) need to be located close to the rivers / streams, all materials on the construction site(s) must be properly stored and contained in bunded and impermeable areas.
- Disposal of waste from the site(s) should also be properly managed in accordance with the EMPr.
- Construction workers must be provided with ablution facilities at the construction works that are located away from the river systems (at least 30 m) in a bunded and impermeable areas and regularly serviced. Proof of service must be maintained on site for inspection.
- Increased sedimentation or turbidity at each of the construction works should be mitigated as far as possible by making use of sandbags, settling ponds or screens to minimize the load of sediment being washed downstream of the sites.
- Waste bins must be made available by the contractor for the disposal of general and hazardous waste. Proof of disposal must be obtained and kept on site.
- Daily site walk throughs must be undertaken by the contractors before the shift ends to clean the site.
- Once the works is complete, the area should be rehabilitated to resemble that of the surrounding landscape to ensure that the flow in the watercourses and to the more natural wetland areas is not modified by the activities.

The impact management measures as detailed in the specialist's reports (refer to Appendix G), have been included in the EMPr (included in Appendix H).

3.	List the specialist investigations and the impact management measures that will not be implemented and provide an explanation as to why these measures will not be implemented.
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The impact management measures as detailed in the specialist's reports (refer to Appendix G), have been included in the EMPr (included in Appendix H).

4.	Explain how the proposed development will impact the surrounding communities.
<p>The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.</p> <p>The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p> <p>Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.</p> <p>The DR 1797 Road upgrade will result in resurfacing the current gravel road to a bitumen surfaced road. This surfacing method was chosen as it is the most appropriate for the amount of traffic the road experiences and is also the most cost effective for the applicant.</p> <p>A survey was conducted by the Hatch Engineering team to identify the requirement for the upgrade the DR 1797 Road from a gravel road (Class 4) to a surfaced road (Special Class 4). This survey identified:</p> <ul style="list-style-type: none"> • The gravel DR 1797 Road and associated stormwater infrastructure is in poor condition • That the alignment of the gravel DR 1797 Road does not allow for safe travel at a speed of 60 km/h • That at km 0.705 where the tributary of the Whiskey Creek intersects with the DR 1797 Road, there is a substantial valley resulting in a driver's blind rise in both directions of traffic. <p>Based on the poor and unsafe conditions of the gravel DR 1797 Road a road re-alignment was considered to be in the best interest of the local community. Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District Municipality SDF.</p>	
5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.
The DR 1797 Road upgrade will not have an impact on climate change thus was not considered.	
6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.
There are no conflicting recommendations between the specialist.	
7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.
The findings and recommendations of the aquatic and botanical specialist studies have been aligned and integrated.	
8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.
<p>The impacts identified during the impact assessment process are noted in Appendix J. The following steps of the mitigation hierarchy was applied in identifying mitigation measures and allowed the EAP to arrive at the best practicable environmental option. The first step that was used was to avoid any impacts which may be caused by the activities associated with the DR 1797 Road upgrade. If this was not possible the second step was to minimise the impact by implementing mitigation measures to reduce the intensity of the impact. Lastly, if an impact could not be mitigated then rectification measures were proposed.</p>	

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.
<p>Background</p> <p>The DR 1797 Road is located on the DR 1797, which is a minor road off the N2 Highway in the Bitou Local Municipality of the Western Cape. This road is a dual lane, single carriageway and is situated in the jurisdiction of the Garden Route District Municipality (formerly known as the Eden District Municipality).</p> <p>The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a surfaced road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well.</p>	

In order to upgrade the DR 1797 Rd to a Special Class 4 road, horizontal and vertical realignment in some areas were required. Due to the realignment of the road, some of the surrounding areas along the DR 1797 Road will be expropriation to allow for a constant speed limit as well as make the road safer to drive. In addition to these activities, all the minor culverts will be replaced and cleaned out to allow for better flow of water. One major culvert will be constructed at Km 0.7 as the road will be raised at this point which will reduce the blind spots on either side of the culvert.

Specialist Studies

Due to the environmental sensitivities in the area, two specialist studies were conducted for the DR 1797 Road upgrade, namely:

- Aquatic Specialist Study
- Botanical Specialist Study

Impact on the receiving environment

- Agriculture

The existing DR 1797 Road provides access to various agricultural activities along the road. As part of the DR 1797 Road upgrade, some of the surrounding landowners' properties will need to be expropriated. The Hatch Engineering Team conducted a survey at the commencement of the project to evaluate and minimise the overall impact the route realignment would have on agricultural activities. The areas which will be expropriated, are mainly the property verges. This is to reduce the overall impact on agriculture along the road to avoid any socio-economic impacts on the landowners where expropriation may occur.

- Landscape and Visual

The area which will be expropriated will be permanently altered to accommodate the realignment of the road. Due to this, there is a potential of a negative impact on the landscape and visual aesthetics. However, the areas which will be disturbed by construction activities, such as the clearing of vegetation, will be rehabilitated to allow natural vegetation growth, thereby reducing the impact to the landscape.

- Archaeology and Cultural Heritage

The DR 1797 is an existing road with the majority of construction activities occurring within the existing road reserve. The expropriation areas will be the only areas outside of the road reserve where construction activities will occur. Due to this, the upgrade of the DR 1797 Road is unlikely to have an impact on archaeology and cultural heritage aspects of the area.

As part of the construction activities, a "Chance Find Procedure" will be compiled and issued to the contractors for implementation during the upgrade works, in the event of an archaeological or cultural heritage find.

- Palaeontology

The DR 1797 is an existing road with the majority of construction activities occurring within the existing road reserve where majority of the area is disturbed. It is not anticipated that the upgrade of the DR 1797 Road will have any negative impacts on palaeontological aspects. However, should any palaeontological finds occur during construction, a "Chance Find Procedure" will be implemented.

- Vegetation / Landcover

The original vegetation that would have occurred across the entire area where the Redford Road is aligned, is Tsitsikamma Sandstone Fynbos. This vegetation type is a fynbos shrubland formation that occurs on the low coastal sandstone mountains, hills and plains of the Tsitsikamma Range. The Tsitsikamma Sandstone Fynbos has an ecosystem threat status of Least Threatened.

Only limited remnant areas of Tsitsikamma Sandstone Fynbos remain in the road reserve of the DR1797, with most of the vegetation having been transformed by invasive aliens or removed in favour of ornamental planting.

Besides the area which will be expropriated there will be little impact on indigenous vegetation. If all the alien invasive vegetation is removed as part of the upgrade activities, then this may have a positive on the area in the long term.

- Terrestrial Biodiversity

The DR 17897 Road upgrade project will require expropriation of some small areas due to the realignment of the road as well as the installation of a major culvert at KM 0.7. Due to this a specialist study was conducted to identify the sensitivity of the area and the vegetation which is adjacent to the road.

The existing DR 1797 Road falls within close proximity to a CBA as well as intersects with various ESA. ESA are areas that are not essential for meeting biodiversity targets but play an important role in supporting the functioning of Protected Areas or CBAs and are often vital for delivering ecosystem services.

The botanical specialist identified that there are some areas where the vegetation was classified as having a low to moderate sensitivity as well as two protected tree which should be avoided if possible. Due to this, the project team would like to avoid removing these trees, thus a survey has been commissioned by the Hatch Engineering Team to identify the exact location of the trees and whether the realignment of the road require the removal of these trees. If it is possible to avoid the trees, this will be done. However, if the trees cannot be avoided, then a permit will be applied for, for the removal of the protected trees. This will be conducted through the DEFF, prior to the trees being removed, cut or trimmed. Furthermore, the protected trees will be replaced (like-for-like where possible), in suitable, nearby areas.

- Aquatic Biodiversity

The DR 1797 Road crosses over tributaries of the Whiskey Creek River, as well as a tributary of the Keurbooms River, including instream dams and associated artificial wetland habitats.

Due to the construction of the major culvert at km 0.705, a freshwater assessment was conducted by a SACNASP registered specialist to identify the impact the upgrade activities would have on the drainage areas which intersect the road.

Based on this assessment, the majority of the watercourses along the road were identified as significantly modified, often with the instream dams immediately upstream or downstream of the road. As a result of the agricultural activities and disturbance of the aquatic habitats immediately adjacent to the road, as well as the flatter topography of this road, the culverts along the road are subject to high sediment deposition and are likely to require regular maintenance to keep these culverts clear of sediment and debris.

Considering that the proposed activities are largely improvements to the existing road in terms of upgrading existing culvert structures, it can be expected that the cumulative impact of this activity on the aquatic habitat will be of low to very low significance over the short term, and in many cases, positive over the long term.

- Noise

During construction there is a potential for an increase in noise levels, however, if the mitigation measures are implemented as indicated in the EMPr there should be a reduction in the noise resulting from construction activities.

Once the DR 1797 Road upgrades have concluded, there is a potential that more vehicles will travers the area. This could result in an increase in noise levels, however, as the DR 1797 Road is an existing road and the communities are accustomed to the noise, the impact is anticipated to be negligible.

- Traffic

The DR 1797 Road will be upgraded from a Class 4 (gravel road) to a Special Class 4 (surfaced road). Due this the, it is anticipated that while the construction activities may have a slightly negative impact on the overall traffic.

- Socio-Economic

The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.

Another objective of the DR 1797 Road upgrade is to provide EPWP work opportunities, develop emerging CIDB contractors and contributing towards black economic empowerment within the local communities. Thus the DR 1797 Road upgrade will create local employment.

Overall, the upgrade of the DR 1797 will have a positive impact on the surrounding landowners as well as the local community by creating jobs and indirectly improving the local community.

- Air Quality

The existing DR 1797 is a gravel road which causes dust fallout when used by vehicles. Once the road is converted from a gravel to a tarred road, there will be a drastic reduction of dust fallout in the area.

During construction, there is a possibility of increased dust levels; however, mitigation measures such as dust suppressions will be implemented throughout the construction duration.

- Topography and Climate

The general topography of the area comprises of low hills. The altitude of the works ranges from approximately 295 mamsl and drops down to 235 mamsl at the intersection with the N2 Highway near Kurland.

The upgrade of the DR 1797 Road will have little to no impact on the topography of the area or the climate.

Outcome of the Impact Assessment

The table below summarises the impacts associated with the No-go Alternative. Please refer to Appendix J for the detailed **No-Go Alternative Impact Assessment**.

No Go Alternative		
Activity	Overall Significance	Status of Impact
Agriculture / Soils		
Should the DR 1797 Road not be upgraded , there will be no loss of agricultural land	Very Low	Positive Impact
Landscape / Visual		
Should the DR 1797 Road not be upgraded, current poor road alignment and visibility may remain.	Low	Negative Impact
Archaeological and Cultural Heritage		
Not Applicable		
Palaeontology		
Not Applicable		
Terrestrial Biodiversity including Plant and Animal Species		
Continuation of infestation of alien invasive vegetation along the DR 1797 Road.	Very Low	Negative Impact
As no agricultural land will be expropriation, no indigenous vegetation will be lost.	Medium	Positive Impact
Aquatic Biodiversity		
Continuation of infestation of alien invasive vegetation along the DR 1797 Road and within channels may disperse and migrate into the water courses .	Very Low	Negative Impact
The drainage throughout the DR 1797 Road has not been maintained, this has compromised the flow of water and may continue to impact on the aquatic biodiversity.	Low	Negative Impact
Noise		
Not Applicable		
Traffic		
Not Applicable		

Geotechnical		
Not Applicable		
Socio-Economic Environment		
Should the DR 1797 Road not be upgraded the current socio-economic status of the area may remain unchanged.	Low	Negative Impact
Should the DR 1797 Road not be upgraded poor road conditions and safety problems may persist.	Very Low	Negative Impact
Air Quality		
Nuisance dust fallout as result of traffic on the gravel DR 1797 Road will continue should the DR 1797 Road not be upgrade.	Low	Negative Impact
Topography and Climate		
Not Applicable		
Geology		
Not Applicable		

The table below summarises the impacts associated with the construction phase. Please refer to Appendix J for the detailed **Construction Phase Impact Assessment**.

Construction Phase			
Activity	Significance without Mitigation	Significance with Mitigation	Status of Impact
Agriculture / Soils			
Portion of small holding to be expropriated for the upgrade of the DR 1797 Road.	Medium	Low	Negative Impact
Areas with high land capability to be expropriated for the upgrade of the DR 1797 Road.	Medium	Low	Negative Impact
Clearance of vegetation due to the DR 1797 Road upgrade and expropriation of land may lead to soil erosion.	Insignificant	Insignificant	Negative Impact
Indirect – Eroded soil could possibly end up in surrounding surface water features	Very Low	Insignificant	Negative Impact
Soil compaction due to heavy machinery and equipment during construction.	Very Low	Insignificant	Negative Impact
Indirect – Soil compaction resulting poor infiltration and increased runoff to surrounding system	Very Low	Insignificant	Negative Impact
Soil pollution due to hazardous substances spills.	Medium	Insignificant	Negative Impact
Loss of topsoil due to incorrect stockpiling and poor rehabilitation	Very Low	Very Low	Negative Impact
Incorrect disposal of waste aggregate.	Insignificant	Insignificant	Negative Impact
Loss of agricultural land due to poorly demarcate expropriation areas.	Medium	Very Low	Negative Impact
Landscape / Visual			
Litter and bad housekeeping from construction staff.	Very Low	Insignificant	Negative Impact
Clearing of vegetation in expropriation areas.	Medium	Very Low	Negative Impact
Inadequate rehabilitation of the construction footprint.	Medium	Insignificant	Negative Impact
Archaeological and Cultural Heritage			
Archaeological and cultural heritage chance finds during the excavation within the expropriation areas.	Very Low	Insignificant	Negative Impact
Palaeontology			
Paleontological chance finds during the excavation within the expropriation areas.	Very Low	Insignificant	Negative Impact
Terrestrial Biodiversity including Plant and Animal Species			

Loss of Tsitsikamma Sandstone Fynbos.	Low	Very Low	Negative Impact
Potential loss of species of concern (namely <i>Afrocarpus falcatus</i> (Outeniqua Yellowwood) and <i>Pittosporum viridiflorum</i> (Cheesewood)).	Medium	Low	Negative Impact
Potential sedimentation and erosion due to construction activities.	Very Low	Insignificant	Negative Impact
Infestation of alien invasive species within areas where construction activities have occurred.	Low	Insignificant	Negative Impact
Aquatic Biodiversity			
Potential impact on the aquatic habitats adjacent to the proposed work areas.	Medium	Insignificant	Negative Impact
Impairment of the surface water quality could potentially occur during the construction phase.	Very Low	Insignificant	Negative Impact
Potential of longer-term modification of the flow characteristics to downstream watercourse habitats as a result of the proposed activities due to the modification of the stormwater drains and the culvert structures.	Insignificant	Insignificant	Negative Impact
Noise			
Noise from construction vehicles and excavation activities.	Very Low	Insignificant	Negative Impact
Traffic			
Interrupted traffic due to construction activities.	Low	Insignificant	Negative Impact
Increase construction vehicles on the road.	Low	Insignificant	Negative Impact
Geotechnical			
No geotechnical impacts have been identified.			
Socio-Economic Environment			
Job opportunities.	Very Low	Insignificant	Positive Impact
Influx of people to the area seeking employment.	Low	Insignificant	Negative Impact
Safety and security problems.	Very Low	Insignificant	Negative Impact
Air Quality			
Increased nuisance dust fall rates associated with construction activities.	Very Low	Insignificant	Negative Impact
Topography and Climate			
Alteration to topography due to the infilling and raising of the DR 1797 Road at km 0.705.	Medium	Low	Negative Impact
Geology			
Not Applicable			

The table below summarises the impacts associated with the operation phase. Please refer to Appendix J for the detailed **Operation Phase Impact Assessment**.

Operational Phase			
Activity	Significance without Mitigation	Significance with Mitigation	Status of Impact
Agriculture / Soils			
Not Applicable			
Landscape / Visual			
Not Applicable			
Archaeological and Cultural Heritage			

Not Applicable			
Palaeontology			
Not Applicable			
Terrestrial Biodiversity including Plant and Animal Species			
Infestation of alien invasive species.	Very Low	Very Low	Negative Impact
Aquatic Biodiversity			
Potential impact of the aquatic habitats adjacent to the proposed work areas.	Low	Low	Positive Impact
Potential of longer-term modification of the flow characteristics to downstream watercourse habitats as a result of the proposed activities due to the modification of the stormwater drains and the culvert structures.	Very Low	Insignificant	Positive Impact
Noise			
Potential of increased noise levels due to increased use of the road.	Low	Insignificant	Negative Impact
Traffic			
Increased vehicles on the road.	Very Low	Very Low	Negative Impact
Geotechnical			
Not Applicable			
Socio-Economic Environment			
Potential job opportunities in surrounding businesses due to better access to the area as a result of improved road conditions.	Medium	Medium	Positive Impact
Potential increase in tourism of the surrounding areas due to better access to the area as a result of improved road conditions.	Medium	Very Low	Positive Impact
Improved road safety due to the road upgrade (e.g. no blind rises).	High	Medium	Positive Impact
Air Quality			
Reduction in dust fall put due to the upgrade of the road from a Class 4 (gravel) to and Special Class 4 (surfaced).	High	Very Low	Positive Impact
Topography and Climate			
Improved road alignment and gradient due to the road upgrade (e.g. no blind rises).	Medium	Very Low	Positive Impact
Geology			
Not Applicable			
Cumulative Impact Assessment			
The sum of negative impacts will be negligible, predominantly limited to the construction phase, and will not result in cumulative effects on the environment should the EMPr be implemented.			
1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)		
	Refer to maps in Appendix B2		
1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.		
Refer to Section 1.1 above for the summary of impacts.			

2. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr
Should the mitigation measures as indicated in the EMPr (Appendix H) be implemented there should be very little residual impact to the environment. Please refer to the Impact Assessment in Appendix J which contains the outcomes of the various impacts assessed.	
2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.
Should EA be granted for the DR 1797 Road upgrade it is recommended that the specialist reports mitigation and management recommendations contained in the EMPr (Appendix H) be implemented for the construction phase.	
Furthermore, The EAP recommends that as part of the EA, the EMPr (Appendix H) be appended to the EA.	
2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.
<p>The DR 1797 is currently a gravel road. The main purpose of this project is to upgrade the road from a gravel road (Class 4) to a tarred road (Special Class 4). The upgrade of DR 1797 Road will be from km 0.00 (left off the N2 and just past The Craggs Petrol Station) to km 4.87, this includes the limit for construction as well. The majority of the upgrade of the existing DR 1797 Road, will be within the road reserve.</p> <p>However, the DR 1797 Road upgrade will require vertical and horizontal realignment. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve and therefore require expropriation. These expropriation areas have a footprint of 9,300 m².</p> <p>The Bitou Local Municipality has the third smallest population within the Garden Route District, after Hessequa and Kannaland. As of 2019, the Bitou Local Municipality had a population of 61,645 people with an annual growth of 0.8%. There is an unemployment rate of 27.9% within the Bitou Local Municipality.</p> <p>The area where the DR 1797 Road upgrade will occur, is mainly known for attracting tourism, especially as there are Protected Areas within a few kilometres of the area. The main objective of upgrading the road is to ensure it is safe to drive, as well as to provide easy access to an area which is expected to increase tourism, which could in turn lead to employment opportunities. This is in support of the PSDF, the Bitou Local Municipality IDP and SDF and the Eden District Municipality SDF.</p> <p>Furthermore, the DR 1797 Road is part of the Learner Transport Route, which is the route that learners use to access schools. The DR 1797 Road upgrade is along this route and will thus improve the access to schools in the area. This is in support of the Eden District</p> <p>Another objective of the DR 1797 Road upgrade is to provide Expanded Public Works Programme (EPWP) work opportunities, develop emerging Construction Industry Development Board (CIDB) contractors and contributing towards black economic empowerment within the local communities. Thus, the DR 1797 Road upgrade will create local employment.</p> <p>As noted above the DR 1797 Road upgrade will require vertical and horizontal realignment to allow for a 60 km/hr design speed and to eliminate a driver's blind rise. Due to this, there are small areas along the DR 1797 Road which falls outside of the existing road reserve. The Hatch Engineering Team conducted a survey at the commencement of the project to minimise the overall impact that the route realignment would have on agricultural activities as well as the surrounding environment. The outcome is that areas which will be expropriated, are mainly the property verges to reduce the overall impact on agriculture and avoid socio-economic impacts on the landowners.</p> <p>The ecological needs and desirability associated with the DR 1797 upgrade are mainly positive. The area drains from the north-east of the DR 1797 Road in a south-westerly direction as there is a mountainous area situated north. Due to this, the only drainage along the DR 1797 Road is through culverts and side drains. The drainage through the DR 1797 Road has not been maintained and the pipe and box culvert barrels will be replaced as part of the road upgrade. The new pipe and box culvert barrels will facilitate a more natural water drainage flow pattern and will thus have a positive impact on the surrounding ecology.</p> <p>Provided that the environmental mitigation measures described in the EMPr (Appendix H) are applied diligently, the DR 1797 Road upgrade will have no environmental impacts that cannot be adequately mitigated to protect the environment, and authorisation of upgrade would be justified on the basis that the positive effects of the project are likely to outweigh the negative impacts.</p>	

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.								
<p>The content of this BAR was largely sourced from:</p> <ul style="list-style-type: none"> • DEFF Environmental Screening Tool • Aquatic Specialist Study • Botanical Specialist Study • Hatch Engineering Study. <p>The EAP notes that there are limited assumptions, uncertainties and gaps in knowledge specified in these specialist reports.</p>									
2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.								
<p><u>Construction Schedule</u></p> <p>Based on the current planning, construction of the DR 1797 Road upgrade is anticipated to commence at the June 2021 and is scheduled for completion September 2022, refer to Table 5.</p> <p style="text-align: center;">Table 5: DR 1797 Construction Schedule</p> <table border="1"> <thead> <tr> <th>Activity</th><th>Start Date – End Date</th></tr> </thead> <tbody> <tr> <td>DR 1797 Construction Commencement Date</td><td>June 2021</td></tr> <tr> <td>De-Establishment and completion of Construction</td><td>September 2022</td></tr> <tr> <td>Post construction monitoring</td><td>December 2022</td></tr> </tbody> </table>		Activity	Start Date – End Date	DR 1797 Construction Commencement Date	June 2021	De-Establishment and completion of Construction	September 2022	Post construction monitoring	December 2022
Activity	Start Date – End Date								
DR 1797 Construction Commencement Date	June 2021								
De-Establishment and completion of Construction	September 2022								
Post construction monitoring	December 2022								

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.

It is anticipated that, the DR 1797 Road upgrade construction activities, will require approximately 10,000 litres of water per month, and such water will be sourced from the Bitou Local Municipality. Water will be trucked to site and use sparingly. No water will be used during the operational phase.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.

The Waste Management Hierarchy Approach will be implemented as part of the construction phase of the DR 1797 Road upgrade. The following will be implemented, where possible:

- Avoid: by waste avoidance and minimisation
- Reduce: by waste reduction
- Recycle: waste recycling, recovery and utilisation
- Dispose: waste disposal, probably by destruction or approved waste disposal sites.

Disposal of waste shall be at a licensed landfill site or at a site approved by the DEA&DP in the event that an existing operating landfill site is not within reasonable distance from the site. No waste shall be burned or buried on site. A concerted effort shall be made to collect and separate materials suitable for recycling and disposal of such at recycling centres.

No waste will be generated during the operational phase of the DR 1797 Road.

5. Energy Efficiency

8.1. Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

During the construction activities, diesel generators will be used to power the various activities. No energy will be required for the DR 1797 Road.

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

Note: Duplicate this section where there is more than one Applicant.

IAzni Khail November, ID number.....890116 5086 086.....in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that the Western Cape Government Department of Transport and Public Works:

- are fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- are aware of my general duty of care in terms of Section 28 of the NEMA;
- are aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;
- appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
 - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
 - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;
- will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;
- will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
 - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
 - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
 - Legitimate costs in respect of specialist(s) reviews; and
 - the provision of security to ensure compliance with applicable management and mitigation measures;
- are responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

~~**Note:** If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.~~

Signature of the Applicant:

Date:

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

IMichelle Miles EAPASA Registration number:2020/1057..... as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
 - In terms of the general requirement to be independent:
 - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
 - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
 - In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
 - I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
 - I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
 - I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
 - I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
 - I have kept a register of all interested and affected parties that participated in the public participation process; and
 - I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

Signature of the EAP:

Date:

Name of company (if applicable):

Hatch Africa Pty Ltd.
58 Emerald Parkway Road
Greenstone Hill, Edenvale
1609

30 September 2020

By e-mail: michelle.miles@hatch.com

Attention: Mrs. M. Miles

16/3/3/1/D1/9/0011/20: BASIC ASSESSMENT ENVIRONMENTAL AUTHORISATION PROCESS FOR THE UPGRADE OF ROAD DR1797

DECLARATION OF INDEPENDENT EXTERNAL REVIEW

1 PURPOSE

This letter serves to confirm that I, Paul Furniss, a registered Environmental Assessment Practitioner, completed an independent external review of the Draft Basic Assessment Report (BAR) and Environmental Management Programme (EMPr) dated September 2020, compiled by Hatch Africa (Pty) Ltd. (Hatch) for the Western Cape Government: Department of Transport and Public Works DR 1797 Road Upgrade Project.

2 TERMS OF REFERENCE

The purpose of the review was to comply with Regulation 13(2) of Government Notice No. R. 982 of 4 December 2014 (as amended), promulgated in terms of sections 25(4) and 44 of the National Environmental Management Act 107 of 1998 (as amended).

The reports were received on 22 September 2020 and the independent review report was submitted to Hatch on 26 September 2020.

3 REVIEW CONCLUSION

The documents reviewed generally comply with the material content and procedural requirements stipulated in the EIA Regulations, 2014 (as amended).

4 DECLARATION

I hereby declare:

- ➔ I have reviewed all the work produced by the EAP which was made available to me;
- ➔ I have reviewed the correctness of the information provided as part of this Report;
- ➔ I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- ➔ I have disclosed to the EAP all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- ➔ I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Yours faithfully,

PFurniss

Paul Furniss

for and on behalf of ABS Africa (Pty) Ltd.

DECLARATION OF THE SPECIALIST – REFER TO APPENDIX G FOR THE SPECIALIST DECLARATIONS

Note: Duplicate this section where there is more than one specialist.

I, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
 - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
 - am not independent, but another specialist (the “Review Specialist”) that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

Signature of the EAP:

Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST- NOT APPLICABLE

I, as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s):
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP:

Date:

Name of company (if applicable):