

Draft Basic Assessment Report

**PROPOSED REHABILITATION OF 29KM OF THE N9 FROM
MIDDELBURG TO CARLTON HEIGHTS, EASTERN CAPE**

DEA Reference: 12/12/20/2597
NEAS Reference: DEAT/EIA/0000791/2011

Prepared for:



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**PROVINCE OF THE EASTERN CAPE
DEPARTMENT OF ECONOMIC DEVELOPMENT
AND
ENVIRONMENTAL AFFAIRS**

BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.

8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

DRAFT

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES	NO
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If YES, please complete form XX for each specialist thus appointed:
Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

1. Introduction

The South African National Roads Agency (SANRAL) is proposing to upgrade a 27km section of the National Road (N9) between Middelburg and Carlton Heights in the Eastern Cape Province (Figure 1.1). Arcus Gibb has been appointed by SANRAL as the project managers who subcontracted Coastal & Environmental Services (CES) as the Environmental Assessment Practitioner (EAP).



Figure 1.1. Location of the proposed upgrade of the N9 between Middelburg and Carlton Height in the Eastern Cape. The darkened red line indicates the affected road.

The proposed activity includes widening the existing road and reconstructing the road to provide the requisite level of service both in terms of geometrics and pavement structure, and reinforcing the existing pavement. The Flonkers “rail over road bridge” will be demolished and reconstructed and the road deviated to accommodate the new “rail over road bridge”. A number of other “river crossing bridges” will also be reconstructed, widened and rehabilitated. The road will not result in the widening of

the road reserve boundaries and should not intrude into private-owned land at any point.

In addition to the EIA process, a water use license application will be undertaken in accordance to the requirements of the National Water Act of 1998 (Act No. 36 of 1998) regulated by the Department of Water Affairs (DWA) for the upgrade and widening of 11 bridges within the road section.

A mining license application will also be submitted for an existing quarry site (called Wolwekop) in accordance with the regulations pertaining to the Minerals and Petroleum Resources Development Act (Act No.28 of 2002) regulated by the Department of Mineral Resources.

2. Activities associated with the proposed project

The following activities are all associated with the upgrade of the N9 between Middelburg and Carlton Heights.

Bridge upgrades:

2.1. Bridge over Ludlow Stream

GPS co-ordinates: S 31° 20.214" E 24° 58.949"

The bridge over Ludlow Stream needs to be upgraded and widened to suit the new road alignment; however it is impossible to widen the bridge at the current angle which the stream runs below. SANRAL engineers have therefore suggested a realignment of the Ludlow Spruit as shown in Figure 2.1. The current spruit (light blue) will be diverted and run parallel to the road where it will cross at Tweefontein Culvert 3 to re-join with the original Ludlow Spruit. See Section 3.1 for more detail.

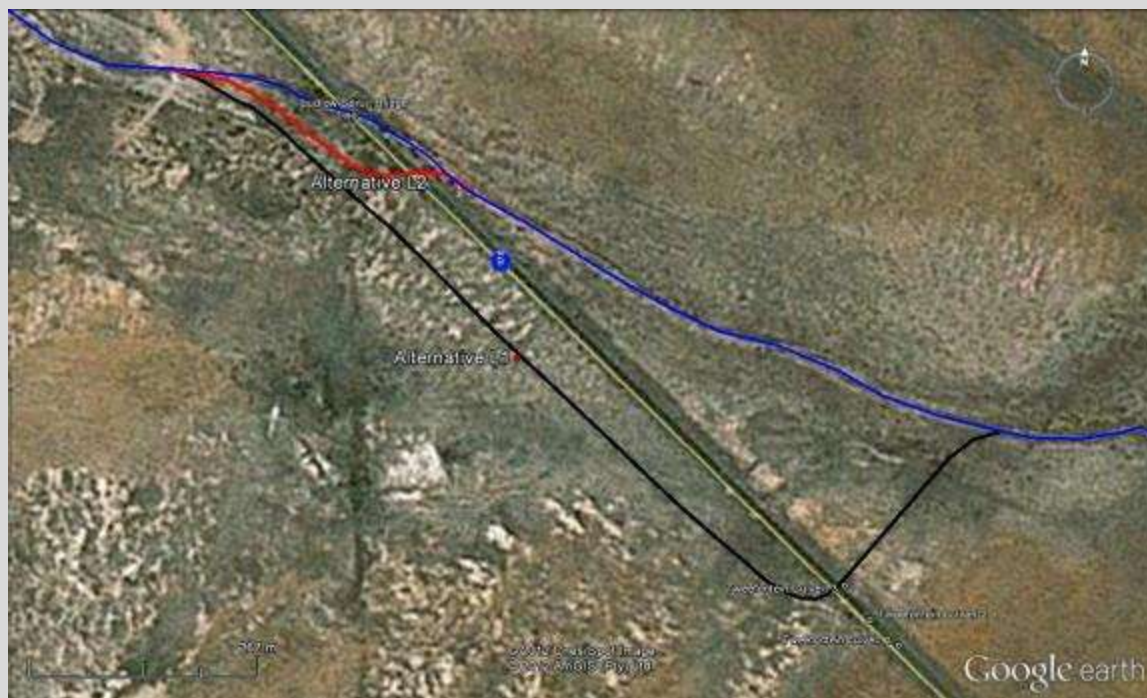


Figure 1: Ludlow Spruit shown in blue with preferred alternative diversion of the spruit (L1) shown in black and alternative L2 shown in red.



2.2. Droë River Bridge

GPS Co-ordinates: S 31° 30.006" E 26° 01.264"

The bridge will be upgraded with a new wearing course, the joints and seals will be serviced or replaced and the balustrades will be replaced with standard SANRAL detail.





2.3. Klein Brak River Bridge

GPS Co-ordinates: S 31° 30.800" E 25° 01.178"

The bridge will be upgraded with a new wearing course, the joints and seals will be serviced or replaced and the balustrades will be replaced with standard SANRAL detail.



2.4. Culvert over Grootfontein Stream

GPS Co-ordinates: S 31° 29.464" E 25° 00.905"

The culvert will be widened or replaced to suit the new cross section. The culvert capacity will also be improved.



2.5. Bridge over Elandskloof Spruit

GPS Co-ordinates: S 31° 26.508" E 25° 01.274"

The bridge will be widened to suit the new road alignment and cross section.



2.6. Bridge over Seligman Spruit

GPS Co-ordinates: S 31° 27.627" E 25° 01.145"

The bridge will be widened to suit the new road alignment and cross section.





2.6. Culvert 1 over Wolwekop Stream

GPS Co-ordinates: S 31° 22.500" E 25° 01.795"

The culvert will be widened or replaced to suit the new cross section and the culvert's capacity will be improved.



2.8. Culvert 2 over Wolwekop Stream

GPS Co-ordinates: S 31° 22.288" E 25° 01.393"

The culvert will be widened or replaced to suit the new cross section and the culvert capacity will be improved.



2.9. Culvert 3 over Wolwekop Stream

GPS Co-ordinates: S 31° 21.403" E 25° 00.587"

The culvert will be widened or replaced to suit the new cross section and the culvert capacity will be improved.



2.10. Culverts 1 over Tweefontein Stream

GPS Co-ordinates: S 31° 20.569" E 24° 59.366"

The culverts will be widened or replaced to suit the new cross section and the culvert's capacity will be improved.



2.11. Culverts 2 over Tweefontein Stream

GPS Co-ordinates: S 31° 20.540" E 24° 59.331"

The culverts will be widened or replaced to suit the new cross section and the culvert's capacity will be improved.



2.12. Culverts 3 over Tweefontein Stream

GPS Co-ordinates: S 31° 20.524" E 24° 59.312"

The culverts will be widened or replaced to suit the new cross section and the culvert's capacity will be improved.



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Road re-alignments:

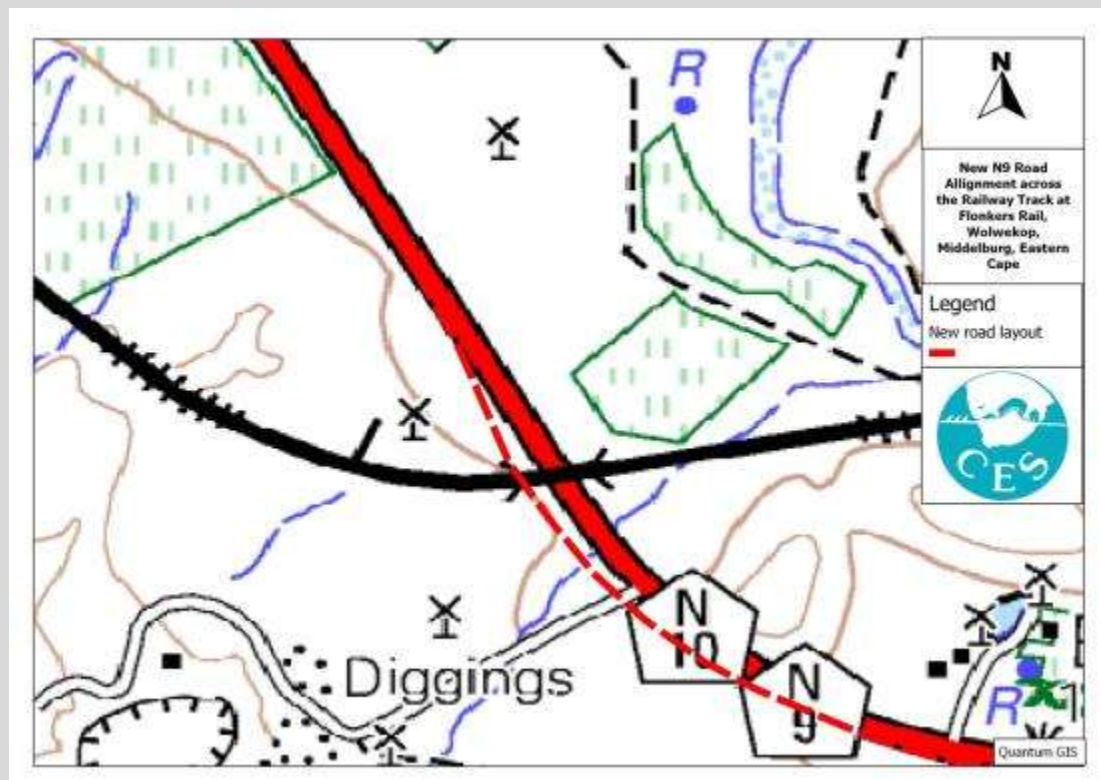
2.13. Flonkers rail over bridge

The railway line runs parallel to the N9 at some places, but is still outside the road reserve and will not be impacted. The railway line crosses the N9 through a bridge over the road at Wolwekop (Figure).



Photo of the Flonkers rail over road bridge that will be upgraded.

This bridge will be upgraded and possibly re-aligned to the new road layout. (Figure 5.2).



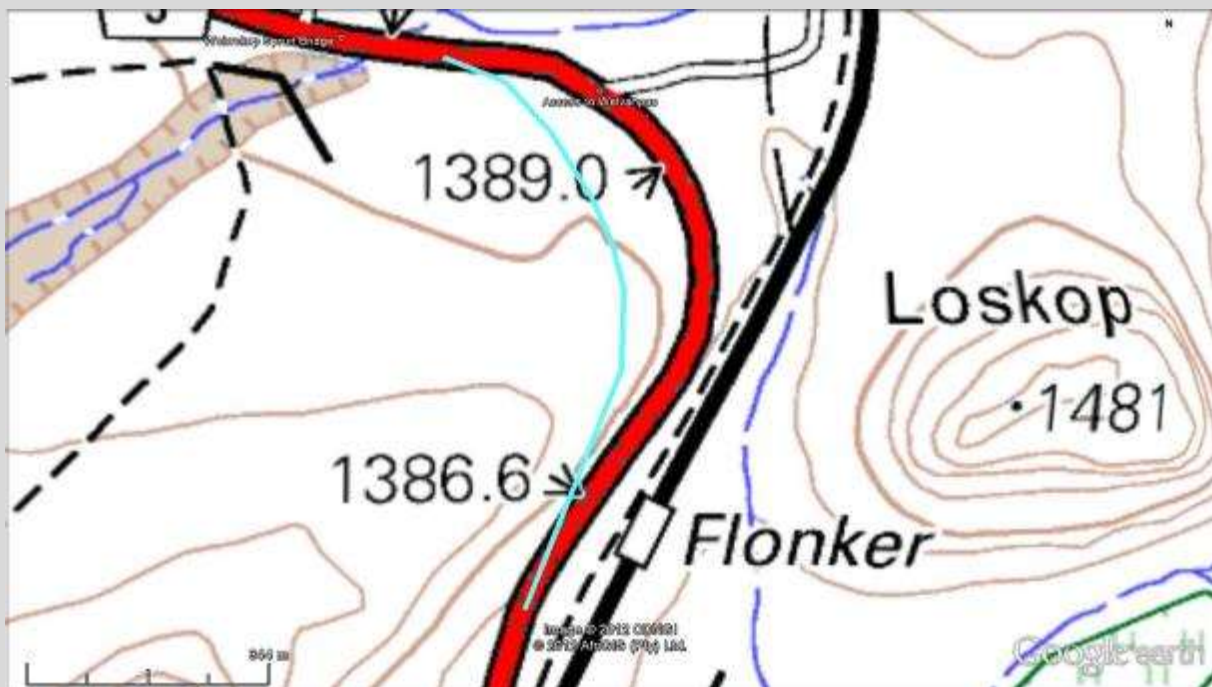
New road alignment at the Flonkers Rail over Road bridge.

SANRAL is proposing the decommissioning and subsequent removal of the existing Flonkers Bridge, and the construction of a new upgraded bridge allowing for the proposed road widening, at a new site next to the existing bridge.

The main reason for this alteration is current height clearance problems coinciding with a major storm water drainage problem. Deepening the existing Flonkers Bridge to solve the current height problem, will only enhance the current drainage problem as this section is already lying in a low lying area that does not allow storm water to flow away from the road. The only viable solution is to build a new bridge underneath the railway line in a higher lying area slightly to the west.

2.14. Wolwekop pass

The curve of the road around Wolwekop will be re-aligned to allow for a less sharp and safer curve of the road. All extra rock and sediment from this road cutting will be used as road fill for the rest of the project area.



The light-blue line represents the new road alignment around the Wolwekop pass.

3. Alternatives

The NEMA guidelines require the consideration of various development alternatives or proposals as part of the EIA process. The consideration of project alternatives is a key requirement of an EIA as it provides a basis for comparison by the competent authority and I&APs. In the NEMA EIA Regulations, alternatives in relation to a proposed activity are defined as:- different means of meeting the general purpose and requirements of the activity, which may include alternatives to the:

- (a) property on which or location where it is proposed to undertake the activity;
- (b) type of activity to be undertaken;
- (c) design or layout of the activity;
- (d) technology to be used in the activity; and

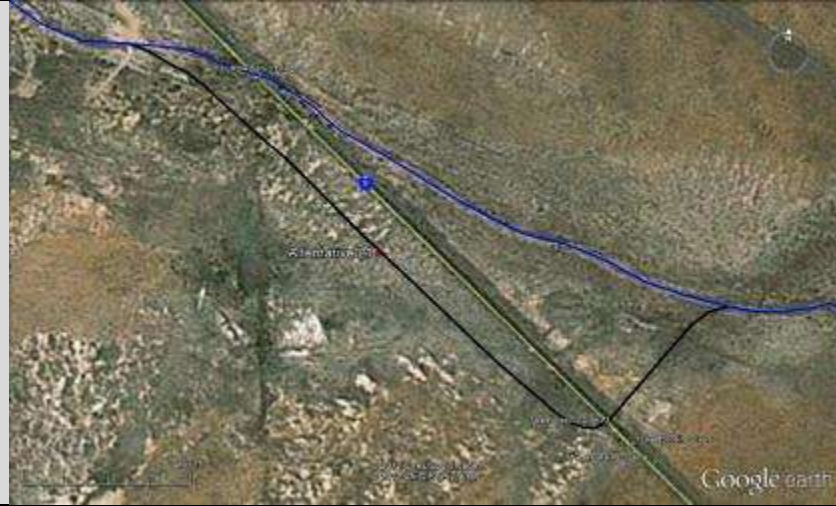

(e) operational aspects of the activity;

3.1. Ludlow stream deviation alternatives

The existing Ludlow Stream bridge will be widened to suit the new road alignment and cross section. The result is that the Ludlow stream will have to be permanently deviated to allow for this to happen. The stream crosses the road at such an obscure angle (Figure 3.1) that it does not allow for the proposed widening of the bridge.

The engineers (Arcus Gibb) are proposing two stream deviation alternatives (namely L1 and L2) that will be submitted to the Department of Water Affairs for approval (Table 3.1.).

Alternative L1 is considered the preferred alternative

Alternative L1 (preferred alternative)	
	<ul style="list-style-type: none">• Lined diversion of Ludlow Stream, to join up with the Tweefontein Culvert 3.• New bridge at Tweefontein culvert 3• Existing stream bed to be rehabilitated.• Existing bridge to be demolished.
Alternative L2	
	<ul style="list-style-type: none">• Diversion of Ludlow Stream, to new Bridge under the N9.• Existing stream bed to be rehabilitated.• Existing bridge to be demolished.

3.2. No development (No-go)

It is mandatory to consider the no development (no-go) alternative in the EIA process. In context of this project it implies the consideration that the road upgrade will not take place.

4. Biophysical environment

4.1. Climate

The area normally receives about 234mm of rain per year, with most rainfall occurring mainly during autumn. The chart below (lower left) shows the average rainfall values for Middelburg per month. It receives the lowest rainfall (3mm) in July and the highest (51mm) in March. The monthly distribution of average daily maximum temperatures (centre chart below) shows that the average midday temperatures range from 15.3°C in June to 30.2°C in January. The region is the coldest during July when temperatures drop to 0.2°C on average during the night.

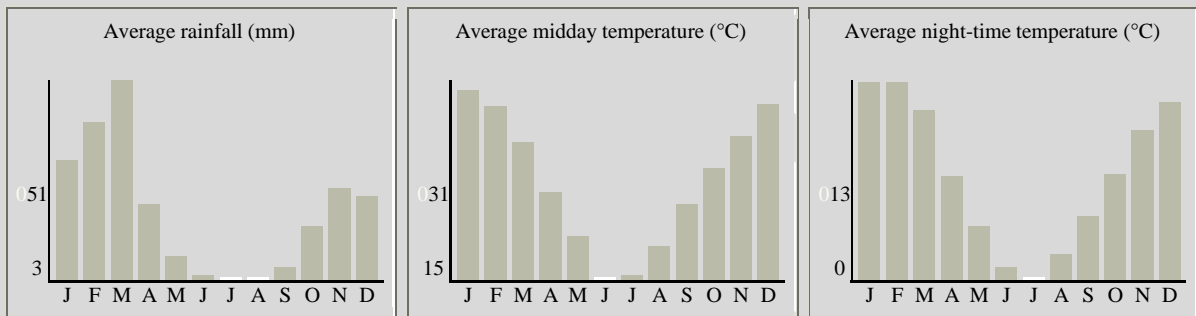


Figure 4.1. Showing average rainfall and temperature variation over a 12 month period.

4.2. Topography

Elevation decreases from 1477 m.a.s.l. (meters above sea level) in the north to 1251 m.a.s.l. in the south. The topography can be considered a gently undulating terrain along ridges and drops off towards the south.



Figure 4.2. Elevation profile along the N9 from Carlton Heights to Middelburg.

4.3. Geology and Soils

The study area falls within the Main Karoo Basin which signifies a large scale basin that was infilled with up to 12 km of sedimentary strata and capped by a 1.4 km thick unit of basaltic lava (today the remnants of the lava layer is called the Drakensberg Mountain).

More locally the rocks consist of a sandstone-rich layer called the Katberg Formation, although there are some mudstones present, increasing slightly towards the north. Intraformational mud-pellet conglomerates are common, with red coloured mudstone units and predominant arenaceous sandstones.

Intruding through all the sediment layers are dolerite dykes and sills of various sizes.

4.4. Vegetation and floristics

Vegetation types found in the area includes Eastern Upper Karoo vegetation (NKu4) and Tarkastad Montane Scrubland (Gs17) (Figure 4.3). Over 95% of the affected and surrounding area makes up Eastern Upper Karoo vegetation that consists of gently sloping plains dominated by dwarf microphyllous scrubs and 'white' grasses of the genera *Aristata* and *Eragrostis*. Tarkastad Montane Scrubland is found on ridges and hills characterised by high surface rock cover. The vegetation is low, semi-open mixed scrubland with grasses and dwarf scrubs. **Both vegetation types are considered Least Threatened by SANBI.**

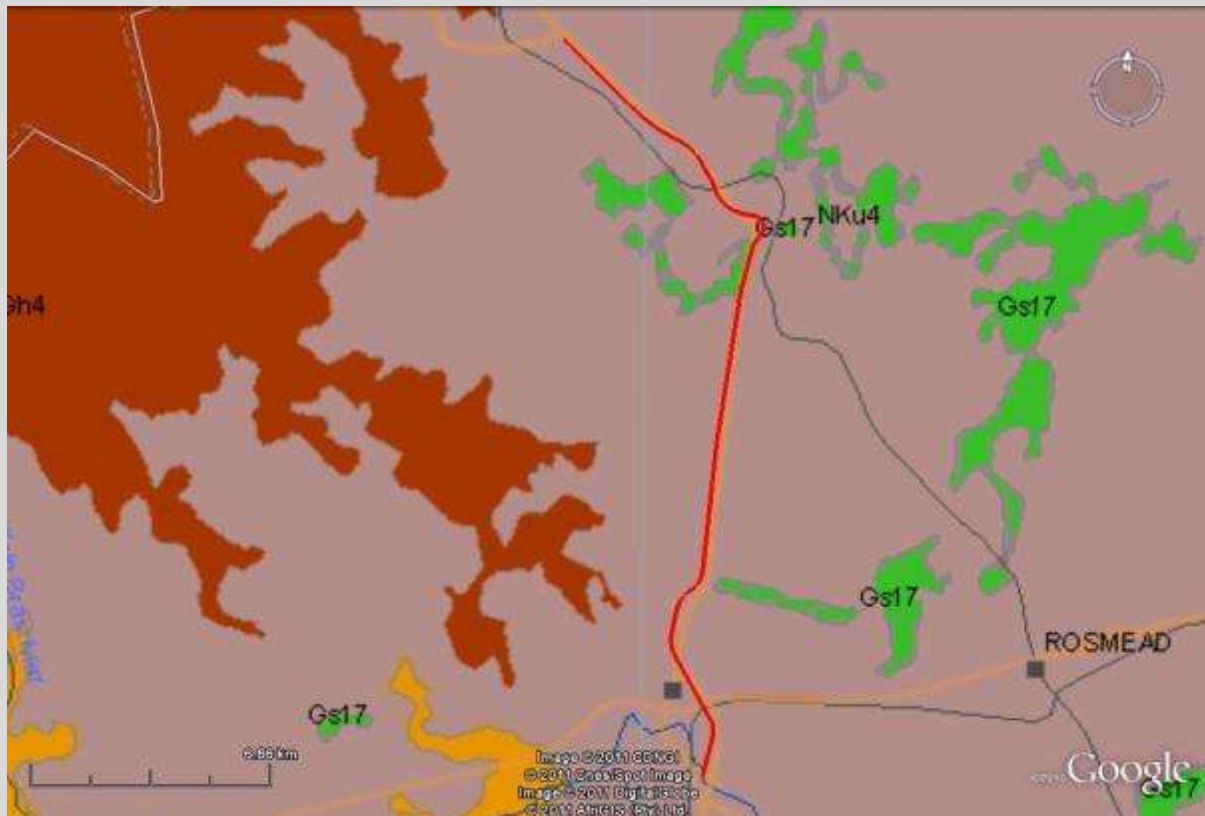


Figure 4.3. SANBI Vegetation map (Mucina and Rutherford, 2006) showing Eastern Upper Karoo vegetation (NKu4) and Tarkastad Montane Shrubland (Gs17).

4.5. Eastern Cape Biodiversity Conservation Plan (ECBCP)

The ECBCP is a first attempt at detailed, low-level conservation mapping for land-use planning purposes. Specifically, the aims of the Plan were to map critical biodiversity areas through a systematic conservation planning process. The current biodiversity plan includes the mapping of priority aquatic features, land-use pressures, critical biodiversity areas and develops guidelines for land and resource-use planning and decision-making.

The main outputs of the ECBCP are "critical biodiversity areas" or CBAs. Two different CBA's were identified in the study site:

1. CBA 3 = Functional landscapes (grey)
2. CBA 4 = Towns & settlements (brown)

The ECBCP maps CBAs based on extensive biological data and input from key stakeholders. The ECBCP, although mapped at a finer scale than the National Spatial Biodiversity Assessment (Driver et al., 2005) is still, for the large part, inaccurate and "course". Therefore it is imperative that the status of the environment, for any proposed development MUST first be verified before the management recommendations associated with the ECBCP are considered (Berliner and Desmet, 2007). In spite of these short-comings, the ECBCP has been adopted by the Provincial Department of Economic Development and Environmental Affairs (DEDEA) as a strategic biodiversity for the Eastern Cape.

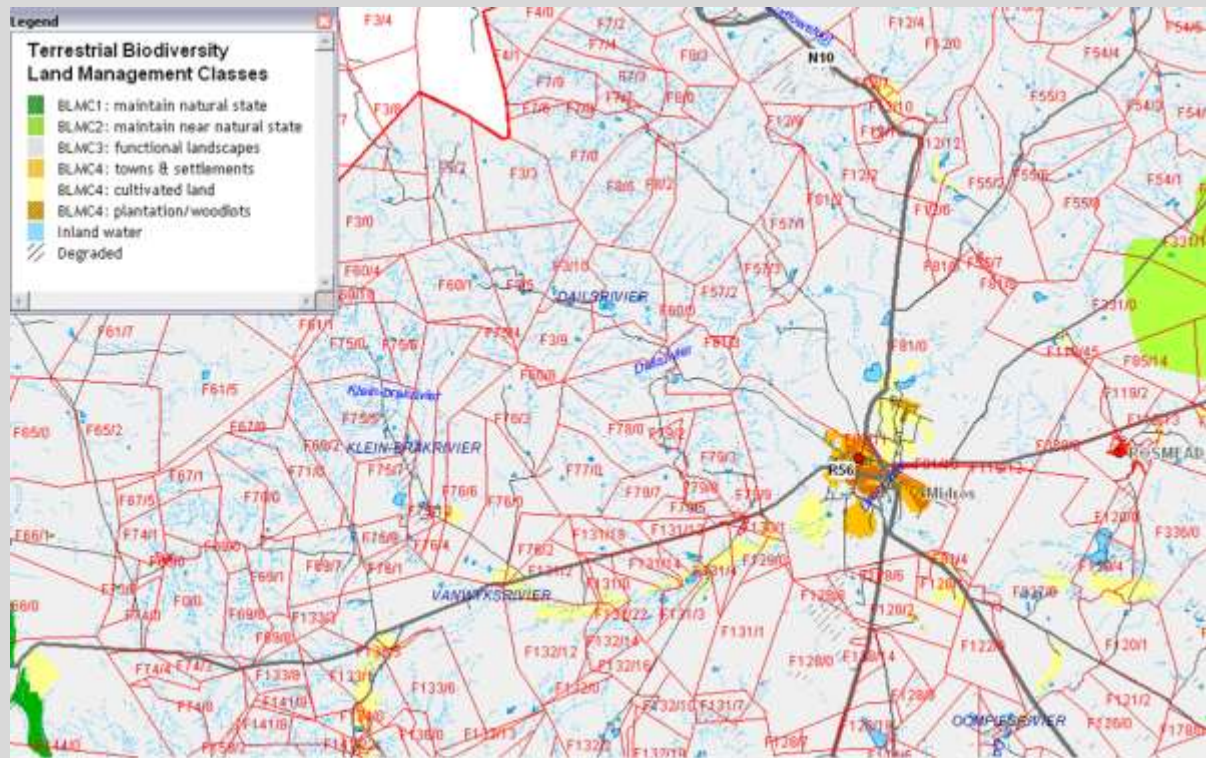


Figure 4.5. ECBCP map of the surrounding area.

The largest section of the study area, including the proposed Wolwekop quarry site falls under CBA 3, classifying it as functional landscape. Recommended land use management involves managing this area for sustainable development. This involves keeping all natural habitats intact in wetlands (including wetland buffers) and riparian zones.

The area around the town of Middelburg classifies as transformed landscape, classifying it as 'towns & settlements' (CBA 4). Recommended land use management involves managing the environment for sustainable development.

It is important to note that there are **no areas of HIGH conservation value** identified in term of ECBCP.

5. Socio-economic profile

The proposed project is located in the Inxuba Yethemba Local Municipality, formerly known as Cradock Local Municipality, which is a local municipality in Chris Hani District Municipality, Eastern Cape

Province.

5.1. Population

The most recent population data for Inxuba Yethemba LM is provided by Statistics SA Community Survey 2007 data. Based on these data, the population in 2007 was determined to be about 48,000 with 40% of the population under the age of 19 years.

5.2. Settlements

The Inxuba Yethemba LM is categorised by the following settlement patterns:

- Urban settlement
- Scattered Peri-Urban and Rural settlements
- Rural/Agriculture areas

The vast majority of people (92%) live in of households described as “brick houses on separate stands” with most of the remainder (7%) living in “flats, townhouses, etc.”.

5.3. Income and poverty levels

The Inxuba Yethemba LM is characterised by poor socio economic conditions and low levels of development which is not an uncommon trend in the region.

It is evident that a significant number of people in the age group 15 – 65), receive no income (45%) while about 70% receive an income of less than R1, 600 per month.

5.4. Employment

In terms of employment data for Inxuba Yethemba LM, a significant proportion of “potentially employable” people are unemployed (23%).

5.5. Economic Activity

The predominant employment sector in the Inxuba Yethemba LM includes agriculture (6%), manufacturing (4%), wholesale and retail (5%) and community services (9%).

2. FEASIBLE AND REASONABLE ALTERNATIVES

“**alternatives**”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in

the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	Latitude (S):		Longitude (E):	
	°	'	°	'
Alternative S1 (only site alternative)	31°	24.382'	25°	1.610'

In the case of linear activities:

Alternative:	Latitude (S):		Longitude (E):	
	°	'	°	'
Alternative S1 (only route alternative)	31°	30.883'	25°	1.154'
• Starting point of the activity	31°	24.382'	25°	1.610'
• Middle point of the activity	31°	19.937'	24°	58.614'
• End point of the activity				

Ludlow Stream alteration alternatives:

Alternative L1	31°	20.190'	24°	58.817'
• Starting point of the activity	31°	20.374'	24°	59.073'
• Middle point of the activity	31°	20.416'	24°	59.432'
• End point of the activity				
Alternative L2	31°	20.190'	24°	58.817'
• Starting point of the activity	31°	20.229'	24°	58.915'
• Middle point of the activity	31°	20.254'	24°	59.016'
• End point of the activity				

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

Table 3.1. Co-ordinates taken every 250 meters along the route.

	Latitude (S)		Longitude (E)	
	°	'	°	'
Starting point	31°	30.883'	25°	1.154'
	31°	30.618'	25°	1.234'
	31°	30.347'	25°	1.314'
	31°	30.075'	25°	1.306'
	31°	29.805'	25°	1.127'
	31°	29.540'	25°	0.952'

31°	29.267'	25°	0.770'	
31°	29.010'	25°	0.607'	
31°	28.730'	25°	0.597'	
31°	28.457'	25°	0.660'	
31°	28.189'	25°	0.805'	
31°	27.938'	25°	1.092'	
31°	27.658'	25°	1.143'	
31°	27.374'	25°	1.176'	
31°	27.089'	25°	1.209'	
31°	26.806'	25°	1.241'	
31°	26.526'	25°	1.271'	
31°	26.249'	25°	1.306'	
31°	25.978'	25°	1.338'	
31°	25.709'	25°	1.381'	
31°	25.445'	25°	1.427'	
31°	25.182'	25°	1.473'	
31°	24.923'	25°	1.517'	
31°	24.671'	25°	1.559'	
31°	24.424'	25°	1.602'	
31°	24.174'	25°	1.646'	
31°	23.937'	25°	1.689'	
31°	23.704'	25°	1.728'	
31°	23.472'	25°	1.793'	
31°	23.234'	25°	1.864'	
31°	22.997'	25°	1.939'	
31°	22.771'	25°	2.096'	
31°	22.535'	25°	2.004'	
31°	22.486'	25°	1.703'	
31°	22.290'	25°	1.396'	
31°	22.233'	25°	1.316'	
31°	21.996'	25°	1.198'	
31°	21.767'	25°	1.043'	
31°	21.537'	25°	0.837'	
31°	21.374'	25°	0.522'	
31°	21.202'	25°	0.184'	
31°	20.984'	24°	59.869'	
31°	20.771'	24°	59.613'	
31°	20.548'	24°	59.344'	
31°	20.331'	24°	59.083'	
31°	20.112'	24°	58.822'	
End point	31°	19.937'	24°	58.614'

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Size of the activity:

Alternative A1¹ (only activity alternative)

m²

Alternative A2 (if any)

m²

Alternative A3 (if any)

m²

or, for linear activities:

Alternative:

Length of the activity:

Alternative A1 (only activity alternative)

27 000m

Alternative A2 (if any)

m

Alternative A3 (if any)

m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Size of the site/servitude:

Alternative A1 (preferred activity alternative)

594 000m²

Alternative A2 (if any)

m²

Alternative A3 (if any)

m²

5. SITE ACCESS

Does ready access to the site exist?

YES NO

If NO, what is the distance over which a new access road will be built

m

Describe the type of access road planned:

n/a

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

- rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

Not determined

What is the expected yearly income that will be generated by or as a result of the activity?

Not determined

Will the activity contribute to service infrastructure?

YES	NO
-----	----

Is the activity a public amenity?

YES	NO
-----	----

How many new employment opportunities will be created in the development phase of the activity?

Not determined

What is the expected value of the employment opportunities during the development phase?

Not determined

What percentage of this will accrue to previously disadvantaged individuals?

Not determined

How many permanent new employment opportunities will be created during the operational phase of the activity?

Not determined

What is the expected current value of the employment opportunities during the first 10 years?

Not determined

What percentage of this will accrue to previously disadvantaged individuals?

Not determined

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The aim of this proposed project is to improve the quality of the N9 which may have adequate remaining structural life, but has an unacceptable quality of service. Improvements are normally applied to roads to improve quality of service on existing roads such as relieving
--

traffic congestion, road safety, road passability, etc. The proposed improvement works include the following works types:

LEVEL OF SERVICE: This comprises works that retain the existing pavement structure, but increases the width in selected areas (i.e. addition of climbing lanes) throughout the length of the section to improve passability.

CAPACITY: This comprises works that retain the existing pavement, but increases the width over the total length of the section. These include partial widening and lane addition.

ALIGNMENT: This comprises works that change the road geometry for part of a section, but that retain some of the existing pavement structure. These include local geometric improvements, and intersection improvements.

BRIDGES: This comprises works that retain the existing bridge, but increases the width over the total length of the bridge. It also include all work related to improve the horizontal and vertical clearances over and under the bridge.

Indicate any benefits that the activity will have for society in general:

The proposed project will also create job opportunity for skilled and semi-skilled workers in the area.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Job creation during construction phase for skilled and semi-skilled workers, skills development.
The road upgrade will result in a safer and better quality road for its users.

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act (No 107 of 1998)	Department of Environmental Affairs (DEA)	1998
Constitution Act (No. 108 of 1996)	Constitution Assembly	1996
National Environmental Management: Biodiversity Act (Act No 10 of 2004)	Department Environmental Affairs (DEA)	2004
National Water Act (No. 36 of 1998)	Department of Water Affairs (DWA)	1998
National Forest Act (84 of 1998)	Department of Agriculture, Forestry and Fisheries (DAFF)	1998
Minerals and Petroleum Resources Development Act (No. 28 of 2002)	Department of Mineral Resources (DMR)	2002
National Road Traffic Act (No. 93 of 1996)	Department of Transport	1996

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES	NO
-----	----

If yes, what estimated quantity will be produced per month?

20-50 m ³

How will the construction solid waste be disposed of (describe)?

All solid waste will be collected at a central location and will be stored temporarily until removed to an appropriately permitted landfill site near the construction site. The nearest licenced landfill site is at Queenstown.

Where will the construction solid waste be disposed of (describe)?

Solid waste will be removed to an appropriately permitted landfill site near the construction site. The nearest licenced landfill site is at Queenstown.

Will the activity produce solid waste during its operational phase?

YES	NO
-----	----

If yes, what estimated quantity will be produced per month?

m ³

How will the solid waste be disposed of (describe)?

N/A

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

YES	NO
-----	----

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

YES	NO
-----	----

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO
-----	----

If yes, what estimated quantity will be produced per month?

m ³

Will the activity produce any effluent that will be treated and/or disposed of on site?

Yes	NO
-----	----

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	NO
-----	----

If yes, provide the particulars of the facility:

Facility name:

N/A

Contact

person:

--

Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
 If no, describe the emissions in terms of type and concentration:

Nuisance dust as a result of construction activities

11(d) Generation of noise

Will the activity generate noise?	YES	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
 If no, describe the noise in terms of type and level:

Noise during construction

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

<input type="checkbox"/> municipal	<input type="checkbox"/> water board	<input type="checkbox"/> groundwater	<input type="checkbox"/> river, stream, dam or lake	<input type="checkbox"/> other	<input type="checkbox"/> the activity will not use water
------------------------------------	--------------------------------------	--------------------------------------	---	--------------------------------	--

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:	litres
Does the activity require a water use permit from the Department of Water Affairs?	YES NO

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

N/A

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No.
(e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section?

YES	NO
-----	----

If YES, please complete form XX for each specialist thus appointed:
All specialist reports must be contained in Appendix D.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1 (only alternative):

Flat	1:50 1:20	-	1:20 1:15	-	1:15 — 1:10	1:10 1:7,5	1:7,5 — 1:5	Steeper than 1:5
------	--------------	---	--------------	---	-------------	---------------	-------------	---------------------

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):						
Shallow water table (less than 1.5m deep)	<table border="1" style="display: inline-table;"><tr><td style="width: 50px; text-align: center;">YES</td><td style="width: 50px; text-align: center;">NO</td></tr></table>	YES	NO	<table border="1" style="display: inline-table;"><tr><td style="width: 50px; text-align: center;">YES</td><td style="width: 50px; text-align: center;">NO</td></tr></table>	YES	NO	<table border="1" style="display: inline-table;"><tr><td style="width: 50px; text-align: center;">YES</td><td style="width: 50px; text-align: center;">NO</td></tr></table>	YES	NO
YES	NO								
YES	NO								
YES	NO								

Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	NO	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

- 4.1 Natural veld – good condition ^E
- 4.2 Natural veld – scattered aliens ^E
- 4.3 Natural veld with heavy alien infestation ^E
- 4.4 Veld dominated by alien species ^E
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an “^E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

- 5.1 Natural area
- 5.2 Low density residential
- 5.3 Medium density residential
- 5.4 High density residential
- 5.5 Informal residential
- 5.6 Retail commercial & warehousing
- 5.7 Light industrial
- 5.8 Medium industrial^{AN}
- 5.9 Heavy industrial^{AN}
- 5.10 Power station
- 5.11 Office/consulting room
- 5.12 Military or police base/station/compound
- 5.13 Spoil heap or slimes dam^A
- 5.14 Quarry, sand or borrow pit
- 5.15 Dam or reservoir
- 5.16 Hospital/medical centre
- 5.17 School
- 5.18 Tertiary education facility
- 5.19 Church
- 5.20 Old age home
- 5.21 Sewage treatment plant^A
- 5.22 Train station or shunting yard^N
- 5.23 Railway line^N
- 5.24 Major road (4 lanes or more)^N
- 5.25 Airport^N
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station^H
- 5.31 Landfill or waste treatment site
- 5.32 Plantation
- 5.33 Agriculture
- 5.34 River, stream or wetland
- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity.

5.23. Railway lines

The railway line runs parallel to the N9 at some places, but is still outside the road reserve and will not be impacted. The railway line crosses the N9 through a bridge over the road at Wolwekop (Figure 5.1 below).



Figure 5.1. Photo of the Flonkers rail over road bridge that will be upgraded.

This bridge will be upgraded and possibly re-aligned to the new road layout. (Figure 5.2).

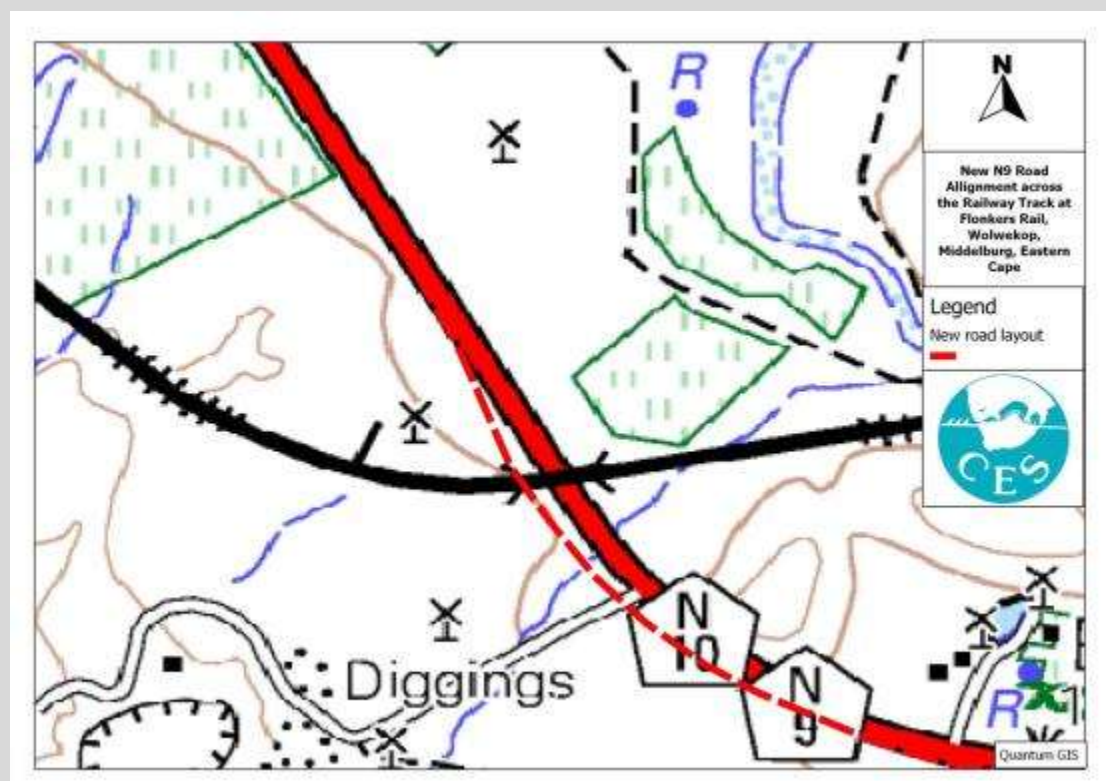


Figure 5.2. New road alignment at the Flonkers Rail over Road bridge.

SANRAL is proposing the decommissioning and subsequent removal of the existing Flonkers Bridge, and the construction of a new upgraded bridge allowing for the proposed road widening, at a new site next to the existing bridge.

The main reason for this alteration is current height clearance problems coinciding with a major storm water drainage problem. Deepening the existing Flonkers Bridge to solve the current height problem, will only enhance the current drainage problem as this section is already lying in a low lying area that does not allow storm water to flow away from the road. The only viable solution is to build a new bridge underneath the railway line in a higher lying area slightly to the west.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain: N/A
If YES, specify: N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain: N/A
If YES, specify: N/A

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or palaeontological sites, on or close (within 20m) to the site?

YES	NO
Uncertain	

If YES, explain: N/A

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

A heritage survey conducted by Umlando CC (Find full report in Appendix D) recorded three archaeological sites, noted two areas of paleontological sensitivity, and two bridges that are over 60 years in age. The archaeological sites date to the Late Stone Age and are open scatters. Two of these scatters have good examples of stone tools and would need to be sampled if impacted by the road. SANRAL will need to apply for a permit for each of these sites if they are affected.

The heritage report indicated that a separate paleontological survey will be required. However sensitive areas were noted during the survey and the Heritage specialist suggests that a Phase 1 paleontological survey is undertaken, as opposed to a Phase 0.

Two bridges are older than 60 years and thus need SAHRA's Built Environment approval to be destroyed. One bridge is 58 years old and is technically not protected; however, the heritage specialist believes this should be submitted for approval as well.

Will any building or structure older than 60 years be affected in any way?

YES	NO
-----	----

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	NO
-----	----

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

DRAFT

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;

- (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
- (iii) the nature and location of the activity to which the application relates;
- (iv) where further information on the application or activity can be obtained; and
- (iv) the manner in which and the person to whom representations in respect of the application may be made.



PROPOSED REHABILITATION OF SECTION 7 ON THE N9 BETWEEN MIDDELBURG AND CARLTON HEIGHTS, EASTERN CAPE.

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT AND INVITATION TO REGISTER AS AN I&AP

Notice is hereby given in terms of Regulation 54(2) published in Government Notice No. R543 under Chapter 5 of the National Environmental Management Act (Act 107 of 1998) (NEMA), of the intent to submit an Environmental Impact Assessment (EIA) application to the Department of Environmental Affairs (DEA).

Proponent and Location:

SANRAL (South African National Roads Agency Ltd.) is proposing the rehabilitation of Section 7 on the N9 National Road between Middelburg and Carlton Heights.

Project Activities:

The proposed project includes widening of the existing road, demolishing and reconstructing the rail over the road bridge, and the upgrade and reconstruction of a number of river bridges. The process will also include a Water Use License application as regulated by the National Water Act (Act No. 36 of 1998), and a quarry mining license as regulated by the Minerals and Petroleum Resources Development Act (Act No. 28 of 2002)

Listed Activities:

The proposed project requires a BASIC ENVIRONMENTAL ASSESSMENT due to the following activities listed in terms of GN R 544:

- Activity 47 (i & ii): The widening of a road by more than 6 meters, or the lengthening of a road by more than 1 kilometer-
 - (i) Where the existing reserve is wider than 13.5 meters
 - (ii) Where no reserve exists, where the existing road is wider than 8 meters.
- As well as Activities 11(iii) and 39 (iii) of GN R544.

Coastal & Environmental Services has been commissioned to undertake the Environmental Impact Assessment. You are hereby invited to register as an Interested & Affected Party (I&AP). Please submit your name, contact information and any comments to the contact person below within 30 days.

For more information, registration as an I&AP or submission of written comments contact by post, phone, fax or e-mail:

Contact details: Mr Roy de Kock, PO Box 8145, East London, 5210, Tel: 043 742 3302, Fax: 043 742 3306, e-mail:
r.dekock@cesnet.co.za

Date of advert: 21 July 2011

Figure C1. Copy of newspaper ad placed in the local newspaper.

NOTICE

ENVIRONMENTAL IMPACT ASSESSMENT

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Listed Activities: The proposed project requires a BASIC ENVIRONMENTAL ASSESSMENT due to the following activities listed in terms of GN R 544:

- Activity 11 (iii): The construction of bridges within a watercourse or within 32 meters of a watercourse.
- Activity 39: The expansion of bridges within a watercourse or within 32 meters of a watercourse.
- Activity 47 (i & ii): the widening of a road by more than 6 meters where the existing reserve is wider than 13.5 meters or where no reserve exists and the existing road is wider than 8 meters.

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Contact details: For more information, registration as an I&AP or submission of written comments contact by post, phone, fax or e-mail: Mr. Roy de Kock, PO Box 8145, East London, 5210 Tel: 043 742 3302, Fax: 043 742 3306, Email: r.dekock@cesnet.co.za



Figure C2: Copy of notice placed on site.


3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.



Figure C3: Photo proof of site notice placed on site, next to the proposed Wolwekop quarry access road.



PROPOSED REHABILITATION OF SECTION 7 ON THE N9 BETWEEN MIDDELBURG AND CARLTON HEIGHTS, EASTERN CAPE. NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT AND INVITATION TO REGISTER AS AN I&AP

Notice is hereby given in terms of Regulation 54(2) published in Government Notice No. R543 under Chapter 5 of the National Environmental Management Act (Act 107 of 1998) (NEMA), of the intent to submit an Environmental Impact Assessment (EIA) application to the Department of Environmental Affairs (DEA).

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Listed Activities: The proposed project requires a BASIC ENVIRONMENTAL ASSESSMENT due to the following activities listed in terms of GN R 544:

- Activity 47 (i & ii): The widening of a road by more than 6 meters, or the lengthening of a road by more than 1 kilometer-
 - (i) Where the existing reserve is wider than 13.5 meters
 - (ii) Where no reserve exists, where the existing road is wider than 8 meters.
- As well as Activities 11(iii) and 39 (iii) of GN R544.

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Tel: 043 742 3302, Fax: 043 742 3306, e-mail: r.dekock@cesnet.co.za
Date of advert: 21 July 2011

Figure C4. Proof of notification advert placed in the Middelburg Courant on the 21 July 2011

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

- DWA
- SAHRA
- Municipal Manager (Inxuba Yethemba Local Municipality)
- Dept of Public Works, Eastern Cape
- DEDEA, Queenstown

List of authorities from whom comments have been received:

N/A

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

N/A