

BASIC ASSESSMENT REPORT



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

FINAL REPORT – SUBMITTED TO
DEPARTMENT OF
ENVIRONMENTAL AFFAIRS

(For official use only)

File Reference Number:

Application Number:

Date Received:

PROPOSED COMPULSORY TRUCK STOP AND ROAD WIDENING TO ACCOMMODATE A TRUCK CRAWLER LANE ON NATIONAL ROUTE 2 (SECTION 21 BETWEEN KM 26 AND KM 28) ON THE NORTHBOUND CARRIAGEWAY SITUATED BETWEEN KOKSTAD AND STAFFORD'S POST, KWAZULU-NATAL

NEAS Reference: DEAT/EIA/0000768/2011

DEA Reference: 12/12/20/2611

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. This report format is current as of **1 September 2012**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. 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.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. 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.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.

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11. 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.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

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 the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

The South African National Roads Agency SOC Limited (hereafter referred to as SANRAL) has identified the need to improve road safety on Section 21 (between km 26 and km 28) of the National Route 2 (N2). SANRAL incident records currently indicate that there is a 'red spot' (i.e. high incident zone) between km 26 and km 32 on N2 Section 21. SANRAL requires investigations into the design and construction of a compulsory truck stop, associated crawler lane and road safety improvements.

SANRAL is proposing to establish a compulsory truck stop on the N2 Section 21 between km 27.0 and km 27.4 on the northbound carriageway and to widen a portion of the N2 (Section 21 between km 26 and km 28) to accommodate a truck crawler lane. The preliminary design of the proposed road widening and truck stop includes a 3.5 metre wide truck lane and a 3.0 metre wide road shoulder. The compulsory stop is located just after km 27.2 (coordinates provided in table that follows).

The Layout Plan of the proposed development is included in Appendix C, 'Facility Illustration'.

Activities associated with the proposed development are listed below:

- Closure of the existing taxi stop and reinstatement of the yellow line shoulder;
- Establishment of a new taxi stop 600m southwest of the existing one;
- Closure of the existing access point to the log storage and handling yard located on Rem of Farm Kalk Fontein, 252;
- Establishment of a new access point (type B2 Access) on the same parcel of land;
- Establishment of a new gravel access road linking from the new access point into the existing gravel road towards the log storage and handling yard;
- Closure of the access road to the afforested area in the south;
- Establishment of retaining structures at certain points along the proposed widening, including soil nail walls and gabion walls; and,
- Extension of existing stormwater pipes to clear the proposed widening at certain points.

The proposed development will occur, within the existing road reserve/servitude. Fill banks and cut banks will be retained by gabion walls and soil nail walls respectively. These stabilisation measures were selected to ensure that the proposed development does not encroach onto the adjacent properties, thereby avoiding the need for land acquisition. The road servitude width at this point is 35 metres.

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN R.544, 545 and 546	Description of project activity
<i>GN R.544 Listed Activity 11: "The construction of: (xi) infrastructure or structures covering 50</i>	<i>The proposed road widening will occur within 32 metres of a drainage line located between km 26.8 and km 26.9 of Section 21 of the N2. This</i>

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Listed activity as described in GN R.544, 545 and 546	Description of project activity
<p><i>square metres or more – where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.”</i></p>	<p><i>will involve the construction of a gabion wall and the widening of the road into the drainage line.</i></p>
<p>GN R.544 Listed Activity 18: <i>“The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from</i></p> <p><i>(i) a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving</i></p> <p><i>(i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or</i></p> <p><i>(ii) occurs behind the development setback line.”</i></p>	<p><i>The preliminary design includes the establishment of retaining structures at certain points along the proposed road widening. A gabion wall is to be constructed within a drainage line located between km 26.8 and km 26.9 of Section 21 of the N2. The construction of the wall will involve the infilling of gabion baskets with more than 5 cubic metres of material.</i></p>
<p>GN R.544 Listed Activity 47: <i>“The widening of a road by more than 6 metres, the lengthening of a road by more than 1 kilometre –</i></p> <p><i>(i) where the existing reserve is wider than 13.5 metres; or</i></p> <p><i>(ii) where no reserve exists and the road is wider than 8 meters – excluding widening or lengthening occurring inside urban areas.”</i></p>	<p><i>The preliminary design of the proposed road widening and compulsory truck stop includes a 3.5 metre wide truck lane and a 3.0 metre wide road shoulder. The proposed road widening to accommodate the compulsory truck stop will occur over a 1.3 kilometre length of road between km 26.4 and km 27.7 of Section 21 of the N2.</i></p>
<p>GN R.546 Listed Activity 19: <i>“The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.</i></p> <p><i>(a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape provinces:</i></p> <p><i>ii. Outside urban areas, in:</i></p> <p><i>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;”</i></p>	<p><i>The site of the proposed road widening is situated 4.8 kilometres to the northwest of the Ngele Forest, which is a protected area.</i></p>
<p>GN R.546 Listed Activity 24: <i>“The expansion of:</i></p> <p><i>(d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where</i></p>	<p><i>The site of the proposed road widening is situated 4.8 kilometres to the northwest of the Ngele Forest, which is a protected area.</i></p>

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Listed activity as described in GN R.544, 545 and 546	Description of project activity
<p><i>such construction will occur behind the development setback line.</i></p> <p><i>(a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</i></p> <p><i>ii. Outside urban areas, in:</i></p> <p><i>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;”</i></p>	

Note: GN R.544 Listed Activity 9, which was included as a potential Listed Activity in the Application for Environmental Authorization has been removed, as the associated thresholds are not exceeded by the proposed developmental activities.

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 as required by Regulation 22(2)(h) of GN R.543. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) 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.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

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a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
There are no site alternatives.	N/A	N/A
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (preferred)	Deg Decimal Minutes	Deg Decimal Minutes
• Starting point of the activity	30° 30.623'	29°36.341'
• #2	30° 30.547'	29°36.453'
• #3	30° 30.482'	29°36.565'
• #4	30° 30.423'	29°36.670'
• #5	30° 30.368'	29°36.779'
• Middle/Additional point of the activity (#6)	30° 30.353'	29°36.890'
• #7	30° 30.354'	29°37.001'
• #8	30° 30.354'	29°37.102'
• #9	30° 30.316'	29°37.202'
• End point of the activity (#10)	30° 30.246'	29°37.269'
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• 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.

The coordinates of the preferred route alternative presented in the table above have a spacing of 200-250 metres.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A.

b) Lay-out alternatives

Please note: The proposed project entails the widening of a portion of Section 21 of the N2 in an attempt to improve road safety along that segment of road, which is known to have a high number of

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incidents.

At the planning and design stage, the proposed compulsory truck stop and crawler lane layout was found to be the optimal engineering solution to the road safety problem along this portion of road. The Detailed Assessment and Design Report (refer to Appendix J) examined two options regarding the positioning of the compulsory truck stop, as follows (refer to Alternative 1 and 2 below):

Alternative 1 (preferred alternative)																													
Description	Lat (DDMMSS)	Long (DDMMSS)																											
<p><u>Option 2:</u> This option for the position of the compulsory truck stop is at km 27.2.</p> <p>The advantages of positioning the stop at km 27.2 are as follows:</p> <ul style="list-style-type: none"> • It will be positioned in the transition area between the cut and fill banks and is therefore much more flat in this section and will require less earthworks to construct; and, • The length of the truck stop entrance lane will be longer by 280m over Option 1 and this denotes that the lane will have a greater stacking capacity. <p>The disadvantage of the preferred alternative is that the truck will be required to stop on a 6.5% downhill gradient.</p> <p>This option was selected as its advantages outweighed those of Alternative 2.</p>																													
<p>Having considered the reasoning provided in the Detailed Assessment and Design Report, Terratest finds it unnecessary to further consider the compulsory truck stop positioning options in this assessment. It is clear that Option 2 is more favourable from environmental (avoid additional cutting into embankment between 26.64km and 26.76km to accommodate the truck stop crawler lane, as per Option 1), social (land acquisitions avoided) and economic (requires less earthworks to construct) perspectives.</p> <p>The approximate coordinates of the proposed activities and affected sites are provided below (recorded in degrees and decimal minutes):</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-left: 40px;">Road Widening Start Point</td> <td style="padding-left: 40px;">-30° 30.50220'</td> <td style="padding-left: 40px;">29° 36.52608'</td> </tr> <tr> <td style="padding-left: 40px;">Road Widening Mid-Point</td> <td style="padding-left: 40px;">-30° 30.35562'</td> <td style="padding-left: 40px;">29° 36.93114'</td> </tr> <tr> <td style="padding-left: 40px;">Road Widening End Point</td> <td style="padding-left: 40px;">-30° 30.24624'</td> <td style="padding-left: 40px;">29° 37.27020'</td> </tr> <tr> <td style="padding-left: 40px;">Truck Stop Start Point</td> <td style="padding-left: 40px;">-30° 30.35364'</td> <td style="padding-left: 40px;">29° 36.89100'</td> </tr> <tr> <td style="padding-left: 40px;">Compulsory Truck Stop</td> <td style="padding-left: 40px;">-30° 30.34950'</td> <td style="padding-left: 40px;">29° 36.99906'</td> </tr> <tr> <td style="padding-left: 40px;">Truck Stop End Point</td> <td style="padding-left: 40px;">-30° 30.35322'</td> <td style="padding-left: 40px;">29° 37.04634'</td> </tr> <tr> <td style="padding-left: 40px;">Existing Taxi Bay</td> <td style="padding-left: 40px;">-30° 30.45894'</td> <td style="padding-left: 40px;">29° 36.61278'</td> </tr> <tr> <td style="padding-left: 40px;">Proposed Taxi Stop</td> <td style="padding-left: 40px;">-30° 30.62352'</td> <td style="padding-left: 40px;">29° 36.34176'</td> </tr> <tr> <td style="padding-left: 40px;">Existing Access to log storage and handling yard</td> <td style="padding-left: 40px;">-30° 30.44436'</td> <td style="padding-left: 40px;">29° 36.62148'</td> </tr> </table>	Road Widening Start Point	-30° 30.50220'	29° 36.52608'	Road Widening Mid-Point	-30° 30.35562'	29° 36.93114'	Road Widening End Point	-30° 30.24624'	29° 37.27020'	Truck Stop Start Point	-30° 30.35364'	29° 36.89100'	Compulsory Truck Stop	-30° 30.34950'	29° 36.99906'	Truck Stop End Point	-30° 30.35322'	29° 37.04634'	Existing Taxi Bay	-30° 30.45894'	29° 36.61278'	Proposed Taxi Stop	-30° 30.62352'	29° 36.34176'	Existing Access to log storage and handling yard	-30° 30.44436'	29° 36.62148'		
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Proposed new access to log storage and handling yard	-30° 30.54858'	29° 36.44532'
Proposed gravel access road mid-point	-30° 30.48318'	29° 36.52908'
Existing access to afforested area to the south	-30° 30.31392'	29° 37.21038'
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p><u>Option 1:</u> The position of the compulsory truck stop was initially located at the crest of the vertical curve before the steep down grade, at km 26.7.</p> <p>The advantage of the stop being in this position is that it will be easier for the trucks to stop on a horizontal grade instead of a vertical grade and then start the downhill crawl.</p> <p>The disadvantages of the stop at this position are as follows:</p> <ul style="list-style-type: none"> • It would require extra cut into the bank of 13m from the edge of the road; • There will be a need for land acquisition; and, • Longer lengths of existing services will be affected. 		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
No other property or location alternatives are presented for the proposed activity.		

c) Technology alternatives

Alternative 1 (preferred alternative)
There are no alternatives to the type of activity to be undertaken or the type of technology to be utilised.
Alternative 2
Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative)
<p>At the prefeasibility stage, SANRAL did consider different locations and activities with respect to future planning and safety. The main option involved the improvement of the geometry along a segment of the route between km 30.30 and km 31.60 to the southeast. It had been observed that a number of road incidents had occurred along three successive restricting horizontal curves, where drivers had been unable to maintain control while negotiating the sharp bends. Consideration was given to the realignment of this segment by replacing the three smaller radii curves with one large curve. This activity was not pursued due to the excessive cost of construction and the negative social impacts of high-significance associated with the relocation of a community to accommodate the said realignment.</p> <p><u>It must be noted that the abovementioned activity was never considered to be an alternative to the proposed compulsory truck stop and crawler lane, but rather an activity that would augment the purpose of the proposed development i.e. to further improve road safety along the segment of road considered a high accident zone.</u></p>

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Alternative 2
Alternative 3

e) No-go alternative

The proposed project entails the widening of a portion of Section 21 of the N2 in an attempt to improve road safety along that segment of road, which is known to have a high number of incidents. The compulsory truck stop will constrain truck drivers to stop and engage a low gear. Access roads and taxi stops will be relocated to safer locations. These measures will result in improved road safety to commuters and pedestrians utilising this stretch of road.

The option of not implementing the activity will result in the current locations of access roads and taxi stops remaining in their dangerous positions and the *status quo* in terms of the high traffic incidents remaining.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	Size of the activity:
Alternative A1 ¹ (preferred activity alternative)	m ²
Alternative A2 (if any)	m ²
Alternative A3 (if any)	m ²

or, for linear activities:

Alternative:	Length of the activity:
Alternative A1 (preferred activity alternative)	1,800m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

Specified length includes new taxi stop, new road access point, road widening to accommodate compulsory truck stop and crawler lane.

b) 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)	63,000 m ²
Alternative A2 (if any)	m ²

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

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Alternative A3 (if any)

m²

Please Note: The size of the servitude is calculated by multiplying the approximate length of the affected stretch of road (1,800m) by a servitude width of 35 metres.

4. 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:

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.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities 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:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (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).

6. LAYOUT/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:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;

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- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- 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 infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

8. 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 report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

[Refer to Appendix B](#)

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 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.

[Refer to Appendix C](#)

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES	NO	Please explain
The proposed development will occur within the existing road reserve/servitude, which allows for the proposed widening of the road.			

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2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
<p>One of the four main spatial variables informing the PSDF, stated in the KZN Provincial Growth and Development Strategy (PGDS) (August 2011), is that of Social Need. The proposed widening of the N2 to accommodate a truck stop seeks to improve road safety over a portion of the N2 that is known to have an elevated incidence of road accidents. It is asserted that the safety of commuters on national roads within the province falls within the ambit of the term "Social Need".</p>			
(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
<p>The proposed activity falls within an existing road reserve and is situated outside urban areas and will therefore not affect the urban edge or edge of the built environment.</p>			

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<p>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</p>	YES	NO	Please explain
<p>The proposed project entails the widening of a portion of Section 21 of the N2 in an attempt to improve road safety along that segment of road, which is known to have a high number of incidents. This section of the N2 is frequently utilised by a large portion of the Sisonke District Municipality population.</p> <p>District Municipality</p> <p>The critical targets identified in the Sisonke District Municipality IDP 2012-2017 are as follows:</p> <ul style="list-style-type: none"> • Having provided infrastructure, water, sanitation and health services in a sustainable manner • To have uplifted the socio-economic wellbeing of Sisonke residents • To have created a conducive environment for business opportunities for both local and foreign investors. • To have promoted agricultural and tourism activities and • To have ensured the safety and healthy environment for all our men, women, elderly, the disabled, youth and children. <p>The proposed widening of the N2 will provide infrastructure (bullet point 1) and will assist the Sisonke District Municipality in achieving its goal of ensuring a safe and healthy environment as the proposed widening will improve the safety of Section 21 of the N2.</p> <p>Local Municipalities</p> <p><u>Greater Kokstad Municipality</u></p> <p>The GKM Spatial Development Framework 2012-2017 identifies, <i>inter alia</i>, the N2 as a Primary Corridor. This document, referring to the Provincial Spatial Economic Development Strategy (PSEDS), highlights the maximisation of interest opportunities and potentials within the municipality in a way which promotes growth and investment as one of its main goals. The improvement of road safety along this stretch of road is in line with this goal.</p> <p><u>Umzimkhulu Local Municipality</u></p> <p>Transport/Movement Infrastructure is one of the key elements listed in the Consolidation of Key Issues, Spatial Objectives and Strategic Intervention Options in the Umzimkhulu Local Municipality SDF 2012-2017. This section in the document is focused on the R56 as this is the main transport corridor through the Local Municipality. The N2 is not dealt with explicitly in this section due to its geographic location within the Municipality.</p>			
<p>(d) Approved Structure Plan of the Municipality</p>	YES	NO	Please explain
<p>The proposed widening project forms part of SANRAL's mandate to improve safety on national roads.</p>			

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<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p>Please explain</p>
<p>Not applicable. No EMF has been compiled for this area.</p>			
<p>(f) Any other Plans (e.g. Guide Plan)</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p>Please explain</p>
<p>None were identified.</p>			
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p>Please explain</p>
<p>Refer to 2(c) above.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p>Please explain</p>
<p>The compulsory truck stop will constrain truck drivers to stop and engage a low gear. Access roads and taxi stops will be relocated to safer locations. These measures will result in improved road safety to commuters and pedestrians utilising this stretch of road.</p> <p>Approximately 30 new employment opportunities will be created during the development phase (expected value of R 600,000).</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p>Please explain</p>
<p>The proposed development does not require services of the local municipalities.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p>Please explain</p>
<p>The proposed development involves the improvement by SANRAL of existing national road infrastructure and therefore the infrastructure planning of the local municipalities will not be affected.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	<p align="center">YES</p>	<p align="center">NO</p>	<p>Please explain</p>
<p>N/A</p>			

BASIC ASSESSMENT REPORT

8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES	NO	Please explain
<p>The widening of the road will impact on the transformed vegetation within the servitude, therefore the location factors do favour this proposed land use.</p>			
9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
<p>Widening within the road reserve is considered the best practicable environmental option. Impacts to surrounding land owners and land uses will be mitigated, where applicable, to the greatest extent.</p>			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
<p>The purpose of the proposed road widening is to reduce the number of incidents on Section 21 of the N2. As described above, the compulsory truck stop will constrain truck drivers to stop and engage a low gear and, access roads and taxi stops will be relocated to safer locations. These measures will result in improved road safety to commuters and pedestrians utilising this stretch of road.</p> <p>Only two alternative sites for the road widening component were identified by the road engineers. The preferred alternative will avoid additional cutting into the embankment between 26.64km and 26.76km to accommodate the truck stop crawler lane, as per the other alternative. Therefore, the preferred site will outweigh the negative impacts on the only other alternative.</p> <p>Therefore the benefits of the proposed development will outweigh the negative impacts thereof.</p>			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
<p>N/A</p>			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
<p>One landowner's site access is planned to be relocated. The landowner has agreed to this in principle.</p>			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO	Please explain
<p>The proposed site is located outside of urban areas.</p>			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
<p>Of the seventeen recorded SIPS, the proposed development is arguably aligned with SIP 6. SIP 6 is known as the Integrated Municipal Infrastructure Project. This aims to develop a national capacity to assist the 23 least resourced districts (17 million people) to address all the maintenance backlogs and upgrades required in water, electricity and sanitation bulk infrastructure. An important element of SIP 6 is the maintenance and fixing of existing roads.</p> <p>The proposed development seeks to expand national road infrastructure in southern KwaZulu-Natal. This is loosely aligned with the objectives of SIP 6.</p>			

BASIC ASSESSMENT REPORT

15. What will the benefits be to society in general and to the local communities?	Please explain														
<p>The compulsory truck stop will constrain truck drivers to stop and engage a low gear and, access roads and taxi stops will be relocated to safer locations. These measures will result in improved road safety to commuters and pedestrians utilising this stretch of road.</p> <p>Approximately 30 new employment opportunities will be created during the development phase (expected value of R 600,000).</p>															
16. Any other need and desirability considerations related to the proposed activity?	Please explain														
None.															
17. How does the project fit into the National Development Plan for 2030?	Please explain														
<p>In Chapter 4: Economic Infrastructure of the National Development Plan for 2030, the vision statement concerning the Transport sector states the following:</p> <p><i>“Improved access to economic opportunities, social spaces and services by bridging geographic distances affordably, reliably and safely”</i></p> <p>The proposed development seeks to pursue this vision by improving safety on National Route 2.</p>															
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.															
<p>In the table below, the various elements of the EIA process are discussed in relation to the relevant sub-sections complied with in Section 23 of NEMA:</p>															
<table border="1"> <thead> <tr> <th data-bbox="209 1068 1027 1144">Compliance</th> <th data-bbox="1027 1068 1351 1144">Relevant sub-section in Section 23 of NEMA</th> </tr> </thead> <tbody> <tr> <td data-bbox="209 1144 1027 1182">The EIA process is the selected environmental management tool.</td> <td data-bbox="1027 1144 1351 1182">1</td> </tr> <tr> <td data-bbox="209 1182 1027 1220">Refer to 19 below.</td> <td data-bbox="1027 1182 1351 1220">2(a)</td> </tr> <tr> <td data-bbox="209 1220 1027 1332">The assessment performed identifies, predicts and evaluates actual and potential impacts, and provides for mitigation of such negative impacts.</td> <td data-bbox="1027 1220 1351 1332">2(b)</td> </tr> <tr> <td data-bbox="209 1332 1027 1370">An EIA is performed before environmental authorisation is granted.</td> <td data-bbox="1027 1332 1351 1370">2(c)</td> </tr> <tr> <td data-bbox="209 1370 1027 1447">A comprehensive public participation process has been followed in accordance with EIA Regulation GN R543 of 2010.</td> <td data-bbox="1027 1370 1351 1447">2(d)</td> </tr> <tr> <td data-bbox="209 1447 1027 1516">Impacts with significance effects have been brought to the attention of the competent authority in this report.</td> <td data-bbox="1027 1447 1351 1516">2(e)</td> </tr> </tbody> </table>	Compliance	Relevant sub-section in Section 23 of NEMA	The EIA process is the selected environmental management tool.	1	Refer to 19 below.	2(a)	The assessment performed identifies, predicts and evaluates actual and potential impacts, and provides for mitigation of such negative impacts.	2(b)	An EIA is performed before environmental authorisation is granted.	2(c)	A comprehensive public participation process has been followed in accordance with EIA Regulation GN R543 of 2010.	2(d)	Impacts with significance effects have been brought to the attention of the competent authority in this report.	2(e)	
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Impacts with significance effects have been brought to the attention of the competent authority in this report.	2(e)														

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

Section 2(2) of NEMA states:
“Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.”
 By improving road safety on this section of the N2, SANRAL is giving effect to the above stated principle in NEMA.

Section 2(4)(f) states:
“The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured”.

The Environmental Impact Assessment process that has been undertaken for the proposed development has included a significant public participation component.

11. 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	Applicability to the project	Administering authority	Date
Constitution of the Republic of South Africa Act (Act 108 of 1996)	Section 24 in the Bill of Rights provides for the environmental right.	National Department of Justice and Constitutional Development	4 February 1997
National Environmental Management Act (NEMA, Act 107 of 1998)	Overarching environmental framework legislation in South Africa.	National Department of Environmental Affairs (DEA)	27 November 1998
National Environmental Management Act (NEMA, Act 107 of 1998), Environmental Impact Assessment Regulations	Activities are in Listing Notices 1 and 3 which trigger a Basic Assessment.	National Department of Environmental Affairs (DEA)	18 June 2010
National Water Act, (Act 36 of 1998).	Proposed linear development traverses a drainage line.	National Department of Water Affairs (DWA)	26 August 1998
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004)	Proposed linear development is situated in close proximity to biodiversity priority areas and protected areas.	National Department of Environmental Affairs (DEA)	7 June 2004
National Roads Act (Act 7 of 1998)	Proposed linear development involves the widening of a national road.	National Department of Transport	31 March 1998
The South African National Roads Agency Limited and	SANRAL is the applicant.	South African National Roads Agency SOC	31 March 1998

BASIC ASSESSMENT REPORT

National Roads Act (Act 7 of 1998)		Limited (SANRAL)	
National Environmental Management: Protected Areas Act (Act 57 of 2003)	Proposed linear development is situated in close proximity to biodiversity priority areas and protected areas.	National Department of Environmental Affairs (DEA)	18 February 2004
Environment Conservation Act (Act 73 of 1989)	South African environmental legislation that preceded NEMA.	National Department of Environmental Affairs (DEA)	9 June 1989
National Heritage Resources Act (Act 25 of 1999)	A linear development longer than 300m.	National Department of Arts and Culture	28 April 1999
Municipal Systems Act (Act 32 of 2000)	Proposed linear development traverses the boundaries of two local municipalities within the Sisonke District Municipality.	National Department of Cooperative Governance and Traditional Affairs	20 November 2000

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES	NO
<5m ³	

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

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

The activity is not expected to produce a significant amount of construction waste. General waste shall be disposed in onsite bins/skips and fed into the municipal waste system.

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

General waste shall be disposed in onsite bins/skips and fed into the municipal waste system.

Will the activity produce solid waste during its operational phase?

YES	NO
m ³	

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

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

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

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

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.

BASIC ASSESSMENT REPORT

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

YES	NO
-----	----

 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

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. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

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? m³
 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:			
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:

Not Applicable.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES	NO
-----	----

 If YES, is it controlled by any legislation of any sphere of government?

YES	NO
-----	----

 If YES, the applicant must 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:

--

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

YES	NO
-----	----

BASIC ASSESSMENT REPORT

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) 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:

Limited noise will be generated by construction vehicles and machinery during construction. There will be noise generated from vehicles utilising the widened road during the operational phase, but this is not likely to differ significantly from the *status quo*.

The amount of noise generated at the site during the construction and operational phases is considered to be negligible, and is not expected to exceed the existing ambient noise levels in the area. Furthermore, no sensitive noise receptors were identified within close proximity to the site when the site visits were undertaken. Noise will not be considered further in this environmental assessment.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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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:

500,000 litres

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

YES	NO
-----	----

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

Refer to Appendix J: Additional Information – Water Use Authorisation has been provided by the Department of Water Affairs.

14. ENERGY EFFICIENCY

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

There are no energy efficiency measures that have been identified other than the road design and geometry to conform to and best suite the topography of the location.

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

Not Applicable.

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 B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B 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 the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	KwaZulu-Natal
District Municipality	Sisonke
Local Municipality	Greater Kokstad Municipality (GKM) and Umzimkhulu Local Municipality (ULM)
Ward Number(s)	GKM Ward 6 and ULM Ward 10
Farm name and number	Remainder of the Farm Draai Kloof, 251 Remainder of the Farm Kalk Fontein, 252 Portion 1 of the Farm Kalk Fontein, 252 Remainder of the Farm Beeste Kraal, 18209
Portion number	See above.
SG Code	NOES00000000025100000 NOES00000000025200000 NOES00000000025200001 NOES00000001820900000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Please Note: Seven potentially affected parcels of land were initially listed in the Application Form. The scope of the proposed project was subsequently changed to exclude some of these properties.

Current land-use zoning as per local municipality IDP/records:

Road Reserve

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES	NO
-----	----

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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
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Alternative S2 (if any):

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
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Alternative S3 (if any):

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
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2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input checked="" type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input checked="" type="checkbox"/>	2.6 Plain	<input type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	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.

BASIC ASSESSMENT REPORT

4. GROUND COVER

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

Natural veld in 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. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

The proposed widening traverses a drainage line (tributary to the Beestekraal River). The proposed widening will include the construction of a gabion wall within the drainage line. This activity will involve cutting into the base of the existing road embankment that perpendicularly bisects the drainage line, followed by the laying of consecutive layers of gabion baskets filled with crushed rock material.

In the absence of stormwater management controls, construction vehicles accessing the drainage line could result in the compaction of the soil presenting a hardened surface, which may lead to increased runoff and/or erosion within the drainage line.

If adequate soil erosion mitigation measures are implemented during the construction phase these impacts are unlikely to persist in the operational phase.

BASIC ASSESSMENT REPORT

6. 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:

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial ^{AN}	Train station or shunting yard ^N	Mountain, koppie or ridge
Heavy industrial ^{AN}	Railway line ^N	Museum
Power station	Major road (4 lanes or more) ^N	Historical building
Office/consulting room	Airport ^N	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

There is an area of natural indigenous vegetation within a drainage line to the south of the site. The proposed road widening could result in an increase in the volume and velocity of the stormwater diverted to the drainage line to the north of the road, which is discharged beneath the road, to the south. Unmitigated, this could result in erosion in the catchment to the south of the proposed development. However, with the correct mitigation measures, such impacts are unlikely.

The proposed development is surrounded by afforested land on both sides. The concerns of these landowners will need to be considered in this assessment. The proposed development is expected to result in a positive impact on the surrounding landowners through the improvement of road safety along this segment of road.

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

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

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

BASIC ASSESSMENT REPORT

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO
Core area of a protected area?	YES	NO
Buffer area of a protected area?	YES	NO
Planned expansion area of an existing protected area?	YES	NO
Existing offset area associated with a previous Environmental Authorisation?	YES	NO
Buffer area of the SKA?	YES	NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

7. 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 paleontological sites, on or close (within 20m) to the site? If YES, explain:

YES	NO
Uncertain	

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

[Excerpt from the Recommendations Section of the Heritage Impact Assessment:](#)

“The proposed SANRAL N2 Compulsory Truck Stop and Crawler Lane development may proceed as no heritage sites are in any danger of being destroyed or altered. However, it should also be pointed out that the KwaZulu-Natal Heritage Act requires that operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities.”

Will any building or structure older than 60 years be affected in any way?
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	NO
YES	NO

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

[Greater Kokstad Municipality:](#)

[The GKM Integrated Development Plan 2012-2017 states the following regarding unemployment:](#)

“Kokstad Municipality experiences challenges in terms of employment, due to high migration of people from the Eastern Cape and Lesotho into the area in search for employment opportunities. The municipality is therefore faced with a challenge of planning, providing basic services, housing and creating employment opportunities for its growing communities.

The economically active/employed population comprises 44.02%. The remaining 9% are unemployed and approximately 40% of population of Greater Kokstad is not economically active.”

Umzimkhulu Local Municipality:

The Umzimkhulu Local Municipality Final Integrated Development Plan 2012/13 states the following regarding unemployment:

“Table 7 below shows the current status of employability in the municipality. The figure indicates high unemployment figures, which can be interpreted to mean high dependency ratios and low affordability levels.”

Table 7: Employment status

<i>Status</i>	<i>Umzimkhulu LM</i>
<i>Employed</i>	<i>10%</i>
<i>Unemployed</i>	<i>22%</i>
<i>Scholar or student</i>	<i>24%</i>
<i>Home-maker or housewife</i>	<i>14%</i>
<i>Pensioner or retired person/too old to work</i>	<i>5%</i>
<i>Unable to work due to illness or disability</i>	<i>5%</i>
<i>Seasonal worker not working presently</i>	<i>1%</i>
<i>Does not choose to work</i>	<i>8%</i>
<i>Could not find work</i>	<i>12%</i>

Economic profile of local municipality:

Greater Kokstad Municipality:

The GKM Integrated Development Plan 2012-2017 states the following regarding the economic profile of the GKM:

“GKM is the largest economic centre within the Sisonke District Municipality, as measured in terms of Gross Domestic Product-Rate (GPD-R). The GDP-R is a measure of economic performance by which the final value of goods and services produced in the economy is estimated. According to the Global Insight, 2011 the level of GKM GDP-R is measured in a percentage form. The contribution of Sisonke District Municipality towards the KZN GDP is constant whereas the Sisonke Local Municipalities (including the GKM) contribution towards the Sisonke District Municipality illustrates an incline of 0.5% GDP-R in 2005 and 2010.

The economic sectors are differentiated into three sectors, primary sector, secondary sector and tertiary sector. According to the Global Insight (2011) states that tertiary sector recorded the highest sector in the GKM with the level of 12.40%. However the major economic sectors in the GKM are agriculture, government and community services followed by wholesale and retail. The remaining sectors (manufacturing, business services and construction) are relatively small but appear to play a significant role in the local economy.

Agriculture is an important sector and currently the dominant sector in the GKM economy. In addition it is culturally important. The Municipality needs to consider the impacts on agriculture from all other economic activities and identify ways to preserve and strengthen this sector as a viable economic mainstream.

The Government and Community Services sector is the second highest contribution to GGP after the agricultural sector in the economy of GKM.”

Umzimkhulu Local Municipality:

The Umzimkhulu Local Municipality Final Integrated Development Plan 2012/13 states the following regarding economic development:

“UMzimkhulu Municipality adopted a Local Economic Development Strategy (LED) in July 2007. The national framework for LED in South Africa aims to support the development of sustainable local economies through integrated government action. This government action is developmental and stimulates the heart of the economy, which consists of a collection of enterprises including cooperatives that operate in local municipal spaces.

LED is one of the five Key Performance Areas (KPA's) for Local Government. As a key performance area, LED is strongly interrelated and dependent on the other four KPA's. The alignment of the Municipal LED Plan with National and Provincial objectives will be catered for when the strategy is being reviewed. However, the District Municipality is in the process of developing its LED Plan and alignment with district objectives will also be considered in the review of the plan.

The municipality is currently reviewing the LED and Comprehensive Agricultural Plan that will be incorporated in the SDF.

The strategy identified the following sectors as the sectors that currently exist in UMzimkhulu.

- *Agriculture*
- *Forestry*
- *Community , social and other personal services*
- *Trade and tourism”*

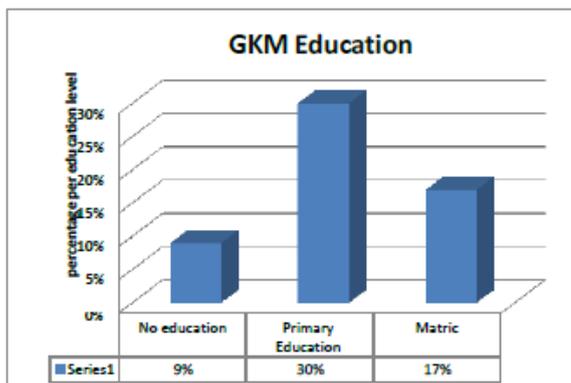
Level of education:

Greater Kokstad Municipality:

The GKM Integrated Development Plan 2012-2017 states the following regarding the education:

“Education has a strong impact on the economy of a municipality, since it determines to a certain extent the type of employment of the economically active population. The table below clearly indicates that the area is characterized by low levels of education and the population requires skills training and quality educational institutions, as well as an improved quality of the work force.

Figure 5: GKM population per education level



The bar graph above indicates a high level of population with access to primary school, whereas the level of matric has the lower number of population. One of the explanations to which this could be attributed is the challenge of accessibility to schooling, especially in rural areas. The level of passing students in the highest grade proves the weakness of the education in the Greater Kokstad Municipality, and thus there would be a high shortage of level of skill to qualify for employment within the Municipality.”

Umzimkhulu Local Municipality:

The Umzimkhulu Local Municipality Final Integrated Development Plan 2012/13 states the following regarding the economic profile:

“Education levels have a major bearing on the quality of life. The inability of an individual to perform certain basic functions due to illiteracy is also part of elements that define human poverty. Low educational levels are likely to push individuals to unemployment and to low paying jobs. Low educational levels also limit the ability of an individual to learn new skills and be trained.

It evident that more than 60% of individuals ranging from no formal education to primary levels are dominant within the Municipality. This is a major challenge which is likely to lead to low households’ income levels which further limit the ability of families to invest into the education of youthful members. Such low figures also limit the ability of absorbing new skills and effectively compete for higher paying jobs. Umzimkhulu area has 176 public schools recognized by the Department of Education including one technical college. Much of the education-associated problems are experienced in farms and rural schools. Existing schools do not up to standard science and technical subjects. School property is continuously vandalized. Most schools lack water and sanitation and the infrastructure of most schools is a health hazard to the pupils.

Effects or consequences of the problems are:

- Low educational levels for the youth in the area;
- Low science and technical skills base;
- Migration of youth to urban areas;
- High unemployment rates;
- High dependency rates;
- Employment to low paying jobs and
- Poor payments for services rendered by the municipality.

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b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 24 million (incl. VAT)	
What is the expected yearly income that will be generated by or as a result of the activity?	R 0.00	
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 and construction phase of the activity/ies?	± 30	
What is the expected value of the employment opportunities during the development and construction phase?	R 600,000	
What percentage of this will accrue to previously disadvantaged individuals?	100 %	
How many permanent new employment opportunities will be created during the operational phase of the activity?	0	
What is the expected current value of the employment opportunities during the first 10 years?	R 0.00	
What percentage of this will accrue to previously disadvantaged individuals?	0%	

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	Not applicable – the proposed development is occurring within a defined road servitude which has been completely transformed.

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).

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Natural	0%	N/A
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	N/A
Degraded (includes areas heavily invaded by alien plants)	0%	N/A
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	100%	The proposed site includes transport infrastructure and grassed embankments that have been disturbed.

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems								
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline			
	Endangered									
	Vulnerable									
	Least Threatened									
		YES	NO	UNSURE	YES	NO	YES	NO		

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

There is an area of natural indigenous vegetation within a drainage line to the south of the site. The proposed road widening could result in an increase in the volume and velocity of the stormwater diverted to the drainage line to the north of the road, which is discharged beneath the road, to the south. Unmitigated, this could result in erosion in the catchment to the south of the proposed development. However, with the correct mitigation measures, such impacts are unlikely.

The proposed development is surrounded by afforested land on both sides. The concerns of these landowners will need to be considered in this assessment. The proposed development is expected to result in a positive impact on the surrounding landowners through the improvement of road safety along this segment of road.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	1) The East Griqualand Fever 2) The Witness 3) The East Griqualand Fever (reprint)	
Date published	1) 11 November 2011 2) 9 November 2011 3) 25 November 2011	
Site notice position	Latitude	Longitude
	30° 31' 15.90" S	29° 38' 36.65" E
	30° 30' 30.55" S	29° 36' 30.93" E
	30° 30' 21.31" S	29° 36' 53.36" E
	30° 30' 17.01" S	29° 37' 14.08" E
	30° 34' 08.96" S	29° 26' 13.84" E
Date placed	8 November 2011	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 54(2)(e) and 54(7) of GN R.543.

Key stakeholders (other than organs of state) identified in terms of Regulation 54(2)(b) of GN R.543:

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Tracy Quin	PG Bison Timber Products	tquin@pqbison.co.za
Dave Birch (Chief Executive Officer)	PG Bison Timber Products	dbirch@pqbison.co.za
Gary Chaplin	PG Bison Timber Products	gchaplin@pqbison.co.za
Pierre Le Roux (Forest Commercial Manager)	Merensky	pierrer@merensky.co.za
Hamish Whyte	Merensky	hamishw@merensky.co.za

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&As	Summary of response from EAP
1) Management of general and hazardous waste generated during the construction phase and operational phase.	1) Management of general and hazardous waste generated during the construction phase is provided for in the EMPr (see Appendix G).
2) Identification of any environmental sensitive areas and water resources such as wetlands, rivers, groundwater etc. as well as possible pollution impacts and proposed mitigation measures of such water resources.	2) Environmentally sensitive areas and potential impacts have been addressed in this Basic Assessment Report.
3) Stormwater management plan/system.	<p>3) Stormwater runoff has been considered in the engineering design of the proposed truck stop and road widening.</p> <p><u>Surface Drainage:</u> There are existing concrete lined side drains along the route. In the sections to be widened, the existing concrete drains will be removed and Type 'F' concrete side drains will be used in sections where there are cut banks whilst Type 'A' concrete side drains will be used along fill banks. All water collected in these drains will be discharged via downchutes to prevent overtopping of the drains.</p> <p><u>Culverts:</u> Culverts located in sections of road to be widened will be extended accordingly. Affected headwalls will be demolished and replaced at the end of the extensions.</p> <p><u>Subsurface drainage:</u> Subsoil drains are required in all areas where there are cut banks and these will be discharged on to the fill banks. No sign of groundwater seepage was noticed in the existing cut faces or quadrants that may warrant extra subsoil drainage.</p>
4) Spill contingency plan.	4) Spill contingency is addressed in the EMPr (see Appendix G).
5) Sewage treatment and disposal as well as wastewater/effluent management.	5) The EMPr addresses sewage and wastewater during the construction phase. Chemical toilets will be provided by the contractor during construction.

BASIC ASSESSMENT REPORT

Summary of main issues raised by I&As	Summary of response from EAP
6) Information regarding the 1:50 and 1:100 year floodlines of any watercourses.	6) Information regarding the 1:50 and 1:100 floodlines of the drainage line, which the road currently traverses, is not available. Terratest is of the opinion that undertaking a specialist Floodline Determination Study at this point is not justifiable for the following reasons: <ul style="list-style-type: none"> • The existing road crosses the drainage line. A culvert has been installed to divert the incoming flow on the northern side of the road to below the road. • The proposed road widening does not involve extending the culvert, but rather increasing the gradient of the embankment above it. • The proposed road widening will therefore not encroach on the drainage line, and is not likely to significantly modify the drainage characteristics in the catchment. • The site of the road widening is located at the headwaters of a tributary. The culvert drains a small catchment (4.5 ha).
7) Erosion control measures.	7) Erosion control measures have been identified. Mitigation measures have been formalized in the EMPr.
8) Environmental Management Programme.	8) The EMPr is a mandatory document that will be submitted to the National Department of Environmental Affairs, as part of the Basic Assessment Report.
9) Surrounding landowners (forestry) must be engaged.	9) The surrounding landowners have been engaged in the public participation process.
10) A Heritage Impact Assessment is required as there is a possibility of grave occurrences.	10) Amafa requested that a Heritage Impact Assessment be undertaken on the basis that there that 'there is a possibility of grave occurrences'. Terratest challenged this request. While it is not possible to conclusively state that there are no graves within the road reserve, the nature and location of the proposed development, makes such occurrences highly unlikely. Terratest has undertaken a number of site visits, and no markers suggesting the presence of graves within the road reserve were observed. Amafa's response is still outstanding.
11) Road widening across the drainage line must be controlled through a site specific management plan.	11) Mitigation measures for potential impacts within the drainage line will be addressed in the EMPr. Such measures will include screening the drainage line, sediment capture

BASIC ASSESSMENT REPORT

Summary of main issues raised by I&As	Summary of response from EAP
	and erosion control.
12) Merensky Timber objected to the proposed closure of the access road at 30° 30.31392'S; 29° 37.21038'E.	12) Merensky Timber's objection was noted. The proposed development was therefore subsequently amended to exclude the closure of the access road.

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR 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 the Final BAR as Appendix E3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Amafa	Annie van de Venter Radford			amafaddps@amafapmb.co.za	PO Box 2685, Pietermaritzburg, 3200
Department of Agriculture and Environmental Affairs (DAEA) (Senior Assessing Officer – Impact Assessment)	Takalani Mavhunga	039 834 7621	039 834 1354	Takalani.mavhunga@kzndae.gov.za	Private Bag X504, Ixopo, 3276
Department of Agriculture, Forestry and Fisheries	Modise Seokwang	033 392 7739 / 28	033 365 1210 / 086 563 5657	seokwangm@nda.agric.za	Private Bag X9029 Pietermaritzburg, 3200
Department of Environmental Affairs	Milicent Solomons	012 310 3182	012 320 7539	MSolomons@environment.gov.za	Private bag X447, Pretoria, 0001
Department of Rural Development and Land Reform	Buyisiwe Mpungose	039 682 2295	039 682 0004	BPMpungose@ruraldevelopment.gov.za buyaah@gmail.com	PO Box 25537, Port Shepstone, 4241
Department of Transport	Roy Ryan	033 355 8600	033 342 3962	Roy.Ryan@Kznttransport.gov.za	Private Bag, X9043, Pietermaritzburg, 3200
Department of Water Affairs	Renelle Pillay	031 336 2700	031 304 9546	pillayr@dwa.gov.za	PO Box 1018 Durban, 4000
Eskom (Assistant Deeds Registration Officer)	Michelle Nicol	031 710 5404	086 667 2564 / 031 710 5146	nicolm@eskom.co.za	PO Box 66, New Germany, 3620
EKZN Wildlife	Jabulani Hlophe	033 845 1903	033 845 1499	hlophej@kznwildlife.com	PO Box 13053, Cascades, 3202,

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Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Greater Kokstad Local Municipality	Andile Velem	039 797 6678		andile.velem@kokstad.org.za	PO Box 8, Kokstad, 4700
Greater Kokstad Local Municipality (Ward 6 Councillor)	Tsiviso Mohlakoana		031 727 3676	-	PO Box 8, Kokstad, 4700
Sisonke District Municipality	Lucky Zondi			zondil@sisonkem.gov.za	Private Bag X501, Ixopo, 3276
Telkom	Sikes Sheik	031 363 1525	081 556 2773 / 081 244 2890	sheiks@telkom.co.za	TelkomSA Engineering Operations Private Bag X54326, Durban, 4001
Umzimkhulu Local Municipality (Ward 10 Councillor)	Boniswua Cira		039 259 0079 / 0427	-	PO Box 53, Umzimkhulu, 3297
Umzimkhulu Local Municipality	Lulamile Mapholoba	039 259 5300	039 259 0223	mapholoba@umzimkhulum.gov.za	PO Box 53, Umzimkhulu, 3297
Umzimkhulu Local Municipality	Ms Dweba	039 259 5001		dwebak@umzimkhulum.gov.za ; gonggab@umzimkhulum.gov.za	PO Box 53, Umzimkhulu, 3297
WESSA	Carolyn Schwegman	039 975 2147		afromatz@telkomsa.net	PO Box 343, Pennington, 4184

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

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

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Earthworks during the construction phase.	<p>Direct impacts: CONSTRUCTION</p> <p>Construction Phase Impact 1: Soil Erosion – Soil erosion may occur during the construction phase as local soils are removed. Soil erosion may occur where embankments and/or depressions are being re-profiled without due consideration for such matters.</p> <p>If adequate soil erosion mitigation measures are implemented during the construction phase these impacts are unlikely to occur in the operational phase.</p>	In the presence of correct soil erosion mitigation measures, the significance of the impact is reduced to very low (local extent, medium intensity, short term duration and probable)	Cut and fill areas where soil nail walls and gabion baskets are to be constructed, respectively, are to be rehabilitated according to the EMPr. The erosion potential in construction areas will be significantly reduced where a progressive rehabilitation and re-grassing program is implemented.
	Construction of a gabion wall within the drainage line (headwaters of the Beestekraal River) to accommodate a section of the proposed		

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
road widening.	<p>perpendicularly bisects the drainage line, followed by the laying of consecutive layers of gabion baskets filled with crushed rock material. Gaps between the embankment and the gabion baskets will be backfilled and compacted.</p> <p>In the absence of stormwater management controls, construction vehicles accessing the drainage line could result in the compaction of the soil presenting a hardened surface, which may lead to increased runoff and/or erosion within the drainage line. Dumping of waste into the drainage line during the construction phase could also negatively impact on the functioning of the drainage line.</p> <p>If adequate soil erosion mitigation measures are implemented during the construction phase these impacts are unlikely to persist in the operational phase.</p>		<p>Progressive rehabilitation and re-grassing is to be undertaken on an on-going basis to reduce the potential of sedimentation within the drainage line.</p> <p>Recommendations from the <u>Hydrological Report</u>:</p> <ol style="list-style-type: none"> 1) Construct as many down chutes as possible to dissipate the flow into the natural veld. 2) Where possible, install splitter blocks to dissipate the energy. 3) Plant indigenous grasses endemic to the area along cut and fill banks.
Widening of the Section of road in question	<p>Construction Phase Impact 3: Stormwater Management – The proposed widening of the Section of road in question will increase the hardened surface area. Consequently, the volume and velocity of stormwater runoff from hardened surfaces is likely to increase. The absence of adequate stormwater control mechanisms to attenuate the increased runoff could have a negative impact on the environment.</p>	<p>The surface runoff control measures provided for in the engineering design are likely to adequately address the matter. Potential stormwater impacts are considered to have a very low significance (local extent, low intensity, long term duration and possible).</p>	<p><u>Surface Drainage:</u> There are existing concrete lined side drains along the route. In the sections to be widened, the existing concrete drains will be removed and Type 'F' concrete side drains will be used in sections where there are cut banks whilst Type 'A' concrete side drains will be used along fill banks. All water collected in these drains will be discharged via down-chutes to prevent overtopping of the drains.</p> <p><u>Culverts:</u></p>

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Activity	Impact summary	Significance	Proposed mitigation
			<p>Culverts located in sections of road to be widened will be extended accordingly. Affected headwalls will be demolished and replaced at the end of the extensions.</p> <p><u>Subsurface drainage:</u> Subsoil drains are required in all areas where there are cut banks and these will be discharged on to the fill banks. No sign of groundwater seepage was noticed in the existing cut faces or quadrants that may warrant extra subsoil drainage.</p>
<p>Removal of vegetation during construction.</p>	<p>Construction Phase Impact 4: Loss of Vegetation – The vegetation within the servitude is composed of grassed embankments and depressions of low biodiversity and conservation value. Vegetation within the servitude is under constant management, serving to maintain the low biodiversity value of the vegetation, as the establishment of various other species is prevented. Local vegetation beyond the servitude includes commercial forestry and grassed firebreaks. While low in ecological value, the vegetation may play an important role in reducing soil erosion. Construction vehicles could result in the damage and/or destruction of patches of vegetation, thus exposing the soil, and increasing the risk of erosion.</p>	<p>Potential associated impacts are considered to be insignificant (local extent, low intensity, short term duration and possible).</p>	<p>Where necessary, disturbed areas will need to be rehabilitated.</p>
<p>Construction activities</p>	<p>Construction Phase Impact 5: Traffic – This portion of the N2 is the major arteriole / conduit for traffic flowing between KwaZulu-</p>	<p>This impact is considered to be of very low</p>	<p>No mitigation measures suggested.</p>

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Activity	Impact summary	Significance	Proposed mitigation
	Natal and the Eastern Cape. Heavy transport / commercial vehicles and light vehicles regularly traverse the study area. There is likely to be a temporary disruption of traffic flow during construction.	significance (local extent, low intensity, short term duration and definite).	
Construction activities	Construction Phase Impact 6: Safety – The current alignment and design of the road has associated safety risks and concerns. During the construction period the associated safety risks are likely to be slightly elevated due to the presence of construction vehicles and workers.	This potential impact is considered to be of very low significance (local extent, low intensity, short term duration and probable).	No mitigation measures suggested.
Construction activities	Construction Phase Impact 7: General and Hazardous Waste – General (rubble, soils, litter) and hazardous (diesel, oils, cement) waste will be generated during construction. Improper management of these wastes may result in the pollution of local soils and the tributary of the Beestekraal River.	If mitigation measures are correctly implemented, potential environmental impacts emanating from the generation of waste are considered to be insignificant (local extent, low intensity, short term duration and improbable).	All general and hazardous waste produced during the construction phase is to be appropriately stored until such time as a suitable waste removal contractor removes such waste for disposal at an approved landfill.
	Indirect impacts: No indirect impacts are envisaged to result from the Planning and Design, Construction, Operational, Decommissioning and Closure Phases.		
	Cumulative impacts: No cumulative impacts are envisaged to result from the Planning and Design, Construction, Operational, Decommissioning and Closure Phases		
Traffic during operation	Direct impacts: OPERATION Operational Phase Impact 1: Traffic – This portion of the N2 is the major arteriole / conduit for traffic flowing between KwaZulu-Natal and the Eastern Cape. Heavy transport / commercial vehicles and light vehicles regularly traverse the study area.	This impact is considered to be of medium significance (local extent, medium intensity, long term duration and	None required.

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Activity	Impact summary	Significance	Proposed mitigation
	During the operational phase the proposed development will positively impact on traffic flow, with a compulsory truck stop allowing light vehicles to pass.	definite)	
Widened road	<p>Operational Phase Impact 2: Safety – During the operational phase the proposed road widening is likely to result in a positive impact in terms on road safety. The compulsory truck stop will encourage drivers of heavy vehicles to engage a low gear before the steep and winding decent through Weza State Forest.</p> <p>The truck stop and associated crawler lane will allow for light vehicles to pass the heavy vehicles, reducing driver frustration and the incidence of potentially hazardous overtaking actions.</p> <p>The relocation of the taxi stop and the access point to Braecroft Timbers (Pty) Ltd. will significantly improve road safety by allowing for increased line-of-sight.</p>	During the operational phase the proposed road widening is likely to result in a positive impact of high significance in terms of road safety (local extent, high intensity, long term duration and probable).	None required. Benefit enhancement: Additional road signs along this section of the route will improve awareness and safety.
	<p>Indirect impacts: No indirect impacts are envisaged to result from the Planning and Design, Construction, Operational, Decommissioning and Closure Phases.</p>		
	<p>Cumulative impacts: No indirect impacts are envisaged to result from the Planning and Design, Construction, Operational, Decommissioning and Closure Phases.</p>		
<p>Alternative 2 Having considered the reasoning provided in the Detailed Assessment and Design Report, Terratest finds it unnecessary to further consider the compulsory truck stop positioning options in this assessment. It is clear that Option 2 (i.e. the preferred alternative assessed above) is more favourable from environmental (avoid additional cutting into embankment between 26.64km and 26.76km to accommodate the truck stop crawler lane, as per Option 1), social (land acquisitions avoided) and economic (requires less earthworks to construct) perspectives.</p>			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
Alternative 3			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
	<p>Direct impacts: The construction phase impacts mentioned above will not materialise if the “No-go” Alternative is selected. Construction phase impacts discussed above will not eventuate. These include soil erosion impacts, impacts to the drainage line, loss of vegetation and the generation of general and hazardous waste.</p> <p>Construction phase negative impacts to traffic and road safety will be avoided.</p> <p>Operational phase impacts to road safety will be avoided.</p> <p>Operational phase impacts to traffic will be avoided.</p>	<p>The avoidance of these potential negate impacts amounts to positive impacts ranging in significance from ‘insignificant’ to ‘very low’.</p> <p>This is considered a positive impact of very low significance.</p> <p>This is considered to be a negative impact of high significance (local extent, high intensity, long term duration and definite).</p> <p>This is considered to be a negative impact of medium</p>	<p>Approve the development of Alternative 1.</p>

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Activity	Impact summary	Significance	Proposed mitigation
		significance (local extent, medium intensity, long term duration and definite).	
	<p>Indirect impacts: No indirect impacts are envisaged to result from the Planning and Design, Construction, Operational, Decommissioning and Closure Phases.</p>		
	<p>Cumulative impacts: No indirect impacts are envisaged to result from the Planning and Design, Construction, Operational, Decommissioning and Closure Phases.</p>		

A complete impact assessment in terms of Regulation 22(2)(i) of GN R.543 must be included as Appendix F.

The impact assessment required in terms of Regulation 22(2)(i) of GN R.543 is undertaken in Section D ('Impact Assessment') of this document.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

Construction Phase

Direct Impact 1: Soil Erosion – Soil erosion may occur during the construction phase as local soils are removed and where embankments and/or depressions are being re-profiled. In the presence of correct soil erosion mitigation measures, the significance of the impact is reduced to very low (local extent, medium intensity, short term duration and probable).

Direct Impact 2: Impact on the Drainage Line – In the presence of adequate mitigation measures, the significance of the impact is reduced to very low (local extent, low intensity, long term duration and possible).

Direct Impact 3: Stormwater Management – The surface runoff control measures provided for in the engineering design are likely to adequately address the matter. Potential stormwater impacts are considered to have a very low significance (local extent, low intensity, long term duration and possible).

Direct Impact 4: Loss of Vegetation – The potential impact that the proposed development may have on vegetation cover is considered to be very low. Re-vegetation will occur where necessary. The vegetation that stands to be disturbed is of low biodiversity value and the mitigation measures will adequately prevent indirect environmental impacts from occurring. Potential associated impacts are considered to be insignificant (local extent, low intensity, short term duration and possible).

Direct Impact 5: Traffic – There is likely to be a temporary disruption of traffic flow during construction. This impact is considered to be of very low significance (local extent, low intensity, short term duration and definite).

Direct Impact 6: Safety – During the construction period safety risks are likely to be slightly elevated due to the presence of construction vehicles and workers. This potential impact is considered to be of very low significance (local extent, low intensity, short term duration and probable).

Direct Impact 7: General and Hazardous Waste – General (rubble, soils, litter) and hazardous (diesel, oils, cement) waste will be generated during construction. If mitigation measures are correctly implemented, potential environmental impacts emanating from the generation of waste are considered to be insignificant (local extent, low intensity, short term duration and improbable).

Operational Phase

Direct Impact 1: Traffic – During the operational phase the proposed development will positively impact on traffic flow. **This impact is considered to be of medium significance** (local extent, medium intensity, long term duration and definite).

Direct Impact 2: Safety – The truck stop and associated crawler lane will allow for light vehicles to pass the heavy vehicles, reducing driver frustration and the incidence of potentially hazardous overtaking actions. During the operational phase the proposed road widening is likely to result in a **positive impact of high significance in terms of road safety** (local extent, high intensity, long term duration and probable).

ENVIRONMENTAL IMPACT STATEMENT:

The negative impacts related to the proposed compulsory truck stop and road widening on the N2 Section 21 (km 26 – km 28) will mainly occur during the construction phase of the development. All these impacts can be mitigated, as described in the document above. Furthermore, detailed mitigation and management principles for the construction phase will be included in the Environmental Management Programme (EMPr). It is imperative that the approved EMP must address the construction-related activities, as well as the decommissioning of the contractor's camp. An independent ECO should be appointed to enforce EMP compliance.

The negative impacts of the proposed activity on the receiving environment carry a very low significance. This is contingent upon the implementation of the mitigation measures and management of the impacts (particularly during the construction phase). The likelihood of these impacts eventuating ranges from 'improbable' to 'probable'.

Areas that may be of concern are vegetation and fauna, surface water, groundwater and soils. However, with the correct implementation of the prescribed mitigation measures, these impacts can be kept to a minimum.

The positive social impact of the proposed development, once implemented (operational phase), will be of medium – high significance to the local communities and the commuters in the region. The likelihood of these positive impacts range from 'probable' to 'definite'.

In the light of the impending need for improving the current national route; the impacts identified herein; the mitigation measures proposed for these impacts; and the high significance, positive

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impacts that are very likely to be forthcoming from the activity, it is our opinion that there are no fatal flaws associated with the project that should prevent it from receiving environmental approval.

Alternative B

Alternative C

No-go alternative (compulsory)

- Operational phase impacts to road safety will be avoided. **This is considered to be a negative impact of high significance** (local extent, high intensity, long term duration and definite).
- Operational phase impacts to traffic will be avoided. **This is considered to be a negative impact of medium significance** (local extent, medium intensity, long term duration and definite).
- Construction phase impacts discussed above will not eventuate. These include soil erosion impacts, impacts to the drainage line, loss of vegetation and the generation of general and hazardous waste. The avoidance of these potential negative impacts amounts to positive impacts ranging in significance from 'insignificant' to 'very low'.
- Construction phase negative impacts to traffic and road safety will be avoided. This is considered a positive impact of very low significance.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	NO
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If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

Should Environmental Authorisation be issued, the following is recommended for inclusion:

- All parties involved are to be aware of their responsibility for compliance with the provisions for Duty of Care and Remediation as stipulated in Section 28 of NEMA, Act 107 of 1998.
- An independent Environmental Control Officer (ECO) is to be contracted by the proponent to undertake regular audits as per this report and the EMPr for the duration of the construction process to ensure compliance. Monthly audits and reports are to be developed.
- Mitigation measures as mentioned in Section D must be followed. These are included in the EMPr Provided in **Appendix G**.
- The disruption to the flow of traffic along Section 21 of the National Route 2 drive must be minimised during the construction phase.

Is an EMPr attached?

YES	NO
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The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

Warren David Hale

NAME OF EAP



SIGNATURE OF EAP

19 October 2012

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information