environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, 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, 2014 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 08 December 2014. 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.
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 in 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

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

A heritage impact assessment was undertaken by Prof. Anton van Vollenhoven of Archaetnos Culture and Cultural resource Consultants.
Due to the nature of the project no specialist was consulted with regards to the Biodiversity of the study area, this section was completed by WSP Environmental (Pty) Ltd.

1. PROJECT DESCRIPTION

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

The South African National Roads Agency SOC Limited (SANRAL) was established in April 1998 by an Act of Parliament as an independent statutory company operating along commercial lines and at arm's length from Government. The purpose of the company is to strategically plan, design, construct, rehabilitate and maintain South Africa's national road network.

SANRAL has recently taken ownership of the National Route R34 (R34) from the North West Provincial Government: Department of Transport, Roads and Community Safety. The condition of the road has deteriorated over time and does not comply with SANRAL's technical and safety standards and specifications as outlined in SANRAL's Code of Procedure for the Planning and Design of Highway and Road Structures in South Africa (February 2002 and amended in January 2008).

SANRAL propose to upgrade and rehabilitate the R34 Section 1 between Vryburg and Schweizer Reneke (km31 to km60) (Figure 1). The scope of works for the upgrade and rehabilitation of the R34 includes:

- Shifting the road centre line to the North, in order to provide sufficient space for drainage on the southern side of the road reserve;
- Lifting the vertical alignment of the road, in areas where poor drainage is evident;
- Introducing catchwater berms upstream of the culverts in order to minimise silting;
- Installing and constructing new culverts that are designed to discharge on natural ground level; and
- Clearing of vegetation for stockpiling.

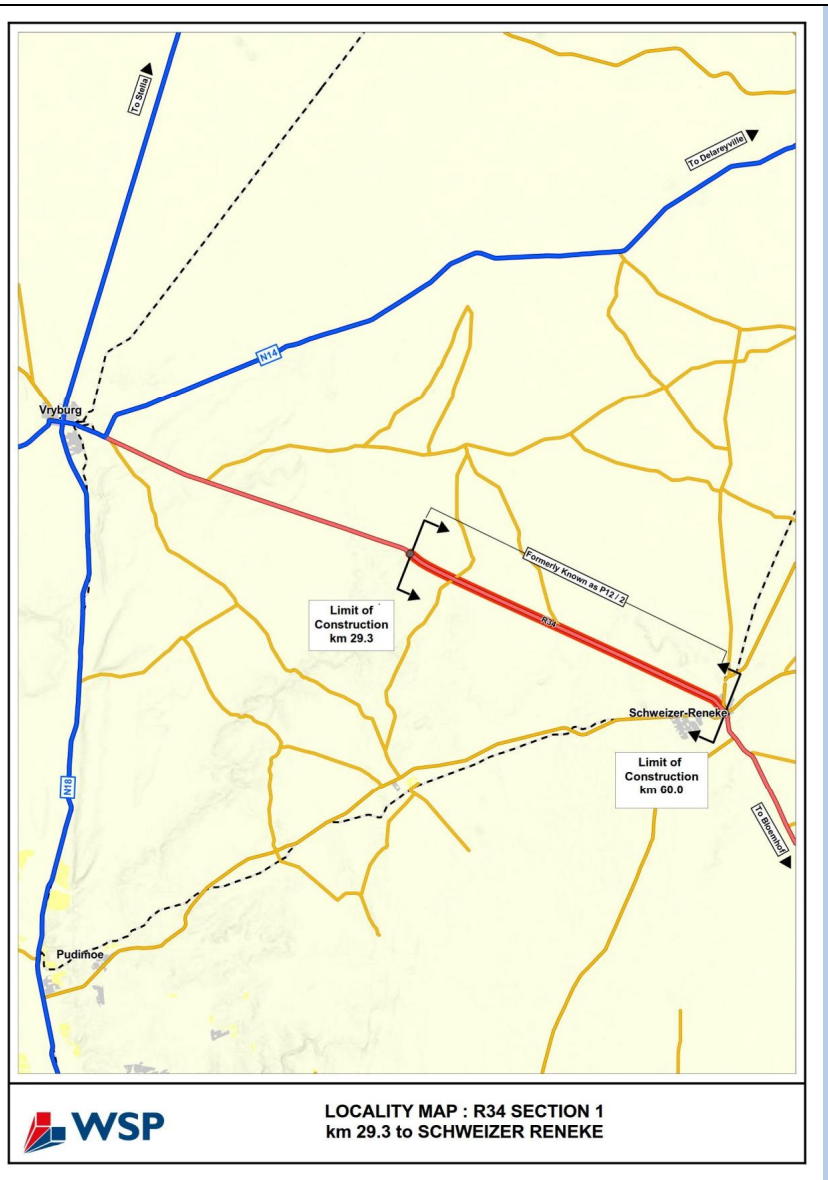


Figure 1 – Locality Map

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

Listed activity as described in GN 983, 984 and 985	Description of project activity
GNR 983: Activity 12 The development of- (vi) bulk storm water outlet structures exceeding 100 square metres in size; where such development occurs- (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; -	The initial portion of the road lies directly adjacent to a non-perennial stream. The existing road servitude is approximately 15m from the edge of the watercourse. As part of the road upgrade the existing culvert will be closed up and a new culvert constructed.
GNR 983: Activity 27 The clearance of an area of 1 hectares or more,	The contractor will require an area where material for the construction phase can be stored and/or

but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for – (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	stockpiled.
GNR 983: Activity 56 The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre (i) where the existing reserve is wider than 13.5 meters; or (ii) where no reserve exists where the existing road is wider than 8 meters; Excluding where widening occur inside urban areas	The existing alignment will be widened from a 6m width to a 12.4m width to comply with SANRAL's specifications.

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 Appendix 1 (3)(h), Regulation 2014. 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.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
[redacted]		
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
[redacted]		
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)
[redacted]		

In the case of linear activities:

It should be noted that the R34 (an existing road) will be upgraded within the existing road reserve. Therefore, there are no site or alignment alternatives.

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (preferred)		
· Starting point of the activity	27° 03’ 51.76”	25° 02’ 42.47”
· Middle/Additional point of the activity	27° 07’ 27.28”	25° 10’ 47.78”
· End point of the activity	27° 11’ 34.19”	25° 19’ 43.61”
Alternative S2 (if any)		
· Starting point of the activity	[redacted]	
· Middle/Additional point of the activity		
· End point of the activity		
Alternative S3 (if any)		
· Starting point of the activity	[redacted]	
· 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.

Km Point	Latitude (S):	Longitude (E):	Km Point	Latitude (S):	Longitude (E):
29.300	27° 03' 45.6394" S	25° 02' 34.2988" E	45.550	27° 07' 40.6835" S	25° 11' 20.6308" E
29.550	27° 03' 50.8519" S	25° 02' 41.2570" E	45.800	27° 07' 44.0603" S	25° 11' 28.8869" E
29.800	27° 03' 56.0642" S	25° 02' 48.2154" E	46.050	27° 07' 47.4370" S	25° 11' 37.1431" E
30.050	27° 04' 01.2761" S	25° 02' 55.1739" E	46.300	27° 07' 50.8135" S	25° 11' 45.3994" E
30.300	27° 04' 06.4882" S	25° 03' 02.1323" E	46.550	27° 07' 54.1899" S	25° 11' 53.6558" E
30.550	27° 04' 11.7002" S	25° 03' 09.0913" E	46.800	27° 07' 57.5664" S	25° 12' 01.9128" E
30.800	27° 04' 16.5628" S	25° 03' 16.3358" E	47.050	27° 08' 00.9426" S	25° 12' 10.1695" E
31.050	27° 04' 20.5286" S	25° 03' 24.2541" E	47.300	27° 08' 04.3185" S	25° 12' 18.4264" E
31.300	27° 04' 24.4943" S	25° 03' 32.1725" E	47.550	27° 08' 07.6944" S	25° 12' 26.6834" E
31.550	27° 04' 28.4598" S	25° 03' 40.0914" E	47.800	27° 08' 11.0704" S	25° 12' 34.9405" E
31.800	27° 04' 32.4252" S	25° 03' 48.0101" E	48.050	27° 08' 14.4460" S	25° 12' 43.1978" E
32.050	27° 04' 36.3905" S	25° 03' 55.9290" E	48.300	27° 08' 17.8214" S	25° 12' 51.4556" E
32.300	27° 04' 40.3027" S	25° 04' 03.8800" E	48.550	27° 08' 21.1967" S	25° 12' 59.7131" E
32.550	27° 04' 43.7595" S	25° 04' 12.0910" E	48.800	27° 08' 24.5722" S	25° 13' 07.9708" E
32.800	27° 04' 47.2028" S	25° 04' 20.3091" E	49.050	27° 08' 28.0165" S	25° 13' 16.1928" E
33.050	27° 04' 50.6457" S	25° 04' 28.5277" E	49.300	27° 08' 31.4606" S	25° 13' 24.4150" E

Km Point	Latitude (S):	Longitude (E):	Km Point	Latitude (S):	Longitude (E):
33.300	27° 04' 54.0884" S	25° 04' 36.7464" E	49.550	27° 08' 34.9047" S	25° 13' 32.6376" E
33.550	27° 04' 57.5313" S	25° 04' 44.9649" E	49.800	27° 08' 38.3489" S	25° 13' 40.8601" E
33.800	27° 05' 00.9737" S	25° 04' 53.1839" E	50.050	27° 08' 41.7926" S	25° 13' 49.0826" E
34.050	27° 05' 04.4164" S	25° 05' 01.4030" E	50.300	27° 08' 45.2362" S	25° 13' 57.3053" E
34.300	27° 05' 07.8585" S	25° 05' 09.6219" E	50.550	27° 08' 48.6800" S	25° 14' 05.5282" E
34.550	27° 05' 11.3006" S	25° 05' 17.8413" E	50.800	27° 08' 52.1234" S	25° 14' 13.7512" E
34.800	27° 05' 14.7428" S	25° 05' 26.0609" E	51.050	27° 08' 55.5666" S	25° 14' 21.9747" E
35.050	27° 05' 18.1846" S	25° 05' 34.2802" E	51.300	27° 08' 59.0096" S	25° 14' 30.1979" E
35.300	27° 05' 21.6266" S	25° 05' 42.5001" E	51.550	27° 09' 02.4529" S	25° 14' 38.4213" E
35.550	27° 05' 25.0681" S	25° 05' 50.7200" E	51.800	27° 09' 05.8921" S	25° 14' 46.6467" E
35.800	27° 05' 28.5094" S	25° 05' 58.9398" E	52.050	27° 09' 09.3299" S	25° 14' 54.8732" E
36.050	27° 05' 31.9510" S	25° 06' 07.1600" E	52.300	27° 09' 12.7672" S	25° 15' 03.0996" E
36.300	27° 05' 35.3921" S	25° 06' 15.3804" E	52.550	27° 09' 16.2047" S	25° 15' 11.3264" E
36.550	27° 05' 38.8334" S	25° 06' 23.6009" E	52.800	27° 09' 19.6421" S	25° 15' 19.5531" E
36.800	27° 05' 42.2635" S	25° 06' 31.8270" E	53.050	27° 09' 23.0794" S	25° 15' 27.7802" E
37.050	27° 05' 45.6499" S	25° 06' 40.0757" E	53.300	27° 09' 26.5165" S	25° 15' 36.0071" E
37.300	27° 05' 49.0365" S	25° 06' 48.3246" E	53.550	27° 09' 29.9531" S	25° 15' 44.2345" E
37.550	27° 05' 52.4227" S	25° 06' 56.5736" E	53.800	27° 09' 33.3899" S	25° 15' 52.4617" E
37.800	27° 05' 55.8087" S	25° 07' 04.8230" E	54.050	27° 09' 36.8266" S	25° 16' 00.6894" E
38.050	27° 05' 59.1949" S	25° 07' 13.0723" E	54.300	27° 09' 40.2632" S	25° 16' 08.9169" E
38.300	27° 06' 02.5806" S	25° 07' 21.3217" E	54.550	27° 09' 43.6993" S	25° 16' 17.1445" E
38.550	27° 06' 05.9666" S	25° 07' 29.5712" E	54.800	27° 09' 47.1356" S	25° 16' 25.3726" E
38.800	27° 06' 09.3520" S	25° 07' 37.8209" E	55.050	27° 09' 50.5718" S	25° 16' 33.6004" E
39.050	27° 06' 12.7374" S	25° 07' 46.0711" E	55.300	27° 09' 54.0078" S	25° 16' 41.8288" E
39.300	27° 06' 16.1229" S	25° 07' 54.3210" E	55.550	27° 09' 57.4437" S	25° 16' 50.0570" E
39.550	27° 06' 19.5080" S	25° 08' 02.5711" E	55.800	27° 10' 00.8791" S	25° 16' 58.2856" E
39.800	27° 06' 22.8932" S	25° 08' 10.8213" E	56.050	27° 10' 04.3147" S	25° 17' 06.5141" E
40.050	27° 06' 26.2780" S	25° 08' 19.0716" E	56.300	27° 10' 07.7502" S	25° 17' 14.7430" E
40.300	27° 06' 29.6630" S	25° 08' 27.3221" E	56.550	27° 10' 11.1856" S	25° 17' 22.9717" E
40.550	27° 06' 33.0475" S	25° 08' 35.5731" E	56.800	27° 10' 14.6204" S	25° 17' 31.2009" E
40.800	27° 06' 36.4319" S	25° 08' 43.8239" E	57.050	27° 10' 18.0555" S	25° 17' 39.4299" E
41.050	27° 06' 39.8165" S	25° 08' 52.0748" E	57.300	27° 10' 21.4905" S	25° 17' 47.6594" E
41.300	27° 06' 43.2006" S	25° 09' 00.3258" E	57.550	27° 10' 24.9253" S	25° 17' 55.8887" E
41.550	27° 06' 46.5849" S	25° 09' 08.5770" E	57.800	27° 10' 28.3599" S	25° 18' 04.1185" E
41.800	27° 06' 49.9688" S	25° 09' 16.8287" E	58.050	27° 10' 31.7941" S	25° 18' 12.3480" E
42.050	27° 06' 53.3528" S	25° 09' 25.0801" E	58.300	27° 10' 35.2285" S	25° 18' 20.5777" E
42.300	27° 06' 56.7364" S	25° 09' 33.3317" E	58.550	27° 10' 38.6628" S	25° 18' 28.8079" E
42.550	27° 07' 00.1201" S	25° 09' 41.5835" E	58.800	27° 10' 42.0969" S	25° 18' 37.0378" E
42.800	27° 07' 03.5034" S	25° 09' 49.8353" E	59.050	27° 10' 45.5306" S	25° 18' 45.2683" E
43.050	27° 07' 06.8866" S	25° 09' 58.0877" E	59.300	27° 10' 48.9644" S	25° 18' 53.4985" E
43.300	27° 07' 10.2700" S	25° 10' 06.3398" E	59.550	27° 10' 52.3981" S	25° 19' 01.7293" E
43.550	27° 07' 13.6529" S	25° 10' 14.5921" E	59.800	27° 10' 56.7981" S	25° 19' 09.3097" E
43.800	27° 07' 17.0359" S	25° 10' 22.8445" E	60.050	27° 11' 02.8679" S	25° 19' 15.3381" E
44.050	27° 07' 20.4186" S	25° 10' 31.0971" E	60.300	27° 11' 09.0301" S	25° 19' 21.2549" E
44.300	27° 07' 23.7968" S	25° 10' 39.3523" E	60.550	27° 11' 15.1923" S	25° 19' 27.1720" E
44.550	27° 07' 27.1743" S	25° 10' 47.6077" E	60.800	27° 11' 21.3543" S	25° 19' 33.0892" E
44.800	27° 07' 30.5520" S	25° 10' 55.8632" E	61.050	27° 11' 27.5160" S	25° 19' 39.0066" E
45.050	27° 07' 33.9292" S	25° 11' 04.1188" E	61.300	27° 11' 34.4368" S	25° 19' 43.7155" E
45.300	27° 07' 37.3062" S	25° 11' 12.3746" E			

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 of this form.

b) Lay-out alternatives

Not Applicable – the R34 will be upgraded within the existing servitude.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
[redacted]		
~~Alternative 2~~		
Description	~~Lat (DDMMSS)~~	~~Long (DDMMSS)~~
[redacted]		
~~Alternative 3~~		
Description	~~Lat (DDMMSS)~~	~~Long (DDMMSS)~~
[redacted]		

c) Technology alternatives

Not Applicable – the R34 will be upgraded within the existing servitude utilising standard road construction methods.

Alternative 1 (preferred alternative)
[redacted]
Alternative 2
[redacted]
Alternative 3
[redacted]

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

Alternative 1 (preferred alternative)
[redacted]
Alternative 2
[redacted]
Alternative 3
[redacted]

e) No-go alternative

The R34 is an important economic link in the Bophirima road network for the following reasons:

- As part of the link between the N14 and N12, this is an important alternative route for heavy industrial traffic between Sishen and Gauteng, as well as a link to the East coast ports of South Africa.
- There is a possibility that the mines at Sishen, Kathu and vicinity will expand their road transport with interlinks between Kathu and Richards Bay
- The road will draw more traffic from the South of Schweizer-Reneke, because of the better access to the Northern Trans-Kalahari corridor via Bray.
- The road is important to the agriculture in the area, providing farmers with access to the regional markets and agricultural institutions.

If nothing is done to upgrade this road, the route will continue to deteriorate rapidly and will not be a viable route for any vehicles, especially heavy vehicles.

It is clear from the amount of money that has been spent over the last few years, that the route maintenance requires huge amounts of cash injections, (reactive maintenance, rather than preventive maintenance). The drainage of the road is poor with flooding of the road during even minor storms. The surfacing of the road is extremely susceptible to potholing due to the continual saturation along with the heavy traffic.

With the deterioration of the pavement, especially the incidences of new potholes and increased rutting, there are additional safety concerns. The fact that the standard cross section provided for only a 6m surfaced width, further exacerbates the road's safety concerns. The frequency of the occurrence of accidents along the road will result because of the deteriorating road condition, which has obvious costly consequences.

The current construction planning strategy calls for the use of the existing road to accommodate the traffic, while the other half of the newly shifted road profile is being constructed. If the upgrade of the road is not implemented timeously, this cost benefit will have been lost and substantial additional funding will need to be obtained to construct an acceptable deviation.

As the road deteriorates and maintenance costs escalate, continued maintenance will have little or no effect on the improvement of the condition of the road. When a road doesn't receive rehabilitation timeously, replacement of the road then becomes the only option. The continuous implementing of cost-effective rehabilitation interventions saves vast sums of money in the long term. There is a massive cost difference between the high replacement cost of the road and the low rehabilitation costs.

Due to the above, the no-go alternative is considered unfeasible.

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)	29 000 m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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

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)	m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

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:

No access roads are required as the project itself consists of the upgrading of an existing road within the existing road reserve.

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).

Refer to Appendix A for the Locality Map

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;
- 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.

Refer to Appendix A for the Layout / Route Plan

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 DWS);
- 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.

Refer to Appendix A for the Sensitivity Map and the 1:100 Year Flood line Map

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 for Photographs of the study area.

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 for the Facility Illustrations (Design Drawings and Existing Culverts Plan)

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		Please explain
The existing road reserve has been declared a National Route under the South African National Roads Agency Act (No 7 of 1998).			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)		NO	Please explain
The Provincial Spatial Development Framework is currently being reviewed, however SANRAL is proposing to rehabilitate and upgrade the R34 within its existing road reserve in order to comply with SANRAL's technical design specifications.			
(b) Urban edge / Edge of Built environment for the area		NO	Please explain
The proposed rehabilitation and upgrade would be undertaken within the existing road reserve as declared under South African National Roads Agency Act (No 7 of 1998).			
(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?).	YES		Please explain
SANRAL is mandated to construct, maintain and upgrade national roads as stipulated under the South African National Roads Agency Act (No 7 of 1998) and National Roads Act (No 7 of 1998). The proposed rehabilitation and upgrade will be in line with the objectives and strategies with regards to the provision of good quality roads as outlined in the IDPs of the Mamusa Local Municipality and Dr Ruth Segomotsi Mompati District Municipality.			
(d) Approved Structure Plan of the Municipality		NO	Please explain
The proposed project is to be undertaken by SANRAL as the custodian and owner of the National Roads.			
(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?)		NO	Please explain
The proposed upgrade would be undertaken within the existing road reserve as declared under South African National Roads Agency Act (No 7 of 1998) and National Roads Act (No 7 of 1998).			
(f) Any other Plans (e.g. Guide Plan)	YES		Please explain
The rehabilitation and upgrading of the R34 will be undertaken in terms of SANRAL's technical design specifications.			

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)?	YES		Please explain
The project entails the rehabilitation and upgrading of an existing road within its existing road reserve. In addition, the project will result in a better quality and safer road as stipulated in the relevant IDPs.			
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.)	YES		Please explain
SANRAL is the custodian of the National Roads and has been mandated to plan, design, construct and maintain the roads. The community will benefit from the road upgrade as the existing road quality is poor and results in numerous accidents. The road upgrade will result in a safer better quality road for all road users.			
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.)			Not Applicable
No local municipal services will be required for the project.			
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.)			Not Applicable
The proposed project will be undertaken by SANRAL and will have no effect on the municipalities infrastructure planning.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
The project is a SANRAL project. SANRAL is responsible for the funding, planning and design, construction, maintenance and upgrading of National roads in order to provide quality road infrastructure which directly boasts the economy and facilitates efficient logistics. In addition quality roads are vital for the safety of the road user.			
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
The project entails the rehabilitation and upgrading of an existing road within its existing road reserve			

9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
The project entails the rehabilitation and upgrading of an existing road within its existing road reserve. No additional land will be required to execute the project.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
The main purpose of the proposed project is to upgrade and rehabilitate the R34 so that it will comply with SANRAL's technical design specifications. This will ultimately benefit the road user by improving the quality of the road which will also improve the road's safety. The environmental impacts will be negligible due to the fact that the upgrading activities will be undertaken within the existing road reserve which is already considered to be transformed.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
The project entails the rehabilitation and upgrading of an existing road within its existing road reserve.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
The road user will ultimately benefit from the proposed project.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO	Please explain
The proposed project will be undertaken within the existing road reserve.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
The proposed project will contribute to SIP 4 (Unlocking the economic opportunities in the North West). The proposed project will assist in the acceleration of investment in road infrastructure through the provision of a better quality road.			
15. What will the benefits be to society in general and to the local communities?			Please explain
· Job opportunities will be created during the construction phase. SANRAL requires contractors to utilise members of the local communities where appropriate. · The upgrading will result in a better quality and safer road once it is operational.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
There are no any other need and desirability considerations for the proposed project. The current road alignment requires upgrading in order to comply with SANRAL's technical design specifications.			
17. How does the project fit into the National Development Plan for 2030?			Please explain
The National Development Plan states that the Government must plan and invest in roads and transport infrastructure construction and maintenance. The proposed road upgrade is in line with the National Development Plan as it seeks to improve road infrastructure by rehabilitating and upgrading the existing road.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.	
The general objective of integrated environmental management, as outlined in Section 23 of NEMA, is to:	
Promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment	*See answers below for Question 19*
Identify, predict and evaluate the actual and potential impact on the environment. socio-economic conditions and cultural heritage. the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts. maximizing benefits. and promoting compliance with the principles of environmental management set out in section 2;	*Section D of this report outlines the identification of potential impacts associated with the proposed project together with the rating of their significance both pre and post mitigation.*
Ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;	*An environmental management programme (EMPr) has been compiled (Appendix G) for the proposed project which outlines the recommended mitigation measures required for all identified impacts which are deemed to have a potentially significant effect on the environment.*
Ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;	*Public Participation has been undertaken as required in the EIA regulations, 2014. A discussion in this regard is included in Section C below.*
Ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and	*Environmental attributes of the proposed project area have been discussed in Section B below.*
Identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.	*An EMPr has been compiled and is included in Appendix G.*
19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.	
(2) 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	*The upgrade of the existing road will benefit the local communities and the broader road user as a result of the provision of a better quality and safer road.*
(3) Development must be socially, environmentally and economically sustainable	*The project involves the rehabilitation and upgrading of an existing road within the existing road reserve.*

(4) (a) Sustainable development requires the consideration of all relevant factors including the following:	-
(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied	*This report includes recommendations and mitigation measures that encourage the minimisation or avoidance of the disturbance of ecosystems, through the implementation of relevant mitigation measures. These mitigation measures have been included in the EMPr (See Appendix G)*
(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied	*This report includes recommendations and mitigation measures that encourage the minimisation or avoidance of pollution and environmental degradation, through the implementation of relevant mitigation measures. These mitigation measures have been included in the EMPr (See Appendix G)*
(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied	*No heritage features were identified to be affected by the proposed project. However, mitigation and management measures have been recommended for use in the event that heritage sites or artefacts are discovered during the construction period.*
(iv) that waste is avoided or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner	*The project is not anticipated to produce large quantities of waste. However, the options for the management of waste are described in the EMPr (See Appendix G).*
(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource	*The proposed project will utilise material from a number of approved borrow pits. The borrow pits will be managed according to the Environmental Management Plans already approved by the Department of Mineral Resources (DMR).*
(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised	*Not Applicable – the proposed project will not exploit renewable resources.*
(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions	*Mitigation measures have been identified for all potential impacts related to the proposed project. These measures have been included in the EMPr (See Appendix G)*

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied	*The impact assessment process is a tool that is utilised to ensure that impacts on the environment and on people's rights are anticipated. Where a negative impact was identified, mitigation measures have been proposed in order to either prevent or minimise the impact. These mitigation measures have been included in the EMPr (See Appendix G).*
(4) (b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option	*The basic assessment has been undertaken taking best practise principles into consideration. The EMPr was also compiled through the recommendation of the best practicable environmental options.*
(4) (c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.	*Not Applicable.*
(4) (d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination	*All studies were required to uphold the principle of sustainable development. The proposed project will in no way negatively affect any person's rights due to the fact the project will be undertaken within the existing road reserve.*
(4) (e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle	*This report addresses impacts from the construction and operational phases of the proposed project life-cycle. The EMPr will ensure that SANRAL's responsibilities are up held throughout the road's life cycle.*
(4) (f) 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	*A comprehensive public participation process has been undertaken. Interested and affected parties (I&APs) have been given the opportunity to comment on the basic assessment report (BAR). The public participation process is outlined in Section C of this report.*
(4) (g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognizing all forms of knowledge. Including traditional and ordinary knowledge	*The comments and queries from stakeholders have all been either taken into account or responded to during the course of the basic assessment process.*

(4) (h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means	*Not Applicable.*
(4) (i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment	*The social, economic and environmental impacts of activities were considered in the impact assessment.*
(4) (j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected	*This is up held in the EMPr where the required Occupational Health and Safety specifications are dealt with.*
(4) (k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law	*All documentation compiled as a result of the basic assessment process has been made available for public comment and scrutiny, as per legal requirements and best practice.*
(4) (l) There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment	*The basic assessment process makes allowance for discussion between different authorities at local, provincial and national levels. Intergovernmental coordination on this project includes co-operation between the Department of Environmental Affairs (DEA), the Department of Water and Sanitation (DWS) and the North West Department of Rural, Environment and Agricultural Development (NWREAD).*
(4) (m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.	*The public participation process endeavoured to ensure that conflict between organs of state was minimised throughout the proposed project duration.*
(4) (n) Global and international responsibilities relating to the environment must be discharged in the national interest.	*Not Applicable.*
(4) (o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.	*Society in general will benefit through the provision of a better quality and safer road.*
(4) (p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.	*Funds for the proposed project have been allocated within the existing SANRAL budget.*

(4) (q) The vital role of women and youth in environment management and development must be recognised and their full participation therein must be promoted.	*The public participation process has endeavoured to include the participation of all role-players including women and youth in Is project.*
(4) (r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.	*Not applicable – There are no sensitive or vulnerable ecosystems in close proximity to the road reserve.*

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
The Constitution of the Republic of South Africa (No. 108 of 1996)	The Constitution of the Republic of South Africa (No. 108 of 1996) (the Constitution), the supreme law in South Africa, contains far reaching clauses relevant to environmental rights. The environmental rights are guaranteed in section 24 of the Constitution, and states that: Everyone has the right: *a. to an environment that is not harmful to their health or well-being; and* *b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -* *i. prevent pollution and ecological degradation;* *ii. promote conservation; and* *iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.* Section 24 of the Constitution has implications for all environmental policies and legislation and the implementation thereof. In keeping with this right, "sustainable development" should be strived towards, which means that biophysical, social and economic considerations should be taken into account (Steyn, 1999). The Constitution on its own cannot ensure the effective management of the environment and natural resources, thus numerous acts have been promulgated or devised to comply with the requirements contained in the Constitution	National Government	18 December 1996
National Environmental Management Act, 1998 (Act No 107 of 1998). · Environmental Impact Assessment	In terms of section 24(2) the NEMA the Minister of the DEA may identify activities, which may not commence without prior authorisation and make regulations in accordance with the procedures required for such authorisations. Activities identified are published in GNR 983, 984 and 985 (4 December 2014) and the regulation outlining the procedures required for authorisation is published in GNR 982 (4	Department of Environment Affairs (DEA).	NEMA – 27 November 1998 (Amended in 2014) EIA Regulations

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
Regulation, 2014. GNR 982, 983, 984 and 985.	December 2014). Regulation 6(1) of GNR 982 states that "an application for an environmental authorisation for the commencement of an activity must be made to the competent authority referred to in regulation 5". The competent authority for the proposed project is the DEA. Regulation 16(1) provides the requirements for an EA application. Due to the fact that potential listed activities from GNR 983 have been identified as applicable a basic assessment (BA) process is required. This process must be undertaken by an independent environmental assessment practitioner (EAP).		– 04 December 2014
National Environmental Management: Biodiversity Act, 2004 (Act No of 2004).	The National Environmental Management Biodiversity Act (No. 10 of 2004) (NEM:BA), in line with the Convention on Biological Diversity (CBD), aims to legally provide for biodiversity conservation, sustainable use and equitable access and benefit sharing. The NEM:BA creates a basic legal framework for the formation of a national biodiversity strategy and action plan and the identification of biodiversity hotspots and bio-regions which will then be given legal recognition. The NEM:BA imposes obligations on landowners (state or private) governing alien invasive species as well as regulating the introduction of genetically modified organisms. The NEM:BA ensures that provision is made to remove any aliens which have been introduced to the site or are present on the site. Furthermore, the NEM:BA serves to regulate bio-prospecting, making provision for communities to share the profits of any exploitation of natural materials involving indigenous knowledge. The South African National Biodiversity Institute (SANBI) was established to enforce the objectives as set out in the NEM:BA. Alien plant species are present within the road reserve and these will be required to be removed.	Department of Environment Affairs (DEA).	2004
National Water Act, 1998 (Act No. 36 of 1998).	The NWA presents strategies to facilitate sound management of water resources, provides for the protection of water resources, and regulates use of water by means of Catchment Management Agencies, Water User Associations, Advisory Committees and International Water Management. Section 22(1) of the NWA states that a person may only use water if the water use is	Department of Water and Sanitation (DWS).	1998

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
	authorised by a licence under NWA or if the responsible authority has dispensed with a Licence requirement if it is satisfied that the purpose the NWA will be met by the granting of a Licence, permit or other authorisation under any other law. A person may only use water without a licence if the water is permissible: · Under Schedule I of NWA · As a continuation of an existing lawful use · In terms of a general authorisation issued under section 39 of NWA. A water use license may be required for the abstraction of water during the construction period.		
National Heritage Resources Act, 1999 (Act No.25 of 1999).	The National Heritage Resources Act (No. 25 of 1999) (NHRA) aims to protect heritage resources of national significance. The NHRA provides for an integrated and interactive system for the management of the national heritage resources and empowers civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations. Furthermore, the Act established the South African Heritage Resources Agency (SAHRA) which was established in 1999 to fulfil the objectives of the NHRA. The NHRA was established to: · Introduce an integrated and interactive system for the management of the national heritage resources · Promote good government at all levels · Empower civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations · Lay down general principles for governing heritage resources management throughout the Republic · Introduce an integrated system for the identification, assessment and management of the heritage resources of South Africa · Establish the South African Heritage Resources Agency together with its Council to co-ordinate and promote the management of heritage resources at national level · Set norms and maintain essential national standards for the management of heritage resources in the Republic	South African Heritage Resource Agency (SAHRA).	1999

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
	· Protect heritage resources of national significance · Control the export of nationally significant heritage objects and the import into the Republic of cultural property illegally exported from foreign countries · Enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources and · Provide for the protection and management of conservation-worthy places and areas by local authorities; and to provide for matters connected therewith. Section 34 and 38 of the NHRA details specific activities that require an approved heritage impact assessment by the South African Heritage Resources Association (SAHRA). Section 38 specifically notes that a Heritage impact assessment is required for the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length.		
South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7 of 1998)	The South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7 of 1998) aims to make provision for a national roads agency for the Republic to manage and control the Republic's national roads system. The National Roads Agency will take charge, amongst others, of the development, maintenance and rehabilitation of national roads within the framework of government policy; for that purpose to provide for the establishment of The South African National Roads Agency Limited, a public company wholly owned by the State; to provide for the governance and management of that company (''the Agency'') by a board of directors and a chief executive officer, respectively, and to define the Agency's powers and functions and financial and operational accountability, and regulate its functioning; to prescribe measures and requirements with regard to the Government's policy concerning national roads, the declaration of national roads by the Minister of Transport and the use and protection of national roads; to repeal or amend the provisions of certain laws relating to or relevant to national roads; and to provide for incidental matters.	National Department of Roads and Transport	31 March 1998
Occupational Health and Safety Act (Act No. 85 Of 1993)	The Occupational Health and Safety Act (Act No. 85 Of 1993) aims to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection	Department of Health	23 June 1993

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
	with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.		

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
If YES, what estimated quantity will be produced per month?	15 - 20 m³	

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

The construction solid waste will be disposed to land at the Mamusa Municipal Landfill Site. It is proposed that the contractor will utilised a suitably qualified sub-contractor to dispose of the waste.

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

The construction solid waste will be disposed at the Mamusa Municipal Landfill Site.

Will the activity produce solid waste during its operational phase?	YES	NO
If YES, what estimated quantity will be produced per month?		m³

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.

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? m^3
Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO
If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility? YES NO
If YES, provide the particulars of the facility:

Facility name:
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:

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that 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:

The emissions applicable to the proposed project include dust and vehicle exhaust emissions as a result of the construction activities.

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

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

Describe the noise in terms of type and level:

The noise generated by the proposed project will include noise from the construction vehicles and machinery used during the construction of the road.

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 (Farmers)	The activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	2.5 Million 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.

No application forms have been submitted as yet. In the event that a Water Use License / General Authorisation is required for the abstraction of water for use during the construction phase, the contractor will be responsible for the submission of the relevant application forms.

14. ENERGY EFFICIENCY

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

Not Applicable – the proposed project entails the upgrading of an existing road.

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

Not Applicable – the proposed project entails the upgrading of an existing road.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. 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): 1 of 1

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

3. 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	North West Province.
	District Municipality	Dr Ruth Segomotsi Mompati.
	Local Municipality	Mamusa Local Municipality.
	Ward Number(s)	1
	Farm name and number	See List below
	Portion number	See List below
	SG Code	See List below

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.

1	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Street in Schweizer Reneke
	SG Code	T0HO00000000006200000
2	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Portion 107
	SG Code	T0HO00000000006200107
3	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Portion 109
	SG Code	T0HO00000000006200109
4	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Remainder of Portion 1
	SG Code	T0HO00000000006200001
5	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Portion 33
	SG Code	T0HO00000000006200033

6	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Portion 32
	SG Code	T0HO00000000006200032
7	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Remainder of Portion 26
	SG Code	T0HO00000000006200026
8	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Portion 129
	SG Code	T0HO00000000006200129
9	Farm name and number	Moredou No 395 HO
	Portion number	Portion 0
	SG Code	T0HO00000000039500000
10	Farm name and number	Schweizer Reneke Town and Townlands No 62 HO
	Portion number	Portion 27 (Alamein)
	SG Code	T0HO00000000006200027
11	Farm name and number	Lot 15 No 44 HO
	Portion number	Remainder of Portion 26
	SG Code	T0HO00000000004400015
12	Farm name and number	Lot 15 No 44 HO
	Portion number	Portion 1
	SG Code	T0HO00000000004400001
13	Farm name and number	Lot 15 No 44 HO
	Portion number	Portion 3
	SG Code	T0HO00000000004400003
14	Farm name and number	Lot 15 No 44 HO
	Portion number	Remainder 0
	SG Code	T0HO00000000004400000
15	Farm name and number	Luciana No 43 Ho
	Portion number	Remainder 0
	SG Code	T0HO00000000004300000
16	Farm name and number	Lot 48 No 44 HO
	Portion number	Remainder of Portion 3
	SG Code	T0HO00000000004400003
17	Farm name and number	Lot 49 No 39 HO
	Portion number	Portion 1
	SG Code	T0HO00000000003900001

18	Farm name and number	Lot 49 No 39 HO
	Portion number	Portion 2
	SG Code	T0HO00000000003900002
19	Farm name and number	Lot 49 No 39 HO
	Portion number	Portion 4
	SG Code	T0HO00000000003900004
20	Farm name and number	Damplaats No 38 HO
	Portion number	Portion 25
	SG Code	T0HO00000000003800025
21	Farm name and number	Damplaats No 38 HO
	Portion number	Remainder of Portion 9
	SG Code	T0HO00000000003800009
22	Farm name and number	Damplaats No 38 HO
	Portion number	Portion 11
	SG Code	T0HO00000000003800011
23	Farm name and number	Damplaats No 38 HO
	Portion number	Portion 1
	SG Code	T0HO00000000003800001
24	Farm name and number	Damplaats No 38 HO
	Portion number	Portion 3
	SG Code	T0HO00000000003800003
25	Farm name and number	Doornbult No 33 HO
	Portion number	Portion 1
	SG Code	T0HO00000000003800001
26	Farm name and number	Doornbult No 33 HO
	Portion number	Remainder
	SG Code	T0HO00000000003300000
27	Farm name and number	Zoet en Smart No 31
	Portion number	Portion 9
	SG Code	T0HO00000000003100009
28	Farm name and number	Zoet en Smart No 31
	Portion number	Remainder Portion 6
	SG Code	T0HO00000000003100006
29	Farm name and number	Zoet en Smart No 31
	Portion number	Remainder of portion 2
	SG Code	T0HO00000000003100002

30	Farm name and number	Zoet en Smart No 31
	Portion number	Remainder of portion 3
	SG Code	T0HO00000000003100003
31	Farm name and number	Zoet en Smart No 31
	Portion number	Portion 11
	SG Code	T0HO00000000003100011
32	Farm name and number	Zoet en Smart No 31
	Portion number	Remainder of Portion 4
	SG Code	T0HO00000000003100004
33	Farm name and number	Zoet en Smart No 31
	Portion number	Remainder
	SG Code	T0HO00000000003100000
34	Farm name and number	Lot 9 No 63 HO
	Portion number	Portion 4
	SG Code	T0HO00000000006300004
35	Farm name and number	Zoet en Smart No 31
	Portion number	Portion 12
	SG Code	T0HO00000000003100012
36	Farm name and number	Zoet en Smart No 31
	Portion number	Remainder of portion 8
	SG Code	T0HO00000000003100008

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

SANRAL - 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

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

~~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

~~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

2. LOCATION IN LANDSCAPE

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

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

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.

4. GROUNDCOVER

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

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

The existing road is adjacent to a non-perennial stream at kilometre (KM) 31. The road reserve falls approximately 15m outside of the 1:100 year floodline (See Floodline Map included in Appendix A)

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 *(Private Game farms)*
~~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) - Existing road reserve (R34)

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

A small air field is adjacent to the R34. The air field will in no way impact or be impacted by the proposed project.

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:

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	
The heritage study found no signs of culturally or historically significant elements along the alignment of the R34. The heritage study is attached in Appendix D.		

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:

Will any building or structure older than 60 years be affected in any way?	YES	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO

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

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

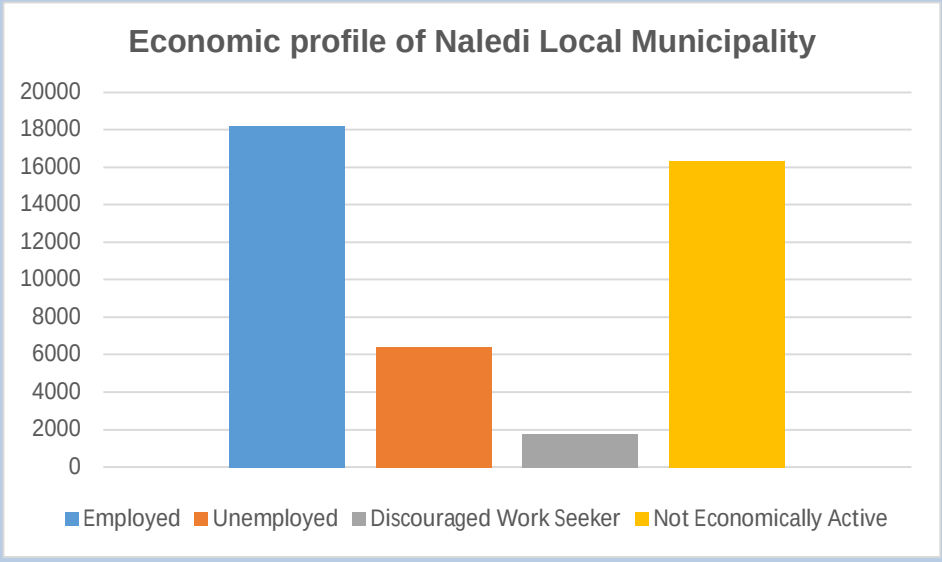
Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

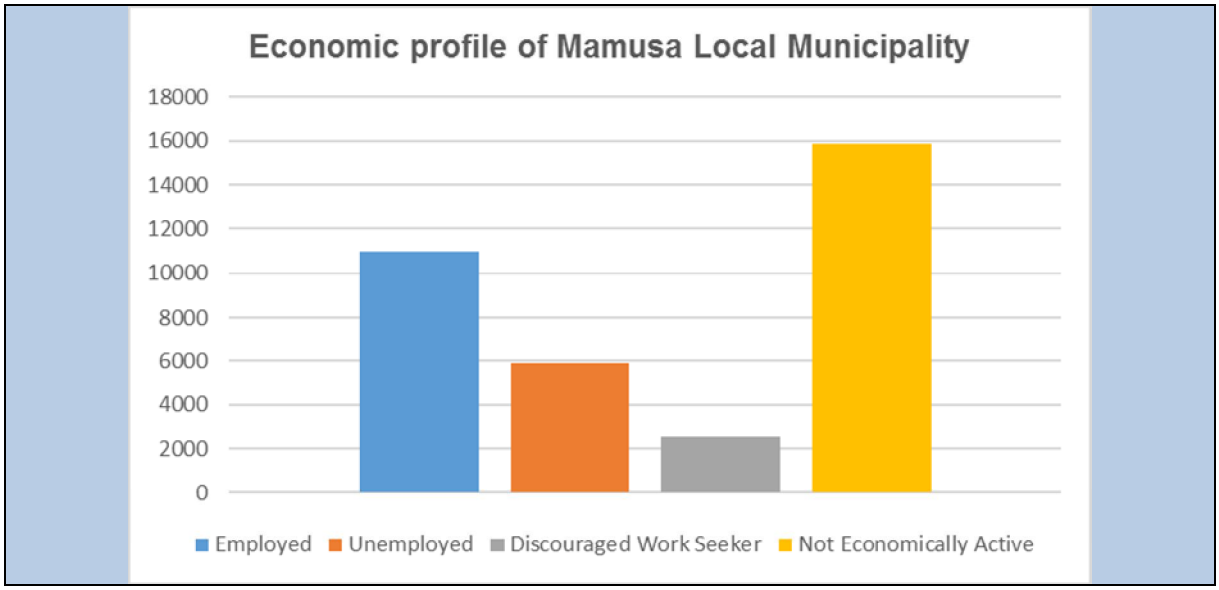
Level of unemployment:

The R34 is located in the North West Province and connects Vryburg and Schweizer-Reneke which fall under the jurisdiction of the Naledi and the Mamusa Local Municipalities respectively.
The level of unemployment in the Mamusa Local Municipality is currently 35.1% with youth unemployment at 45.8%.
The Naledi Local Municipality unemployment rate is 26.1% with youth unemployment sitting at 35.5% (Stats SA, 2015).

Economic profile of local municipality:

The economic profile of both the Mamusa and the Naledi Local Municipality are depicted in the graphs below:





Level of education:

The education level in the Mamusa and Naledi Local Municipalities is outlined in the tables below.

Mamusa Local Municipality.	
Group	**Percentage**
No Schooling	5,3%
Some Primary	53,1%
Completed Primary	6,6%
Some Secondary	27,6%
Completed Secondary	6,6%
Higher Education	0,5%
Not Applicable	0,3%

Naledi Local Municipality.	
Group	**Percentage**
No Schooling	6,6%
Some Primary	47,5%
Completed Primary	6,9%
Some Secondary	28,5%
Completed Secondary	8,9%
Higher Education	1,3%
Not Applicable	0,3%

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	Approximately R350 million	
What is the expected yearly income that will be generated by or as a result of the activity?	Not applicable	
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?	Approximately 170
What is the expected value of the employment opportunities during the development and construction phase?	Approximately R 25 Million (over 24 months)
What percentage of this will accrue to previously disadvantaged individuals?	100% of new employees
How many permanent new employment opportunities will be created during the operational phase of the activity?	Not applicable
What is the expected current value of the employment opportunities during the first 10 years?	Not applicable
What percentage of this will accrue to previously disadvantaged individuals?	Not applicable

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)	The R34 road reserve passes through an area classified at a Critical Biodiversity Area (CBA). The Schweizer-Reneke Bushveld vegetation type is classified as vulnerable according to North West Province Biodiversity Conservation Assessment Technical Report Version 1.2, dated March 2009.
				It is important to note that even though the project is located within a CBA, the upgrading of the R34 will take place within the existing road reserve, which is an already disturbed area.

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).
Natural	10%	Only a small percentage of the road reserve can be considered natural habitat.
Near Natural (includes areas with low to moderate level of alien invasive plants)	20%	Alien invasive plants such as *Opuntia ficus-indica* can be found within the road reserve.
Degraded (includes areas heavily invaded by alien plants)	0	There are no sections along the alignment of the R34 that can be considered degraded or heavily invaded by alien plants.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	70%	The majority of the road reserve and areas adjacent can be considered transformed due to land uses such as the road and its servitude, agriculture, borrow pits, a quarry and the municipal landfill site.

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 Endangered Vulnerable Least Threatened	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
		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)

Topography

The topography of this road is flat to mildly undulating. The maximum slope along road is 3% and the minimum 0%.

Climate

The climate of the area is semi-arid. The maximum temperatures occur during January and December while minimum temperatures occur during July and can be below 0 degree.

Rainfall

A maximum rainfall is experience during February (Average 94mm) and minimum during July (Average 2mm). This indicates that the area is arid but a fair amount of rain can fall during February. The Average annual rainfall is 510mm.

Vegetation and Landscape features

The study area consists of plains, slightly undulating plains and some hills, supporting open woodland with a fairly dense shrub layer. The vegetation is classified as Schweizer Reneke Kalahari woodland and Schweizer-Reneke Bushveld which mainly composed of Acacia erioloba, A. karroo, A. tortilis, Rhus lancea and shrubs A. hebeclada, Diospyros lyciodes, Grewia flava Tarchonathus camphratus (Mucina and Rutherford, 2006). The threat status is vulnerable state.

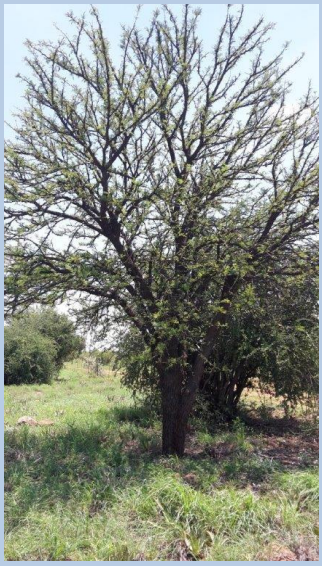
The vegetation found within the road reserve is mostly transformed and includes amongst others:

- *Opuntia ficus-indica*

- *Aloe grandidentata*

- *Tarchonanthus camphoratus*

- *Acacia robusta* subsp. *robusta* (*Vachellia robusta* subsp. *robusta)*



- *Ehretia rigida*

- *Asparagus* spp

- Various Grasses including *Hyparrhenia tamba*, *Urochloa* species, *Eragrostis* species, and *Tragus berteronianus*

Geology and Soil

The study area fall under the formation of the ventersdorp supergroup, covered with silcrete or calcrete of the Kalahari Group. Deep (0.9-1.2m) sandy soils, with Hutton and Clovelly the dominant soil forms.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Overvaal Newspaper	
Date published	11 March 2016	
Site notice position	Latitude	Longitude
	To be included in the Final BAR.	[redacted]
Date placed	09 March 2016	

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

In addition to the site notices, general project notices will also erected and placed at the following places:

- Naledi Local Municipality Offices
- Mamusa Local Municipality Offices
- Mamusa Community Library
- Vryburg Public Library

Appendix E1 will be updated proof of general project notice placement in the Final BAR.

The BAR was placed at the following public places for review from 11 March 2016 to 15 April 2016:

- Mamusa Community Library
- Vryburg Public Library
- WSP Website - http://www.wspgroup.com/en/WSP-Africa/What-we-do/Services/All-Services-A-Z/Technical-Reports/

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Ms Nombulelo mboyisi	Naledi Local Municipality	mboyisin@naledi.local.gov.za
Mr Ruben Gincane	Mamusa Local Municipality	mainej@mamusalm.co.za
[redacted]		

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&APs	Summary of response from EAP
No comments or issues have been raised to date. Comments and issues raised during the BAR report review period will be included in the Final BAR.	

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.

No comments or issues have been raised to date. Comments and issues raised during the BAR report review period will be included in the Final BAR.

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
Department of Environmental Affairs (DEA)	Mr Wayne Hector			WHector@environment.gov.za	
DEA	Ms Lerato Mokoena			LMokoena@environment.gov.za	
Department of Water and Sanitation (DWS)	Ms Ester Makungo	053 836 7600		MakungoE@dws.gov.za	
North west Provincial Heritage Resource Authority	Ms Shannel Omar			Somar@nwpg.gov.za	
DMR: North West Province	Mr Eugene Nkatlholang			Eugene.Nkatlholang@dmr.gov.za	
NWPG: Rural ,	Ms Elis Thebe			Gethebe@nwpg.gov.za	

Environment and Agricultural Development		[redacted]		[redacted]

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, 2014 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.

Methodology – Rating of Impacts

The significance of the potential environmental impacts was evaluated according to their severity, duration, extent and probability. Furthermore, cumulative impacts were also taken into consideration. The Hacking Impact Assessment Methodology has been used for the rating of the impacts. This system derives environmental significance on the basis of the severity of the impact on the environment and the likelihood of the impact occurring. Consequence is calculated as the average of the sum of the ratings of severity, duration and extent of the environmental impact. Likelihood considers the frequency of the activity together with the probability of an environmental impact occurring. The following tables are applicable:

Severity

	Negative	Positive
High	· Substantial deterioration. · Death, illness or injury.	· Substantial improvement.
Medium	· Moderate deterioration. · Discomfort.	· Moderate improvement.
Low	· Minor deterioration. · Nuisance or minor irritation	· Minor improvement.

Extent

High	· Widespread / Far beyond site boundary · Regional / National
Medium	· Fairly widespread / Beyond site boundary · Local
Low	· Localised / Within site boundary · Site

Duration

High	· Permanent / Beyond Closure · Long Terms
Medium	· Reversible over life time of the project · Medium-term
Low	· Quickly reversible (Less that the project life) · Short-term

Probability

High	· Definite · Continuous
Medium	· Possible · Frequent
Low	· Unlikely · Seldom

The detailed impact assessment rating table has been included as Appendix F.

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 Before Mitigation	Proposed mitigation	Significance After Mitigation
Alternative 1 (preferred alternative)				
Planning and Design Phase Activities	Direct impacts:			
	Non-compliance with environmental Policy and legislative frameworks	Medium	SANRAL to ensure compliance with all relevant legislative requirements	Low (+)
	Improper, incorrect and inaccurate planning and design of stormwater infrastructures.	Medium	The final technical design of stormwater infrastructures must be reviewed and approved by Professional Registered Engineer.	Low (+)
	Improper planning of traffic movement may negatively affect the surrounding environment.	Low	The traffic management plan must be incorporated into the final design of the proposed development.	Low (+)
	Indirect impacts:			
	No indirect impacts are anticipated.			
	Cumulative impacts:			
	No Cumulative impacts are anticipated.			
Construction Phase Activities	Direct impacts:			
	Loss of vegetation due to vegetation clearance	Medium	· A suitably qualified ecologist must walk the road reserve prior to construction to ensure that there are no species of special concern. · All exposed soil must be re-vegetated at the end of the construction phase. · Construction activities must be limited to within the road reserve and laydown areas.	Low

Activity	Impact summary	Significance Before Mitigation	Proposed mitigation	Significance After Mitigation
	Erosion and loss of top soil due to vegetation clearance	Medium	Vegetation clearance must be limited to the road alignment.	Low
	Noise from the construction vehicles and equipment	Low	The Construction vehicles and equipment must be monitored and regularly maintained.	Low
	Soil contamination from spillage of hazardous substances such as fuel, oil, cement, and bitumen	Medium	· Mixing of hazardous substances should be conducted in a manner that will not impact on the soil surface. · All hand mixing to be undertaken on an impermeable surface within a demarcated area. · Drip trays (or other suitable method) must be placed under construction machinery (while standing) to avoid soil contamination. · Contaminated soil must be excavated and disposed of at a suitable hazardous waste landfill site. · All hazardous substances to be stored in appropriately bunded facilities where applicable.	Low
	Water contamination from spillage of hazardous substances such as fuel, oil, cement, and bitumen	Medium	· Drip trays (or other suitable method) must be placed under construction machinery (while standing) to avoid water contamination. · Contaminated soil must be excavated and disposed at registered landfill site.	Low

Activity	Impact summary	Significance Before Mitigation	Proposed mitigation	Significance After Mitigation
			· All hazardous substances to be stored in appropriately bunded facilities where applicable.	
	Air quality due to the generation of dust	Medium	· Dust suppression techniques must be implemented as required. · Speed limits on site must be enforced to limit the levels of dust pollution.	Low
	Air Quality due to vehicle exhaust emissions	Medium	· All construction vehicles must be kept in good working order and maintained according to the relevant standards. · Limit the speed of construction vehicles.	Low
	Social Impacts (including the influx of workers and safety and security issues)	Medium	· Ensure that the contractor is required to utilise a relevant percentage of local labour (as per SANRAL regulations). · No personnel to stay on site. · All security staff (where applicable) to be introduced to the relevant land owners. · Sufficient ablution facilities must be available on site for construction workers. · All construction activities to be limited to within the road reserve.	Low
	Temporary job opportunities will be created for local	Medium (+)	Ensure that the contractor is required to utilise a relevant	Medium (+)

Activity	Impact summary	Significance Before Mitigation	Proposed mitigation	Significance After Mitigation
	community.		percentage of local labour (as per SANRAL regulations).	
	Poor housekeeping	Medium	· The litter must be disposed in the portable waste bins on site and later disposed at municipal landfill site. · The Construction workers must be inducted and trained about the housekeeping by ECO and DEO.	Low
	Traffic Management	Medium	· A traffic management plan must be followed. · The operators of Stop and Go must be inducted and trained. · All road signs must be clearly visible during day and night.	Medium
	Heritage resources	Low	If heritage resources are exposed, all construction activities in the vicinity must stop immediately, and SAHRA, Heritage Specialist and SAPS should informed.	Low
	Indirect impacts:			
	No indirect impacts are anticipated.			
	Cumulative impacts:			
	The potential cumulative impacts of the construction activities are detailed below: · Dust generation – the cumulative impact of dust generation has a potentially medium significance as the road does not currently generate dust. However, with the implementation of mitigation measures, as described above, the significance of this impact will be low. · Traffic management – the construction activities will result in the transportation of various materials by road as well as the use of construction vehicles and machinery on site. This will result in a significant increase in vehicle movement within the study area during the construction phase. However, with the implementation of mitigation measures, as described above, the significance of this impact will be low.			
Operational Phase Activities	Direct impacts:			
	Lack of maintenance of the road could cause	Medium	SANRAL (Routine Road Maintenance) shall	Low

Activity	Impact summary	Significance Before Mitigation	Proposed mitigation	Significance After Mitigation
	deterioration which may comprise safety of the road user and adversely affect environment.		frequently maintain the road in accordance with the SANRAL maintenance requirements.	
	Indirect impacts:			
	Potential indirect impacts of the operational phase include the provision of a better quality road, resulting in fewer accidents and improved provincial interconnectivity.			
	Cumulative impacts:			
	No cumulative impacts are anticipated			
No-go option				
In the event that the current road alignment is not rehabilitated and upgraded, the condition of the road surface will continue to deteriorate which will ultimately lead to more accidents on the road. In addition, due to the fact that the road used to be a North West provincial road and has recently been transferred to SANRAL, the road must be realigned and upgraded in order to comply with SANRAL's technical design specifications. Therefore no-go alternative is considered unfeasible.				

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

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)

The proposed project involves the upgrading of the R34 (an existing road) within the existing road reserve in order to ensure compliance with SANRAL's technical and safety specifications. Due to the nature of the project no alternatives are applicable, and therefore the preferred and only alternative was assessed.

The impact assessment of all phases indicates that potential impacts which are associated with proposed project can be mitigated and reduce from medium to low level. The most notable impacts included:

- The loss of vegetation and top soil due to vegetation clearance;
- Erosion due to vegetation clearance;
- Noise from construction vehicles;
- Soil and water contamination from hazardous substances;
- Air quality impacts due to dust and exhaust emissions;
- Social impacts such as job creation, safety and security issues and the influx of workers; and
- Traffic management.

Mitigation and management measures for these impacts are outlined in the EMPr.

A heritage impact assessment was undertaken for the road upgrade alignment and no heritage sites were identified. In terms of biodiversity it was noted that the road is located within a CBA, however,

the impacts on the biodiversity of the area are limited due to the fact that the project involves the upgrading of an existing road within the existing road reserve.

It is the opinion of the EAP that there are no fatal flaws associated with this proposed project.

This Basic Assessment Report contains adequate information to allow the Competent Authority to make an informed decision. The EAP therefore recommends that the application for Environmental Authorisation should be approved on condition that the recommended mitigation measures stated herein are effectively implemented

~~Alternative B~~

N/A

~~Alternative C~~

N/A

No-go alternative (compulsory)

The R34 is an important economic link in the Bophirima road network for the following reasons:

- As part of the link between the N14 and N12, this is an important alternative route for heavy industrial traffic between Sishen and Gauteng, as well as a link to the East coast ports of South Africa.
- There is a possibility that the mines at Sishen, Kathu and vicinity will expand their road transport with interlinks between Kathu and Richards Bay
- The road will draw more traffic from the South of Schweizer-Reneke, because of the better access to the Northern Trans-Kalahari corridor via Bray.
- The road is important to the agriculture in the area, providing farmers with access to the regional markets and agricultural institutions.

If nothing is done to upgrade this road, the route will continue to deteriorate rapidly and will not be a viable route for any vehicles, especially heavy vehicles.

It is clear from the amount of money that has been spent over the last few years, that the route maintenance requires huge amounts of cash injections, (reactive maintenance, rather than preventive maintenance). The drainage of the road is poor with flooding of the road during even minor storms. The surfacing of the road is extremely susceptible to potholing due to the continual saturation along with the heavy traffic.

With the deterioration of the pavement, especially the incidences of new potholes and increased rutting, there are additional safety concerns. The fact that the standard cross section provided for only a 6m surfaced width, further exacerbates the road's safety concerns. The frequency of the occurrence of accidents along the road will result because of the deteriorating road condition, which has obvious costly consequences.

The current construction planning strategy calls for the use of the existing road to accommodate the traffic, while the other half of the newly shifted road profile is being constructed. If the upgrade of the road is not implemented timeously, this cost benefit will have been lost and substantial additional funding will need to be obtained to construct an acceptable deviation.

As the road deteriorates and maintenance costs escalate, continued maintenance will have little or no effect on the improvement of the condition of the road. When a road doesn't receive rehabilitation timeously, replacement of the road then becomes the only option. The continuous implementing of cost-effective rehabilitation interventions saves vast sums of money in the long term. There is a massive cost difference between the high replacement cost of the road and the low rehabilitation costs.

The no-go alternative is considered unfeasible due to the fact that the R34 must be upgraded to comply with SANRAL's technical design specifications thereby providing the local communities and the public at large with a better quality and safer road.

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

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.

An Environmental Authorisation should be approved with the mitigation measures which are outlined in the attached EMPr

Is an EMPr attached?	YES	NO

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.

Ashlea Strong (WSP Environmental (Pty) Ltd)

NAME OF EAP

SIGNATURE OF EAP

07 March 2016

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 D1: Heritage Specialist Report

Appendix E: Public Participation
- Appendix E1: Advertisements and notices
- Appendix E2: Stakeholder notification
- Appendix E3: Comment and response report
- Appendix E4: Authority notification
- Appendix E5: Stakeholder database
- Appendix E6: Meetings and additional correspondence

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

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix D1: Heritage Specialist Report

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