



**DRAFT BASIC ASSESSMENT
REPORT**

**DEA REFERENCE:
14/12/16/3/3/1/1334**

**THE SPECIAL MAINTENANCE OF
NATIONAL ROUTE R56 SECTIONS 6
AND 7 BETWEEN INDWE AND
MACLEAR**

**Prepared for the South African
National Roads Agency Soc Limited**

April 2015



BASIC ASSESSMENT REPORT



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

(For official use only)

File Reference Number:

Application Number:

Date Received:

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

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **1 September 2012**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
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.

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15. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES x	NO
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If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

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

The project entails the special maintenance of National Route R56 Sections 6 and 7 between Indwe And Maclear in the Eastern Cape Province. The R56 is an existing road that requires special maintenance. The maintenance of the road will not extend beyond the existing road reserve.

The R56 Section 6 is from Indwe (km 0.0) and Elliot (km 58.14) and is 58.14 km in length. This section falls within the Emalahleni Local Municipality. The R56 Section 7 between Elliot (km 0.0) and Maclear (km 68.36) is 68.36 km in extent and falls within the Elundini Local Municipality. The total length of the project is 126.50 km in extent.

The following is included in the scope of works:

- Strengthening of portions of the existing pavement,
- Patching and repair of the existing pavement,
- Resurfacing of the road,
- Installation of subsurface drainage in certain cuttings,
- Clearing and shaping of existing open drains,
- Replacing of the existing road reserve fencing,
- Replacing of existing guardrails
- Replacing of existing culverts,
- Construction of new culverts,
- Pedestrian concrete sidewalks to be constructed at Indwe, Elliot, Ugie and Malear on request from the local community.

a. Culverts

Drainage forms an integral part of the special maintenance of the road. Approximately 6 major existing pipe and/or box culverts to be constructed along this section of road. Please see full list included in Appendix A.

b. Bridges

No bridges will be widened on this project.

c. Mining Areas

There are no borrow pits or quarries associated with the project. Commercial gravel sources will be utilised on this project.

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d. Listed Activities Triggered

The following listed activities are triggered by the scope of works for this project:

Listed activity as described in GN R.544, 545 and 546	Description of project activity
R. 544, 18 June 2010, Item 18: The infilling or depositing of any material of more than 5 cubic metres into: (i) A watercourse.	Material of more than 5m ³ will be deposited into water courses at culverts to be constructed (see item 11).
R. 544, 18 June 2010, Item 22: The construction of a road, outside urban areas, With a reserve wider that 13,5 meters.	The current road reserve is 32m wide.
R. 544, 18 June 2010, Item 39: The expansion of: (v) Bulk storm water outlet structures. Within a watercourse or within 32 metres of a watercourse.	Approximately 6 major existing and/or new pipe and/or box culverts to be constructed.
R. 544, 18 June 2010, Item 40: The expansion of: (iv) Infrastructure by more than 50 sq metres Within a watercourse or within 32 m of a watercourse	Approximately 6 major existing and/or new pipe and/or box culverts to be constructed (more than 50 m ² each)

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

Listed activity as described in GN R.544, 545 and 546	Description of project activity
Example: <i>GN R.544 Item 11(3): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i>	<i>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</i>
R. 544, 18 June 2010, Item 11: The construction of: (vi) Bulk storm water outlet structures. Within a watercourse or within 32 metres of a watercourse.	Approximately 6 existing and/or new and/or new pipe and/or box culverts to be constructed.
R. 544, 18 June 2010, Item 18: The infilling or depositing of any material of more than 5 cubic metres into: (i) A watercourse.	Material of more than 5m ³ will be deposited into water courses at culverts to be constructed (see item 11).
R. 544, 18 June 2010, Item 22: The construction of a road, outside urban areas, With a reserve wider that 13,5 meters.	The current road reserve is 32m wide.
R. 544, 18 June 2010, Item 39:	Approximately 6 major existing and/or new pipe

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Listed activity as described in GN R.544, 545 and 546	Description of project activity
The expansion of: (v) Bulk storm water outlet structures. Within a watercourse or within 32 metres of a watercourse.	and/or box culverts to be constructed.
R. 544, 18 June 2010, Item 40: The expansion of: (iv) Infrastructure by more than 50 sq metres Within a watercourse or within 32 m of a watercourse	Approximately 6 major existing pipe and/or box culverts to be constructed (more than 50 m ² each)

2. FEASIBLE AND REASONABLE ALTERNATIVES

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

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

Describe alternatives that are considered in this application as required by Regulation 22(2)(h) of GN R.543. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

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

a) Site alternatives

In the case of linear activities: **There is only 1 site alternative as the R56 is an existing road**

Alternative:

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Latitude (S):

Longitude (E):

31°27' 51.69" S	27°20' 11.91" E
31°20' 04.29" S	27°50' 52.77" E
31°03' 48.13" S	28°20' 44.74" E

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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 (Please see Appendix A).

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

- b) **Lay-out alternatives: NONE**
- c) **Technology alternatives NONE**
- d) **Other alternatives DESIGN ALTERNATIVES**

Alternative A1 (preferred alternative)
Special Maintenance Of National Route R56 Sections 6 And 7 Between Indwe And Maclear with an <u>emulsion treated base.</u>
Alternative A2
Special Maintenance Of National Route R56 Sections 6 And 7 Between Indwe And Maclear with a <u>high quality crushed stone base.</u>
Alternative 3
None

- e) **No-go alternative**

Should the special maintenance of the road not be undertaken, the traffic on the R56 could experience increasingly unsafe driving conditions. Investigations and analyses of pavement data indicate that the pavement structure is severely distressed in the proposed special maintenance sections and structural strengthening is required to ensure the safety of the traveling public. This will also accommodate the predicted increase in traffic volume and avoid high driver frustration.

The volume of heavy vehicles is expected to increase significantly over the next 20 years. Traffic volumes and design principals determine that the pavement structure of the road needs to be maintained to ensure the safety of the traveling public. If this is not done, it is anticipated that accidents on this road will increase in future.

Indirect impacts:

Possible traffic accidents as a result of poor driving conditions.
Possible injury and death of travelling public.

Cumulative impacts:

High health care costs as a result of traffic accidents.

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

ALTERNATIVE A1: PREFERRED ALTERNATIVE

SPECIAL MAINTENANCE OF NATIONAL ROUTE R56 SECTIONS 6 AND 7 BETWEEN INDWE AND MACLEAR WITH AN EMULSION TREATED BASE

PHYSICAL SIZE OF THE ACTIVITY

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

For linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

126500 m
126500 m
None

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

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

(126500m x 32 m) = 4048000 m ²
126500m x 32 m) = 4048000 m ²
None

3. SITE ACCESS

Does ready access to the site exist?

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

YES x	NO
	m

Describe the type of access road planned:

There is no access road planned. This project entails the special maintenance of an existing road.

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.

4. 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).

5. 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.

6. SENSITIVITY MAP

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

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

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

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to

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

8. FACILITY ILLUSTRATION

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

9. 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 x	NO	Please explain
The special maintenance of the road is undertaken in terms of the South African National Roads Agency Soc Limited (SANRAL's) mandate in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The declaration of the R56 as a national road under section 40(1) of the Act creates the land use right within the declared road reserve.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's PSDF in order to continue.			
(b) Urban edge / Edge of Built environment for the area	YES x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's urban edge in order to continue as it is not a residential development or municipal road development.			
(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 x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's IDP in order to continue as it is not a residential development or municipal roads development.			

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(d) Approved Structure Plan of the Municipality	YES x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's approved structure plan in order to continue as it is not a residential development or municipal roads development.			
(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?)	YES	NO x	Please explain
The approval of this application will not compromise the integrity of the existing environmental management priorities for the area and it can it be justified in terms of sustainability considerations. No significant long term impact is foreseen as a result of the special maintenance of the road.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO x	Please explain
No significant long term impact is foreseen as a result of the special maintenance of the road.			
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 x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL. The development is not bound by the Municipality's approved SDF in order to continue as it is not a residential development or municipal roads development.			
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 x	NO	Please explain
The area is in dire need of this project and it is a societal priority as numerous accidents occur on the R56 in this area every year with associated loss of lives.			
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.)	YES x	NO	Please explain
The contractor will in all probability make use of municipal water, sewage and waste disposal services during the time of construction. There is adequate capacity available at the local Municipality for these services.			

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<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	YES x	NO	Please explain
<p>The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL. The development is not bound by the Municipality's infrastructure planning in order to continue.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	YES	NO x	Please explain
<p>The special maintenance of the R56 became important as a result of the deterioration of the road and the numerous accidents that occur in this area every year with associated loss of lives.</p>			
<p>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.)</p>	YES x	NO	Please explain
<p>The R56 is an existing national road from Indwe to Maclear and the area that is earmarked for upgrading is from Indwe (km 0.0) to Elliot (km 58.14) and is 58.14 km in length. This section falls within the Emalahleni Local Municipality. The R56 Section 7 between Elliot (km 0.0) and Maclear (km 68.36) is 68.36 km in extent and falls within the Elundini Local Municipality. The total length of the project is 126.50 km in extent. This existing road will be maintained in terms of SANRAL's mandate in terms of the South African National Roads Agency Limited and National Roads Act, 1998.</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	YES x	NO	Please explain
<p>The activity falls within the R56 road reserve and the maintenance of the road will be conducted within the R56 road reserve. The potential impacts related to the activity were assessed together with specialist engineering and environmental input and the best practicable environmental option and mitigation measures recommended in the report.</p>			
<p>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</p>	YES x	NO	Please explain
<p>The benefits of the proposed development will outweigh the negative impacts as the local communities and road users are in dire need of this project as numerous accidents occur in this area every year with associated loss of lives. The road will, therefore, be maintained with a low impact to the environment but a high positive impact to the community.</p>			
<p>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</p>	YES	NO x	Please explain
<p>The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL. This development will therefore not set a precedent for similar activities as it is not bound by the Municipality's infrastructure planning in order to continue.</p>			

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12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO x	Please explain
It is not foreseen that any person's rights will be negatively affected by the proposed activity as no community displacement will take place. A public participation process were followed and the comments and concerns taken into account during the environmental process.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO x	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's urban edge in order to continue as it is not a residential development or municipal road development.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO x	Please explain
This project is not included in any of the SIP projects.			
15. What will the benefits be to society in general and to the local communities?	Please explain		
<p>The special maintenance of the proposed road could offer several benefits to society in general, including:</p> <ul style="list-style-type: none"> • Safer driving conditions for the road users as the road surface will be maintained; • With the special maintenance of the road, less maintenance on vehicles are anticipated; • Improved traffic flow of commuter traffic, particularly during peak periods; • Less traffic accidents; • Improved drainage and other services. 			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
<ul style="list-style-type: none"> • Employment opportunities for the local residents during construction. • Less accidents and associated loss of lives. • Improved traffic flow, particularly during peak periods; • Improved drainage and other services. • Drainage channels will be improved. 			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa. The R56 is a national road and falls within the jurisdiction of the SANRAL in terms of the South African National Roads Agency Limited and National Roads Act, 1998.			

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 following general objective of integrated environmental management have been taken into account:

- a) Identified, predicted and evaluated the actual and potential impact on the environment as a result of the special maintenance of the road as well as the socio-economic conditions and cultural heritage,
- b) Investigated alternatives and options for mitigation of activities, with a view to minimizing negative impacts.
- c) Maximizing benefits to the environment as a result of the special maintenance of the road;
- d) Ensured that the effects of activities on the environment received adequate consideration before actions are taken in connection with them;
- e) Ensured adequate and appropriate opportunity for public participation in decisions that may affect the environment;
- f) Ensured the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and
- g) Identified and employed 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 of the NEMA.

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

The following have been taken into account:

- Identified all potential activities and associated environmental risks associated with the proposed project;
- Consideration of all relevant ecological, social and economic factors in development;
- Minimised adverse environmental impacts, pollution or degradation of the environment;
- Avoiding or minimising the disturbance to ecosystems;
- That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- 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;
- 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;
- 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;
- 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;
- 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;
- 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.
- Promotion of community participation through an extensive and open public participation process with I&APs;
- Delivery of high quality information to government and other decision-makers in order to enable them to make informed decisions regarding the project and avoid unnecessary project delays.

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
EIA Regulations GN R. 544 Activities 11, 18, 22, 39, 40.	Listed activities triggered in terms of the EIA Regulations, 2010	Department of Environmental Affairs	18 June 2010
Department of Environmental Affairs Departmental Guidelines under www.environment.gov.za	Guidance with regard to the execution of the Basic Assessment process	Department of Environmental Affairs	2010
National Environmental Management Act, 1998 (Act No. 107 of 1998) The National Environmental Management Act, 1998 (Act No. 107 of 1998): [NEMA] was enacted in November 1998. NEMA provides for cooperative governance by establishing principles for decision-making on matters affected the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions, public participation and sustainable development.	General objectives of Integrated Environmental Management as set out in section 23 of NEMA taken into account	The National Department of Environmental Affairs	27 November 1998
National Water Act (Act No. 36 of 1998) The application for a Water Use License in terms of the National Water Act, 1998.	Stream crossings and possible application of Water Use License or general authorization at the Department of Water Affairs	Department of Water Affairs	20 August 1998
National Heritage Resource Act 1999 (Act No. 25 of 1999) In terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Any linear activity that exceeds 300 m in extent requires input from SAHRA.	South African Heritage Resources Agency (SAHRA)	1999

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Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
comment was obtained from SAHRA.			
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)	Any relocation or destruction of a protected plants species requires a permit	Eastern Cape Department of Economic Development, Environmental Affairs & Tourism	1983

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES x	NO
10 m ³	

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

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

Waste skips will be provided at the construction camp site and strategically along the route. These waste bins will be regularly emptied by a contractor who in turn will dispose of the waste at a recognized waste disposal site.

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

The solid waste will be disposed of at a recognized waste disposal site. Waste will feed into the Local Municipality municipal waste stream.

Will the activity produce solid waste during its operational phase?

YES	NO x
m ³	

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

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

n/a

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

The solid waste will be disposed of at the Local Municipality landfill sites.

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

n/a

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

Can any part of the solid waste be classified as hazardous in terms of the 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.

BASIC ASSESSMENT REPORT

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

YES	NO x
-----	------

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 x
-----	------

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

m ³	
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Will the activity produce any effluent that will be treated and/or disposed of on site?

YES	NO x
-----	------

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 x
-----	------

If YES, provide the particulars of the facility:

Facility name:	n/a		
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

Recycling of wastewater will be undertaken if an asphalt plant with a wet scrubber system will be utilised for the production of asphalt on the road.

c) Emissions into the atmosphere

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

YES	NO x
-----	------

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:

During the construction phase some dust might be generated. Dust will be suppressed through regular water spraying of surfaces as indicated in the EMPr.

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 x
-----	------

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 x	NO
YES	NO x

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

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

If NO, describe the noise in terms of type and level:

Construction noise will be generated during normal working hours. Mitigation measures for noise generated during construction are included in the EMPr.

12. WATER USE

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

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

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

litres	
YES x	NO

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

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

13. ENERGY EFFICIENCY

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

The following energy efficient measures will be taken on the project:

- Equipment generating energy will be properly insulated to prevent energy loss.
- Compact fluorescent lights will be installed in the site offices;

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

The use of solar geysers will be investigated for use at the contractor camp site during construction. Compact fluorescent lights will be installed in the site offices.

ALTERNATIVE A2:

SPECIAL MAINTENANCE OF NATIONAL ROUTE R56 SECTIONS 6 AND 7 BETWEEN INDWE AND MACLEAR WITH A HIGH QUALITY CRUSHED STONE BASE

3. PHYSICAL SIZE OF THE ACTIVITY

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

For linear activities:

Alternative:

Alternative A1 (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Length of the activity:

126500 m
126500 m
None

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

Alternative:

Alternative A1 (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Size of the site/servitude:

(126500m x 32 m) = 4048000 m ²
(126500m x 32 m) = 4048000 m ²
None

4. SITE ACCESS

Does ready access to the site exist?

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

YES x	NO
M	

Describe the type of access road planned:

There is no access road planned. This is the special maintenance of an existing road.

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

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;

- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

6. LAYOUT/ROUTE PLAN

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

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

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

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

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

8. SITE PHOTOGRAPHS

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

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.

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 x	NO	Please explain
The special maintenance of the road is undertaken in terms of the South African National Roads Agency Soc Limited (SANRAL's) mandate in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The declaration of the R56 as a national road under section 40(1) of the Act creates the land use right within the declared road reserve.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's PSDF in order to continue.			
(b) Urban edge / Edge of Built environment for the area	YES x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's urban edge in order to continue as it is not a residential development or municipal road development.			
(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 x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's IDP in order to continue as it is not a residential development or municipal roads development.			

BASIC ASSESSMENT REPORT

(d) Approved Structure Plan of the Municipality	YES x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's approved structure plan in order to continue as it is not a residential development or municipal roads development.			
(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?)	YES	NO x	Please explain
The approval of this application will not compromise the integrity of the existing environmental management priorities for the area and it can it be justified in terms of sustainability considerations. No significant long term impact is foreseen as a result of the special maintenance of the road.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO x	Please explain
No significant long term impact is foreseen as a result of the special maintenance of the road.			
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 x	NO	Please explain
The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL. The development is not bound by the Municipality's approved SDF in order to continue as it is not a residential development or municipal roads development.			
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 x	NO	Please explain
The area is in dire need of this project and it is a societal priority as numerous accidents occur on the R56 in this area every year with associated loss of lives.			
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.)	YES x	NO	Please explain
The contractor will in all probability make use of municipal water, sewage and waste disposal services during the time of construction. There is adequate capacity available at the local Municipality for these services.			

BASIC ASSESSMENT REPORT

<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	YES x	NO	Please explain
<p>The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL. The development is not bound by the Municipality's infrastructure planning in order to continue.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	YES	NO x	Please explain
<p>The special maintenance of the R56 became important as a result of the deterioration of the road and the numerous accidents that occur in this area every year with associated loss of lives.</p>			
<p>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.)</p>	YES x	NO	Please explain
<p>The R56 is an existing national road between Indwe and Maclear and the area that is earmarked for upgrading is located from from Indwe (km 0.0) to Elliot (km 58.14) and is 58.14 km in length. This section falls within the Emalahleni Local Municipality. The R56 Section 7 between Elliot (km 0.0) and Maclear (km 68.36) is 68.36 km in extent and falls within the Elundini Local Municipality. The total length of the project is 126.50 km in extent. This existing road will be maintained in terms of SANRAL's mandate in terms of the South African National Roads Agency Limited and National Roads Act, 1998.</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	YES x	NO	Please explain
<p>The activity falls within the R56 road reserve and the maintenance of the road will be conducted within the R56 road reserve. The potential impacts related to the activity were assessed together with specialist engineering and environmental input and the best practicable environmental option and mitigation measures recommended in the report.</p>			
<p>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</p>	YES x	NO	Please explain
<p>The benefits of the proposed development will outweigh the negative impacts as the local communities and road users are in dire need of this project as numerous accidents occur in this area every year with associated loss of lives. The road will, therefore, be maintained with a low impact to the environment but a high positive impact to the community.</p>			

BASIC ASSESSMENT REPORT

11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO <input checked="" type="checkbox"/>	Please explain
<p>The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL. This development will therefore not set a precedent for similar activities as it is not bound by the Municipality's infrastructure planning in order to continue.</p>			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO <input checked="" type="checkbox"/>	Please explain
<p>It is not foreseen that any person's rights will be negatively affected by the proposed activity as no community displacement will take place. A public participation process were followed and the comments taken into account during the environmental process.</p>			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO <input checked="" type="checkbox"/>	Please explain
<p>The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa in terms of the South African National Roads Agency Limited and National Roads Act, 1998. The R56 is a national road and falls within the jurisdiction of the SANRAL and the development is not bound by the Municipality's urban edge in order to continue as it is not a residential development or municipal road development.</p>			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO <input checked="" type="checkbox"/>	Please explain
<p>This project is not included in any of the SIP projects.</p>			
15. What will the benefits be to society in general and to the local communities?	Please explain		
<p>The proposed special maintenance of the road could offer several benefits to society in general, including:</p> <ul style="list-style-type: none"> • Safer driving conditions for the road users as the road surface will be maintained; • With the special maintenance of the road, less maintenance on vehicles are anticipated; • Improved traffic flow of commuter traffic, particularly during peak periods; • Less traffic accidents; • Improved drainage and other services. 			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
<ul style="list-style-type: none"> • Employment opportunities for the local residents during construction. • Less accidents and associated loss of lives. • Improved traffic flow, particularly during peak periods; • Improved drainage and other services. • Drainage channels will be improved. 			

BASIC ASSESSMENT REPORT

17. How does the project fit into the National Development Plan for 2030?	Please explain
<p>The SANRAL is given the power to perform all strategic planning, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of all national roads in South Africa. The R56 is a national road and falls within the jurisdiction of the SANRAL in terms of the South African National Roads Agency Limited and National Roads Act, 1998.</p>	
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.	
<p>The following general objective of integrated environmental management have been taken into account:</p> <ul style="list-style-type: none">h) Identified, predicted and evaluated the actual and potential impact on the environment as a result of the special maintenance of the road as well as the socio-economic conditions and cultural heritage,i) Investigated alternatives and options for mitigation of activities, with a view to minimizing negative impacts.j) Maximizing benefits to the environment as a result of the special maintenance of the road;k) Ensured that the effects of activities on the environment received adequate consideration before actions are taken in connection with them;l) Ensured adequate and appropriate opportunity for public participation in decisions that may affect the environment;m) Ensured the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; andn) Identified and employed 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 of the NEMA.	

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

The following have been taken into account:

- Identified all potential activities and associated environmental risks associated with the proposed project;
- Consideration of all relevant ecological, social and economic factors in development;
- Minimised adverse environmental impacts, pollution or degradation of the environment;
- Avoiding or minimising the disturbance to ecosystems;
- That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- 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;
- 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;
- 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;
- 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;
- 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;
- 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.
- Promotion of community participation through an extensive and open public participation process with I&APs;
- Delivery of high quality information to government and other decision-makers in order to enable them to make informed decisions regarding the project and avoid unnecessary project delays.

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
EIA Regulations GN R. 544 Activities 11, 18, 22, 39, 40.	Listed activities triggered in terms of the EIA Regulations, 2010	Department of Environmental Affairs	18 June 2010
Department of Environmental Affairs	Guidance with regard to the execution of the Basic	Department of Environmental Affairs	2010

BASIC ASSESSMENT REPORT

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
Departmental Guidelines under www.environment.gov.za	Assessment process		
National Environmental Management Act, 1998 (Act No. 107 of 1998) The National Environmental Management Act, 1998 (Act No. 107 of 1998): [NEMA] was enacted in November 1998. NEMA provides for cooperative governance by establishing principles for decision-making on matters affected the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions, public participation and sustainable development.	General objectives of Integrated Environmental Management as set out in section 23 of NEMA taken into account	The National Department of Environmental Affairs	27 November 1998
National Water Act (Act No. 36 of 1998) The application for a Water Use License in terms of the National Water Act, 1998.	Stream crossings and possible application of Water Use License or general authorization at the Department of Water Affairs	Department of Water Affairs	20 August 1998
National Heritage Resource Act 1999 (Act No. 25 of 1999) In terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) comment was obtained from SAHRA.	Any linear activity that exceeds 300 m in extent requires input from SAHRA.	South African Heritage Resources Agency (SAHRA)	1999
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)	Any relocation or destruction of a protected plants species requires a permit	Eastern Cape Department of Economic Development, Environmental Affairs & Tourism	1983

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
10 m ³	

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

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

Waste skips will be provided at the construction camp site and strategically along the route. These waste bins will be regularly emptied by a contractor who in turn will dispose of the waste at a recognized waste disposal site.

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

The solid waste will be disposed of at a recognized waste disposal site. Waste will feed into the Local Municipality municipal waste stream.

Will the activity produce solid waste during its operational phase?

YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
m ³	

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

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

n/a

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

The solid waste will be disposed of in the Local Municipality landfill sites.

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

n/a

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

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

YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
------------------------------	--

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 <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
------------------------------	--

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 <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
m ³	

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

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

YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
------------------------------	--

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.

BASIC ASSESSMENT REPORT

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

YES	NO x
-----	------

If YES, provide the particulars of the facility:

Facility name:	n/a		
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

Recycling of wastewater will be undertaken if an asphalt plant with a wet scrubber system will be utilised for the production of asphalt on the road.

c) Emissions into the atmosphere

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

YES	NO x
-----	------

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:

During the construction phase some dust might be generated. Dust will be suppressed through regular water spraying of surfaces as indicated in the EMPr.

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 x
-----	------

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 x	NO
-------	----

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

YES	NO x
-----	------

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

If NO, describe the noise in terms of type and level:

Construction noise will be generated during normal working hours. Mitigation measures for noise generated during construction are included in the EMPr.

13. WATER USE

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

Municipal <input checked="" type="checkbox"/>	Water board	Groundwater	River, stream, dam or lake	Other	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:

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

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

litres	
YES <input checked="" type="checkbox"/>	NO

14. ENERGY EFFICIENCY

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

The following energy efficient measures will be taken on the project:

- Equipment generating energy will be properly insulated to prevent energy loss.
- Compact fluorescent lights will be installed in the site offices.

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

The use of solar geysers will be investigated for use at the contractor camp site during construction. Compact fluorescent lights will be installed in the site offices.

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): 0

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.

BASIC ASSESSMENT REPORT

Property description/physical address:	Province	Eastern Cape
	District Municipality	Emalahleni Local Municipality (Indwe) within Chris Hani District Municipality Sakhisizwe Local Municipality (Elliot) within Chris Hani District Municipality Elundini Local Municipality (Maclear) within Joe Gqabi District Municipality
	Local Municipality	Emalahleni Local Municipality (Indwe) Sakhisizwe Local Municipality (Elliot) Elundini Local Municipality (Maclear)
	Ward Number(s)	To be determined by speakers
	Farm name and number	Indwe, Elliot and Maclear
	Portion number	None (R56 road reserve)
	SG Code	None (R56 road reserve)

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.

Current land-use zoning as per local municipality IDP/records:	R56 road reserve
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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 x

THERE IS ONLY 1 SITE ALTERNATIVE FOR THIS EXISTING LINEAR PROJECT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20 x	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any): None

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper
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Alternative S3 (if any): None

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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BASIC ASSESSMENT REPORT

2. LOCATION IN LANDSCAPE

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

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

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any): None		Alternative S3 (if any): None	
Shallow water table (less than 1.5m deep)	YES x	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO x	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES x	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO x	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES x	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES x	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO x	YES	NO	YES	NO
An area sensitive to erosion	YES	NO x	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 x	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface x	Building or other structure	Bare soil

BASIC ASSESSMENT REPORT

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

5. SURFACE WATER

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

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

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

A specialist report was conducted by Eko Environmental dated March 2015 attached in Appendix D i.e. "Report on the biodiversity, ecological and wetland assessment of the proposed special maintenance of National Road R56 from Indwe to Maclear, Eastern Cape Province". The report has the following conclusions:

Road section to be rehabilitated

The special maintenance of the R56 National Road between Indwe and Maclear has been rated as being Acceptable in terms of the biodiversity and ecology of the study area. The majority of the road reserve is already disturbed and transformed. The species composition within the road reserve is altered where the natural species composition has been replaced by pioneer species. A large degree of exotic weeds are also present.

The vegetation consists of a dominant grass layer with a high degree of weeds and exotics. The special maintenance of the road will also be confined to the existing road reserve and impacts will therefore be confined to the degraded road reserve. It is anticipated that construction will also take place at many of the culverts along the route. Due to the high diversity within this region a high number of protected species occur within the road reserve (Appendix B). This include *Aloe ecklonis*, *Aristea abyssinica*, *Brunsvigia grandiflora*, *Crocoshmia paniculata*, *Delosperma sp.*, *Habenaria dives*, *Kniphofia parviflora*, *Pelargonium sidoides*, *Satyrium parviflorum*, *S. sphaerocarpum* and *Scadoxus puniceus*. Of these *Pelargonium sidoides* is also listed as a Declining species within the National Red List.

As a result of these high amounts of protected species within the road reserve it is recommended that vegetation only be removed from the road reserve where this is absolutely necessary. Where protected species will be destroyed by construction, permits must be obtained from the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism to remove and transplant them to an adjacent area where they will not be affected (Appendix B).

Watercourses

Construction, maintenance and rehabilitation of roads are inevitable and an imperative necessity. However, the impacts that this has on the environment should still be taken into account and should be minimised. This is of special relevance where roads cross sensitive areas such as rivers, streams and wetlands. The section of the R56 National Road that is proposed for special maintenance crosses over a large number of streams and rivers including large and extensive wetlands. The majority of the drainage systems in this area considered in a relatively good condition. This is largely due to the area situated in the headwaters mountainous region where there are not yet a high amount of impacts on these watercourses. They must therefore also be considered as highly sensitive as impacts on the headwaters of drainage systems will affect the condition downstream as well.

Several significant and extensive wetlands occur in the area associated with streams, rivers and catchment origins (Seasonal Stream 4, Seasonal Stream 25, Seasonal Stream 27, Multiple drainage lines and Gatberg River Wetland, Kuntombizinzi River and Seasonal Stream 34) (Table 2 & Map 1 - 4). These wetlands are all in a good condition and provide a vital ecosystem function. The wetlands must be considered as the most sensitive areas to be affected by the construction. Utmost care will have to be taken when construction occurs in these areas.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

Natural area x	Dam or reservoir	Polo fields
Low density residential x	Hospital/medical centre	Filling station ^H x
Medium density residential	School	Landfill or waste treatment site
High density residential x	Tertiary education facility	Plantation x
Informal residential ^A	Church	Agriculture x
Retail commercial & warehousing	Old age home	River, stream or wetland x
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial ^{AN}	Train station or shunting yard ^N	Mountain, koppie or ridge x
Heavy industrial ^{AN}	Railway line ^N x	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 x
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

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

None

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:

Following the specialist studies and impact assessment undertaken for the project, the road will be maintained with a low impact to the environmental but a high positive impact to the local communities and road users.

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:

None

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

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

Note: The entire area consists of Critical Biodiversity Areas 1 & 2 according to the Terrestrial Critical Biodiversity

BASIC ASSESSMENT REPORT

Areas for the Eastern Cape (2007). It is therefore clear that this vegetation type is of conservation importance (Map 5). However, the majority of the road reserve has been degraded to such an extent that it does not represent conservable areas of these vegetation types. Nonetheless it may still be possible for rare and endangered species to occur within the road reserve.

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 x

NO

Uncertain

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by Chameleon Environmental Services to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to maintain the section of the R56 National road. Please refer to the findings of the specialist consultant below.

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:

BASIC ASSESSMENT REPORT

A specialist heritage study was undertaken by Dr J van Schalkwyk dated March 2015 included in Appendix D called "Cultural Heritage Impact Assessment for the Proposed Special Maintenance of Sections 6 and 7 of Road R56 between Maclear and Indwe, Eastern Cape Province". The report contains the following conclusions:

The cultural landscape qualities of the region essentially consist of a rural setup. In this the human occupation is made up of a pre-colonial element consisting of Stone Age and limited Iron Age occupation, as well as a much later colonial (farmer) component. In recent years an urban element developed. The following sites, features and objects of cultural heritage significance have been identified to occur in close proximity of the study area (see Appendix 3 of the report in Appendix D for a detailed information on the locality and mitigation measures propose for each identified feature):

1. Large stone circle with an entrance marked by two standing stones. It has a diameter of approximately 24 x 27m. No other built features that could be related to this structure were noticed in the immediate vicinity.
 - Although this feature is clearly visible, its proximity to the road reserve might create a problem if road works is undertaken here.
 - The feature should be avoided and fenced off with danger tape during any road works that might take place in its vicinity.
2. A very large town cemetery with probably more than 1000 graves. It runs parallel to the road for a distance of approximately 550m. Some of the graves are located next to the road reserve.
 - Although this cemetery is known and clearly visible, its proximity to the road reserve might create a problem if road works is undertaken here.
 - The cemetery should be avoided and fenced off with danger tape during any road works that might take place in its vicinity.
3. On 7 August 1981 MK operatives, working out of Lesotho, were engaged by SAP forces at a roadblock near Elliot. Currently this feature forms part of a heritage route recounting the struggle for liberation and as a result is well signposted.
 - This feature is currently located within the boundary of the R56 road. Although this feature is clearly visible, its location in the road reserve might create a problem if road works is undertaken here. It is recommended that the memorial is retained in its current position. If this is not possible, it should be relocated a few metres to the west, outside of the road reserve, on condition of negotiating its new location with the current landowner.
4. Memorial commemorating three Maclear rugby players that died here on 17 May 1990.
 - This feature is currently located within the boundary of the R56 road. Although this feature is clearly visible, its location in the road reserve might create a problem if road works is undertaken here.
 - It is recommended that the memorial is retained in its current position. If this is not possible, it should be relocated a few metres to the west, outside of the road reserve, on condition of negotiating its new location with the current landowner.
5. A large number of culverts and small bridgelets along the railway line running from Indwe to Maclear. The railway line was constructed during the period 1904 to 1906.
 - For a number of sections the railway line runs very close to the existing R56, in some cases next to the road reserve fence. However, it is anticipated that the proposed development would not have an impact on these features.

From a heritage point of view we therefore recommend that the proposed development can continue, on condition of acceptance of the above mitigation measures. We request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.

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

YES	NO x
YES	NO x

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:

Emalahleni Local Municipality (Indwe)

Emalahleni Local Municipality is an administrative area of 3 447km² situated in the north-eastern part of the Chris Hani District Municipality in the Eastern Cape. Emalahleni Municipality was established during 2000 and comprises an extensive rural component. Much of the municipal area was formerly in the Transkei. The quality of life in the rural villages is generally poor, marked by poverty and lack of access to services and amenities. Unemployment is high, and most households rely on social grants and remittances from family members working elsewhere.

The majority (55,3%) of economically active youth (aged 15 – 34 years) are unemployed

According to Census 2011, the Emalahleni Local Municipality has a total population of 119 460 and a growth rate of 3.58%. The Municipality has an unemployment rate of 46.3%.

Demographic Information:

Population	119 460
Age Structure	
Population under 15	35.10%
Population 15 to 64	55.00%
Population over 65	9.90%
Dependency Ratio	
Per 100 (15-64)	81.80

Sakhisizwe Local Municipality (Elliot)

Sakhisizwe Local Municipality covers an area of 2 355km² and is classified in terms of the Municipal Structures Act as a Category B municipality, falling under the Chris Hani District in the Eastern Cape province.

Demographic Information:

Population	63 582
Age Structure	
Population under 15	35.00%
Population 15 to 64	57.50%
Population over 65	7.50%

The average unemployment rate in the Sakhisizwe Municipal area is 24%. This is in line with National unemployment rate but lower than the Provincial unemployment rate of 35%. The highest employment levels are found in the commercial farming area of Sakhisizwe, where 52% of its potential active work force is employed. It is important to note, that although the urban area of Cala has the second highest employment rate (28%).

Elundini Local Municipality (Maclear)

Elundini Local Municipality (ELM) is an area of 5 065km² located within the Joe Gqabi District in the north-eastern portion of the Eastern Cape province.

The average unemployment rate of Elundini Municipal area is 23%. This only includes people that are actively searching for work. The urban areas and commercial farming district are the highest employers, where people have found employment in the agriculture, commercial and service sectors. There are very low levels of employment in the rural settlements. This can partly be attributed to the fact that these areas do not have a strong economic base and most persons are involved in subsistence-related activities with little surplus being produced for economic profit.

The Community Survey 2007 indicates that 61.29% of the Elundini population earn no income and 29.69% earn between R1-R1600 per month.

The unemployment rate of 23.11% slightly lower when compared with provincial (25%) and national (24%) unemployment averages. According to the official definition of employment, an individual must have been actively seeking employment within the past four weeks. 63.64% of the population of Elundini are not economically active and comprise of students, home-makers, pensioners, disabled people, seasonal workers, people who choose to work and people who cannot find work.

Demographic Information:

Population	138 141
Age Structure	
Population under 15	35.40%
Population 15 to 64	56.40%
Population over 65	8.30%
Dependency Ratio	
Per 100 (15-64)	77.40

Sources: <http://www.localgovernment.co.za/locals/view/>
http://beta2.statssa.gov.za/?page_id=993&id=emalahleni-municipality
Emalahleni Municipality IDP 2014-2015
Sakhasizwe Local Municipality IDP 2010-2011
Eludini Local Municipality IDP 2010-2011

Economic profile of local municipality:

Emalahleni Local Municipality (Indwe) within Chris Hani District Municipality

The municipal population has a large representation of the youth (comprising of 47%) of the total population. The retired age group of age 60 and above represents 13 percent of the population. These two above point also pose a great challenge for the Emalahleni municipality. This challenge being that the 60 percent of the population is both under 19 years and above 60 years and thus most likely economically in active and reliant on social grants. The resultant of this compels the municipality to increase its commitment to Special Programmes.

According to statistics released by ECSECC, about 47% of the population earns just under R3500.00 and 13% of the population lives under the bread line and would therefore not be able to afford housing or other services and rely on state subsidies. Emalahleni thus can be classified as a low wage economy which is a factor of low or negative growth.

Sakhisizwe Local Municipality (Elliot)

The poor socio-economic conditions due to high levels of economic dependency are further exacerbated by low levels of income. Of those individuals that do earn an income, 68% earn less than R800 per month. The data revealed that 90% of the Potentially Economically Active Population in the Sakhisizwe Municipality lives below the poverty line (earning less than R800 per month), with 69% receiving no monthly income at all. A mere 1 % earn greater than R6401 per a month.

Elundini Local Municipality (Maclear)

The data from the 2007 Statistics South Africa revealed that 32.40% of the Economically Active Population in Elundini Municipality earn below the poverty line of R800 per month. 15.87% earn between R801 to 3 200 per month, 1.54% earn between R3 210 to R6 400 per month, 1.45% earn between R6401 to R12 800 per month and 0.62% earn more than R12 801 per month. 48.12% have no income.

It is clear from the figures above that approximately 50% of the Elundini population is unemployed. This has implications with regard to affordability of services and sustainability of these services. Many people are dependent on Social Grants. In general, skills levels are low throughout the district, with the majority of residents reliant on government/community services for employment or primary economic activities such as agriculture. These two sectors employ 69% of the formal workforce.

Emalahleni Municipality IDP 2014-2015
Sakhasizwe Local Municipality IDP 2010-2011
Eludini Local Municipality IDP 2010-2011

Level of education:

Emalahleni Local Municipality (Indwe) within Chris Hani District Municipality

About 35% of the entire population has no schooling whilst only 5% of the population has a matric (Grade 12) qualification. The levels of educational attainment are very low. This situation presents a major challenge for future economic growth because essential skills for growing the economy are limited and will be further reduced by this situation in which 37% of population has no schooling at all.

Sakhisizwe Local Municipality (Elliot)

The 2001 census data revealed that 20% of the Municipal population has not attended schools. Of those that have, 8% have completed their Matric. For the purpose of this study, the literacy rate indicates the percentage of people over 13 years of age who have completed Grade 7. The Literacy Rate for Sakhisizwe Municipality is 53.7%. This is below both the literacy rate for the Eastern Cape Province, which is 58%, and the National literacy rate of 68%.

Elundini Local Municipality (Maclear)

Elundini has the lowest levels of education in the District, with 68% of the population having only received a primary school education. There is a lack of educational facilities i.e. in Mount Fletcher there is only 1 FET College, 1 primary and 1 junior secondary school in the town. The high school is a few kilometres away. There are no tertiary facilities in the Municipality. The lack of education facilities is further exacerbated by the dilapidated condition of present facilities, especially some of the farm schools.

About 21% of the entire population has no schooling whilst 47% has grade 0-6. Only 3% of the population has a matric (Grade 12) qualification and 2% has a matric with a tertiary education.

Emalahleni Municipality IDP 2014-2015
 Sakhisizwe Local Municipality IDP 2010-2011
 Elundini Local Municipality IDP 2010-2011

b) Socio-economic value of the activity

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

R545,288,893.20
 for alternative 1
 R583,003,556.50
 for alternative 2

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

R 0

Will the activity contribute to service infrastructure?

YES x	NO
-------	----

Is the activity a public amenity?

YES x	NO
-------	----

How many new employment opportunities will be created in the development and construction phase of the activity/ies?

Approximately 80
 per day over a 24
 month
 construction
 period

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

Approximately
 R32 million

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What percentage of this will accrue to previously disadvantaged individuals?	Approximately 80 %
How many permanent new employment opportunities will be created during the operational phase of the activity?	None
What is the expected current value of the employment opportunities during the first 10 years?	None
What percentage of this will accrue to previously disadvantaged individuals?	None

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) x	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	Part of mapped corridors.
				Part of expert mapped areas and high irreplaceability sites from marxan analysis for province.

Note: The entire area consists of Critical Biodiversity Areas 1 & 2 according to the Terrestrial Critical Biodiversity Areas for the Eastern Cape (2007). It is therefore clear that this vegetation type is of conservation importance (Map 5). However, the majority of the road reserve has been degraded to such an extent that it does not represent conservable areas of these vegetation types. Nonetheless it may still be possible for rare and endangered species to occur within the road reserve.

- 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	0%	
Near Natural	100%	The study area within the R56 road reserve.

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(includes areas with low to moderate level of alien invasive plants)		
Degraded (includes areas heavily invaded by alien plants)	0 %	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	0%	

c) Complete the table to indicate:

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

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

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)

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Road section to be rehabilitated

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Watercourses

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Several significant and extensive wetlands occur in the area associated with streams, rivers and catchment origins (Seasonal Stream 4, Seasonal Stream 25, Seasonal Stream 27, Multiple drainage lines and Gatberg River Wetland, Kuntombizinzi River and Seasonal Stream 34) (Table 2 & Map 1 - 4). These wetlands are all in a good condition and provide a vital ecosystem function. The wetlands must be considered as the most sensitive areas to be affected by the construction. Utmost care will have to taken when construction occurs in these areas.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Daily Dispatch	
Date published	20 January 2015	
Site notice position	Latitude	Longitude
	31°27' 51.69" S	27°20' 11.91" E
	31°20' 04.29" S	27°50' 52.77" E
	31°03' 48.13" S	28°20' 44.74" E
Date placed	4 February 2015	

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

2. DETERMINATION OF APPROPRIATE MEASURES

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

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

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Dr Sitembele Wiseman Vatala	Emalahleni Local Municipality (Indwe) Municipal Manager	Tel: 047 878 0020/2004 0832705821/0794900006 Fax: 047 878-0303 vatalas@emalahlenilm.gov.za
Mr T Samuel	Sakhisizwe Local Municipality (Elliot) Municipal Manager	Tel: 045 931-1011 Fax: 045 931-1361 tsamuel@sakhisizwe.gov.za
Mr Kayaletu Gashi	Elundini Local Municipality (Maclear) Municipal Manager	Tel: 045 932-8100 Fax: 045 932-1094 khayag@elundini.gov.za
M K Bootman	Ward Councillor Indwe	Tel: 0822576279 Fax: 047 878-0303 vatalas@emalahlenilm.gov.za
Mr T Doda	Ward Councillor Elliot	Tel: 0832605785 Fax: 045 931-1361 Gobeka.nkula@Sakhisizwe.gov.za
Mr John Klaas	Ward Councillor Maclear	Tel: 0823050160 Fax: 045 932-1094 johnk@elundini.gov.za

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

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;

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- 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
Extensive public participation held. See issues and response report in Appendix E3.	Extensive public participation held. See issues and response report in Appendix E3.

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Eastern Cape Department of Economic Development, Environmental Affairs and Tourism	Environmental Quality Management	045 808-4017	086 612 5063	None	PO Box 9636 Queenstown 5320
South African Heritage Resources Agency	Mr Phillip Hine	021 462 4502	021 462 4509	phine@sahra.org.za (information to be posted on SAHRA website)	PO Box 4637 Cape Town 8000
Department of Water and Sanitation	Mr Tandile Ngcume	043 604-5402 043 604-5418	043 604-5592	ngcumet@dwa.gov.za	Private Bag X7485 King William's Town 5600

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

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

6. CONSULTATION WITH OTHER STAKEHOLDERS

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

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

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

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

SECTION D: IMPACT ASSESSMENT

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

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

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

Activity	Impact summary	Significance	Proposed mitigation
Alternative A1 (preferred alternative)			
<u>Planning and design phase</u>	<p>Direct impacts:</p> <ul style="list-style-type: none"> • Placement and access of construction site camp area. • Designs of drainage systems (culverts and pipes) at sensitive riparian areas. • Design of widening of culverts. 	<p>Medium</p> <p>Medium</p> <p>Medium</p>	<ul style="list-style-type: none"> • The final design of the road must include the appropriate siting of all construction camps (i.e. site camps and worker accommodation camps, where required), as well as a site layout plan. • The establishment of a construction yard may only occur in an area that has previously been

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Activity	Impact summary	Significance	Proposed mitigation
			<p>disturbed. This area must be approved by the Environmental Control Officer (ECO) and must be inspected regularly.</p> <ul style="list-style-type: none"> • Drainage systems shall be adequately designed to allow for run-off from a 1:50 year flood condition for large culverts and 1:10 for minor culverts. Culverts, pipes and channels shall be concrete lined. In designing culverts along the proposed route, it must be ensured that drainage systems are kept as natural as possible. Natural drainage should be retained, and normal flow ensured at all times.
	<p><i>Indirect impacts:</i> <u>Planning and design phase</u></p> <p>Possible relocation of services i.e. water pipes.</p>	<p>High</p>	<ul style="list-style-type: none"> • Where service disruption is inevitable, the Contractor must advise the Engineer at least 7 days in advance, allowing enough time to inform affected parties. • Any complaints must be included in the complaints register maintained on site. • Updated information boards must be maintained on site and must include contact details for complaints by the public in accordance

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Activity	Impact summary	Significance	Proposed mitigation
	<p data-bbox="459 342 839 416"><u>Cumulative impacts:</u> <u>Planning and design phase</u></p> <p data-bbox="459 454 839 562">There are no cumulative impacts associated with the design phase.</p>	None	<p data-bbox="1098 237 1406 304">with details provided by the Engineer.</p> <p data-bbox="1050 454 1118 488">None</p>
<p data-bbox="204 640 373 707"><u>Construction phase</u></p>	<p data-bbox="459 640 655 674"><u>Direct impacts:</u></p> <ul data-bbox="459 719 839 1615" style="list-style-type: none"> • Possible impacts to the streams with the extension of culverts and pipes; • Possible impact on protected species in the road reserve; • Possible impact on mammals and snakes; • Possible erosion of soils and loss of topsoil; • Possible invasion of exotic species; • Possible pollution by solid waste; • Possible sewage pollution; • Possible pollution of fuels and gas as a result of inadequate storage; • Possible pollution by cement or concrete; • Possible noise pollution; • Possible dust pollution. • Possible impact on archaeological sites. 	<p data-bbox="861 712 920 745">High</p> <p data-bbox="861 824 920 857">High</p> <p data-bbox="861 1003 959 1037">Medium</p> <p data-bbox="861 1149 920 1182">High</p> <p data-bbox="861 1227 959 1261">Medium</p> <p data-bbox="861 1294 959 1328">Medium</p> <p data-bbox="861 1373 959 1406">Medium</p> <p data-bbox="861 1440 959 1473">Medium</p> <p data-bbox="861 1518 959 1552">Medium</p> <p data-bbox="861 1597 959 1630">Medium</p> <p data-bbox="861 1664 920 1697">High</p>	<ul data-bbox="1050 678 1406 2029" style="list-style-type: none"> • The area contains a high diversity of species and as a result also a significant amount of conservational significant species (Appendix B). Protected species identified includes <i>Aloe ecklonis</i>, <i>Aristea abyssinica</i>, <i>Brunsvigia grandiflora</i>, <i>Crocoshmia paniculata</i>, <i>Habenaria dives</i>, <i>Kniphofia parviflora</i>, <i>Pelargonium sidoides</i>, <i>Satyrium parviflorum</i>, <i>S. sphaerocarpum</i> and <i>Scadoxus puniceus</i> but are not confined to these species. Of these <i>Pelargonium sidoides</i> is also listed as a Declining species within the National Red List. It is recommended that protected species occurring in the road reserve and which will be affected by construction be removed and transplanted to an adjacent area where they will not be affected. Permits must be obtained for transplanting these species. • There is a high likelihood

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Activity	Impact summary	Significance	Proposed mitigation
			<p>that several mammal species may inhabit the road reserve. These are limited to opportunistic, widespread species that are well adapted to the disturbed conditions. No animal species may be harmed in any way and no hunting or capturing of animals may be permitted. These animals will move out of the road reserve of their own accord.</p> <ul style="list-style-type: none"> • In the event of poisonous snakes or other dangerous animals encountered on the site an experienced and certified snake handler or zoologist must remove these animals from the site and re-locate them to a suitable area. • A large number of perennial rivers, streams and wetlands are being crossed by the road. As these occur in the headwaters region the majority are listed as National Freshwater Ecosystems Priority Areas (NFEPA): Priority Areas, Fish Sanctuaries and Upstream Areas. They must therefore be considered as being highly important for conservation and sustained functioning of these systems. At no time may these perennial streams be blocked in full. A portion of these watercourses should at all times contain stream flow.

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Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> • Several significant and extensive wetlands occur in the area associated with streams,rivers and catchment origins (Seasonal Stream 4, Seasonal Stream 25, Seasonal Stream 27, Multiple drainage lines and Gatberg River Wetland, Kuntombizinzi River and Seasonal Stream 34) (Table 2 & Map 1 - 4). These wetlands are all in a good condition and provide a vital ecosystem function. The wetlands must be considered as the most sensitive areas to be affected by the construction. Utmost care will have to taken when construction occurs in these areas. • Several streams flow through ravines or form the origin of watercourses (Seasonal Stream 2, Seasonal Stream 25, Seasonal Stream 26, Seasonal Stream 27, Seasonal Stream 34). These are also considered highly sensitive (Table 2 & Map 1 - 4). • The majority of rivers streams and wetlands being crossed by the R56 are in a relatively good condition (Table 2 & Map 1 - 4). These must all be regarded as sensitive with several being considered as highly sensitive including all perennial systems, catchment origin

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Activity	Impact summary	Significance	Proposed mitigation
			<p>wetlands and streams, ravines and large wetlands. No alterations to flow patterns should be allowed in any of the stream. The disturbance of the stream banks must also be kept to a minimum. The following recommendations should be adhered to, to ensure that disturbance of the watercourses and wetlands are kept to a minimum:</p> <ul style="list-style-type: none"> □ Disturbance and sedimentation of the stream bed must be prevented as far as possible. The use of attenuation ponds must be investigated where disturbance of the stream bed will take place. □ Any construction within the streams should preferably take place during the dry season (June to September) when zero flows are present within these streams. This will prevent water erosion of the stream bed sediments. □ Construction within the streams should preferably take place during the dry season (June to September) when zero flows are present within these streams. This will prevent water erosion of the stream bed sediments.

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Activity	Impact summary	Significance	Proposed mitigation
			<p>□ During installation of culverts, the riparian vegetation (reeds and sedges) should be removed together with the topsoil and replaced afterwards in bare areas. This will speed up recovery of the riparian vegetation.</p> <p>□ If it is not possible to install culverts during the dry season only half of the stream may be blocked off during culvert installation (applicable only if main channel flow is present).</p> <p>□ Following completion of the culvert installation the area will be susceptible to erosion. This must be prevented by the use of gabions or other geotextiles.</p> <p>□ The time period for the installation of culverts should be kept to a minimum.</p> <p>□ After cessation of construction the culverts should be regularly inspected for erosion and this should be corrected.</p> <ul style="list-style-type: none"> • Wherever the removal of topsoil is necessary the topsoil should be stockpiled separately and protected against weed infestation and erosion. • Topsoil should be

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Activity	Impact summary	Significance	Proposed mitigation
			<p>replaced on top of the soil surface where it has been removed as soon as possible.</p> <ul style="list-style-type: none"> • It is preferred that natural vegetation be allowed to establish within the road reserve while weed eradication is constantly exercised. • After construction the areas cleared of vegetation will be susceptible to infestation by invader weed species. The road reserve should be monitored for the presence of invader weed species (Refer to Appendix C for likely invader species to be removed). • Areas that have become compacted due to construction activities should be ripped/scarified. • After cessation of activities on the site the area should be rehabilitated to acceptable standards. • After construction has ceased all construction materials should be removed from the road reserve. • It is requested that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.
	Indirect impacts:		<ul style="list-style-type: none"> • All alien vegetation in the

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Activity	Impact summary	Significance	Proposed mitigation
	<ul style="list-style-type: none"> • Possible weed invaders as a result of disturbance of soil. • Possible erosion at stream banks 	<p>Medium</p> <p>High</p>	<p>road reserve should be removed upon completion of construction.</p> <ul style="list-style-type: none"> • Bank vegetation cover should be monitored to ensure that sufficient vegetation is present to bind the bankside soils and prevent further bankside erosion.
	<p>Cumulative impacts:</p> <ul style="list-style-type: none"> • Possible additional traffic on the roads during construction; • Possible influx of people in the area during construction. 	<p>High</p> <p>Medium</p>	<ul style="list-style-type: none"> • The additional traffic will be managed by the contractor through the traffic management as included in the tender document to the project. • A Public Liaison Officer (PLO) should be appointed through the relevant ward councillor to manage the employment opportunities on the project.
<p><u>Operational phase (Maintenance phase)</u></p>	<p><u>Direct impacts:</u></p> <ul style="list-style-type: none"> • Possible increase in alien vegetation; • Possible bank failure at aquatic systems present 	<p>Medium</p> <p>High</p>	<ul style="list-style-type: none"> • Mechanical control of alien plants around disturbed areas to be implemented within three months of completion of construction. Thereafter every six months. Mechanical control to be of such a nature as to allow local, indigenous grasses and other pioneers to colonise the previously disturbed areas, thereby keeping out alien invasives. • No chemical control (herbicides) of alien plants to be used. Herbicides could get

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Activity	Impact summary	Significance	Proposed mitigation
			<p>into the water system and will have a detrimental effect on the environment.</p> <ul style="list-style-type: none"> • Areas around foundations, culverts, gabions, etc. need to be check before and after the summer rainy season for signs of soil erosion due to stormwater run-off. Such sites need to be modified and rehabilitated to prevent ongoing erosion. These sites need to be monitored more closely than other sites which show no or minimal signs of erosion. • No inspection or other vehicles to drive through watercourses except where there are existing bridges, roads and other existing crossovers.
	<p>Indirect impacts:</p> <p>There is no indirect impacts associated with the maintenance phase</p>	None	None
	<p>Cumulative impacts:</p> <p>There is no cumulative impacts associated with the maintenance phase</p>	None	None
<p><u>Decommissioning and closure phase.</u></p> <p>This phase only pertains to the decommissioning</p>	<p>Direct impacts:</p> <ul style="list-style-type: none"> • To ensure that disturbed areas and the construction site camp are rehabilitated after construction has been completed. 	High	<ul style="list-style-type: none"> • It is preferred that natural vegetation be allowed to establish within the road reserve while weed eradication is constantly exercised. • After construction, the

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Activity	Impact summary	Significance	Proposed mitigation
<p>of the construction camp site. The road itself will not be decommissioned in the foreseeable future.</p>			<p>areas cleared of vegetation will be susceptible to infestation by invader weed species. The road reserve should be monitored for the presence of invader weed species (Refer to Appendix D of specialist report by Eko Environmental for likely invader species to be removed).</p> <ul style="list-style-type: none"> • Areas that have become compacted due to construction activities should be ripped. • After cessation of activities on the site the area should be rehabilitated to acceptable standards. • After construction has ceased all construction materials should be removed from the road reserve.
	<p>Indirect impacts:</p> <p>There is not indirect impacts associated with the decommissioning phase</p>	<p>None</p>	<p>None</p>
	<p>Cumulative impacts:</p> <p>There is not indirect impacts associated with the decommissioning phase</p>	<p>None</p>	<p>None</p>
<p>Alternative A2</p>			
<p><u>Planning and design phase</u></p>	<p>Direct impacts:</p> <ul style="list-style-type: none"> • Placement and access of construction site camp area. • Designs of drainage systems (culverts and 	<p>Medium</p> <p>Medium</p>	<ul style="list-style-type: none"> • The final design of the road must include the appropriate siting of all construction camps (i.e. site camps and worker accommodation camps,

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Activity	Impact summary	Significance	Proposed mitigation
	<p>pipes) at sensitive riparian areas.</p> <ul style="list-style-type: none"> • Design of widening of culverts. 	<p>Medium</p>	<p>where required), as well as a site layout plan.</p> <ul style="list-style-type: none"> • The establishment of a construction yard may only occur in an area that has previously been disturbed. This area must be approved by the Environmental Control Officer (ECO) and must be inspected regularly. • Drainage systems shall be adequately designed to allow for run-off from a 1:50 year flood condition for large culverts and 1:10 for minor culverts. Culverts, pipes and channels shall be concrete lined. In designing culverts along the proposed route, it must be ensured that drainage systems are kept as natural as possible. Natural drainage should be retained, and normal flow ensured at all times.
	<p><u>Indirect impacts:</u> <u>Planning and design phase</u></p> <p>Possible relocation of services i.e. water pipes.</p>	<p>High</p>	<ul style="list-style-type: none"> • Where service disruption is inevitable, the Contractor must advise the Engineer at least 7 days in advance, allowing enough time to inform affected parties. • Any complaints must be included in the complaints register maintained on site. • Updated information

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Activity	Impact summary	Significance	Proposed mitigation
	<p data-bbox="459 526 837 600"><u>Cumulative impacts:</u> <u>Planning and design phase</u></p> <p data-bbox="459 638 837 745">There are no cumulative impacts associated with the design phase.</p>	None	<p data-bbox="1098 230 1407 488">boards must be maintained on site and must include contact details for complaints by the public in accordance with details provided by the Engineer.</p> <p data-bbox="1050 638 1118 667">None</p>
<p data-bbox="204 835 371 902"><u>Construction phase</u></p>	<p data-bbox="459 835 655 869"><u>Direct impacts:</u></p> <ul data-bbox="459 909 837 1848" style="list-style-type: none"> • Possible impacts to the streams with the extension of culverts and pipes; • Possible impact on protected species in road reserve; • Possible impact on mammals and snakes; • Possible erosion of soils and loss of topsoil; • Possible invasion of exotic species; • Possible pollution of solid waste; • Possible sewage pollution; • Possible pollution of fuels and gas as a result of inadequate storage; • Possible pollution by cement or concrete; • Possible noise pollution; • Possible dust pollution; • Possible impact on archaeological sites and graves 	<p data-bbox="863 909 922 943">High</p> <p data-bbox="863 1016 922 1050">High</p> <p data-bbox="863 1167 922 1200">High</p> <p data-bbox="863 1205 922 1238">High</p> <p data-bbox="863 1272 959 1305">Medium</p> <p data-bbox="863 1350 959 1384">Medium</p> <p data-bbox="863 1417 959 1451">Medium</p> <p data-bbox="863 1496 959 1529">Medium</p> <p data-bbox="863 1574 959 1608">Medium</p> <p data-bbox="863 1675 959 1709">Medium</p> <p data-bbox="863 1713 959 1747">Medium</p> <p data-bbox="863 1787 922 1821">High</p>	<ul data-bbox="1050 835 1407 2033" style="list-style-type: none"> • The area contains a high diversity of species and as a result also a significant amount of conservational significant species (Appendix B). Protected species identified includes <i>Aloe ecklonis</i>, <i>Aristea abyssinica</i>, <i>Brunsvigia grandiflora</i>, <i>Crocoshmia paniculata</i>, <i>Habenaria dives</i>, <i>Kniphofia parviflora</i>, <i>Pelargonium sidoides</i>, <i>Satyrium parviflorum</i>, <i>S. sphaerocarpum</i> and <i>Scadoxus puniceus</i> but are not confined to these species. Of these <i>Pelargonium sidoides</i> is also listed as a Declining species within the National Red List. It is recommended that protected species occurring in the road reserve and which will be affected by construction be removed and transplanted to an adjacent area where they will not be affected.

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Activity	Impact summary	Significance	Proposed mitigation
		High	<p>Permits must be obtained for transplanting these species.</p> <ul style="list-style-type: none"> • There is a high likelihood that several mammal species may inhabit the road reserve. These are limited to opportunistic, widespread species that are well adapted to the disturbed conditions. No animal species may be harmed in any way and no hunting or capturing of animals may be permitted. These animals will move out of the road reserve of their own accord. • In the event of poisonous snakes or other dangerous animals encountered on the site an experienced and certified snake handler or zoologist must remove these animals from the site and re-locate them to a suitable area. • A high amount of perennial rivers, streams and wetlands are being crossed by the road. As these occur in the headwaters region the majority are listed as National Freshwater Ecosystems Priority Areas (NFEPA): Priority Areas, Fish Sanctuaries and Upstream Areas. They must therefore be considered as being highly important for conservation and sustained functioning of these systems. At no time may these perennial streams be blocked in

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Activity	Impact summary	Significance	Proposed mitigation
			<p>full. A portion of these watercourses should at all times contain stream flow.</p> <ul style="list-style-type: none"> • Several significant and extensive wetlands occur in the area associated with streams,rivers and catchment origins (Seasonal Stream 4, Seasonal Stream 25, Seasonal Stream 27, Multiple drainage lines and Gatberg River Wetland, Kuntombizinzi River and Seasonal Stream 34) (Table 2 & Map 1 - 4). These wetlands are all in a good condition and provide a vital ecosystem function. The wetlands must be considered as the most sensitive areas to be affected by the construction. Utmost care will have to taken when construction occurs in these areas. • Several streams flow through ravines or form the origin of watercourses (Seasonal Stream 2, Seasonal Stream 25, Seasonal Stream 26, Seasonal Stream 27, Seasonal Stream 34). These are also considered highly sensitive (Table 2 & Map 1 - 4). • The majority of rivers streams and wetlands being crossed by the R56 are in a relatively good condition (Table 2 & Map 1 - 4). These must all be regarded as sensitive with several

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Activity	Impact summary	Significance	Proposed mitigation
			<p>being considered as highly sensitive including all perennial systems, catchment origin wetlands and streams, ravines and large wetlands. No alterations to flow patterns should be allowed in any of the stream. The disturbance of the stream banks must also be kept to a minimum. The following recommendations should be adhered to, to ensure that disturbance of the watercourses and wetlands are kept to a minimum:</p> <ul style="list-style-type: none"> ▣ Disturbance and sedimentation of the stream bed must be prevented as far as possible. The use of attenuation ponds must be investigated where disturbance of the stream bed will take place. ▣ Any construction within the streams should preferably take place during the dry season (June to September) when zero flows are present within these streams. This will prevent water erosion of the stream bed sediments. ▣ Construction within the streams should preferably take place during the dry season (June to September) when zero flows are present within these

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Activity	Impact summary	Significance	Proposed mitigation
			<p>streams. This will prevent water erosion of the stream bed sediments.</p> <p>□ During installation of culverts, the riparian vegetation (reeds and sedges) should be removed together with the topsoil and replaced afterwards in bare areas. This will speed up recovery of the riparian vegetation.</p> <p>□ If it is not possible to install culverts during the dry season only half of the stream may be blocked off during culvert installation (applicable only if main channel flow is present).</p> <p>□ Following completion of the culvert installation the area will be susceptible to erosion. This must be prevented by the use of gabions or other geotextiles.</p> <p>□ The time period for the installation of culverts should be kept to a minimum.</p> <p>□ After cessation of construction the culverts should be regularly inspected for erosion and this should be corrected.</p> <ul style="list-style-type: none"> • Wherever the removal of topsoil is necessary the topsoil should be

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Activity	Impact summary	Significance	Proposed mitigation
			<p>stockpiled separately and protected against weed infestation and erosion.</p> <ul style="list-style-type: none"> • Topsoil should be replaced on top of the soil surface where it has been removed as soon as possible. • It is preferred that natural vegetation be allowed to establish within the road reserve while weed eradication is constantly exercised. • After construction the areas cleared of vegetation will be susceptible to infestation by invader weed species. The road reserve should be monitored for the presence of invader weed species (Refer to Appendix C for likely invader species to be removed). • Areas that have become compacted due to construction activities should be ripped/scarified. • After cessation of activities on the site the area should be rehabilitated to acceptable standards. • After construction has ceased all construction materials should be removed from the road reserve. • It is requested that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and

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Activity	Impact summary	Significance	Proposed mitigation
	<p>Indirect impacts:</p> <ul style="list-style-type: none"> • Possible weed invaders as a result of disturbance of soil. • Possible erosion at stream banks 	<p>Medium</p> <p>High</p>	<p>evaluation of the finds can be made.</p> <ul style="list-style-type: none"> • All alien vegetation in the road reserve should be removed upon completion of construction. • Bank vegetation cover should be monitored to ensure that sufficient vegetation is present to bind the bankside soils and prevent further bankside erosion.
	<p>Cumulative impacts:</p> <ul style="list-style-type: none"> • Possible additional traffic on the roads during construction; • Possible influx of people in the area during construction. 	<p>High</p> <p>Medium</p>	<ul style="list-style-type: none"> • The additional traffic will be managed by the contractor through the traffic management as included in the tender document to the project. • A Public Liaison Officer (PLO) should be appointed through the relevant ward councillor to manage the employment opportunities on the project.
<p><u>Operational phase (Maintenance phase)</u></p>	<p><u>Direct impacts:</u></p> <ul style="list-style-type: none"> • Possible increase in alien vegetation; • Possible bank failure at aquatic systems present 	<p>Medium</p> <p>High</p>	<ul style="list-style-type: none"> • Mechanical control of alien plants around disturbed areas to be implemented within three months of completion of construction. Thereafter every six months. Mechanical control to be of such a nature as to allow local, indigenous grasses and other pioneers to colonise the previously disturbed areas, thereby keeping out alien invasives.

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Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> • No chemical control (herbicides) of alien plants to be used. Herbicides could get into the water system and will have a detrimental effect on the environment. • Areas around foundations, culverts, gabions, etc. need to be checked before and after the summer rainy season for signs of soil erosion due to stormwater run-off. Such sites need to be modified and rehabilitated to prevent ongoing erosion. These sites need to be monitored more closely than other sites which show no or minimal signs of erosion. • No inspection or other vehicles to drive through watercourses except where there are existing bridges, roads and other existing crossovers.
	<p>Indirect impacts:</p> <p>There is no indirect impacts associated with the maintenance phase</p>	None	None
	<p>Cumulative impacts:</p> <p>There is no cumulative impacts associated with the maintenance phase</p>	None	None
<p><u>Decommissioning and closure phase</u></p>	<p>Direct impacts:</p> <ul style="list-style-type: none"> • To ensure that 	High	<ul style="list-style-type: none"> • It is preferred that natural vegetation be allowed to establish within the road

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Activity	Impact summary	Significance	Proposed mitigation
<p>This phase only pertains to the decommissioning of the construction camp site. The road itself will not be decommissioned in the foreseeable future.</p>	<p>disturbed areas, the construction site camp and borrow pits/quarries are rehabilitated after construction has been completed.</p>		<p>reserve while weed eradication is constantly exercised.</p> <ul style="list-style-type: none"> • After construction the areas cleared of vegetation will be susceptible to infestation by invader weed species. The road reserve should be monitored for the presence of invader weed species (Refer to Appendix D of specialist report by Eko Environmental for likely invader species to be removed). • Areas that have become compacted due to construction activities should be ripped. • After cessation of activities on the site the area should be rehabilitated to acceptable standards. • After construction has ceased all construction materials should be removed from the road reserve.
	<p>Indirect impacts:</p> <p>There is not indirect impacts associated with the decommissioning phase</p>	<p>None</p>	<p>None</p>
	<p>Cumulative impacts:</p> <p>There is not indirect impacts associated with the decommissioning phase</p>	<p>None</p>	<p>None</p>
No-go option			
	<p>Direct impacts:</p> <ul style="list-style-type: none"> • Increase in unsafe driving conditions; • Increase in traffic accidents; 	<p>High</p>	<p>Special Maintenance of the road.</p>

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Activity	Impact summary	Significance	Proposed mitigation
	<ul style="list-style-type: none"> Increase in loss of lives. 		
	<p>Indirect impacts: Possible traffic accidents as a result of poor driving conditions. Possible injury and death of travelling public.</p>	High	Special Maintenance of the road.
	<p>Cumulative impacts: High health care costs as a result of traffic accidents.</p>	High	None

A complete impact assessment in terms of Regulation 22(2)(i) of GN R.543 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 A1 (preferred alternative)

a) Introduction

This option entails the special maintenance of National Route R56 Sections 6 and 7 between Indwe And Maclear with an emulsion treated base in the Eastern Cape Province. The R56 is an existing road that requires special maintenance. The maintenance of the road will not extend beyond the existing road reserve.

The R56 Section 6 is from Indwe (km 0.0) and Elliot (km 58.14) and is 58.14 km in length. This section falls within the Emalahleni Local Municipality. The R56 Section 7 between Elliot (km 0.0) and Maclear (km 68.36) is 68.36 km in extent and falls within the Elundini Local Municipality. The total length of the project is 126.50 km in extent.

The following is included in the scope of works:

- Strengthening of portions of the existing pavement,
- Patching and repair of the existing pavement,
- Resurfacing of the road,
- Installation of subsurface drainage in certain cuttings,
- Clearing and shaping of existing open drains,
- Replacing of the existing road reserve fencing,
- Replacing of existing guardrails,
- Replacing of existing culverts,

- Construction of new culverts.

b) This option is favoured for the following reasons

The various types of investigations and analyses of pavement data indicate that the pavement structure is severely distressed in the proposed special maintenance sections and structural strengthening is required. Due to the low density observed in the subbase throughout both sections, some form of stabilisation or compaction of the in-situ subbase is required for all pavement alternatives considered. A cement stabilised subbase (C4) is proposed in all cases for design purposes.

The emulsion treated base is expected to perform better in the wet regional climatic conditions.

c) Possible Environmental Impacts

The main possible environmental impacts associated with the construction of this alternative is the following:

- Possible impacts to the streams with the extension of culverts and pipes;
- Possible impact on protected species in road reserve;
- Possible impact on mammals and snakes;
- Possible erosion of soils and loss of topsoil;
- Possible invasion of exotic species;
- Possible pollution of solid waste;
- Possible sewage pollution;
- Possible pollution of fuels and gas as a result of inadequate storage;
- Possible pollution by cement or concrete;
- Possible noise pollution;
- Possible dust pollution;
- Possible impact on archaeological sites and graves (An informal cemetery west of the road at km and two old farm labourer homesteads and stone cairn at borrow pit 8 will not be impacted upon).

Should the mitigation measures as included in the EMPr for the project are adhered to, the possible impacts related to this project will be medium to low.

d) Specialist Studies Undertaken

Two specialist studies were undertaken for this project i.e.

- Report on the biodiversity, ecological and wetland assessment of the proposed special maintenance of National Road R56 from Indwe to Maclear, Eastern Cape Province undertaken by Eko Environmental dated March 2015.
- Cultural Heritage Impact Assessment for the special maintenance of Provincial Road R56 from Indwe to Maclear, Eastern Cape Province undertaken by Dr J van Schalkwyk dated March 2015.

e) Recommendations by Specialist Reports

The following recommendations were included in the specialist reports and included in the EMPr for the project:

(i) Biodiversity, Ecological and Wetland Assessment

The following are recommended by this study (Appendix D):

- The establishment of a construction yard may only occur in an area that has previously been disturbed. This area must be approved by the Environmental Control Officer (ECO) and must be inspected regularly.
- The road is situated within an area which contains a high diversity of species. Although the road reserve is degraded it still contains a significant diversity of species. As a result the clearance of vegetation within the road reserve should be kept to a minimum.
- The area contains a high diversity of species and as a result also a significant amount of conservational significant species (Appendix B). Protected species identified includes *Aloe ecklonis*, *Aristea abyssinica*, *Brunsvigia grandiflora*, *Crocoshmia paniculata*, *Habenaria dives*, *Kniphofia parviflora*, *Pelargonium sidoides*, *Satyrium parviflorum*, *S. sphaerocarpum* and *Scadoxus puniceus* but are not confined to these species. Of these *Pelargonium sidoides* is also listed as a Declining species within the National Red List. It is recommended that protected species occurring in the road reserve and which will be affected by construction be removed and transplanted to an adjacent area where they will not be affected. Permits must be obtained for transplanting these species.
- There is a high likelihood that a few mammal species may inhabit the road reserve. These are limited to opportunistic, widespread species that are well adapted to the disturbed conditions. No animal species may be harmed in any way and no hunting or capturing of animals may be permitted. These animals will move out of the road reserve of their own accord.
- In the event of poisonous snakes or other dangerous animals encountered on the site an experienced and certified snake handler or zoologist must remove these animals from the site and re-locate them to a suitable area.
- A high amount of perennial rivers, streams and wetlands are being crossed by the road. As these occur in the headwaters region the majority are listed as National Freshwater Ecosystems Priority Areas (NFEPAs): Priority Areas, Fish Sanctuaries and Upstream Areas. They must therefore be considered as being highly important for conservation and sustained functioning of these systems. At no time may these perennial streams be blocked in full. A portion of these watercourses should at all times contain stream flow.
- Several significant and extensive wetlands occur in the area associated with streams, rivers and catchment origins (Seasonal Stream 4, Seasonal Stream 25, Seasonal Stream 27, Multiple drainage lines and Gatberg River Wetland, Kuntombizinzi River and Seasonal Stream 34) (Table 2 & Map 1 - 4). These wetlands are all in a good condition and provide a vital ecosystem function. The wetlands must be considered as the most sensitive areas to be affected by the construction. Utmost care will have to be taken when construction occurs in these areas.

- Several streams flow through ravines or form the origin of watercourses (Seasonal Stream 2, Seasonal Stream 25, Seasonal Stream 26, Seasonal Stream 27, Seasonal Stream 34). These are also considered highly sensitive (Table 2 & Map 1 - 4).
- The majority of rivers streams and wetlands being crossed by the R56 are in a relatively good condition (Table 2 & Map 1 - 4). These must all be regarded as sensitive with several being considered as highly sensitive including all perennial systems, catchment origin wetlands and streams, ravines and large wetlands. No alterations to flow patterns should be allowed in any of the stream. The disturbance of the stream banks must also be kept to a minimum. The following recommendations should be adhered to, to ensure that disturbance of the watercourses and wetlands are kept to a minimum:
 - Disturbance and sedimentation of the stream bed must be prevented as far as possible. The use of attenuation ponds must be investigated where disturbance of the stream bed will take place.
 - Any construction within the streams should preferably take place during the dry season (June to September) when zero flows are present within these streams. This will prevent water erosion of the stream bed sediments.
 - During the special maintenance of the road along the streams and wetlands the riparian vegetation (reeds and sedges) should be removed intact with the topsoil and replaced afterwards in bare areas. This will speed up recovery of the riparian vegetation.
 - Where work is being done within perennial systems or seasonal systems during the rainy season only half the stream should be blocked off at a time and construction time should be kept to a minimum.
 - Following completion of the special maintenance process the area will be susceptible to erosion. This must be prevented by the use of gabions or other geotextiles.
 - The time period for the construction or associated activities within streams should be kept to a minimum.
 - After cessation of construction the culverts should be regularly inspected for erosion and this should be corrected.
 - Wherever the removal of topsoil is necessary the topsoil should be stockpiled separately and protected against weed infestation and erosion.
 - Topsoil should be replaced on top of the soil surface where it has been removed as soon as possible.
 - It is preferred that natural vegetation be allowed to establish within the road reserve
 - while weed eradication is constantly exercised.
 - After construction the areas cleared of vegetation will be susceptible to infestation by invader weed species. The road reserve should be monitored for the presence of invader weed species (Refer to Appendix C for likely invader species to be removed).
 - Areas that have become compacted due to construction activities should be ripped/scarified.
 - After cessation of activities on the site the area should be rehabilitated to acceptable standards.
 - After construction has ceased all construction materials should be removed from the road reserve.

(ii) Heritage Assessment

The following is recommended by this study (Appendix D):

A specialist heritage study was undertaken by Dr J van Schalkwyk dated March 2015 included in Appendix D called "Cultural Heritage Impact Assessment for the Proposed Special Maintenance of Sections 6 and 7 of Road R56 between Maclear and Indwe, Eastern Cape Province". The report contains the following conclusions:

The cultural landscape qualities of the region essentially consist of a rural setup. In this the human occupation is made up of a pre-colonial element consisting of Stone Age and limited Iron Age occupation, as well as a much later colonial (farmer) component. In recent years an urban element developed. The following sites, features and objects of cultural heritage significance have been identified to occur in close proximity of the study area (see Appendix 3 of the report in Appendix D for a detailed information on the locality and mitigation measures propose for each identified feature):

- Large stone circle with an entrance marked by two standing stones. It has a diameter of approximately 24 x 27m. No other built features that could be related to this structure were noticed in the immediate vicinity. Although this feature is clearly visible, its proximity to the road reserve might create a problem if road works is undertaken here. The feature should be avoided and fenced off with danger tape during any road works that might take place in its vicinity.
- A very large town cemetery with probably more than 1000 graves. It runs parallel to the road for a distance of approximately 550m. Some of the graves are located next to the road reserve. Although this cemetery is known and clearly visible, its proximity to the road reserve might create a problem if road works is undertaken here. The cemetery should be avoided and fenced off with danger tape during any road works that might take place in its vicinity.
- On 7 August 1981 MK operatives, working out of Lesotho, were engaged by SAP forces at a roadblock near Elliot. Currently this feature forms part of a heritage route recounting the struggle for liberation and as a result is well signposted. This feature is currently located within the boundary of the R56 road. Although this feature is clearly visible, its location in the road reserve might create a problem if road works is undertaken here. It is recommended that the memorial is retained in its current position. If this is not possible, it should be relocated a few metres to the west, outside of the road reserve, on condition of negotiating its new location with the current landowner.
- Memorial commemorating three Maclear rugby players that died here on 17 May 1990. This feature is currently located within the boundary of the R56 road. Although this feature is clearly visible, its location in the road reserve might create a problem if road works is undertaken here. It is recommended that the memorial is retained in its current position. If this is not possible, it should be relocated a few metres to the west, outside of the road reserve, on condition of negotiating its new location with the current landowner.
- A large number of culverts and small bridgelets along the railway line running from Indwe to Maclear. The railway line was constructed during the period 1904 to 1906. For a number of sections the railway line runs very close to the existing R56, in some cases next to the road reserve fence. However, it is anticipated that the proposed development would not have an impact on these features.

From a heritage point of view we therefore recommend that the proposed development can continue, on

condition of acceptance of the above mitigation measures. We request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.

The special maintenance of the culverts will be conducted within the road reserve and the objects of cultural/heritage significance will not be impacted on.

f) Advantages and Disadvantages of the Preferred Alternative

(i) Advantages

- The safety to the traveling public will be significantly improved as the pavement will be maintained.
- This pavement option meets the required traffic bearing capacities;
- From an environmental point of view it is the most favourable option as this pavement option most likely requires the raw materials from local commercial suppliers. No additional borrow pits is expected to be opened.
- Less maintenance can be expected for an emulsion treated layer than for a granular /crushed stone material;
- Reduced water susceptibility of the Emulsion Treated Base layer;
- Faster construction times with this option;
- It implies the minimum change in vertical alignment;
- It is anticipated that the traffic accidents that occur on this road will be reduced with this option;
- It is anticipated that the special maintenance of the road will cater for future traffic demand and will support economic growth. This will benefit the communities in the area including local residents, motorists, the road freight industry and its customers. The special maintenance of the road will, therefore, ensure safer driving conditions for the traveling public by enabling vehicles to travel more efficiently and smoothly.

(ii) Disadvantages

- This option is more expensive than granular base pavements.
- Protected species will have to be relocated.

g) Sustainable Development

It will be attempted to implement the following:

- i. Compact fluorescent lights will be installed in the site offices;
- ii. All solid waste will be separated in different containers to make recycling possible;
- iii. Where new toilets will be installed dual flush device toilets will be installed;
- iv. Storm water will be managed and improved to reduce erosion by installing gabion boxes;
- v. Where new grassing is done, it will be done by using locally indigenous vegetation;
- vi. Training of staff will be done to implement good housekeeping. This will be done during toolbox talks.
- vii. A Designated Environmental Officer will address the staff on good housekeeping actions.

h) Final Conclusion

This is the preferred alternative for the construction project from an economic and practicality perspective and will increase the level of service to acceptable standards for the long term. The impacts related to the extension of the culverts will be high during construction but is not anticipated to have any long term impact as the flow dynamics will not be altered.

The vegetation that is currently in the road reserve is regarded as degraded and heavily invaded by alien plants. The impact related to the clearing of vegetation in the road reserve, is therefore, considered low. The protected species in the road reserve should be transplanted before construction commences.

From a heritage point of view, it is recommend that the proposed development can continue, on condition of acceptance of the mitigation measures as included in the report. Should an archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.

The traffic disruption during the 24 month construction period is considered high but is a short term impact. The construction related impacts are also considered to be short terms and with mitigation measures, to be of low impact.

The primary findings for the special maintenance of National Route 56 between Indwe and Maclear would probably result in:

- No negative environmental impacts of high significance with mitigation;
- Positive impacts related to improved traffic flow and reduced traffic accidents;
- Potential positive impacts due to increased economic activity, employment and training and capacity building.

Therefore, alternative 1 (preferred alternative) presents a better option than the alternative 2 for the proposed project in terms of the parameters investigated. The essence of the Basic Assessment process is aimed at ensuring informed decision-making and environmental accountability, and to assist in achieving environmentally sound and sustainable development. No long-term environmental impact should arise with this alternative.

In conclusion, it is believed the information contained in this report and the documentation attached hereto is sufficient to make a decision in respect of the activity applied for. This report covers the full suite of potential environmental issues related to the proposed development, and that sufficient information regarding the identification, assessment and potential mitigation of impacts has been presented to facilitate informed decision making by the appropriate authorities. Based on the specialist studies undertaken within this BA, both benefits and negative impacts are anticipated as a result of the proposed project. The findings of this BAR have highlighted these impacts and prioritised them in terms of high, medium or low significance. It is therefore recommended that this project be authorized by the authorities with the condition that the mitigation measures as stipulated in the EMPr should be adhered to. The authorities need to use this document to aid the decision- making process with respect to the future outcome of this proposal.

An Environmental Management Programme is included detailing the management of the environmental aspects during the design, construction and decommissioning period.

Alternative A2

This alternative entails the special maintenance of National Route R56 Sections 6 and 7 between Indwe And Maclear with a high quality crushed stone base in the Eastern Cape Province. The possible environmental impacts identified and construction related impacts will be similar to that of Alternative A1.

1. Advantages and Disadvantages of this Alternative

(i) Advantages

- Analyses suggest that these types of pavements can easily attain the desired design bearing capacities on these low trafficked roads.

(ii) Disadvantages

- This option will require the opening of borrow pits and/or quarries with associated impacts on the environment.
- This layer will not perform well in the wet regional climatic conditions;
- The construction times with this option will be longer with associated impacts on the traveling community;
- The vertical alignment will have to be changed with the option with associated impacts on the environment.
- More maintenance can be expected for this option;
- Protected species need to be relocated.

From information received from the consulting engineers and potential environmental impacts that were identified during the Basic Assessment process that are associated with this alternative, the construction of this alternative is, therefore, not recommended.

Alternative A3

None

No-go alternative (compulsory)

Should the special maintenance not be undertaken on the road, the traffic on the R56 could experience increasingly unsafe driving conditions. Investigations and analyses of pavement data indicate that the pavement structure is severely distressed in the proposed special maintenance sections and structural strengthening is required to ensure the safety of the traveling public. This will also accommodate the predicted increase in traffic volume and avoid high driver frustration.

The volume of heavy vehicles is expected to increase significantly over the next 20 years. Traffic volumes and design principals determine that the pavement structure of the road needs to be maintained to ensure the safety of the traveling public. If this is not done, it is anticipated that accidents on this road will increase in future.

Indirect impacts:

Possible traffic accidents as a result of poor driving conditions.

Possible injury and death of travelling public.

BASIC ASSESSMENT REPORT

Cumulative impacts:
High health care costs as a result of traffic accidents.

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

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

- The mitigation measures included in the EMPr should be adhered to;
- A Designated Environmental Officer should be appointed during the construction period. The DEO will be responsible for the monitoring, reviewing and verifying of compliance with the EMPr by the applicant.
- Regular environmental audits should be undertaken, both internal and external by an independent auditor.
- During the construction phase, the premises and the works site must be maintained by the contractor in a reasonably neat and orderly condition and free from accumulation of waste materials and rubbish during the entire construction period.

Is an EMPr attached?

YES x	NO
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The EMPr must be attached as Appendix G.

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

Preparation of Basic Assessment Report

This Basic Assessment Report was prepared by Dr Jenine Bothma of Chameleon Environmental Consultants:

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Dr Bothma is certified as an Environmental Assessment Practitioner with the Interim Certification Board for Environmental Assessment Practitioners of South Africa.

Assumptions and Limitations

- a. The following assumptions have been made for the purposes of this report:
 - All information received from sources contributing to this project is correct;
 - That the SANRAL would consider the recommendations derived from this study, and
 - The Department of Environmental Affairs would be the decision making authority with regard to this application.

- b. Limitations
 - None.

- c. Knowledge Gaps

None

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.

Dr Josephine Bothma _____
NAME OF EAP



SIGNATURE OF EAP

2015-04-13 _____
DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps and co-ordinates taken every 250 meters

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information