



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Inter-basin Transfer Scheme. The river receives water from the Gariep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Inter-basin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River Crossing 1, located on the DWS servitude is going to be upgraded by removing the structures that were part of the existing bridge and constructing a suspended bridge. The foot print of **River Crossing 1** will be expanded as the height of the crossing will be raised and the length increased.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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</i>	<i>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built</i>

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<p><i>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></p>	<p><i>over the Orange river</i></p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing, dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs;</p> <p>within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p> <p>(a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p> <p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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the core area of a biosphere reserve;	
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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

Please note: **River crossing 1** involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 1	33 04' 34.93" S	25 33' 15.19" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

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In the case of linear activities:

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures is planned to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will

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however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place

Alternative 1 (preferred)
Monolithic, single span, concrete bridges are considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. This is mainly due to the span needing to be in excess of about 50 meters making the structure impractical to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with a single span bridge structures..
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.
Alternative 4
The final option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

8m x 23 = 264 m ²
m ²
m ²

or, for linear activities:

Alternative:

Length of the activity:

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

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

	m
	m
	m

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:

	m ²
	m ²
	m ²

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	

Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

6. LAYOUT/ROUTE PLAN

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

The site or route plans must indicate the following:

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

[Please find attached in Appendix B.](#)

9. FACILITY ILLUSTRATION

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

[Please find attached in Appendix C.](#)

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10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective. It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access. Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. □			
(d) Approved Structure Plan of the Municipality	YES		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(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		Please explain
(f) Any other Plans (e.g. Guide Plan)		NO	Please explain

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<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade of the river crossing is located on a private farm road.</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>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.</p>			

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9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES		Please explain
The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES		Please explain
Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		<input checked="" type="checkbox"/> NO	Please explain
The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		<input checked="" type="checkbox"/> NO	Please explain
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		<input checked="" type="checkbox"/> NO	Please explain
The activity falls outside the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		<input checked="" type="checkbox"/> NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development does not apply to the National Development plan for 2030.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act (Act No. 36 of 1998 (NWA))	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

YES	
100m ³	

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

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

All solid waste will be disposed of by the contractor at a licenced disposal site.

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

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All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

Will the activity produce solid waste during its operational phase? YES NO
 If YES, what estimated quantity will be produced per month? [REDACTED]
 How will the solid waste be disposed of (describe)?

[REDACTED]

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

[REDACTED]

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

[REDACTED]

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

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

Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

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

[REDACTED]

c) Emissions into the atmosphere

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

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

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

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

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

e) Generation of noise

Will the activity generate noise?

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

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 1** is located less than 100 meters away. However, no noise disturbance is anticipated from the proposed development. Any potential noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will be temporary and will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

<input type="checkbox"/> Municipal	<input type="checkbox"/> Water-board	<input type="checkbox"/> Groundwater	<input type="checkbox"/> River, stream, dam or lake	<input type="checkbox"/> Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

<input checked="" type="checkbox"/> YES	

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

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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



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



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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Palmietfontein 407
Portion number	3
SG Code	C0660000000040700003

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline 2.2 Plateau 2.3 Side slope of hill/mountain 2.10 At sea	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2.4 Closed valley 2.5 Open valley 2.6 Plain	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	2.7 Undulating plain / low hills 2.8 Dune 2.9 Seafront	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	NO		

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

BASIC ASSESSMENT REPORT

4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

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

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

6. LAND USE CHARACTER OF SURROUNDING AREA

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

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation

BASIC ASSESSMENT REPORT

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

BASIC ASSESSMENT REPORT

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



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

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

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

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

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

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

R20 000 000
R0

BASIC ASSESSMENT REPORT

Will the activity contribute to service infrastructure?	YES	NO
Is the activity a public amenity?	YES	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20	
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000	
What percentage of this will accrue to previously disadvantaged individuals?	% 60	
How many permanent new employment opportunities will be created during the operational phase of the activity?	0	
What is the expected current value of the employment opportunities during the first 10 years?	N/A	
What percentage of this will accrue to previously disadvantaged individuals?	% N/A	

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.

BASIC ASSESSMENT REPORT

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	100%	The study site is located within the lower karoo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)					Estuary		Coastline	
	Endangered									
	Vulnerable									
	Least Threatened									
	YES	NO	UNSURE	YES	NO	YES	NO			

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcurata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The Herald & Die Burger		
Date published	31 March 2015 – Die Burger 01 April 2015 – The Herald		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 41.00" E	33° 17' 33.50" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 42.95" E	33° 10' 48.66" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 38.44" E	33° 4' 18.91" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 16' 22.74" E	33° 4' 27.26" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 17' 1.84" E	33° 4' 26.33" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 26.06" E	33° 5' 2.21" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 33' 17.09" E	33° 4' 30.17" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 18.94" E	33° 4' 56.63" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 26.06" E	33° 4' 57.33" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 24' 49.20" E	33° 5' 20.71" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 8
	25° 28' 28.10" E	33° 4' 51.30" S	Eastern Cape Somerset Kruis Rivier Outspan 250, Portion 2
	25° 28' 27.96" E	33° 4' 51.45" S	Eastern Cape Somerset Kruis Rivier Outspan 250, Portion 1
	25° 29' 51.21" E	33° 4' 46.93" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 55.38" E	33° 4' 37.70" S	Eastern Cape, Somerset East 407, Portion 1	
25° 36' 13.13" E	33° 4' 49.50" S	Along the R335 Road	
Date placed	7 April 2015		

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

Site notices (English and Afrikaans) were placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E1 was placed in 31 March 2015 in Die Burger and on the 01 April 2015 in The Herald newspapers. Proof of the site notice placement and advertisement is provided 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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the Final Basic Assessment Report (FBAR). On the 31 March 2015 notification letters were sent to all registered I&APs upon availability of the Draft Final Basic Assessment Report (DBAR), proof of the notification can be found in Appendix E2. The 40 day
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BASIC ASSESSMENT REPORT

		<p>comment period started on the 7 April 2015. This was to ensure enough time for the report to reach the relevant locations and that I&APs had enough time to review the documents.</p> <p>An advertisement advertising the DBAR (A copy of the advertisement is provided in Appendix E1) was placed on the 31 March 2015 in Die Burger and on the 01 April 2015 in The Herald newspapers.</p> <p>An open day was held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the DBAR.</p> <p>No alternate methods were requested by I&APs or required by the competent authority however an sms was sent notifying I&APs of the availability of the DBAR. I&APs will also receive notification of the FBAR on the 1 July 2015 allowing sufficient time for commenting. The FBAR will be available for a comment period of 21 days (8 July 2015 to 28 July 2015).</p>
<p>54(3)</p>	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for</p>	<p>All site notices (English and Afrikaans) and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the</p>

BASIC ASSESSMENT REPORT

	<p>environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>application or activity can be obtained from SRK's public participation office and the SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices (English and Afrikaans) are A2 (60cm by 42cm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) 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.</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the letter can be found in Appendix E2.</p>
54(6)	<p>Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted</p>	<p>Not applicable.</p>

BASIC ASSESSMENT REPORT

54(7)	<p>When complying with this regulation, the person conducting the public participation process must ensure that—</p> <p>(a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and</p> <p>(b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.</p>	<p>All public participation activities undertaken comply with this section. I&AP were given 40 days, from the 7 April 2015 to the 15 May 2015, for reviewing and commenting on the DBAR. The FBAR will be available for a comment period of 21 days (8 July 2015 to 28 July 2015), in which I&APs can refer all their comments and concerns to the DEA. Contact person - Mr Sabelo Malaza Chief Director :Integrated Environmental Authorisations Department of Environmental Affairs.</p>
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Key stakeholders (other than organs of state) identified in terms of Regulation 54(2)(b) of GN R.543:

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge10 – V with rights owned by DWS.
54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	<p>SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters was sent via Mr. Gouws to landowners upon availability of the DBAR which also include an invitation and details of the public open day (please see Appendix E2 for example letter).</p> <p>Notification letters will be sent via Mr. Gouws to landowners upon availability of the FBAR on the 1 July 2015.</p>

BASIC ASSESSMENT REPORT

54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	<p>Notification letters (Appendix E2) was sent to all I&APs upon availability of the DBAR.</p> <p>An advertisement has been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015.</p> <p>A public open day public open day was held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the DBAR.</p> <p>Notification letters (Appendix E2) will be sent to all I&APs upon availability of the FBAR.</p>
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	<p>Notification letters was sent to relevant ward councillors upon availability of the DBAR, which included an invitation and details of the public open day:</p> <p>Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6).</p> <p>Notification letters will be sent to relevant ward councillors upon availability of the FBAR</p>
54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters was sent to relevant municipal officials upon availability of the DBAR, which included an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5).</p> <p>Notification letters will be sent to relevant municipal officials upon availability of the Final BAR</p>

BASIC ASSESSMENT REPORT

54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters included an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the DBAR was sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape);</p> <p>Department of Agriculture and Rural Development(Eastern Cape);</p> <p>Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT);</p> <p>Department of Rural development and Land Reform (Eastern Cape);</p> <p>Department of Public Works and Roads (Eastern Cape);</p> <p>Blue Crane Route Local Municipality</p> <p>Cacadu District Municipality; and</p> <p>SAHRA (Please refer to table 5).</p> <p>Notification letters will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the FBAR will be sent to the commenting authorities who have jurisdiction over activities as mentioned above.</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

BASIC ASSESSMENT REPORT

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E5 for a copy of the I&AP register		

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

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

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response received is provided in a Comments and Response Report found 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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850
Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000

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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

BASIC ASSESSMENT REPORT

Table 1: Criteria for Assessing Significance of Impacts

SEVERITY OF IMPACT	RATING	
Insignificant / non-harmful	1	
Small / potentially harmful	2	
Significant / slightly harmful	3	
Great / harmful	4	
Disastrous / extremely harmful	5	
CONSEQUENCE		
SPATIAL SCOPE (EXTENT) OF IMPACT	RATING	
Activity specific	1	
Mine specific (within the mine boundary)	2	
Local area (within 5 km of the mine boundary)	3	
Regional (Greater Rustenburg area)	4	
National	5	
DURATION OF IMPACT	RATING	
One day to one month	1	
One month to one year	2	
One year to ten years	3	
Life of operation	4	
Post closure / permanent	5	
LIKELIHOOD/ PROBABILITY		
FREQUENCY OF ACTIVITY / DURATION OF ASPECT	RATING	
Annually or less / low	1	
6 monthly / temporary	2	
Monthly / infrequent	3	
Weekly / life of operation / regularly / likely	4	
Daily / permanent / high	5	
FREQUENCY OF IMPACT	RATING	
Almost never / almost impossible	1	
Very seldom / highly unlikely	2	
Infrequent / unlikely / seldom	3	
Often / regularly / likely / possible	4	
Daily / highly likely / definitely	5	

Table 2: Interpretation of Impact Rating

		Consequence													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Likelihood	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105
	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

BASIC ASSESSMENT REPORT

Table 3: Impacts during the Construction Phase.

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There is potential for noise disturbance around crossing 1 . Any potential noise disturbance will be temporary. No mitigation required.	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablation facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required
Soil and Land Use			

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	<p>No parking of vehicles or equipment should take place off the access road or designated parking areas.</p> <p>All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology		SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology		SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is option 4: to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Option 4 is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Alternative B

Alternative C

No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS **River crossing 1** along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of **River crossing 1**. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature
 *Manda Hinsch*
472748/42183/Report
4765-9961-8411-HJNM
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? **YES**
 If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River crossing 2, located along the DWS servitude, is going to be upgraded by removing existing structures and replacing them with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. The foot print of **River Crossing 2** will be widened.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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

BASIC ASSESSMENT REPORT

<p>Example: 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.</p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape: ii. Outside urban areas, in:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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<p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: river crossing two involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 2	33 04' 43.03" S	25 31' 46.69" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

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In the case of linear activities:

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however

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stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 4
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

8m x 23 = 264 mm ²
m ²
m ²

or, for linear activities:

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

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Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

	m
	m
	m

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:

	m ²
	m ²
	m ²

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	

Describe the type of access road planned:

--

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

5. LOCALITY MAP

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

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

6. LAYOUT/ROUTE PLAN

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

The site or route plans must indicate the following:

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

[Please find attached in Appendix B.](#)

9. FACILITY ILLUSTRATION

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

[Please find attached in Appendix C.](#)

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10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. ▯			
(d) Approved Structure Plan of the Municipality	YES		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(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		Please explain
(f) Any other Plans (e.g. Guide Plan)		NO	Please explain

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<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		<p>Please explain</p>
<p>It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		<p>Please explain</p>
<p>Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		<p>Please explain</p>
<p>Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">NO</p>	<p>Please explain</p>
<p>The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">NO</p>	<p>Please explain</p>
<p>The proposed upgrade of the river crossing is located on a private farm road.</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>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		<p>Please explain</p>
<p>The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.</p>			

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9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES		Please explain
The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES		Please explain
Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		<input checked="" type="checkbox"/> NO	Please explain
The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		<input checked="" type="checkbox"/> NO	Please explain
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		<input checked="" type="checkbox"/> NO	Please explain
The activity falls outside the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		<input checked="" type="checkbox"/> NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development does not apply to the National Development plan for 2030.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management Act (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
	100m ³

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

All solid waste will be disposed of by the contractor at a licenced waste site

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

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All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

If YES, what estimated quantity will be produced per month? [Redacted]
 Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
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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	

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 2** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Palmietfontein 407
Portion number	1
SG Code	C0660000000040700001

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

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1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline</p> <p>2.2 Plateau</p> <p>2.3 Side slope of hill/mountain</p> <p>2.10 At sea</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>2.4 Closed valley</p> <p>2.5 Open valley</p> <p>2.6 Plain</p>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>2.7 Undulating plain / low hills</p> <p>2.8 Dune</p> <p>2.9 Seafront</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
---------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------	----------------------------------------------------------------------------------

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	NO		

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

BASIC ASSESSMENT REPORT

4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

Perennial River	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-Perennial River	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permanent Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seasonal Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Artificial Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estuarine / Lagoonal wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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

--

Will any building or structure older than 60 years be affected in any way?
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

BASIC ASSESSMENT REPORT

Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Is the activity a public amenity?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.

BASIC ASSESSMENT REPORT

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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)	YES	NO	UNSURE	Estuary		Coastline	
	Endangered					YES	NO	YES	NO
	Vulnerable					YES	NO	YES	NO
	Least Threatened					YES	NO	YES	NO

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcuata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

1. 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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the
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BASIC ASSESSMENT REPORT

		<p>Draft BAR.</p> <p>No alternate methods were requested by I&APs or required by the competent authority.</p>
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK's public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below: Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) may be appropriate, the person conducting the public</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the</p>

BASIC ASSESSMENT REPORT

	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.	letter can be found in Appendix E2.
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge 10 – V with rights owned by DWS.

BASIC ASSESSMENT REPORT

54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

BASIC ASSESSMENT REPORT

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

2. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

3. 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.

4. 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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

5. 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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

BASIC ASSESSMENT REPORT

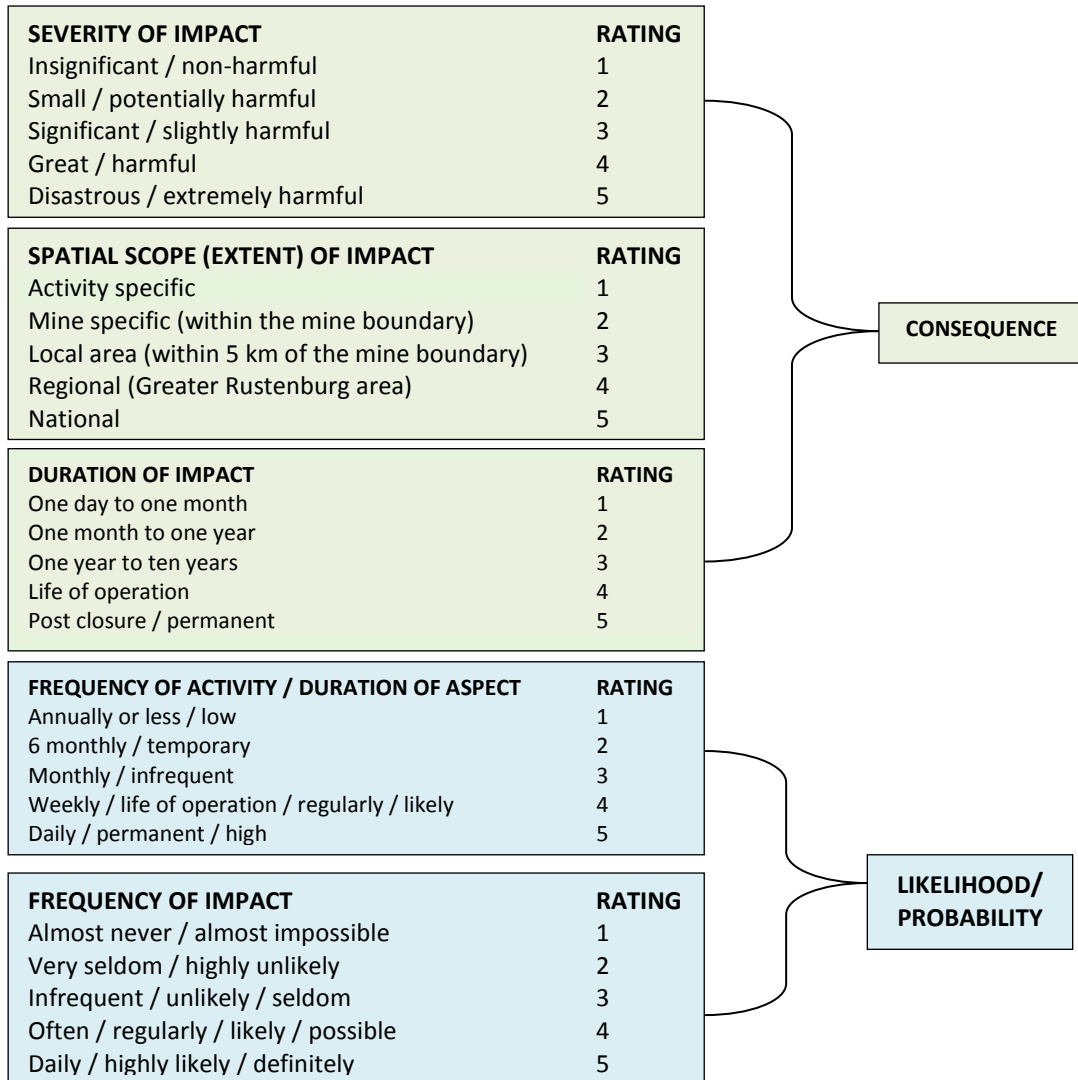


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There are no noise sensitive areas located close to crossing 2 . No mitigation required.	L No Management Required
Waste management			

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology		SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is option 4: to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 4, to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Alternative B

Alternative C

No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS **river crossing 2** along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of **river crossing 2**. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature



472748/42183/Report
4765-9961-8411-H/NM

This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

____30/06/2015____
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River crossing 3, located along the DWS servitude, is going to be upgraded by removing existing structures and replacing them with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. The foot print of **River Crossing 3** will be widened.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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	Description of project activity
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and 546	
<p>Example: 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.</p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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<p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: the proposed river crossing upgrade is an upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 3	33 04' 56.04" S	25 29' 41.30" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)

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Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 4
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

8m x 23 = 264 mm ²
m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

m
m
m

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:

m ²
m ²
m ²

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

Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

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

- 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.

Please find attached in Appendix B.

9. FACILITY ILLUSTRATION

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

Please find attached in Appendix C.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	<input checked="" type="checkbox"/>		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<input checked="" type="checkbox"/>		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(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?).	<input checked="" type="checkbox"/>		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. □			
(d) Approved Structure Plan of the Municipality	<input checked="" type="checkbox"/>		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			

BASIC ASSESSMENT REPORT

<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<p>YES</p>		<p>Please explain</p>
<p>(f) Any other Plans (e.g. Guide Plan)</p>		<p>NO</p>	<p>Please explain</p>
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<p>YES</p>		<p>Please explain</p>
<p>It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade of the river crossing is located on a private farm road.</p>			

BASIC ASSESSMENT REPORT

8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	<input checked="" type="checkbox"/> YES		Please explain
The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.			
9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES		Please explain
The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES		Please explain
Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		<input checked="" type="checkbox"/> NO	Please explain
The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		<input checked="" type="checkbox"/> NO	Please explain
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		<input checked="" type="checkbox"/> NO	Please explain
The activity falls outside the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		<input checked="" type="checkbox"/> NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development does not apply to the National Development plan for 2030.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management Act (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
	100m ³

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

All solid waste will be disposed of by the contractor.

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

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All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

Will the activity produce solid waste during its operational phase? YES **NO**

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

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

[Redacted]

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

[Redacted]

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

[Redacted]

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES **NO**

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

Is the activity that is being applied for a solid waste handling or treatment facility? YES **NO**

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES **NO**

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

Will the activity produce any effluent that will be treated and/or disposed of on site? YES **NO**

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

Will the activity produce effluent that will be treated and/or disposed of at another facility? YES **NO**

If YES, provide the particulars of the facility:

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

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
--	----

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

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 3** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

YES	

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Palmietfontein 250
Portion number	1
SG Code	C0660000000025000001

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline</p> <p>2.2 Plateau</p> <p>2.3 Side slope of hill/mountain</p> <p>2.10 At sea</p>	<div style="background-color: #808080; width: 20px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: #808080; width: 20px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: #808080; width: 20px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: #808080; width: 20px; height: 20px;"></div>	<p>2.4 Closed valley</p> <p>2.5 Open valley</p> <p>2.6 Plain</p>	<div style="background-color: #808080; width: 20px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: #808080; width: 20px; height: 20px; margin-bottom: 5px; border: 1px solid black; text-align: center; line-height: 20px;">X</div> <div style="background-color: #808080; width: 20px; height: 20px;"></div>	<p>2.7 Undulating plain / low hills</p> <p>2.8 Dune</p> <p>2.9 Seafront</p>	<div style="background-color: #808080; width: 20px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: #808080; width: 20px; height: 20px; margin-bottom: 5px;"></div> <div style="background-color: #808080; width: 20px; height: 20px;"></div>
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	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.

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4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

Perennial River	<input checked="" type="checkbox"/> YES		
Non-Perennial River		<input checked="" type="checkbox"/> NO	
Permanent Wetland		<input checked="" type="checkbox"/> NO	
Seasonal Wetland		<input checked="" type="checkbox"/> NO	
Artificial Wetland		<input checked="" type="checkbox"/> NO	
Estuarine / Lagoonal wetland		<input checked="" type="checkbox"/> NO	

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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

--

Will any building or structure older than 60 years be affected in any way?
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

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Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

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		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Critical Biodiversity Area (CBA)</td> <td style="width: 50%; text-align: center;">Ecological Support Area (ESA)</td> </tr> </table>	Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	<p>The majority of the site is located within a CBA which is associated with the Skoenmakers River.</p>
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Other Natural Area (ONA)</td> <td style="width: 50%; text-align: center;">No-Natural Area Remaining (NNR)</td> </tr> </table>	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	
Other Natural Area (ONA)	No-Natural Area Remaining (NNR)		

BASIC ASSESSMENT REPORT

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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)	YES	NO	UNSURE	Estuary		Coastline	
	Endangered					YES	NO	YES	NO
	Vulnerable					YES	NO	YES	NO
	Least Threatened					YES	NO	YES	NO

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcurata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the
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BASIC ASSESSMENT REPORT

		<p>Draft BAR.</p> <p>No alternate methods were requested by I&APs or required by the competent authority.</p>
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK's public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below:</p> <p>Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) may be appropriate, the person conducting the public</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the</p>

BASIC ASSESSMENT REPORT

	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.	letter can be found in Appendix E2.
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge 10 – V with rights owned by DWS.

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54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

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Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

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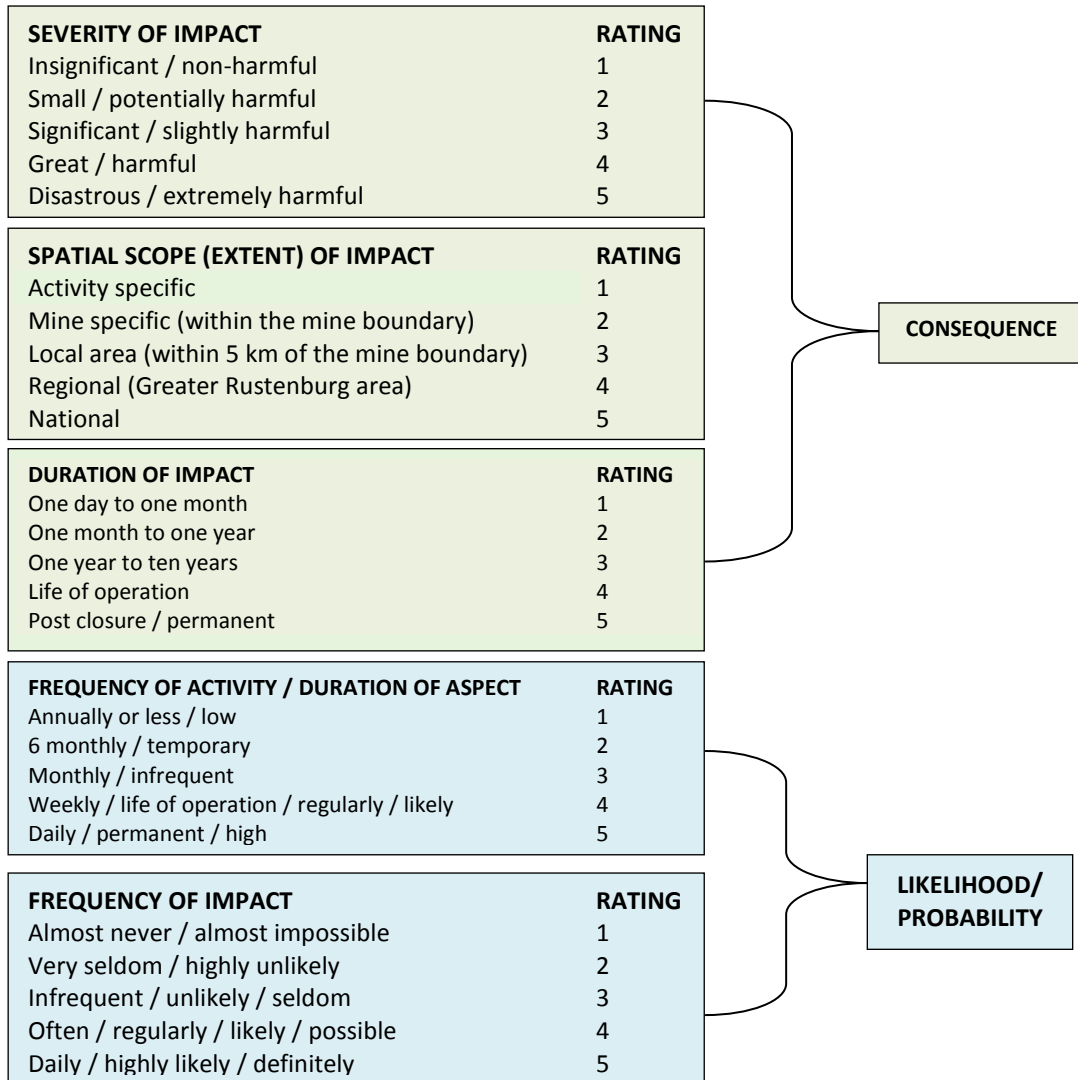


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	6	9	12	15	18	21	24	27	30	33	36	39	42	45
	3	6	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	4	8	10	15	20	25	30	35	40	45	50	55	60	65	70	75
	5	10	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	6	12	14	21	28	35	42	49	56	63	70	77	84	91	98	105
	7	14	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	8	16	18	27	36	45	54	63	72	81	90	99	108	117	126	135
	9	18	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	10	20	20	30	40	50	60	70	80	90	100	110	120	130	140	150

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There are no noise sensitive areas located close to crossing 3 . No mitigation required.	L No Management Required
Waste management			

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology		SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternatives for construction methodology

The most viable option is to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 4 to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Alternative B



Alternative C



No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS **river crossing 3** along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of **river crossing 3**. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature



472748/42183/Report
4765-9961-8411-H/NM

This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River crossing 4, located on the DWS servitude is going to be expanded on with 2 additional culverts and the reinstatement of the washed away embankment including approach slabs. The foot print of **River Crossing 4** will be extended.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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
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<p>Example: GN R.544 Item 11(3): <i>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></p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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<p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: river crossing four involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 4	33 05' 02.58" S	25 27' 39.15" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		

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Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. Additional culverts will be added to the existing structure, increasing the foot print. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.
Alternative 2
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 3
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

9m x 60 = 540 m ²
m ²
m ²

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

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or, for linear activities:

Alternative:

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

Length of the activity:

	m
	m
	m

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:

	m ²
	m ²
	m ²

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	

Describe the type of access road planned:

--

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

5. LOCALITY MAP

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

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal

minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

6. LAYOUT/ROUTE PLAN

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

The site or route plans must indicate the following:

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

[Please find attached in Appendix B.](#)

9. FACILITY ILLUSTRATION

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

[Please find attached in Appendix C.](#)

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10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. ▯			
(d) Approved Structure Plan of the Municipality	YES		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(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		Please explain
(f) Any other Plans (e.g. Guide Plan)		NO	Please explain

BASIC ASSESSMENT REPORT

<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		Please explain
<p style="color: #0070c0;">It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		Please explain
<p style="color: #0070c0;">Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		Please explain
<p style="color: #0070c0;">Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">NO</p>	Please explain
<p style="color: #0070c0;">The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">NO</p>	Please explain
<p style="color: #0070c0;">The proposed upgrade of the river crossing is located on a private farm road.</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>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div> <p style="text-align: center; font-weight: bold; margin: 0;">YES</p>		Please explain
<p style="color: #0070c0;">The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.</p>			

BASIC ASSESSMENT REPORT

9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES		Please explain
The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES		Please explain
Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		<input checked="" type="checkbox"/> NO	Please explain
The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		<input checked="" type="checkbox"/> NO	Please explain
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		<input checked="" type="checkbox"/> NO	Please explain
The activity falls outside the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		<input checked="" type="checkbox"/> NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development does not apply to the National Development plan for 2030.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management Act (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
	100 m ³

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

All solid waste will be disposed of by the contractor.

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

BASIC ASSESSMENT REPORT

All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

If YES, what estimated quantity will be produced per month? [REDACTED]
 Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

BASIC ASSESSMENT REPORT

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 4** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

YES	

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Kruis River 248
Portion number	4
SG Code	C0660000000024800004

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline</p> <p>2.2 Plateau</p> <p>2.3 Side slope of hill/mountain</p> <p>2.10 At sea</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>2.4 Closed valley</p> <p>2.5 Open valley</p> <p>2.6 Plain</p>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>2.7 Undulating plain / low hills</p> <p>2.8 Dune</p> <p>2.9 Seafront</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES					
Dolomite, sinkhole or doline areas		NO				
Seasonally wet soils (often close to water bodies)	YES					
Unstable rocky slopes or steep slopes with loose soil	YES					
Dispersive soils (soils that dissolve in water)		NO				
Soils with high clay content (clay fraction more than 40%)	YES					
Any other unstable soil or geological feature	YES					
An area sensitive to erosion		NO				

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

BASIC ASSESSMENT REPORT

4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

Perennial River	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-Perennial River	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permanent Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seasonal Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Artificial Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estuarine / Lagoonal wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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:

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

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

BASIC ASSESSMENT REPORT

Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

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		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Critical Biodiversity Area (CBA)</td> <td style="width: 50%; text-align: center;">Ecological Support Area (ESA)</td> </tr> </table>	Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	<p>The majority of the site is located within a CBA which is associated with the Skoenmakers River.</p>
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Other Natural Area (ONA)</td> <td style="width: 50%; text-align: center;">No-Natural Area Remaining (NNR)</td> </tr> </table>	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	
Other Natural Area (ONA)	No-Natural Area Remaining (NNR)		

BASIC ASSESSMENT REPORT

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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)	YES	NO	UNSURE	Estuary		Coastline	
	Endangered					YES	NO	YES	NO
	Vulnerable					YES	NO	YES	NO
	Least Threatened					YES	NO	YES	NO

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcurata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the
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BASIC ASSESSMENT REPORT

		<p>Draft BAR.</p> <p>No alternate methods were requested by I&APs or required by the competent authority.</p>
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK's public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below: Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) may be appropriate, the person conducting the public</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the</p>

BASIC ASSESSMENT REPORT

	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.	letter can be found in Appendix E2.
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge 10 – V with rights owned by DWS.

BASIC ASSESSMENT REPORT

54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

BASIC ASSESSMENT REPORT

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

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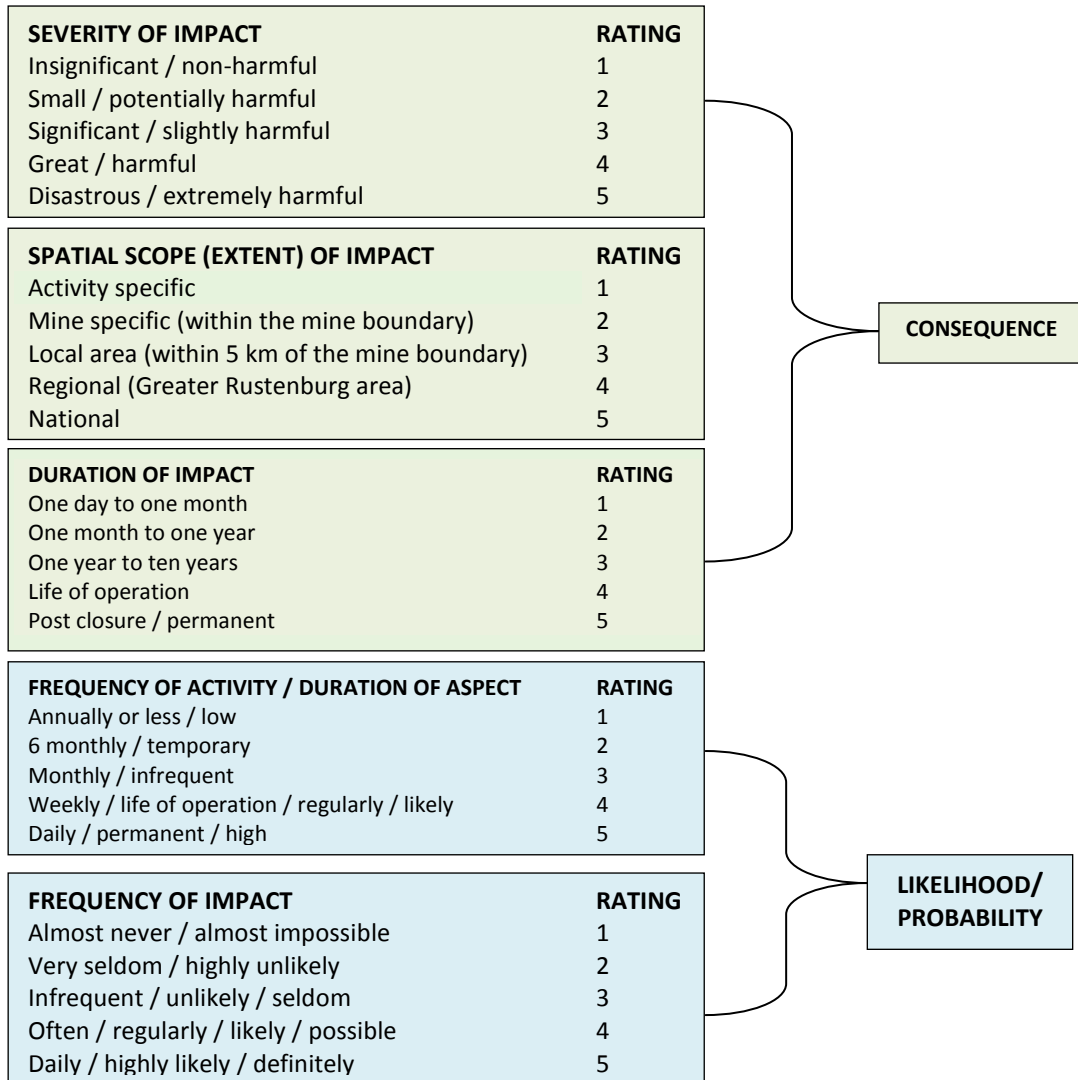


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There are no noise sensitive areas located close to crossing 4 . No mitigation required.	L No Management Required
Waste management			

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	<p>No parking of vehicles or equipment should take place off the access road or designated parking areas.</p> <p>All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 3, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Alternative B

Alternative C

No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS **river crossing 4** along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of **river crossing 4**. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature

472748/42183/Report
4765-9961-8411-HJNM
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? **YES** [REDACTED]
 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 Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River Crossing 5 is going to be repaired and maintained. Approach slabs will also be constructed on either side of each bridge crossing. Bull noses will be constructed in order to prevent debris getting trapped in the water way. This will expand on the footprint of the crossing.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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

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<p>Example: GN R.544 Item 11(3): <i>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></p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by constructing bull noses to prevent debris from getting trapped.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by constructing bull noses, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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<p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: river **crossing 5** involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 5	33 05' 08.99" S	25 25' 34.54" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		

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Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

BASIC ASSESSMENT REPORT

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

Alternatives in Design methodology:

Different design and construction approaches were considered in the process of providing a Hydraulic sound and practical solution to the existing river crossing structure in the Skoenmakers River.

Alternative 1 (preferred alternative)
Clean out and replace the front part of the existing bridge piers at the upstream side of the bridge with Debris mitigation piers. These piers have a special rounded shape which allows debris to move freely through the bridge and hence prevents blockage. Repair existing damaged erosion control measures at the river bank .Construct energy dissipation wing walls at the downstream side of the bride to protect the river bank from being eroded .This option will prevent blockage of the bridge as well as protect the approach to the bridge and the section of the river banks downstream of the bridge.
Alternative 2
Remove debris and silt from the existing structure and repair damaged erosion control measures such as road approach slabs at each side of the bridge. This option does however not improve the debris mitigation and hence the bridge will still get blocked with debris after each storm event. This then causes a backup of water at the bridge which becomes a safety hazard for road users as well as causes excessive erosion along the river banks such that the bridge does not get blocked with debris after a storm event. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.
Alternative 3
Alternative 4

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo of the exiting bridge being maintained. This alternative will cause the bridge to be blocked with debris which will cause increased erosion, a safety hazard to road users and ultimately cause the bridge to fail.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1¹ (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

8m x 23 = 264 mm ²
m ²
m ²

or, for linear activities:

Alternative:

Length of the activity:

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

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

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

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

4. SITE ACCESS

Does ready access to the site exist?	YES
If NO, what is the distance over which a new access road will be built	

Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

6. LAYOUT/ROUTE PLAN

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

The site or route plans must indicate the following:

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

[Please find attached in Appendix B.](#)

9. FACILITY ILLUSTRATION

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

[Please find attached in Appendix C.](#)

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10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. ▯			
(d) Approved Structure Plan of the Municipality	YES		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(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		Please explain
(f) Any other Plans (e.g. Guide Plan)		NO	Please explain

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<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade of the river crossing is located on a private farm road.</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>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.</p>			

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9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/>	Please explain
The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/>	Please explain
Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Please explain
The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Please explain
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Please explain
The activity falls outside the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/> NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development does not apply to the National Development plan for 2030.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management Act (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
	100 m ³

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

All solid waste will be disposed of by the contractor. at a licenced waste site

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

BASIC ASSESSMENT REPORT

All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

If YES, what estimated quantity will be produced per month? [REDACTED]
 Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
--	----

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

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 5** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

YES	

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Kruis Rivier 248
Portion number	9
SG Code	C0660000000024800009

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

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1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline</p> <p>2.2 Plateau</p> <p>2.3 Side slope of hill/mountain</p> <p>2.10 At sea</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>2.4 Closed valley</p> <p>2.5 Open valley</p> <p>2.6 Plain</p>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>2.7 Undulating plain / low hills</p> <p>2.8 Dune</p> <p>2.9 Seafront</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	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.

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4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

Perennial River	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-Perennial River	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permanent Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seasonal Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Artificial Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estuarine / Lagoonal wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

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6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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:

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

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

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Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.

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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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)	YES	NO	UNSURE	Estuary		Coastline	
	Endangered					YES	NO	YES	NO
	Vulnerable					YES	NO	YES	NO
	Least Threatened					YES	NO	YES	NO

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcurata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the
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		<p>Draft BAR.</p> <p>No alternate methods were requested by I&APs or required by the competent authority.</p>
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK’s public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below:</p> <p>Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) may be appropriate, the person conducting the public</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the</p>

BASIC ASSESSMENT REPORT

	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.	letter can be found in Appendix E2.
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from "Bridge 1 – Palmietfontein" to "Bridge 10 – V with rights owned by DWS.

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54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

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Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetzeeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

BASIC ASSESSMENT REPORT

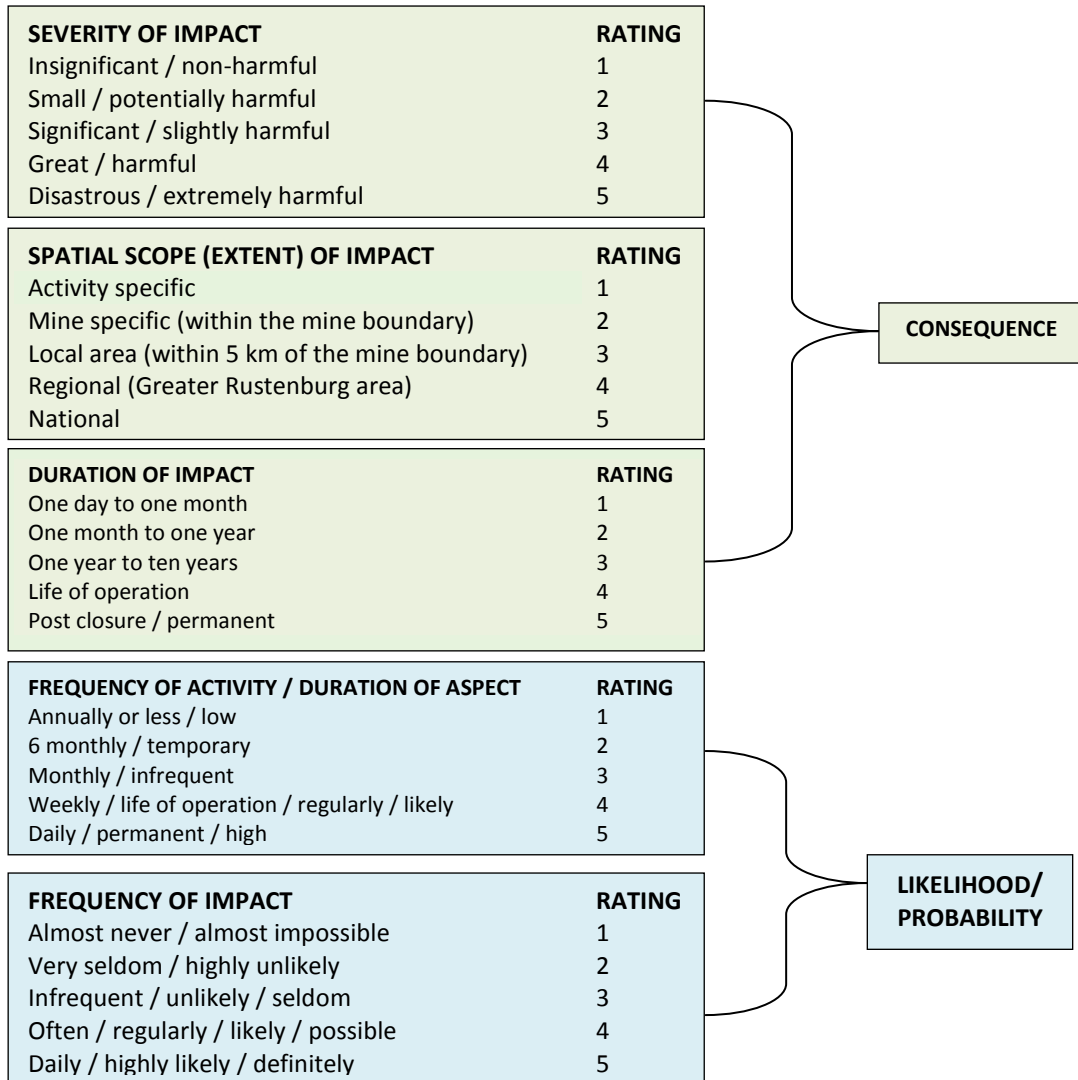


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

High	76 to 150	Improve current management
Medium High	40 to 75	Maintain current management
Medium Low	26 to 39	
Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There is potential for noise disturbance around crossing 5. Any potential noise disturbance will be temporary. No mitigation required.	L No Management Required
Waste management			

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	<p>No parking of vehicles or equipment should take place off the access road or designated parking areas.</p> <p>All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative 1 (Preferred).

Clean out and replace the front part of the existing bridge piers at the upstream side of the bridge with Debris mitigation piers. This option will prevent blockage of the bridge as well as protect the approach to the bridge and the section of the river banks downstream of the bridge.

Alternative 2

Remove debris and silt from the existing structure and repair damaged erosion control measures such as road approach slabs at each side of the bridge. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

Alternative C

No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed maintenance and repair of DWS **river crossing 5** along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed maintenance and restoration of **river crossing 5**. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature



472748/42183/Report
4765-9961-8411-HJNM

This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River Crossing 6, located along the DWS servitude, is going to be upgraded by removing existing structures and replacing them with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. The foot print of **River Crossing 6** will be widened.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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
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<p>Example: GN R.544 Item 11(3): <i>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></p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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<p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: river crossing 6 involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 6	33 05' 11.28" S	25 25' 00.59" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		

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Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 4
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

8m x 23 = 264 mm ²
m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

m
m
m

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:

m ²
m ²
m ²

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

Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

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

- 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.

Please find attached in Appendix B.

9. FACILITY ILLUSTRATION

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

Please find attached in Appendix C.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	<input checked="" type="checkbox"/>		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<input checked="" type="checkbox"/>		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(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?).	<input checked="" type="checkbox"/>		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. □			
(d) Approved Structure Plan of the Municipality	<input checked="" type="checkbox"/>		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			

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<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<p>YES</p>		<p>Please explain</p>
<p>(f) Any other Plans (e.g. Guide Plan)</p>		<p>NO</p>	<p>Please explain</p>
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<p>YES</p>		<p>Please explain</p>
<p>It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade of the river crossing is located on a private farm road.</p>			

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<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>	<input checked="" type="checkbox"/> YES		Please explain
<p>The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	<input checked="" type="checkbox"/> YES		Please explain
<p>The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.</p>			
<p>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</p>	<input checked="" type="checkbox"/> YES		Please explain
<p>Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.</p>			
<p>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.</p>			
<p>12. Will any person's rights be negatively affected by the proposed activity/ies?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>The activity falls outside the urban edge.</p>			
<p>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>15. What will the benefits be to society in general and to the local communities?</p>	Please explain		
<p>It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.</p>			
<p>16. Any other need and desirability considerations related to the proposed activity?</p>	Please explain		
<p>No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.</p>			
<p>17. How does the project fit into the National Development Plan for 2030?</p>	Please explain		
<p>The proposed development does not apply to the National Development plan for 2030.</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.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management Act (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
	100 m ³

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

All solid waste will be disposed of by the contractor at a licenced waste disposal facility

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

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All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

If YES, what estimated quantity will be produced per month? [REDACTED]
 Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 6** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

YES	

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Kruis River 248
Portion number	5 & 6
SG Code	C0660000000024800005
	C0660000000024800006

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline <input type="checkbox"/></p> <p>2.2 Plateau <input type="checkbox"/></p> <p>2.3 Side slope of hill/mountain <input type="checkbox"/></p> <p>2.10 At sea <input type="checkbox"/></p>	<p>2.4 Closed valley <input type="checkbox"/></p> <p>2.5 Open valley <input checked="" type="checkbox"/></p> <p>2.6 Plain <input type="checkbox"/></p>	<p>2.7 Undulating plain / low hills <input type="checkbox"/></p> <p>2.8 Dune <input type="checkbox"/></p> <p>2.9 Seafront <input type="checkbox"/></p>
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	NO		

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

BASIC ASSESSMENT REPORT

4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

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

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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

--

Will any building or structure older than 60 years be affected in any way?
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

BASIC ASSESSMENT REPORT

Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.

BASIC ASSESSMENT REPORT

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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline			
	Endangered									
	Vulnerable									
	Least Threatened									
	YES	NO	UNSURE	YES	NO	YES	NO			

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcurata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

1. 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.

54(2)(e)	<p>using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—</p> <ul style="list-style-type: none"> (i) illiteracy; (ii) disability; or (iii) any other disadvantage. 	<p>Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR. No alternate methods were</p>
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BASIC ASSESSMENT REPORT

		requested by I&APs or required by the competent authority.
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK's public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below: Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) 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</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the letter can be found in Appendix E2.</p>

BASIC ASSESSMENT REPORT

	manner as may be agreed to by the competent authority.	
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge 10 – V with rights owned by DWS.

BASIC ASSESSMENT REPORT

54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

BASIC ASSESSMENT REPORT

54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

BASIC ASSESSMENT REPORT

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

2. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

3. 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.

4. 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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

BASIC ASSESSMENT REPORT

Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

5. 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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

BASIC ASSESSMENT REPORT

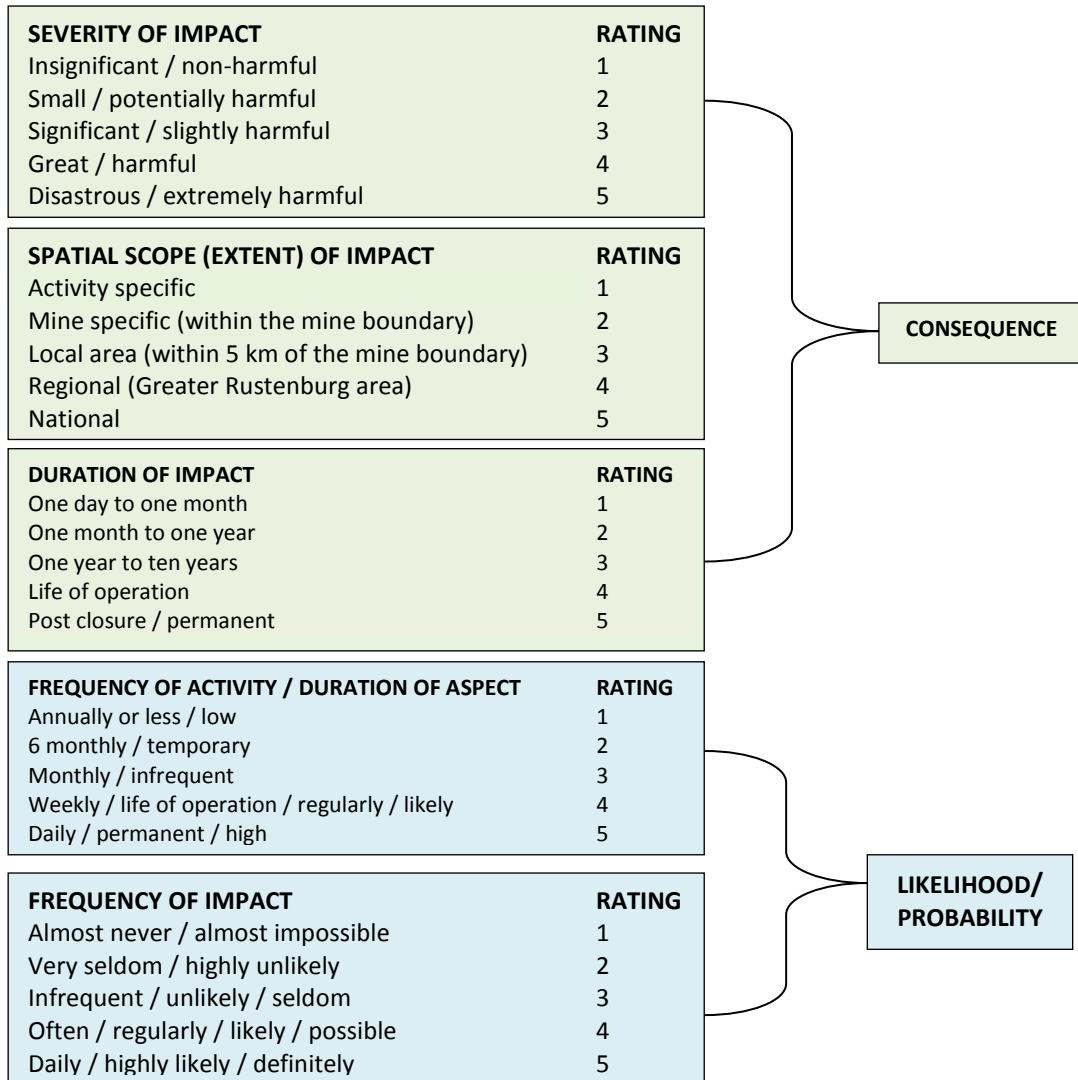


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There are no noise sensitive areas located close to crossing 6 . No mitigation required.	L No Management Required
Waste management			

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	<p>No parking of vehicles or equipment should take place off the access road or designated parking areas.</p> <p>All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 4, to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Alternative B

Alternative C

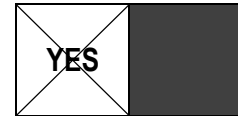
No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS **river crossing 6** along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of **river crossing 6**. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature

472748/42183/Report
4765-9961-8411-HJNM
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River crossing 7, located along the DWS servitude, is going to be upgraded by removing existing structures and replacing them with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. The foot print of **River Crossing 7** will be widened.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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
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BASIC ASSESSMENT REPORT

<p>Example: GN R.544 Item 11(3): <i>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></p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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<p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: river crossing 7 involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 7	33 05' 13.39" S	25 24' 47.14" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		

BASIC ASSESSMENT REPORT

Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 4
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

8.5m x 85 = 722.5 m ²
m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

m
m
m

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:

m ²
m ²
m ²

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

Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

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

- 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.

Please find attached in Appendix B.

9. FACILITY ILLUSTRATION

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

Please find attached in Appendix C.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	<input checked="" type="checkbox"/> YES		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<input checked="" type="checkbox"/> YES		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(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?).	<input checked="" type="checkbox"/> YES		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. □			
(d) Approved Structure Plan of the Municipality	<input checked="" type="checkbox"/> YES		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			

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<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p>(f) Any other Plans (e.g. Guide Plan)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade of the river crossing is located on a private farm road.</p>			

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<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>	<p>YES</p>		<p>Please explain</p>
<p>The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	<p>YES</p>		<p>Please explain</p>
<p>The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.</p>			
<p>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.</p>			
<p>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.</p>			
<p>12. Will any person's rights be negatively affected by the proposed activity/ies?</p>		<p>NO</p>	<p>Please explain</p>
<p>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</p>		<p>NO</p>	<p>Please explain</p>
<p>The activity falls outside the urban edge.</p>			
<p>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</p>		<p>NO</p>	<p>Please explain</p>
<p>15. What will the benefits be to society in general and to the local communities?</p>	<p>Please explain</p>		
<p>It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.</p>			
<p>16. Any other need and desirability considerations related to the proposed activity?</p>	<p>Please explain</p>		
<p>No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.</p>			
<p>17. How does the project fit into the National Development Plan for 2030?</p>	<p>Please explain</p>		
<p>The proposed development does not apply to the National Development plan for 2030.</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.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
	100 m ³

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

All solid waste will be disposed of by the contractor at a licenced waste disposal facility

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

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All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

If YES, what estimated quantity will be produced per month? [REDACTED]
 Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
--	----

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

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 7** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

YES	

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Kruis Rivier 248
Portion number	8
SG Code	C0660000000024800008

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline <input type="checkbox"/></p> <p>2.2 Plateau <input type="checkbox"/></p> <p>2.3 Side slope of hill/mountain <input type="checkbox"/></p> <p>2.10 At sea <input type="checkbox"/></p>	<p>2.4 Closed valley <input type="checkbox"/></p> <p>2.5 Open valley <input checked="" type="checkbox"/></p> <p>2.6 Plain <input type="checkbox"/></p>	<p>2.7 Undulating plain / low hills <input type="checkbox"/></p> <p>2.8 Dune <input type="checkbox"/></p> <p>2.9 Seafront <input type="checkbox"/></p>
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	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.

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4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

Perennial River	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-Perennial River	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permanent Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seasonal Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Artificial Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estuarine / Lagoonal wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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

--

Will any building or structure older than 60 years be affected in any way?
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

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Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

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		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Critical Biodiversity Area (CBA)</td> <td style="width: 50%; text-align: center;">Ecological Support Area (ESA)</td> </tr> </table>	Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	<p>The majority of the site is located within a CBA which is associated with the Skoenmakers River.</p>
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Other Natural Area (ONA)</td> <td style="width: 50%; text-align: center;">No-Natural Area Remaining (NNR)</td> </tr> </table>	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	
Other Natural Area (ONA)	No-Natural Area Remaining (NNR)		

BASIC ASSESSMENT REPORT

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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline			
	Endangered									
	Vulnerable									
	Least Threatened	YES	NO	UNSURE	YES	NO	YES	NO		

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcuata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

1. 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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR. No alternate methods were
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BASIC ASSESSMENT REPORT

		requested by I&APs or required by the competent authority.
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK's public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below: Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) 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</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the letter can be found in Appendix E2.</p>

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	manner as may be agreed to by the competent authority.	
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from "Bridge 1 – Palmietfontein" to "Bridge 10 – V with rights owned by DWS.

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54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

BASIC ASSESSMENT REPORT

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

2. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

3. 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.

4. 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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

5. 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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

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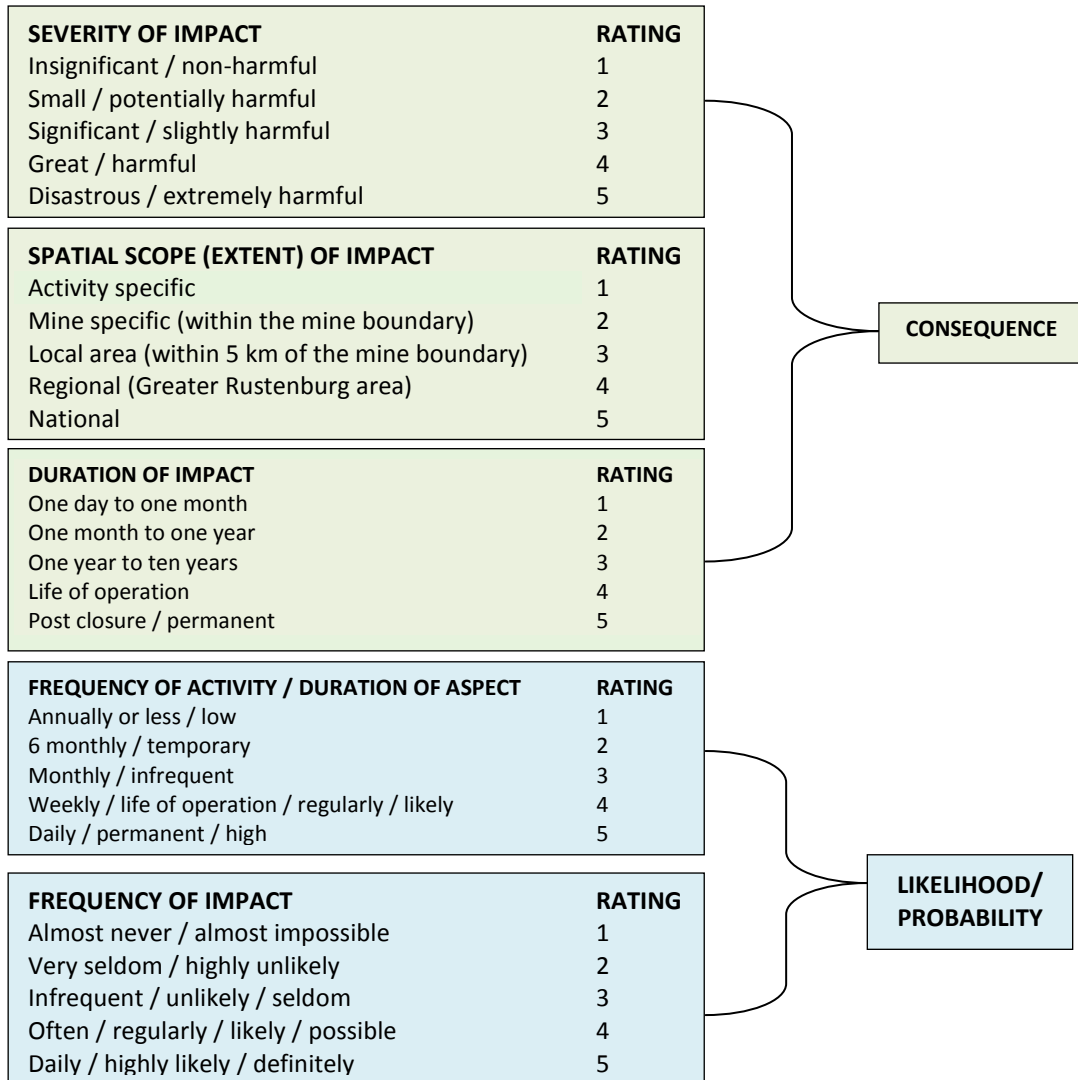


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There are no noise sensitive areas located close to crossing 7 . No mitigation required.	L No Management Required
Waste management			

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	<p>No parking of vehicles or equipment should take place off the access road or designated parking areas.</p> <p>All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 4, to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Alternative B

Alternative C

No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS river crossing 7 along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of river crossing 7. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature
 *Manda Hinsch*
472748/42183/Report
4765-9961-8411-H/NM
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

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14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River crossing 8, located along the DWS servitude, is going to be upgraded by removing existing structures and replacing them with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. The foot print of **River Crossing 8** will be widened.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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
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<p>Example: GN R.544 Item 11(3): <i>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></p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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<p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: river crossing 8 involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 8	33 05' 11.76" S	25 21' 17.91" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		

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Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 4
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

8m x 23 = 264 mm ²
m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

m
m
m

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:

m ²
m ²
m ²

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

Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

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

- 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.

Please find attached in Appendix B.

9. FACILITY ILLUSTRATION

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

Please find attached in Appendix C.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	<input checked="" type="checkbox"/>		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<input checked="" type="checkbox"/>		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(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?).	<input checked="" type="checkbox"/>		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. □			
(d) Approved Structure Plan of the Municipality	<input checked="" type="checkbox"/>		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			

BASIC ASSESSMENT REPORT

<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<p>YES</p>		<p>Please explain</p>
<p>(f) Any other Plans (e.g. Guide Plan)</p>		<p>NO</p>	<p>Please explain</p>
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<p>YES</p>		<p>Please explain</p>
<p>It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade of the river crossing is located on a private farm road.</p>			

BASIC ASSESSMENT REPORT

<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>	<input checked="" type="checkbox"/> YES		Please explain
<p>The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	<input checked="" type="checkbox"/> YES		Please explain
<p>The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.</p>			
<p>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</p>	<input checked="" type="checkbox"/> YES		Please explain
<p>Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.</p>			
<p>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.</p>			
<p>12. Will any person's rights be negatively affected by the proposed activity/ies?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>The activity falls outside the urban edge.</p>			
<p>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</p>		<input checked="" type="checkbox"/> NO	Please explain
<p>15. What will the benefits be to society in general and to the local communities?</p>	Please explain		
<p>It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.</p>			
<p>16. Any other need and desirability considerations related to the proposed activity?</p>	Please explain		
<p>No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.</p>			
<p>17. How does the project fit into the National Development Plan for 2030?</p>	Please explain		
<p>The proposed development does not apply to the National Development plan for 2030.</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.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
100 m ³	

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

All solid waste will be disposed of by the contractor.

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

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All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

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

Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

BASIC ASSESSMENT REPORT

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO

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

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 8** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

	YES

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Geelhoutboom 247
Portion number	0
SG Code	C0660000000024700000

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline</p> <p>2.2 Plateau</p> <p>2.3 Side slope of hill/mountain</p> <p>2.10 At sea</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>2.4 Closed valley</p> <p>2.5 Open valley</p> <p>2.6 Plain</p>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>2.7 Undulating plain / low hills</p> <p>2.8 Dune</p> <p>2.9 Seafront</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
---------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------	----------------------------------------------------------------------------------

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	NO		

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

BASIC ASSESSMENT REPORT

4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

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

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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

--

Will any building or structure older than 60 years be affected in any way?
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

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Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Is the activity a public amenity?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.

BASIC ASSESSMENT REPORT

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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline			
	Endangered									
	Vulnerable									
	Least Threatened	YES	NO	UNSURE	YES	NO	YES	NO		

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcurata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

1. 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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR. No alternate methods were
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		requested by I&APs or required by the competent authority.
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK's public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below: Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) 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</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the letter can be found in Appendix E2.</p>

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	manner as may be agreed to by the competent authority.	
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge 10 – V with rights owned by DWS.

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54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

BASIC ASSESSMENT REPORT

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

2. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

3. 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.

4. 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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

5. 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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

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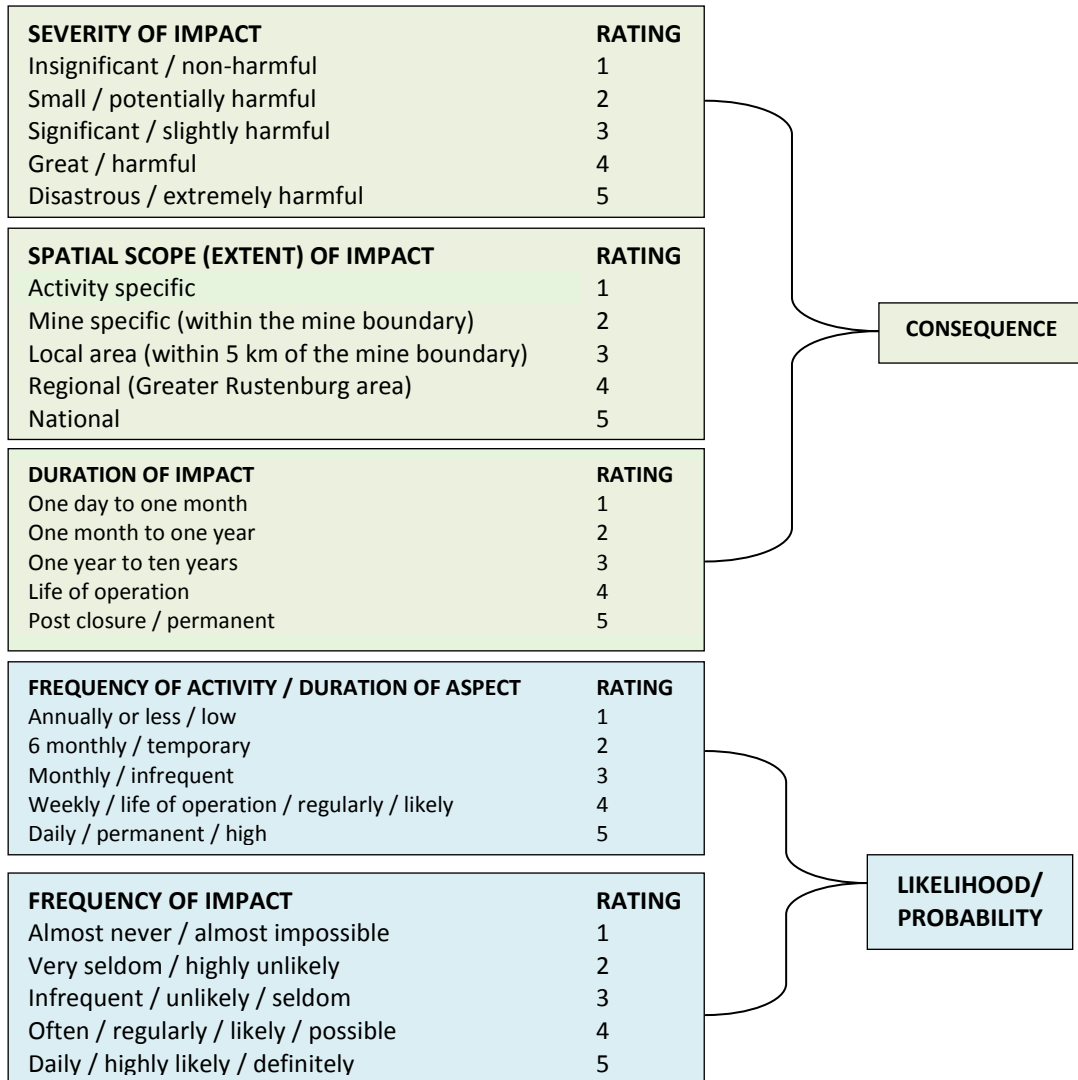


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There is potential for noise disturbance around crossing 8. Any potential noise disturbance will be temporary. No mitigation required.	L No Management Required
Waste management			

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology		SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 4, to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Alternative B



Alternative C



No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS river crossing 8 along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of river crossing 8. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature

472748/42183/Report
4765-9961-8411-HJNM
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

BASIC ASSESSMENT REPORT

14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River crossing 9, located along the DWS servitude, is going to be upgraded by removing existing structures and replacing them with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. The foot print of **River Crossing 9** will be widened.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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
-------------------------------------------------------	---------------------------------

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<p>Example: GN R.544 Item 11(3): <i>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></p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

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ii. Outside urban areas, in: (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;	
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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

Please note: river crossing 9 involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 9	33 05' 22.30" S	25 17' 24.60" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		

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Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydraulic sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 4
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

8m x 23 = 264 mm ²
m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

m
m
m

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:

m ²
m ²
m ²

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

Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

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

- 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.

Please find attached in Appendix B.

9. FACILITY ILLUSTRATION

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

Please find attached in Appendix C.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	<input checked="" type="checkbox"/>		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<input checked="" type="checkbox"/>		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(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?).	<input checked="" type="checkbox"/>		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. □			
(d) Approved Structure Plan of the Municipality	<input checked="" type="checkbox"/>		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			

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<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<p>YES</p>		<p>Please explain</p>
<p>(f) Any other Plans (e.g. Guide Plan)</p>		<p>NO</p>	<p>Please explain</p>
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<p>YES</p>		<p>Please explain</p>
<p>It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<p>NO</p>	<p>Please explain</p>
<p>The proposed upgrade of the river crossing is located on a private farm road.</p>			

BASIC ASSESSMENT REPORT

8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	<input checked="" type="checkbox"/> YES		Please explain
The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.			
9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES		Please explain
The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES		Please explain
Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		<input checked="" type="checkbox"/> NO	Please explain
The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		<input checked="" type="checkbox"/> NO	Please explain
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		<input checked="" type="checkbox"/> NO	Please explain
The activity falls outside the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		<input checked="" type="checkbox"/> NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development does not apply to the National Development plan for 2030.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
	100 m ³

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

All solid waste will be disposed of by the contractor.

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

BASIC ASSESSMENT REPORT

All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

Will the activity produce solid waste during its operational phase? YES NO

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO

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

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

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

Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 9** is located less than 1 kilometre away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

YES	

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

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

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

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

- Has a specialist been consulted to assist with the completion of this section? YES NO
 If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Fonteins Plaats 246
Portion number	4
SG Code	C0660000000024600004

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:

The current Landuse zoning is Thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline <input type="checkbox"/></p> <p>2.2 Plateau <input type="checkbox"/></p> <p>2.3 Side slope of hill/mountain <input type="checkbox"/></p> <p>2.10 At sea <input type="checkbox"/></p>	<p>2.4 Closed valley <input type="checkbox"/></p> <p>2.5 Open valley <input checked="" type="checkbox"/></p> <p>2.6 Plain <input type="checkbox"/></p>	<p>2.7 Undulating plain / low hills <input type="checkbox"/></p> <p>2.8 Dune <input type="checkbox"/></p> <p>2.9 Seafront <input type="checkbox"/></p>
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES					
Dolomite, sinkhole or doline areas		NO				
Seasonally wet soils (often close to water bodies)	YES					
Unstable rocky slopes or steep slopes with loose soil	YES					
Dispersive soils (soils that dissolve in water)		NO				
Soils with high clay content (clay fraction more than 40%)	YES					
Any other unstable soil or geological feature	YES					
An area sensitive to erosion		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.

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4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

Perennial River	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-Perennial River	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permanent Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seasonal Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Artificial Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estuarine / Lagoonal wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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:

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

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

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Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Is the activity a public amenity?	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

9. BIODIVERSITY

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

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

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.

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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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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									
	YES	NO	UNSURE	YES	NO	YES	NO			

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

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcurata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the
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		<p>Draft BAR.</p> <p>No alternate methods were requested by I&APs or required by the competent authority.</p>
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK’s public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below: Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) may be appropriate, the person conducting the public</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the</p>

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	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.	letter can be found in Appendix E2.
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge 10 – V with rights owned by DWS.

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54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

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Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

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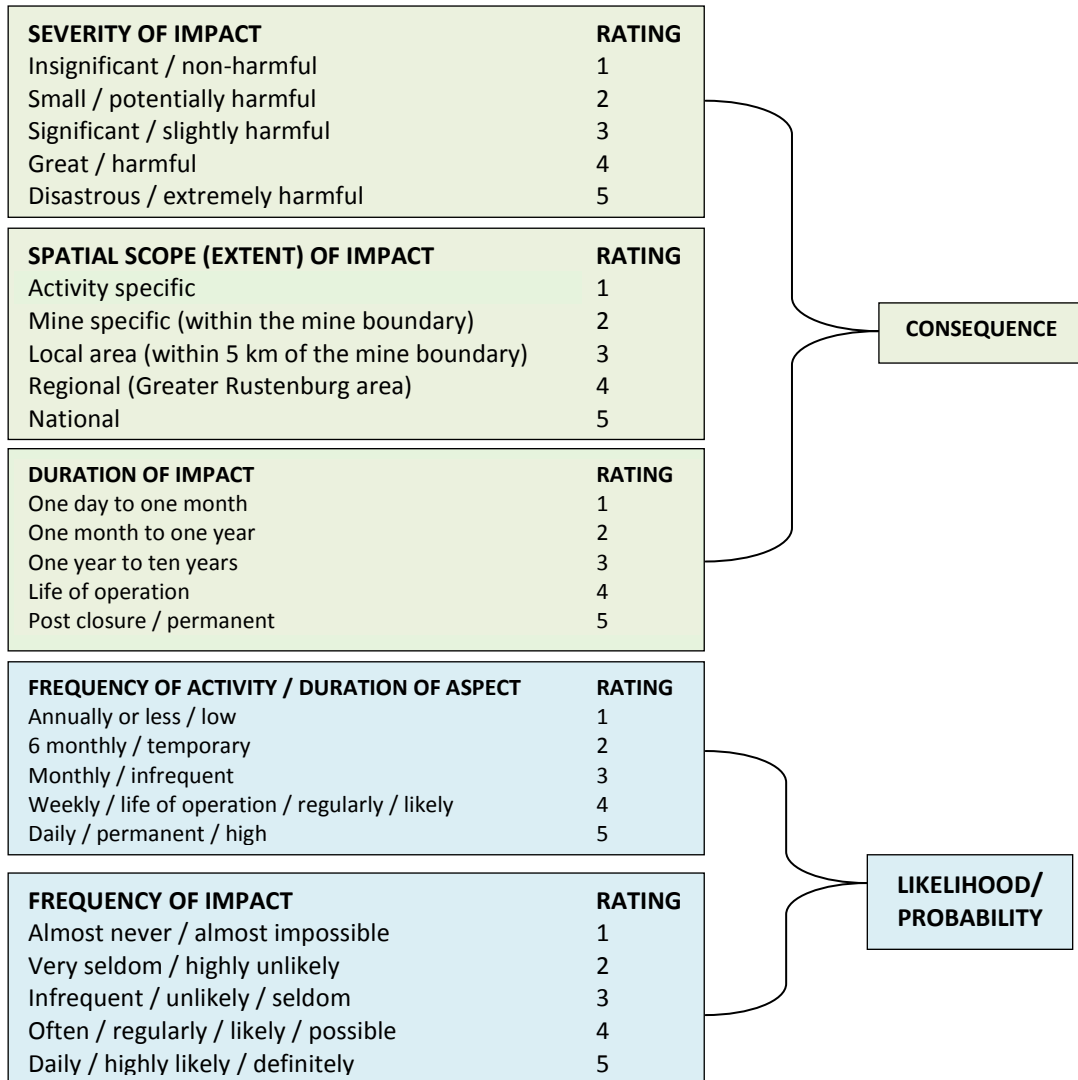


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There are no noise sensitive areas located close to crossing 9 . No mitigation required.	L No Management Required
Waste management			

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	<p>No parking of vehicles or equipment should take place off the access road or designated parking areas.</p> <p>All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.</p>	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1, is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 4, to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Alternative B

Alternative C

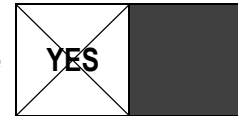
No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS river crossing 9 along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of river crossing 9. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature

472748/42183/Report
4765-9961-8411-HJNM
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

SIGNATURE OF EAP

30/06/2015
DATE



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 August 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed. co-worker
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.

BASIC ASSESSMENT REPORT

14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

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

YES

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

1. PROJECT DESCRIPTION

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

The Skoenmakers River (located in the semi-arid Karoo region of the Eastern Cape) is being used as a transfer route for water transferred by the Orange-Fish-Sundays River Interbasin Transfer Scheme. The river receives water from the Gariiep dam via a gravity tunnel and discharges into the Darlington dam. Development of the Orange-Fish-Sundays River Interbasin Transfer Scheme in the 1970s to early 1980s made access for farmers to their lands hazardous. To overcome inaccessibility to Middlewater and farmlands, 10 River crossings were constructed.

The continual change in the hydrological regime of this once ephemeral stream to a much bigger perennial river led to dramatic changes to both the physical structure and riparian vegetation structure of the river system. This has resulted in:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.
- Damage to infrastructure such as road crossings, water extraction weirs and equipment to regulate flood water.

This continual change has led to the deterioration of the 10 river crossings. This project entails restoring and/or upgrading the crossings. This application is for:

River crossing 10, located along the DWS servitude, is going to be upgraded by removing existing structures and replacing them with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. The foot print of **River Crossing 10** will be widened.

The portion of the river to be assessed is located to the east of the R400 and to the west of the R335 and will hereafter be referred to as the study area. The study area is located within the Great Karoo and the Drought Corridor Ecoregions and within the Fish to Tsitsikama Water Management Area (WMA);

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
-------------------------------------------------------	---------------------------------

BASIC ASSESSMENT REPORT

<p>Example: GN R.544 Item 11(3): <i>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></p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GN R. 544 Item 11: The construction of: (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts.</p>
<p>GN R. 544 Item 18: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse but excluding where such infilling, depositing , dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority</p>	<p>Removal or moving of silt during the upgrade of the bridge crossings.</p>
<p>GN R. 544 Item 39: The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.</p>	<p>Upgrading of bridge crossing by removing existing culvert structures and replacing them with portal culverts, which will increase the width of the bridge.</p>
<p>GN R. 546 Item 24: The expansion of (d) infrastructure where the infrastructure will be expanded by 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line. (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape:</p>	<p>Expansion of the footprint of the bridge crossings within 10 kilometres of Addo Elephant National Park.</p>

BASIC ASSESSMENT REPORT

<p>ii. Outside urban areas, in:</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	
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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

Please note: river crossing 10 involves upgrade of an existing bridge; therefore there are no site alternatives for the proposed development.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
DWS Bridge Crossing 10	33 05' 19.55" S	25 16' 47.65" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		

BASIC ASSESSMENT REPORT

Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

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

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

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

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

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

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

Alternatives in Construction methodology:

Different design approaches were considered in the process of providing a hydrological sound and practical solution to the existing river crossing structures in the Skoenmakers River. Construction of these structures are to take place during the annual shut-down maintenance period, during which time the transfer flow will not take place. This is usually over a period of one month in June and July. The construction programme will however stretch over a longer period and the Construction Methodology thus plays a big part in determining the nature and extent of construction that is to take place.

Alternative 1 (preferred alternative)
The preferred option is to remove the existing structures and replace it with portal culverts adequately sized to accommodate the hydraulic capacity, both current and future. These pre-cast structures can be placed directly after removal of the existing structures which would lead to some time saving on the construction programme. The construction can also take place in phases which would allow for the bridges being constructed over a longer period by introducing temporary river diversion methods. This option is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.
Alternative 2
Due to the short available construction period and in order to allow for proper hydraulic capacity, it was proposed to construct suspended steel structures over the entire river width at each of the crossings. These would replace the existing structures and as a result of the nature of these structures, it can be constructed adjacent to the river and moved into position during full flow of the river. These type of structures are however extremely costly. With the current and expected volume of traffic over the said river crossings, this option would not be economically viable.
Alternative 3
Monolithic, single span, concrete bridges were also considered to replace the existing culvert structures. These type of structures are however both costly and time-consuming to construct. Since the low-flow period of the river is only a month, with high flow volumes the rest of the time, this option would not be viable. The existing and future traffic loads to these bridges would also not warrant the cost involved with such structures.
Alternative 4
Clean out and repair the existing structures, upgrade the existing erosion protection and remove silt upstream from the structures. This option does however not consider the hydraulic capacity of the existing structures, as well as future increase in the transfer (base flow) of water. Although this will be the most cost-effective solution, the existing problems experienced at the structures will not be addressed and re-occurrence of the current conditions will again have to be addressed in near future.

e) No-go alternative

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded.

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1¹ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

5.5m x 90 = 264 mm ²
m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

m
m
m

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:

m ²
m ²
m ²

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	
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Describe the type of access road planned:

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

5. LOCALITY MAP

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

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

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

- 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.

Please find attached in Appendix B.

9. FACILITY ILLUSTRATION

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

Please find attached in Appendix C.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	<input checked="" type="checkbox"/> YES		Please explain
The proposed activity involves the replacement and upgrade of existing infrastructure. This will not affect the property's existing land use rights.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	<input checked="" type="checkbox"/> YES		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed upgrade and restoration is in line with this objective.			
It should, however, be noted that the PSDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			
(b) Urban edge / Edge of Built environment for the area			Please explain
This is not applicable as the proposed upgrade of the river crossing falls outside of the urban edge.			
(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?).	<input checked="" type="checkbox"/> YES		Please explain
The proposed upgrade and restoration of the river crossing falls in line with the aim of maintaining safe roads and good quality road access.			
Local municipalities, however, are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road. □			
(d) Approved Structure Plan of the Municipality	<input checked="" type="checkbox"/> YES		Please explain
Local municipalities are only responsible for municipal roads. It should be noted that these two documents would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.			

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<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p>(f) Any other Plans (e.g. Guide Plan)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">It should be noted that the SDF document would not be specifically applicable to the proposed project as the proposed upgrade and restoration of the river crossing is on a private farm road.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes the upgrade of the river crossing is predominantly to benefit the communities that utilise the existing structure. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the community in terms of usage of the bridge.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> YES </div>		Please explain
<p style="color: blue;">Yes there is adequate capacity available.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> NO </div>	Please explain
<p style="color: blue;">The proposed upgrade of the river crossing is located on a private farm road.</p>			

BASIC ASSESSMENT REPORT

8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	<input checked="" type="checkbox"/> YES		Please explain
The area is used for crop and livestock farming. The upgrade and restoration of the river crossing will improve road accessibility to local farmers for the transportation of agricultural goods and well as provide a safe crossing for livestock.			
9. Is the development the best practicable environmental option for this land/site?	<input checked="" type="checkbox"/> YES		Please explain
The existing river crossing is causing erosion of river banks, siltation and blockages. The restoration and upgrade of the river crossing a necessary environmental option in order to remediate these environmental problems caused by the existing structure.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	<input checked="" type="checkbox"/> YES		Please explain
Yes the negative environmental and social impacts are minor. The proposed upgrade of the river crossing will be beneficial for the water course as well as the community members that make use of the river crossing.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?		<input checked="" type="checkbox"/> NO	Please explain
The proposed upgrade and restoration will merely provide easier and safer access on a private farm road.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		<input checked="" type="checkbox"/> NO	Please explain
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		<input checked="" type="checkbox"/> NO	Please explain
The activity falls outside the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?		<input checked="" type="checkbox"/> NO	Please explain
15. What will the benefits be to society in general and to the local communities?	Please explain		
It will not apply to society in general. To the local farming community it will mean that both the farmers and their cattle can cross the river for grazing and improve accessibility to local farmers.			
16. Any other need and desirability considerations related to the proposed activity?	Please explain		
No other need and desirability considerations are related to the proposed upgrade of the DWS river crossing.			
17. How does the project fit into the National Development Plan for 2030?	Please explain		
The proposed development does not apply to the National Development plan for 2030.			

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objectives of IEM were taken into account by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering a number of different alternative designs during an initial screening exercise. The public will be given opportunity to comment on the proposed project and to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved Environmental Management Programme (EMPr) (see Appendix G).

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

One of the key principles in Section 2 of NEMA is that “development must be socially, environmentally and economically sustainable”. The proposed project is deemed to be socially, environmentally and economically sustainable and would not result in any significant adverse impacts to either the biophysical or socio-economic environments.

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
National Environmental Management (Act No. 107, 1998)	This Environmental Authorisation	DEA	1998
National Water Act No. 36 of 1998 (NWA)	Water Use Licence	DWS	1998
Guidelines for EIA Regulations		DEA	
Guidelines for Need and Desirability		DEA	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

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

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

YES	
100 m ³	

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

All solid waste will be disposed of by the contractor.

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

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All domestic waste produced during construction will be disposed of at a licenced municipal landfill site.

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

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

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

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

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? YES NO
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES NO

If YES, what estimated quantity will be produced per month? [Redacted]
 Will the activity produce any effluent that will be treated and/or disposed of on site? YES NO

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

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

If YES, provide the particulars of the facility:

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

BASIC ASSESSMENT REPORT

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

c) Emissions into the atmosphere

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

	NO

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

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

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

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

	NO
--	----

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

e) Generation of noise

Will the activity generate noise?

YES	
	NO

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

Describe the noise in terms of type and level:

The closest dwelling to **River Crossing 10** is located less than 100 meters away. However, no noise disturbance is anticipated from the proposed development. Any noise disturbance could only arise during the construction phase, particularly during the deconstruction of the existing structural features that are planned to be replaced. Construction activities will take place between the hours of 7h30 and 18h00 to avoid noise disturbance.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

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

YES	

If YES, please provide proof that the application has been submitted to the Department of Water Affairs. [Please note that an application for a water use licence will be submitted to the Department of Water and Sanitation.](#)

14. ENERGY EFFICIENCY

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

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

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):

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. [Please find specialist declaration of interest attached in appendix I.](#)

Property description/physical address:

Province	Eastern Cape
District Municipality	Cacadu District Municipality
Local Municipality	Blue Crane Route Municipality
Ward Number(s)	6
Farm name and number	Fontein Plaats 246
Portion number	6
SG Code	C0660000000024600006

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:

The current landuse zoning is thicket and shrubland. (http://gis.ecprov.gov.za/Environmental_Affairs/default.aspx)

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? NO YES

BASIC ASSESSMENT REPORT

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

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

<p>2.1 Ridgeline</p> <p>2.2 Plateau</p> <p>2.3 Side slope of hill/mountain</p> <p>2.10 At sea</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>2.4 Closed valley</p> <p>2.5 Open valley</p> <p>2.6 Plain</p>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<p>2.7 Undulating plain / low hills</p> <p>2.8 Dune</p> <p>2.9 Seafront</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
---------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------	----------------------------------------------------------------------------------

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas	NO		
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil	YES		
Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	YES		
Any other unstable soil or geological feature	YES		
An area sensitive to erosion	NO		

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

BASIC ASSESSMENT REPORT

4. GROUNDCOVER

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

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

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

5. SURFACE WATER

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

Perennial River	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-Perennial River	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permanent Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seasonal Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Artificial Wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estuarine / Lagoonal wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

The proposed development is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karroo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that feeds in to the Darling Dam. The river is classified as a system in a Category E-F condition (Not acceptable). The river is not a flagship river, is not free flowing and is not indicated as a Fresh Water Ecosystem Priority Area River. There are five channelled valley bottom wetlands that are associated with the Skoenmakers River. These wetlands are indicated to AB (good or natural) and C (moderately modified) conditions and three of the wetland areas are indicated as Freshwater Ecosystem Priority Area wetlands.

BASIC ASSESSMENT REPORT

6. LAND USE CHARACTER OF SURROUNDING AREA

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

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

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

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

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

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

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

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

7. CULTURAL/HISTORICAL FEATURES

The proposed upgrade of the river crossing will replace an existing river crossing; therefore no disturbance of culturally or historically significant elements is anticipated to occur.

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:

	NO

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:

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

	NO
	NO

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:

There is 10 734 people who are economically active (employed or unemployed but looking for work); of these 30,7 % are unemployed. Of the 4 884 economically active youth (15–35 years) in the area, 40,0 % are unemployed (Stats SA, 2011).

Economic profile of local municipality:

Blue Crane Route Local Municipality has a total population estimated at 36 000 people as of 2011. The area has a number of strategic environment advantages. It contains 97% of natural land covers, is centrally located between three national parks, contains biodiversity of regional and national significance and local conditions present a number of opportunities for renewable energy generation on a large scale. However the area faces a number of issues such as higher densities of population primarily concentrated in the three urban centres (Stats SA, 2011).

The low agricultural productivity and carrying capacity of much of the land in the municipality, combined with limited access to water for irrigation, has restricted development of the agricultural economy. The remoteness of the urban centres limits growth of business, services and sectors (Stats SA, 2011).

BASIC ASSESSMENT REPORT

Level of education:

Of those aged 20 years and older 7,6% have completed primary school, 38,1% have some secondary education, 18,9% have completed matric, and 6,8% have some form of higher education. 10,5% of those aged 20 years and older have no form of schooling (Stats SA, 2011).

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R20 000 000 - 00
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES NO
Is the activity a public amenity?	YES NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	20
What is the expected value of the employment opportunities during the development and construction phase?	R3 000 000 - 00
What percentage of this will accrue to previously disadvantaged individuals?	% 60
How many permanent new employment opportunities will be created during the operational phase of the activity?	0
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

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					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; vertical-align: middle;">Critical Biodiversity Area (CBA)</td> <td style="width: 50%; text-align: center; vertical-align: middle;">Ecological Support Area (ESA)</td> </tr> </table>	Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center; vertical-align: middle;">Other Natural Area (ONA)</td> <td style="width: 25%; text-align: center; vertical-align: middle;">No-Natural Area Remaining (NNR)</td> <td style="width: 50%; vertical-align: top;"> The majority of the site is located within a CBA which is associated with the Skoenmakers River. </td> </tr> </table>	Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)					
Other Natural Area (ONA)	No-Natural Area Remaining (NNR)	The majority of the site is located within a CBA which is associated with the Skoenmakers River.				

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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	100%	The study site is located within the lower karroo bioregion and is associated with the Nama-Karoo. Riparian vegetation associated with the Skoenmakers River.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
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 unchannelled wetlands, flats, seeps pans, and artificial wetlands)	YES	NO	UNSURE	Estuary		Coastline	
	Endangered					YES	NO	YES	NO
	Vulnerable					YES	NO	YES	NO
	Least Threatened					YES	NO	UNSURE	YES

- 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)

The site falls within the Lower Karoo Bioregion (Mucina and Rutherford, 2006). According to the National List of Threatened Terrestrial Ecosystems (2011) the study area is not located within a threatened terrestrial ecosystem.

The vegetation type in the area is Albany broken veld. This vegetation type differs in a number of respects from those of the rest of the Nama-Karoo. Apart from climatic differences (highest rainfall, least frost), this type has a number of important species that are regarded as not important elsewhere in the Nama-Karoo. It is also the only vegetation type within the Nama-Karoo in which species such as *Enneapogon desvauxii* do not qualify as an important species.

The following flora is indicators of the Albany Broken Veld vegetation type (TCape Thickets, Wetlands):

Succulent Tree: *Aloe ferox*;

Small trees: *Acacia natalitia* (d), *Euclea undulata* (d), *Pappea capensis* (d), *Schotia afra* var. *afra* (d), *Boscia oleoides*, *Cussonia spicata*;

Tall shrubs: *Grewia robusta*, *Lycium cinereum*, *Putterlickia pyracantha*, *Rhigozum obovatum*, *Rhus incisa* var. *effuse*;

Low Shrubs: *Asparagus striatus* (d), *A. suaveolens* (d), *Becium burchellianum* (d), *Chryscoma ciliata* (d), *Selago fruticosa* (d), *Asparagus acocksii*, *A. racemosus*, *Eriocephalus ericoides* subsp. *Erocoides*, *Felicia filifolia*, *F. muricata*, *Gnidia cuneata*, *Helichrysum dregeanum*, *Hermannia linearifolia*, *Indigofera sessilifolia*, *Limeum aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala aethiopicum*, *Nenax microphylla*, *Pentzia incana*, *Polygala seminuda*, *Rosenia humilis*;

Succulent Shrubs: *Cotyledon campanulata*, *Drosanthemum lique*, *Euphorbia meloformis*, *E. rectirama*, *Faucaria britteniae*, *F. tigrina*, *Mestoklema tuberosum*;

Herbs: *Gazania krebsiana*, *Hermannia pulverata*, *Hibiscus pusillus*;

Geophytic herbs: *Bulbine frutescens*, *Drimia anomala*, *Eriospermum dregei*, *Ornithogalum dyeri*;

Succulent Herbs: *Gasteria bicolor*, *Ophionella arcuata* subsp. *arctuata*, *Platythyra hackeliana*, *Senecio radicans*, *Stapeliopsis pillansii*;

Graminoids: *Aristida congesta* (d), *Eragrostis obtuse* (d), *Sporobolus fimbriatus* (d), *Tragus berteronianus* (d), *Cynodon incompletes*, *Digitaria eriantha*, *Ehrharta calycina*, *Eragrostis curvula*, *Setaria sphacelata*, *Tragus koeleroides*.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	The Herald & Die Burger		
Date published	7 April 2015		
Site notice position	Latitude	Longitude	Site Notice Location (Farm and Farm Portion)
	24° 49' 49.53" E	33° 17' 29.01" S	Eastern Cape Uitenhage 5 Police Station in Wolwefonte (Public Place)
	25° 41' 49.01" E	33° 10' 39.62" S	Bracefield UCC Primary School in Bracefield (Public Place)
	25° 15' 37.51" E	33° 4' 19.77" S	Eastern Cape, Somerset East, Bouwers Fontein 240, Portion 0
	25° 17' 36.44" E	33° 4' 34.61" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 4
	25° 18' 9.09" E	33° 4' 39.07" S	Eastern Cape, Somerset East, Fonteins Plaats 246, Portion 0
	25° 21' 19.66" E	33° 5' 6.71" S	Eastern Cape, Somerset East Geelhoutboom 247, Portion 0
	25° 25' 31.25" E	33° 5' 7.48" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 25' 16.20" E	33° 4' 57.99" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 5
	25° 25' 23.80" E	33° 4' 58.29" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 9
	25° 26' 32.04" E	33° 5' 1.05" S	Eastern Cape, Somerset East Kruis Rivier 248, Portion 0
	25° 29' 57.59" E	33° 4' 46.12" S	Eastern Cape, Somerset East 205, Portion 2
	25° 30' 33.17" E	33° 4' 45.20" S	Eastern Cape, Somerset East 407, Portion 4
25° 31' 49.22" E	33° 4' 33.64" S	Eastern Cape, Somerset East 407, Portion 2	
25° 31' 48.51" E	33° 4' 38.97" S	Eastern Cape, Somerset East 407, Portion 1	
Date placed	7 April 2015		

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

Site notices will be placed on 7 April 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E 1 will be placed in The Herald and Die Burger Newspaper on 7 April 2015. Proof of the site notice placement and advertisement will be provided in the Final BAR.

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.

54(2)(e)	using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Notification letters will be sent to all registered I&APs upon availability of the DBAR. An advertisement will be placed in The Herald and Die Burger Newspaper. An open day will be held on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the
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		<p>Draft BAR.</p> <p>No alternate methods were requested by I&APs or required by the competent authority.</p>
54(3)	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—</p> <p>(a) give details of the application which is subjected to public participation; and</p> <p>(b) state—</p> <p>(i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];</p> <p>(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p> <p>(iii) the nature and location of the activity to which the application relates;</p> <p>(iv) where further information on the application or activity can be obtained; and</p> <p>(vi) the manner in which and the person to whom representations in respect of the application may be made.</p>	<p>All site notices and advertisements states the following details:</p> <p>Applicant, namely Department of Water and Sanitation (DWS);</p> <p>(i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA regulations;</p> <p>(ii) A Basic Assessment is undertaken by SRK Consulting (SA); to allow for the application of environmental authorisation (iii) project activities and location of the activities to which the application relates are listed;</p> <p>(iv) further information on the application or activity can be obtained from SRK's public participation office, or public open day on 15 April 2015 at the Bracefield Recreation Hall in Kommadagga, or at the public places listed below: Bracefield UCC Primary School; Police Station in Wolwefontein and SRK Website.</p> <p>(vi) questions, comments and suggestions may be submitted by means of e-mail, fax, postage, or telephonically to the SRK public participation office.</p>
54(4)	<p>A notice board referred to in sub-regulation (2) must—</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority</p>	<p>All site notices are A2 (594mm x 420mm) in size and display the required information as mentioned in the section above.</p>
54(5)	<p>Where deviation from sub-regulation (2) may be appropriate, the person conducting the public</p>	<p>Deviation from aspects of the public participation was applied for and granted by DEA on 26 February 2015. A copy of the</p>

BASIC ASSESSMENT REPORT

	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.	letter can be found in Appendix E2.
54(6)	Where a basic assessment report, scoping report or environmental impact assessment report as contemplated in regulations 22, 28 and 31 respectively is amended because it has been rejected or because of a request for additional information by the competent authority, and such amended report contains new information, the amended basic assessment report, scoping report or environmental impact assessment report must be subjected to the processes contemplated in regulations 21, 27 and 31, as the case may be, on the understanding that the application form need not be resubmitted	Not applicable.
54(7)	When complying with this regulation, the person conducting the public participation process must ensure that— (a) information containing all relevant facts in respect of the application is made available to potential interested and affected parties; and (b) participation by potential interested and affected parties is facilitated in such a manner that all potential interested and affected parties are provided with a reasonable opportunity to comment on the application.	All public participation activities undertaken comply with this section. I&AP will be given 40 days for review and commenting on the Draft BAR.

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

54(2)(b)	Giving written notice to -	Details
54(2)(b)(i)	the owner or person in control of that land if the applicant is not the owner or person in control of the land;	There is an existing servitude which spans from “Bridge 1 – Palmietfontein” to “Bridge 10 – V with rights owned by DWS.

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54(2)(b)(ii)	the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	SRK Consulting is in agreement with Mr Rocco Gouws (farmer and landowner in the community) to distribute notification letters on behalf of SRK Consulting to adjacent land owners. A letter of agreement has been signed with Mr. Gouws and can be found in Appendix E2. Adjacent landowners have signed a register in receipt for the notification (please see Appendix E2). Notification letters will be sent via Mr. Gouws to landowners upon availability of the Draft BAR and will also include an invitation and details of the public open day (please see Appendix E2 for example letter).
54(2)(b)(iii)	owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Notification letters (Appendix E2) will be sent to all I&APs upon availability of the Draft BAR. An advertisement will have been placed in The Herald newspaper on 31 March 2015 and in Die Burger on 01 April 2015. A public open day public open day will be held on 15 April 2015 at the Bracefield Recreational Hall to provide equal opportunity for all stakeholders from the surrounding area to receive information and comment on the Draft BAR.
54(2)(b)(iv)	the municipal councilor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters will be sent to relevant ward councillors upon availability of the Draft BAR, which will include an invitation and details of the public open day: Blue Crane Route Local Municipality, Councillor: Ms Z Funiselo (Ward 6)

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54(2)(b)(v)	the municipality which has jurisdiction in the area	<p>Notification letters will be sent to relevant municipal officials upon availability of the Draft BAR, which will include an invitation and details of the public open day with jurisdiction:</p> <p>Blue Crane Route Local Municipality, Municipal Manager; Cacadu District Municipality, Executive Major/Municipal Head Cacadu District Municipality, Municipal Manager (please refer to table in section 5)</p>
54(2)(b)(vi)	any organ of state having jurisdiction in respect of any aspect of the activity; and	<p>Notification letters which will include an invitation and details of the public open day will be sent to all relevant Departments with jurisdiction in the area. Hard copies of the Draft BAR will be sent to the commenting authorities who have jurisdiction over activities:</p> <p>Department of Water and Sanitation (DWS) –(Eastern Cape); Department of Agriculture and Rural Development(Eastern Cape); Eastern Cape Department of Economic Development and Environmental Affairs and Tourism (DEDEAT); Department of Rural development and Land Reform (Eastern Cape); Department of Public Works and Roads (Eastern Cape); Blue Crane Route Local Municipality Cacadu District Municipality; and SAHRA (Please refer to table 5).</p>
54(2)(b)(vii)	any other party as required by the competent authority	No other parties are required by the competent authority.

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Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Please refer to Appendix E4 for a copy of the I&AP register		

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

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

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
All comment or response that has been received will be provided in the Final BAR from Stakeholders.	

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
DWS – Eastern Cape	Mr Dewalt Coetsee	083 627 5920	(041)586 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
Department of Rural development and Agrarian -Eastern Cape	Mr L Ngada	040 609 3471		akile@yebo.co.za	Private Bag X0040 Bisho 5605
Department of Public Works and Roads - Eastern Cape	Mr Bongani Gxilishe	040 602 4000	(040)639 2733	Zukiswa.ngwane@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Gerry Pienaar	082 458 4593	(0)605 7300	gerry.pienaar@dedea.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)243 0633	mmanager@bcm.gov.za	P O Box 21 Somerset East 5850

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Cacadu District Municipality	Mr T Pillay	041 508 7111		tpillay@sbdm.co.za	PO Box 318, Port Elizabeth 6000
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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.

2. METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The anticipated impacts associated with the proposed project have been assessed according to SRK's standardised impact assessment methodology which is presented below. This methodology has been utilised for the assessment of environmental impacts where the consequence (severity of impact, spatial scope of impact and duration of impact) and likelihood (frequency of activity and frequency of impact) have been considered in parallel to provide an impact rating and hence an interpretation in terms of the level of environmental management required for each impact.

The first stage of any impact assessment is the identification of potential environmental activities², aspects³ and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors⁴ and resources⁵, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts⁶ (social and biophysical) are then identified based on the potential interaction between the aspects and the receptors/resources.

The significance (degree to which the impact may cause irreplaceable loss of resources) of the impact is then assessed by rating each variable numerically according to defined criteria as outlined in

²An *activity* is a distinct process or task undertaken by an organisation for which a responsibility can be assigned. Activities also include facilities or pieces of infrastructure that are possessed by an organisation.

³An *environmental aspect* is an 'element of an organisations activities, products and services which can interact with the environment'. The interaction of an aspect with the environment may result in an impact.

⁴*Receptors* comprise, but are not limited to people or man-made structures.

⁵*Resources* include components of the biophysical environment.

⁶*Environmental impacts* are the consequences of these aspects on environmental resources or receptors of particular value or sensitivity, for example, disturbance due to noise and health effects due to poorer air quality. Receptors can comprise, but are not limited to, people or human-made systems, such as local residents, communities and social infrastructure, as well as components of the biophysical environment such as aquifers, flora and palaeontology. In the case where the impact is on human health or well-being, this should be stated. Similarly, where the receptor is not anthropogenic, then it should, where possible, be stipulated what the receptor is.

Table 1. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity⁷, spatial scope⁸ and duration⁹ of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity¹⁰ and the frequency of the impact¹¹ together comprise the likelihood of the impact occurring and can obtain a maximum value of 10. The values for likelihood and consequence of the impact are then read off a significance rating matrix table as shown in Table 2.

This matrix thus provides a rating on a scale of 1 to 150 (low, medium low, medium high or high) based on the consequence and likelihood of an environmental impact occurring.

Natural and existing mitigation measures, including built-in engineering designs, are included in the pre-mitigation assessment of significance. Measures such as demolishing of infrastructure, and reinstatement and rehabilitation of land, are considered post-mitigation.

⁷*Severity* refers to the degree of change to the receptor status in terms of the reversibility of the impact; sensitivity of receptor to stressor; duration of impact (increasing or decreasing with time); controversy potential and precedent setting; threat to environmental and health standards.

⁸*Spatial scope* refers to the geographical scale of the impact.

⁹*Duration* refers to the length of time over which the stressor will cause a change in the resource or receptor.

¹⁰*Frequency of activity* refers to how often the proposed activity will take place.

¹¹*Frequency of impact* refers to the frequency with which a stressor (aspect) will impact on the receptor.

Table 1: Criteria for Assessing Significance of Impacts

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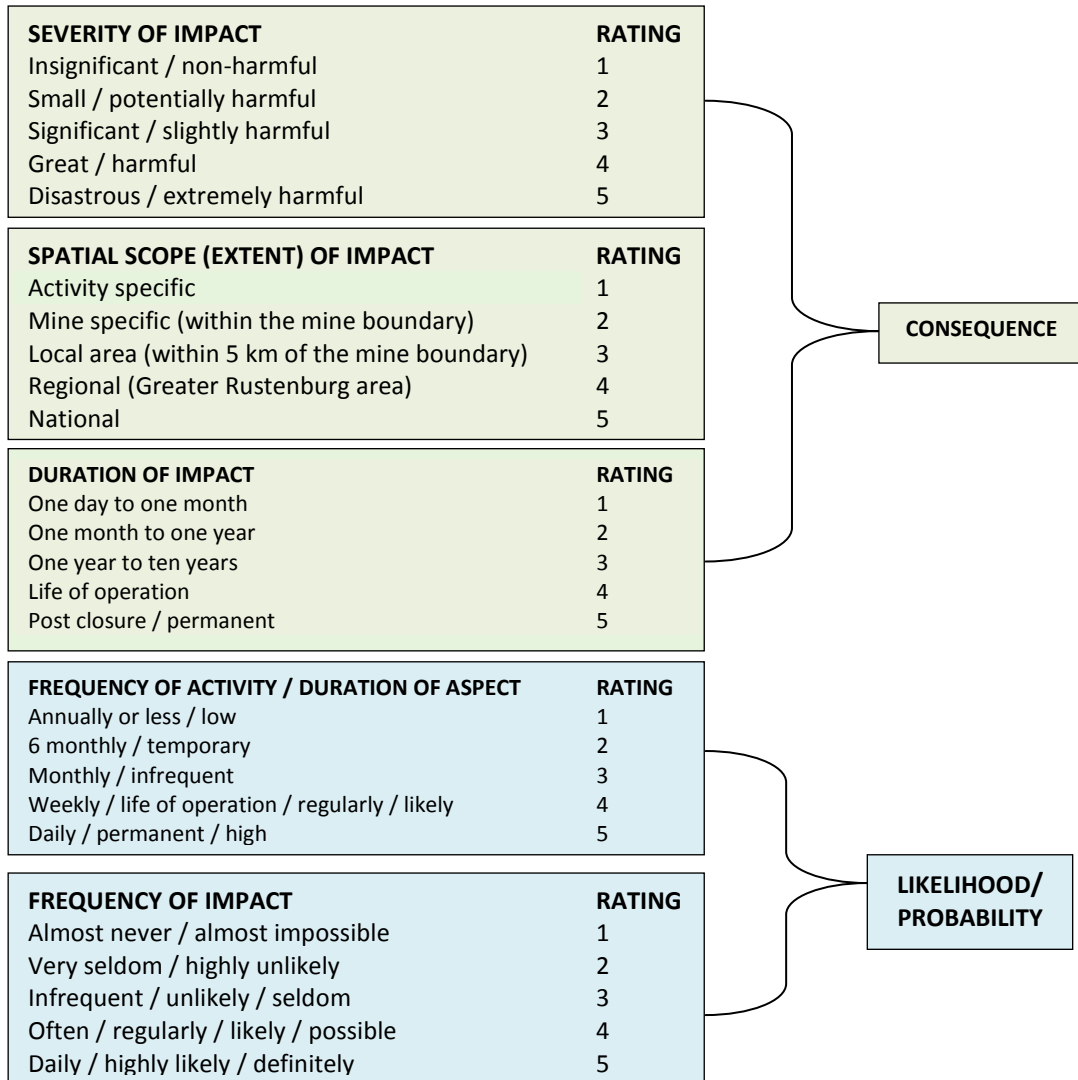


Table 2: Interpretation of Impact Rating

		Consequence														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Likelihood	1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	2	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	3	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
	6	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
	7	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
	8	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	9	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270
	10	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300

	High	76 to 150	Improve current management
	Medium High	40 to 75	Maintain current management
	Medium Low	26 to 39	
	Low	1 to 25	No management required

SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD

Table 3: Impacts during the Construction Phase.

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	L No Management Required	The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	L No Management Required
		The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.	
		Strict controls and environmental education should be employed for all the construction workers that are working within the water course.	
		Construction should preferably take place during the dry season.	
Spillages from the plant and equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent spillages of hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
Noise			
Construction activities resulting in noise disturbance in the surrounding area	L No Management Required	There are no noise sensitive areas located close to crossing 10 . No mitigation required.	L No Management Required
Waste management			

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment.	MH Maintain Current Management	All waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site.	L No Management Required
		The waste must be stockpiled in a designated area within the site camp and transported to the Municipal Landfill Site on a regular basis.	
		All construction materials should be stored in designated areas.	
		No dumping of construction waste of excess construction materials will be allowed in the bush surrounding the construction site.	
		No waste is to be buried or burned on site.	
		Chemical toilets are to be maintained in a clean state on a regular basis and must be moved to ensure that they adequately service the work areas. The contractor is to ensure that the surrounding bush is not being used as an ablution facility.	
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp.	
		Bins and/or skips must be emptied regularly and waste must be disposed of at a registered landfill site.	
Heritage			
Impact on unidentified heritage artefacts.	L No Management Required	If any artefacts of archaeological or cultural interest are found, including graves, then the area will be marked and all activities in that vicinity will cease with immediate effect. SAHRA and the North West Provincial Heritage Resources Authority (NWPHRA)/the Provincial Heritage Resources Authority - Gauteng (PHRA-G) will be notified of the finding and operations at that specific site will only continue after the relevant NWPHRA has granted permission to do so.	L No Management Required

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POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology		SRK Methodology
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to erosion of the river banks.	ML Maintain Current Management	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Biodiversity			
Construction activities could result in the disturbance of the vegetation specifically on the banks of the water course.	ML Maintain Current Management	No vehicles or plant should be parked within the river course when not actively working on the construction.	L No Management Required
		The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	
Disturbance of fauna during site clearance and construction activities	ML Maintain Current Management	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	
Construction activities and spillages will negatively impact on aquatic biota present in the Skoenmakers River.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the construction site. All refuelling will be done in the site camp or another designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	
		The construction footprint must not extend further than is necessary, preferably not more than 30m up and downstream of the positioning of the bridge structure.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		<p>The amount of heavy machinery and equipment needed to work within the river course should be limited. Only the equipment that is absolutely necessary should be allowed in the river course.</p> <p>Construction should preferably take place during the dry season.</p> <p>Strict controls and environmental education should be employed for all the construction workers that are working within the water course.</p>	
Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.	MH Maintain Current Management	<p>No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.</p> <p>An alien eradication and management program must be developed. Eradication and monitoring must be undertaken monthly during the construction phase and yearly during the operational phase.</p>	ML Maintain Current Management
Air quality			
Air pollution from vehicle emissions and fires as well as dust from vehicle movements and stock piles may have a negative impact on air quality.	ML Maintain Current Management	<p>Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 30 km/h must be adhered to on the construction site.</p> <p>High winds may pick up dust from the stockpiles. Screening of stockpiles may be required by utilising wooden supports and shade cloth.</p> <p>Fires by construction or project personnel are strictly prohibited.</p>	L No Management Required

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
		Vehicles and machinery are to be kept in good working order and meet the manufacturer's specifications. Should excessive emissions be observed, the contractor is to have the equipment seen to within 24 hours.	

Table 4: Impact during the Operational Phase

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Surface water			
Sediment may build up behind the new structures.	L No Management Required	The design of the structure makes provision for limiting sediment build up.	L No Management Required
		The bridge must be maintained regularly.	
Spillages from the plant and equipment that will be used during maintenance activities could result in pollution of the water by hydrocarbons.	ML Maintain Current Management	Plastic trays and liners must be used to prevent cement and spillages of other hazardous substances such as oil or diesel into the water body.	L No Management Required
		No refuelling of vehicles or machinery will be allowed on the maintenance site. All refuelling will be done in a designated area off site.	
		No large scale mixing of cement will take place on site. Where possible Ready Mix cement should be used for the cast in-situ structures. Any mixing of cement must take place on top of an impermeable surface.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
Waste management			
Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during maintenance activities may have negative impacts on the surrounding environment.	L No Management Required	Portable toilet facilities must be provided for maintenance workers and serviced and maintained as and when necessary by a registered waste disposal company.	L No Management Required
		All waste produced during maintenance should be removed as soon as possible and disposed of at a Municipal Landfill Site.	
		No dumping of waste and excess construction materials generated during maintenance will be allowed in the bush surrounding the maintenance site.	
		No waste is to be buried or burned on site.	
		Appropriate disposal facilities, such as litter bins, must be provided during maintenance activities.	
Soil and Land Use			
Indirect Impact: Disturbance of vegetation on the river banks due to the maintenance activities may lead to erosion of the river banks.	L No Management Required	No parking of vehicles or equipment should take place off the access road or designated parking areas.	L No Management Required
		All work must take place within the maintenance footprint area must be rehabilitated once the maintenance has been completed.	
Biodiversity			
Disturbance of fauna during site maintenance activities	L No Management Required	The protection of threatened or protected species (TOPS) must be carried out in accordance to NEMBA (Act 10 of 2004) Chapter 4, Part 2. This will include any amendments or changes to regulations and guidelines pertaining to the protection of TOPS.	L No Management Required
		No trapping or hunting of fauna should be allowed on site during any phase of the project.	

BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MITIGATION MEASURES	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	SRK Methodology
The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.	MH Maintain Current Management	No vegetation is to be removed outside of the demarcated zones. This will prevent disturbance of natural vegetation and the establishment of alien and invader vegetation species specified by GNR 507 and 508 or any amendments to the legislation.	ML Maintain Current Management
		An alien eradication and management program must be developed. Eradication and monitoring must be undertaken at the start of the wet season (August) and the end of the wet season (May) as well as after major flooding events (when the 1:100 flood level is reached).	

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

3. 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impacts could be mitigated to acceptable measures.

The main negative impacts during the construction phase are on:

- **Waste management**
 - Contamination of the area with general waste (litter, construction material etc.) and hazardous waste (Oils, hydrocarbon etc.) produced during the construction phase may have negative impacts on the surrounding environment
- **Biodiversity**
 - Disturbance of the river bank vegetation could lead to the spread of invasive alien vegetation.

The main negative impacts during the operational phase of the proposed development are on:

- **Biodiversity:**
 - The disturbance of the area surrounding the upgraded river crossing could lead to the spread of invasive alien vegetation. Particularly after flood events.

The proposed upgrade and restoration of the river crossing will have long-term benefits to the local farming community. Included in this is the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river at the crossing will be mitigated.

Alternative A (Construction methodology -- Option 4)

The most viable option is to do construction in 2 phases where berms divert the water through half of the existing structure there by allowing construction of the alternative section. Subsequently water will be diverted back through the new section thus allowing the construction completion of the rest of the river crossing.

Option 1 is considered to be the most viable option regarding the required capacity, constructability, construction programme, cost and remote access to the site.

Option 2, to construct suspended steel structures over the river width at the crossing, is extremely costly. This option is, therefore, not considered economically viable as there is a very low volume of traffic over the river crossing.

Option 3, to construct a monolithic, single span, concrete bridge, is both costly and time consuming. The existing and future traffic loads to the bridge does not warrant the cost involved with such structures.

Option 4, to clean out and repair existing structures, upgrade erosion protection and remove silt, is the most cost effective option. It does, however, not address the hydraulic capacity or capacity for future increases in base flow of the existing structures which will result in a reoccurrence of the current conditions.

Alternative B



Alternative C



No-go alternative (compulsory)

This alternative is the “no-development alternative”. The no development option will result in the status quo being maintained. This alternative will prevent the road crossing from being upgraded. This alternative is not viewed as practical from an environmental perspective. If the existing river crossing is not upgraded and restored, the following issues surrounding the river crossing will not be mitigated:

- Erosion of the river embankment.
- Excessive siltation causing unnatural islands to form within the river bed.
- Blockage of water extraction Weirs and pump stations.
- Excessive invasive vegetation causing blockage of the water course.

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)?



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.

This report is intended to offer an objective assessment of the concerns, which were identified during the Basic Assessment Phase of the study as well as through the technical expertise, which lie within the environmental practitioners. The purpose of this report is to ascertain the impact of the proposed upgrade and repair of DWS **river crossing 10** along the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river and provide a safe crossing for those that utilize the bridge. Environmental impacts identified in this report should allow the relevant authority the opportunity to make an informed decision regarding the proposed activities.

It is the opinion of SRK Consulting that there are no significant detrimental environmental impacts associated with the proposed upgrade and restoration of **river crossing 10**. The management of the negative impacts will require the implementation of mitigation measures.

A site specific Environmental Management Programme (EMPr) (refer to Appendix G) must be implemented by the applicant for the proposed development.

The following are recommended that:

- The EMPr should be a condition of the Environmental Authorisation issued by DEA;
- The EMPr should be binding on all managers and contractors operating/utilizing the site;
- The submission of a Water Use License Application is made a condition of the issuing of the Environmental Authorisation.

The EMPr should form part of the contractor's tender documentation.

Is an EMPr attached?



The EMPr must be attached as Appendix G.

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

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

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

BASIC ASSESSMENT REPORT

Manda Hinsch

NAME OF EAP

SRK Consulting - Certified Electronic Signature



472748/42183/Report
4765-9961-8411-H/NM

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SIGNATURE OF EAP

____30/06/2015____
DATE