



**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, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

**Kindly note that:**

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

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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.

The contents of this Basic Assessment Report complies with the requirements of GN R 982 as indicated in the table below:

Regulation	Content	Section of report
<b>Section 3 (1) of Appendix 1 of GN R 982</b>		
A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include-		
(a) (i)	details of the EAP who prepared the report; and	Appendix H
(a) (ii)	the expertise of the EAP, including a curriculum vitae;	Appendix H
(b) (i)	the location of the activity, including the 21 digit Surveyor General code of each cadastral land parcel;	Appendix K – Surveyor General Codes
(b) (ii)	the location of the activity, including where available, the physical address and farm name;	Section B
(b) (iii)	the location of the activity, including where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Not Applicable; items (i) and (ii) are available.
(c) (i)	a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale; or, if it is a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or	Appendix A Appendix C
(c) (ii)	on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	Section 2(a) Table 1
(d) (i)	a description of the scope of the proposed activity, including all listed and specified activities triggered and being applied for; and	Section A
(d) (ii)	a description of the activities to be undertaken including associated structures and infrastructure;	Appendix C – Technical Drawings
(e) (i)	a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and	Section A
(e) (ii)	how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments;	Section A
(f)	a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	Section A

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Regulation	Content	Section of report
(g)	a motivation for the preferred site, activity and technology alternative;	Section A
(h) (i)	a full description of the process followed to reach the proposed preferred alternative within the site, including details of all the alternatives considered;	Section A
(h) (ii)	details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;	Section C
(h) (iii)	a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;	Appendix E1 – Comments and Responses Report
(h) (iv)	the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Section B
(h) (v)	the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts- (aa) can be reversed;  (bb) may cause irreplaceable loss of resources; and  (cc) can be avoided, managed or mitigated;	Section D – and Appendix F – Impact assessment table
(h) (vi)	the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;	Section D
(h) (vii)	positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	Section D
(h) (viii)	the possible mitigation measures that could be applied and level of residual risk;	Section D
(h) (ix)	the outcome of the site selection matrix;	N/A as sites are determined by need for intervention
(h) (x)	if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and	Section A
(h) (xi)	a concluding statement indicating the preferred alternatives, including preferred location of the activity;	Section E

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Regulation	Content	Section of report
(i) (i)	a full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including a description of all environmental issues and risks that were identified during the environmental impact assessment process; and	Appendix D – Specialist reports
(i) (ii)	an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures;	Section D
(j) (i)	an assessment of each identified potentially significant impact and risk, including cumulative impacts;	Appendix F – Impact tables
(j) (ii)	the nature, significance and consequences of the impact and risk;	Appendix F – Impact tables
(j) (iii)	the extent and duration of the impact and risk;	Appendix F – Impact tables
(j) (iv)	the probability of the impact and risk occurring;	Appendix F – Impact tables
(j) (v)	the degree to which the impact and risk can be reversed;	Appendix F – Impact tables
(j) (vi)	the degree to which the impact and risk may cause irreplaceable loss of resources; and	Appendix F – Impact tables
(j) (vii)	the degree to which the impact and risk can be avoided, managed or mitigated;	Appendix F – Impact tables
(k)	where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final report;	Section B
(l) (i)	an environmental impact statement which contains a summary of the key findings of the environmental impact assessment;	Section D
(l) (ii)	a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and	Appendix A - Maps
(l) (iii)	a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;	Section D
(m)	a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;	Repeat of (l)(iii)
(n)	any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;	Appendix G – Environmental Management Programme

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Regulation	Content	Section of report
<b>(o)</b>	a description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed;	Section D
<b>(p)</b>	a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;	Section E
<b>(q)</b>	where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised;	Section A
<b>(r) (i)</b>	an undertaking under oath or affirmation by the EAP in relation to: the correctness of the information provided in the reports;	Appendix H
<b>(r) (ii)</b>	the inclusion of comments and inputs from stakeholders and I&APs;	Appendix E3 – Comments and responses report
<b>(r) (iii)</b>	the inclusion of inputs and recommendations from the specialist reports where relevant; and	Section D, Appendix F – Impact tables and Appendix D – Specialist studies.
<b>(r) (iv)</b>	any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties; and	Appendix E – Stakeholder engagement
<b>(s)</b>	where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;	Section B
<b>(t)</b>	any specific information that may be required by the competent authority; and	Appendix E – Stakeholder engagement
<b>(u)</b>	any other matters required in terms of section 24(4)(a) and (b) of the Act.	N/A

**SECTION A: ACTIVITY INFORMATION**

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

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

This BAR is for the remediation and rehabilitation interventions required on the banks and floodplain of the river. The proposed interventions will address the erosion and bank instability along the river. The sites for these interventions will only be known after the modelling of the river has been completed.

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 Mzimvubu to Tsitsikama Water Management Area (WMA).

It is estimated that construction will commence in April 2017, with the conclusion of the construction activities in April 2021. The timeframe for construction is heavily dependent on the availability of funds from the DWS in their annual budget and may extend past this date. Should the construction not be concluded by April 2021, an application will be made to the DEA for an amendment to the EA to extend the validity period of the EA.

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

Listed activity as described in GN 983, 984 and 985	Description of project activity
<b>Example:</b> <i>GN 983 Item xx xx): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i>	<i>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</i>
GN R.983 Item 19: The infilling or depositing of any material of more	In order to prevent further erosion along the banks of the Skoenmakers River, it is proposed that the river

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than 5 m <sup>3</sup> into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 m <sup>3</sup> from- (i): a watercourse.	banks will be stabilized through reshaping unstable river embankments in the form of Riprap structures.; Please refer to the technical drawings in Appendix C for more detailed information on this rehabilitation intervention
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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 Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

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

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

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### a) Site alternatives

Due to the nature of the activity being site specific along the course of the river as a result of erosion at specific points, no site alternatives could be assessed.

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

The proposed project consists of multiple interventions, each having a start and end point as indicated in Table 1.



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**Table 1: Summary of interventions**

Structure Name	Site Coordinates (Midpoint)		Length	Description	Intervention proposed
	Longitude	Lattitude			
Zone 1-1	25° 33' 45.95" E	33° 4' 34.77" S	83m	This area is within the servitude and has unstable banks encroaching farmland.	Riprap d50 = 0.45 m
Zone 1-2	25° 33' 33.87" E	33° 4' 34.22" S	79m	This area is within the servitude and has unstable banks. Due to the bedrock at the location, the banks do not need protection and the servitude seems incorrect.	
Zone 1-3	25° 33' 27.72" E	33° 4' 34.45" S	65m	This area is within the servitude and protection does not seem necessary.	
Zone 1-4	25° 33' 26.89" E	33° 4' 35.24" S	50m	This area is within the servitude and protection does not seem necessary.	
Zone 1-5	25° 33' 4.51" E	33° 4' 39.22" S	84m	This area is within the servitude and has unstable banks encroaching a road.	Riprap d50 = 0.5 to d50 = 0.6 m
Zone 1-6	25° 32' 53.58" E	33° 4' 36.64" S	67m	This area has unstable banks crossing the servitude. A typical layout and elevations are shown in Appendix 10	Riprap d50 = 0.8 m
Zone 1-7	25° 32' 34.92" E	33° 4' 42.72" S	42m	This area are within the servitude but encroaching the servitude.	Riprap d50 = 0.55 m
Zone 1-8	25° 32' 33.18" E	33° 4' 40.27" S	56m	This area has banks partially crossing the servitude.	Riprap d50 = 0.25 m
Zone 2-1	25° 32' 27.95" E	33° 4' 44.20" S	88m	The banks are encroaching the servitude but protection does not seem necessary.	
Zone 2-2	25° 32' 25.60" E	33° 4' 39.71" S	181m	This area has unstable banks crossing the servitude.	Riprap d50 = 0.45 m and d50 = 0.6 m
Zone 2-3	25° 32' 19.54" E	33° 4' 44.32" S	37m	This area has unstable banks are encroaching on the servitude.	Riprap d50 = 0.9 m
Zone 2-4	25° 32' 0.96" E	33° 4' 44.25" S	197m	This area crosses the servitude but due the wide flood plain flow, protection is not viable.	

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Structure Name	Site Coordinates (Midpoint)		Length	Description	Intervention proposed
	Longitude	Lattitude			
Zone 2-5	25° 31' 52.03" E	33° 4' 42.24" S	53m	This area is within the servitude but encroaches farmland that is within the servitude. Protection does not seem necessary.	Riprap d50 = 0.4 m
Zone 2-6	25° 31' 49.07" E	33° 4' 39.34" S	51m	This area is within the servitude but has unstable banks that encroach a road.	Riprap d50 = 0.2 m
Zone 2-7	25° 31' 43.23" E	33° 4' 44.76" S	31m	This area is within the servitude but encroaches farmland that is within the servitude. Protection does not seem necessary.	
Zone 2-8	25° 31' 37.58" E	33° 4' 46.35" S	35m	The banks are encroaching the servitude and farmland.	Riprap d50 =0.3 m and d50 =0.4 m
Zone 2-9	25° 31' 35.59" E	33° 4' 49.16" S	42m	The banks are encroaching the servitude and farmland.	Riprap d50 =0.3 m and d50 =0.4 m
Zone 2-10	25° 31' 29.35" E	33° 4' 51.83" S	52m	The banks are encroaching the road but within the servitude.	Riprap d50 = 0.3 m and d50 = 0.6 m
Zone 2-11	25° 31' 26.75" E	33° 4' 51.22" S	59m	The unstable banks are crossing the servitude and encroaching onto farmland.	Riprap d50 = 0.25 m
Zone 2-12	25° 31' 25.77" E	33° 4' 53.67" S	36m	This area is within the servitude but encroaches farmland. An old weir diverts water inducing erosion. Protection does not seem necessary.	
Zone 2-13	25° 31' 24.12" E	33° 4' 54.68" S	28m	The unstable banks are encroaching the servitude and farmland.	Riprap d50 = 0.5 m
Zone 2-14	25° 31' 23.07" E	33° 4' 53.36" S	50m	This area is within the servitude but encroaches farmland. An old weir diverts water inducing erosion. Protection does not seem necessary.	
Zone 2-15	25° 31' 14.22" E	33° 4' 53.22" S	47m	The unstable banks are encroaching the servitude and farmland. Protection was deemed not necessary.	
Zone 3-1	25° 30' 57.57" E	33° 4' 53.81" S	50m	The zone has unstable banks crossing the servitude.	Riprap d50 = 0.45 m
Zone 3-2	25° 30' 49.27" E	33° 4' 53.71" S	303m	Flow in this area is in a wide floodplain crossing the servitude and protection is not viable.	

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Structure Name	Site Coordinates (Midpoint)		Length	Description	Intervention proposed
	Longitude	Lattitude			
Zone 3-3	25° 30' 38.34" E	33° 4' 55.24" S	140m	The zone has unstable banks crossing the servitude.	Riprap d50 = 0.4 m and d50 = 0.45 m
Zone 3-4	25° 30' 34.72" E	33° 4' 52.11" S	103m	Flow in this area is in a wide floodplain and protection is not necessary.	
Zone 3-5	25° 30' 23.28" E	33° 4' 53.13" S	72m	The zone has unstable banks crossing the servitude.	Riprap d50 = 0.4 m
Zone 3-6	25° 30' 20.18" E	33° 4' 55.13" S	50m	The zone has unstable banks but within the servitude. Protection was found not necessary.	
Zone 3-7	25° 30' 18.40" E	33° 4' 58.61" S	113m	The zone has unstable banks encroaching the servitude and road.	Riprap d50 = 0.1 m
Zone 3-8	25° 30' 13.26" E	33° 4' 53.61" S	90m	The zone has unstable banks within the servitude. Protection was found not necessary.	
Zone 3-9	25° 30' 7.13" E	33° 4' 53.89" S	84m	The zone has unstable banks encroaching the servitude and farmland.	Riprap d50 = 0.15 m
Zone 3-10	25° 30' 5.83" E	33° 4' 52.32" S	91m	The zone has unstable banks within the servitude. Protection was found not necessary.	
Zone 4-1	25° 29' 41.04" E	33° 5' 1.68" S	130m	The zone has unstable banks crossing the servitude and encroaching the road.	Riprap d50 = 0.55 m
Zone 4-2	25° 29' 28.49" E	33° 4' 59.03" S	169m	The zone has unstable banks crossing the servitude and encroaching the road.	Riprap d50 = 0.3 m and d50 = 0.45 m
Zone 4-3	25° 29' 23.68" E	33° 5' 3.74" S	97m	The zone has unstable banks crossing the servitude.	Riprap d50 =0.3 m, d50 =0.45 m and d50 =0.6 m
Zone 4-4	25° 29' 19.18" E	33° 5' 7.78" S	79m	The zone has unstable banks crossing the servitude and encroaching the road.	Riprap d50 =0.3 m and d50 =0.6 m
Zone 5-1	25° 28' 23.07" E	33° 5' 4.54" S	94m	The zone has banks encroaching the servitude.	Riprap d50 = 0.85 m

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Structure Name	Site Coordinates (Midpoint)		Length	Description	Intervention proposed
	Longitude	Lattitude			
Zone 5-2	25° 28' 15.08" E	33° 5' 6.08" S	276m	The zone has unstable banks encroaching servitude and farmland. Protection in this zone does not seem necessary.	
Zone 5-3	25° 28' 3.77" E	33° 5' 9.56" S	77m	The zone has banks crossing the servitude and encroaching farmland.	Riprap d50 = 0.5 m
Zone 5-4	25° 27' 55.92" E	33° 5' 10.20" S	247m	The zone has banks crossing the servitude.	Riprap d50 = 0.5 m and d50 = 0.85 m
Zone 6-1	25° 26' 47.22" E	33° 5' 3.05" S	265m	The zone has banks crossing the servitude and encroaching farmland.	Riprap d50 = 0.45 m, d50 = 0.7m and d50 = 0.85 m
Zone 6-2	25° 26' 35.70" E	33° 5' 9.78" S	170m	The zone has banks within the servitude. Upstream tributary flow induces the erosion and protection will constrict the flow thus not necessary.	
Zone 6-3	25° 26' 29.13" E	33° 5' 6.78" S	58m	The zone has banks crossing the servitude and encroaching farmland.	Riprap d50 = 0.9 m
Zone 6-4	25° 26' 21.66" E	33° 5' 5.45" S	68m	The zone has banks crossing the servitude but with bedrock outcropping.	Riprap d50 = 0.65 m
Zone 6-5	25° 25' 53.93" E	33° 5' 9.57" S	80m	The zone has unstable banks within the servitude and protection is not necessary.	
Zone 6-6	25° 25' 34.75" E	33° 5' 4.68" S	161m	The zone has banks crossing the servitude and encroaching farmland.	Riprap d50 = 0.35 m, d50 = 0.45 m, d50 = 0.55 m, d50 = 0.6 m and d50 = 0.75 m
Zone 7-1	25° 24' 21.05" E	33° 5' 28.37" S	50m	The zone has unstable banks within the servitude and protection is not necessary.	
Zone 7-2	25° 24' 9.93" E	33° 5' 23.63" S	110m	The zone has banks crossing the servitude.	Riprap d50 = 0.4 m and d50 = 0.45 m
Zone 7-3	25° 23' 55.19" E	33° 5' 16.60" S	52m	The zone has unstable banks within the servitude.	Riprap d50 = 0.55 m
Zone 7-4	25° 23' 23.20" E	33° 5' 27.52" S	195m	This area's river servitude seems inaccurate.	Due to the erosion on the river bank extending further than the identified servitude, these sites will not form part of this EA application
Zone 8-1	25° 22' 38.21" E	33° 5' 16.43" S	46m	The zone has unstable banks within the servitude thus protection is not necessary.	

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Structure Name	Site Coordinates (Midpoint)		Length	Description	Intervention proposed
	Longitude	Lattitude			
Zone 8-2	25° 21' 49.03" E	33° 5' 24.10" S	102m	The zone has unstable banks crossing the servitude and encroaching onto farm land.	Riprap d50 = 0.65 m
Zone 9-1	25° 20' 40.34" E	33° 5' 13.60" S	245m	The zone has unstable banks crossing the servitude and encroaching onto farm land.	Riprap d50 = 0.3 m, d50 = 0.35 m and d50 = 0.45 m
Zone 9-2	25° 19' 54.32" E	33° 5' 2.14" S	56m	The zone has unstable banks within the servitude thus protection is not necessary.	
Zone 9-3	25° 19' 32.97" E	33° 5' 24.07" S	65m	The zone has unstable banks crossing the servitude which seemed to be inaccurate.	Riprap d50 = 0.6 m and d50 = 0.85 m
Zone 10-1	25° 18' 59.48" E	33° 5' 36.81" S	900m	The area's river servitude seems to be inaccurate.	Due to the erosion on the river bank extending further than the identified servitude, these sites will not form part of this EA application
Zone 10-2	25° 18' 43.99" E	33° 5' 20.06" S	51m	The zone has unstable banks within the servitude. Protection in this area is not necessary.	
Zone 10-3	25° 18' 39.42" E	33° 5' 20.90" S	87m	The zone has banks crossing the servitude.	Riprap d50 = 0.35 m
Zone 11-1	25° 17' 43.98" E	33° 5' 21.98" S	208m	The zone has unstable banks crossing the servitude and flow is on a wide floodplain.	Riprap d50 = 0.4 m,
Zone 11-2	25° 16' 49.83" E	33° 5' 11.78" S	720m	The area's river servitude is inaccurate.	Due to the erosion on the river bank extending further than the identified servitude, these sites will not form part of this EA application
Zone 11-3	25° 16' 50.12" E	33° 5' 33.60" S	163m	The area's river servitude seems inaccurate.	Due to the erosion on the river bank extending further than the identified servitude, these sites will not form part of this EA application

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Structure Name	Site Coordinates (Midpoint)		Length	Description	Intervention proposed
	Longitude	Lattitude			
Zone 12-1	25° 16' 23.87" E	33° 5' 48.98" S	150m	The zone has unstable banks crossing the servitude.	Riprap d50 =0.35 m

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**Alternative:**

**Latitude (S):**

**Longitude (E):**

Alternative S1 (preferred)

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

Please refer to Table 1	

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 of this form.

**b) Lay-out alternatives (Not applicable)**

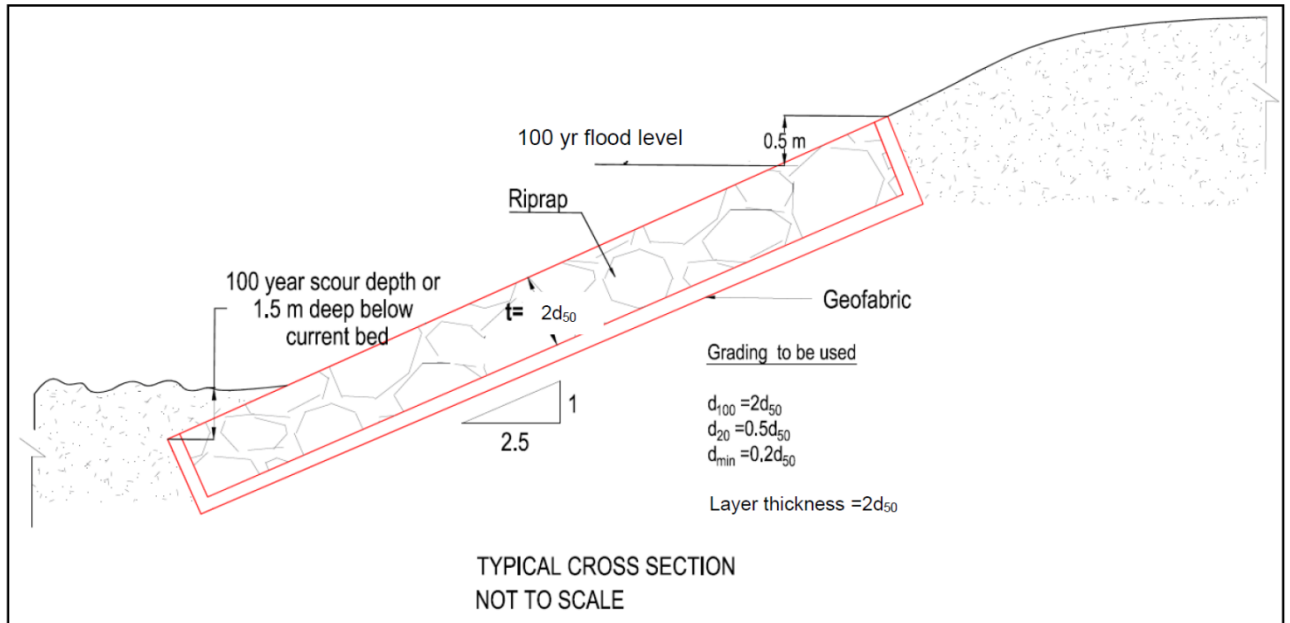
<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)

**c) Technology alternatives**

The major problem in the Skoenmakers River is excessive erosion of the river banks that causes bank instability and failure. The following are solutions to stabilise river banks and to prevent further erosion and also resulting siltation downstream.

Alternative 1 (preferred alternative)

RIPRAP (Preferred alternative)



The following points are typical characteristics of Riprap structures when used in the Skoenmakers River:

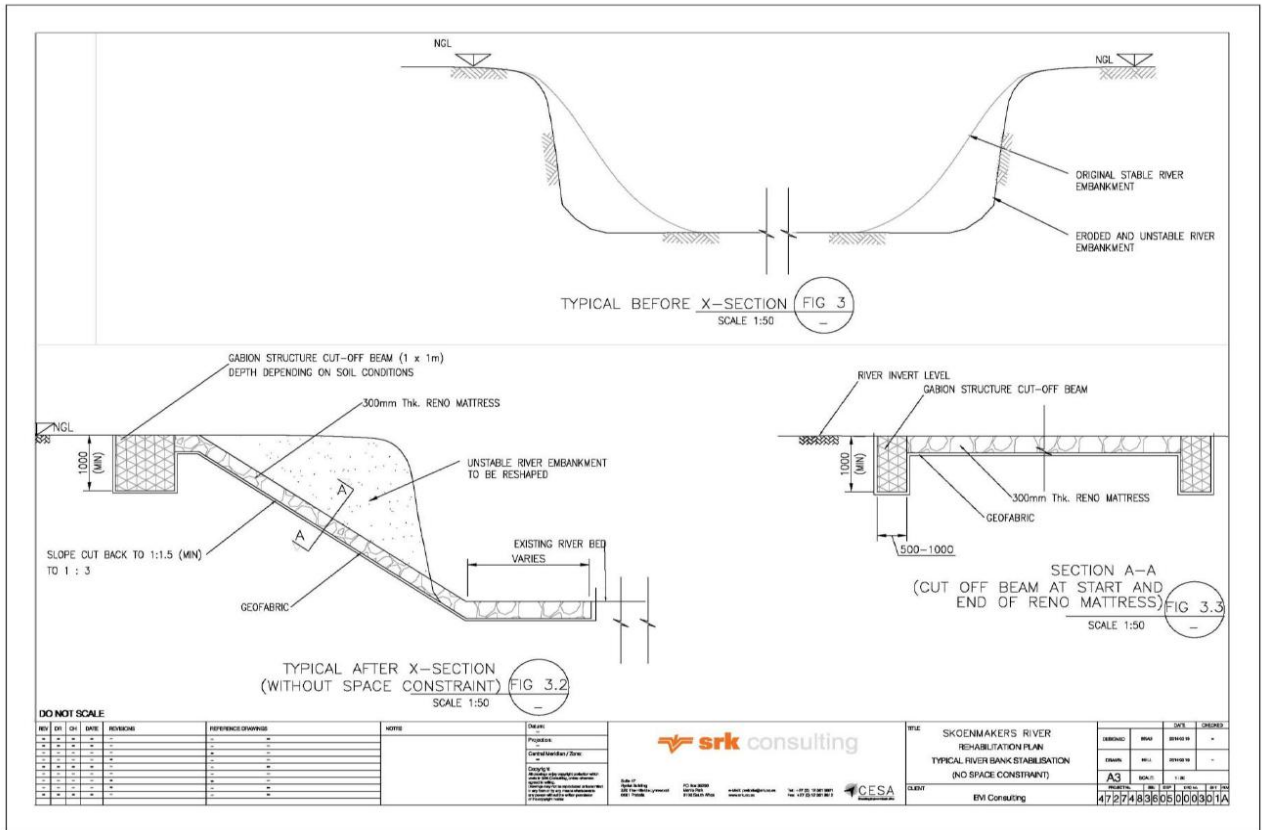
- Riprap is dump rock that has been designed and sized for specific rock diameters unique to each identified erosion zone;
- It is a natural erosion protection measure forming a flexible, sustainable layer for erosion protection;
- No wire mesh is required making it a low maintenance option;
- Riprap will improve the long term sustainability of the river.

Because of the above mentioned points, riprap was the preferred rehabilitation alternative to be implemented.



Alternative 2

Reno Mattress

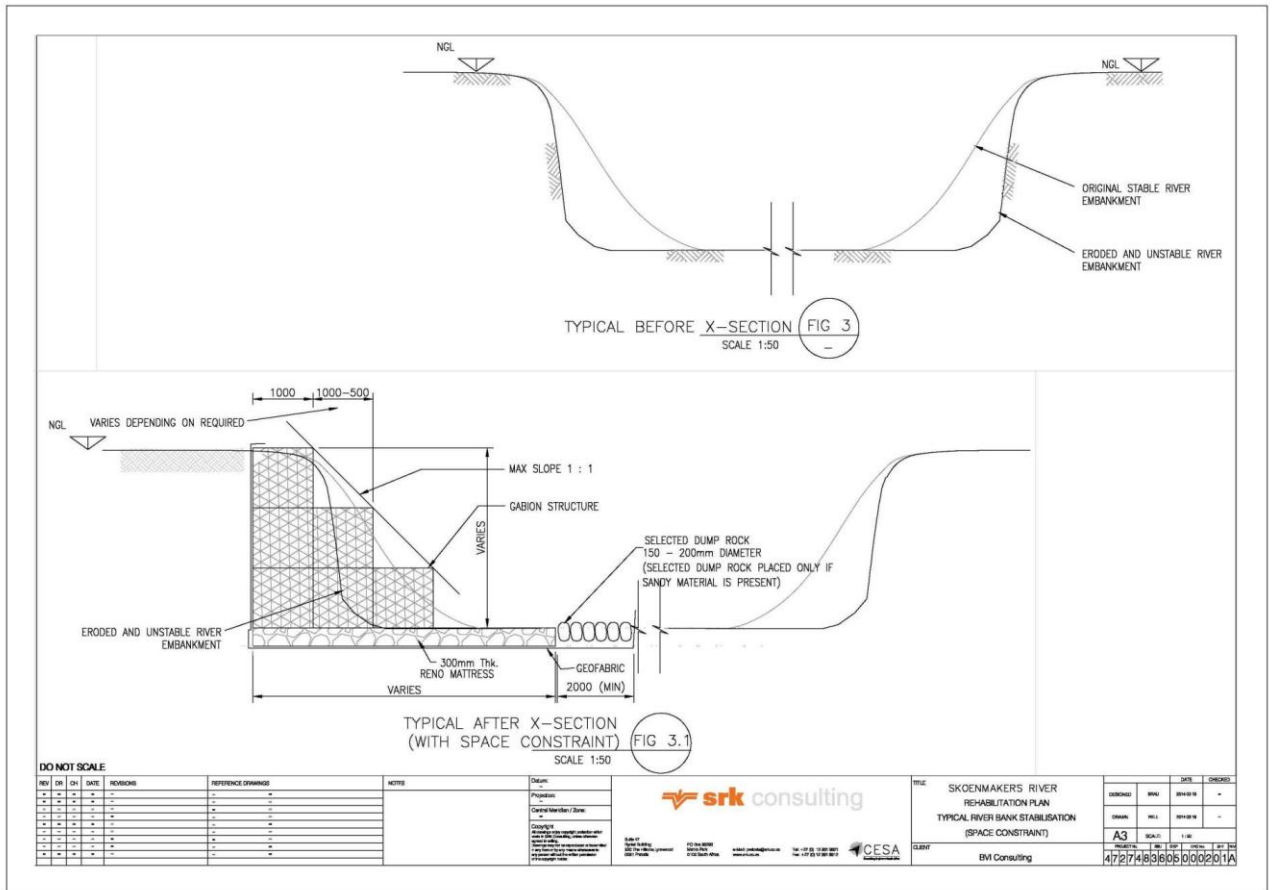


The following points are typical characteristics of Reno Mattress structures when used in the Skoenmakers River:

- Cheaper and more flexible structure;
- The slope required to be able to place a Reno Mattress is low (1:3) and requires a larger area of flow because of this shallow gradient;
- Reno Mattress structures may only be placed on wide river sections and this is not always possible for all erosion zones identified within the Skoenmakers River;
- Potential erosion problems at the interface between the natural river and Reno Mattress protected bank;
- Reno Mattress may be damaged by flotsam and hence Reno Mattress rocks could be dislodged and washed out causing failure;
- The Reno Mattress mesh is susceptible to corrosion over a period of time leading to high maintaining cost;
- Difficult to maintain because of remote location of the Skoenmakers River.

Alternative 3

Gabions



The following points are typical characteristics of gabion structures when used in the Skoenmakers River:

- Semi-ridged structures;
- Potential erosion problems at the interface between the natural river and gabion protected bank;
- Gabion baskets may be damaged by flotsam and hence gabion rocks could be dislodged and washed out causing failure;
- The gabion structure mesh is susceptible to corrosion over a period of time leading to high maintaining cost;

Difficult to maintain because of remote location of the Skoenmakers River.

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)  
(Not applicable)

<b>Alternative 1 (preferred alternative)</b>
<b>Alternative 2</b>
<b>Alternative 3</b>

**e) No-go alternative**

The river bank erosion and degradation along the Skoenmakers river is causing the river banks to cut across boundaries between the DWS servitude of the river and the adjacent farm land. This is starting to impact on crops and farm roads. Further, unstable banks are encroaching on to adjacent farmland. At some erosion zones the farmland is closer than 32 m from the edge of the river, and in many cases the riparian vegetation has also been removed due to the farming activity. If the identified areas are not rehabilitated, these issues will not be mitigated.

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 A1<sup>1</sup> (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

**Size of the activity:**

	m <sup>2</sup>
	m <sup>2</sup>
	m <sup>2</sup>

or, for linear activities:

**Alternative:**

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

**Length of the activity:**

Refer to Table 1	
	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:**

Refer to Table 1	
	m <sup>2</sup>
	m <sup>2</sup>

**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.

---

<sup>1</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

### 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 DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

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

**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):

<b>1. Is the activity permitted in terms of the property's existing land use rights?</b>	<input checked="" type="checkbox"/>		Please explain
The proposed activity involves the remediation and rehabilitation of the river channel. This will not affect the property's existing land use rights.			
<b>2. Will the activity be in line with the following?</b>			
<b>(a) Provincial Spatial Development Framework (PSDF)</b>	<input checked="" type="checkbox"/>		Please explain
The PSDF refers to the provision of well-maintained and safe roads. The proposed erosion control measures are in line with this objective as they will prevent undue erosion of nearby farm roads.			
<b>(b) Urban edge / Edge of Built environment for the area</b>			Please explain
This is not applicable as the proposed rehabilitation of the river falls outside of the urban edge.			
<b>(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?).</b>	<input checked="" type="checkbox"/>		Please explain
The proposed rehabilitation of the river will prevent the river from encroaching on farm roads and falls in line with the aim of maintaining safe roads and good quality road access. Local municipalities, however, are only responsible for municipal roads.			
<b>(d) Approved Structure Plan of the Municipality</b>			Please explain
This does not apply due to the nature of this project. This project involves the rehabilitation of a natural water course.			

BASIC ASSESSMENT REPORT

<p><b>(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?)</b></p>			Please explain
<p>No EMF was available at the time of the compilation of the FBAR.</p>			
<p><b>(f) Any other Plans (e.g. Guide Plan)</b></p>		<del>NO</del>	Please explain
<p><b>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)?</b></p>			Please explain
<p>This does not apply due to the nature of this project. This project involves the rehabilitation of a natural water course.</p>			
<p><b>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.)</b></p>	<del>YES</del>		Please explain
<p>Yes the upgrade of the river is predominantly to benefit the communities. Unstable banks are encroaching on to adjacent farmland. By undertaking this project, the applicant intends to prevent further inconveniences and risks for the surrounding community.</p>			
<p><b>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.)</b></p>	<del>YES</del>		Please explain
<p>Yes there is adequate capacity available.</p>			
<p><b>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.)</b></p>		<del>NO</del>	Please explain
<p>The proposed upgrade is provided for by the Department of Water and Sanitation.</p>			
<p><b>7. Is this project part of a national programme to address an issue of national concern or importance?</b></p>		<del>NO</del>	Please explain

## BASIC ASSESSMENT REPORT

<b>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.)</b>	<input checked="" type="checkbox"/> YES		Please explain
<p>The area is used for crop and livestock farming. The rehabilitation of the river crossing will mitigate unstable banks that are encroaching on to adjacent farmland.</p>			
<b>9. Is the development the best practicable environmental option for this land/site?</b>	<input checked="" type="checkbox"/> YES		Please explain
<p>The existing river crossing is causing erosion of river banks, siltation and blockages. The rehabilitation of the river is a necessary environmental option in order to remediate these environmental problems caused by the existing erosion.</p>			
<b>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b>	<input checked="" type="checkbox"/> YES		Please explain
<p>Yes the negative environmental and social impacts are minor. The proposed rehabilitation of the river will be beneficial for the water course as well as the community members that adjacent to the watercourse.</p>			
<b>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</b>		<input checked="" type="checkbox"/> NO	Please explain
<p>The proposed rehabilitation will merely provide bank and bed erosion mitigation for along the Skoenmakers river.</p>			
<b>12. Will any person's rights be negatively affected by the proposed activity/ies?</b>		<input checked="" type="checkbox"/> NO	Please explain
<b>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</b>		<input checked="" type="checkbox"/> NO	Please explain
<p>The activity falls outside the urban edge.</p>			
<b>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</b>		<input checked="" type="checkbox"/> NO	Please explain
<b>15. What will the benefits be to society in general and to the local communities?</b>	Please explain		
<p>It will not apply to society in general. To the local farming community it will mean that bank encroachment on to their farm land will be mitigated.</p>			
<b>16. Any other need and desirability considerations related to the proposed activity?</b>	Please explain		
<p>No other need and desirability considerations are related to the proposed rehabilitation of the Skoenmakers River.</p>			
<b>17. How does the project fit into the National Development Plan for 2030?</b>	Please explain		
<p>The proposed development does not apply to the National Development plan for 2030.</p>			

## BASIC ASSESSMENT REPORT

**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. The public are being given the 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:

<b>Title of legislation, policy or guideline</b>	<b>Applicability to the project</b>	<b>Administering authority</b>	<b>Date</b>
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
National Environmental Management: Biodiversity Act ( Act No 10 of 2004)	Possible need for removal or destruction permits for TOPS listed species	DEDEAT	2004
National Environmental Management: Protected Areas Act (Act No 57 of 2003)	The close proximity of the Addo Elephant National Park may lead to provisions of this act being applicable	DEDEAT	2003
National Heritage Resources Act (Act 25 of 1999)	The possibility of heritage resources of both natural and anthropogenic nature may be present on the site for which the necessary permits must be obtained prior to destruction.	ECHRA	1999
Nature Conservation Ordinance No. 19 of 1974	Impacts that the proposed activities might have on the fauna and flora of the area may fall under the ambit of this ordinance	DEDEAT	1974



**12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT**

**a) Solid waste management**

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

YES	
< 20 m <sup>3</sup>	

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. Waste manifests will have to be obtained as proof of legal disposal of waste.

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

All domestic waste produced during construction will be disposed of at a licenced municipal landfill site. Waste manifests will have to be obtained as proof of legal disposal of waste.

Will the activity produce solid waste during its operational phase?

	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?

	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?

	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?

	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?

	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.*

## BASIC ASSESSMENT REPORT

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

	NO
--	----

If YES, provide the particulars of the facility:

<b>Facility name:</b>			
<b>Contact person:</b>			
<b>Postal address:</b>			
<b>Postal code:</b>			
<b>Telephone:</b>		<b>Cell:</b>	
<b>E-mail:</b>		<b>Fax:</b>	

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:

No noise disturbance is anticipated from the proposed river rehabilitation. Any potential noise disturbance could only arise during the construction phase. Construction activities will be temporary and will take place between the hours of 7h30 and 18h00 to avoid noise disturbance during the week, with work on Saturday being restricted from 6h00 to 13h00.

**13. WATER USE**

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

<del>Municipal</del>	<del>Water board</del>	<del>Groundwater</del>	<del>River, stream, dam or lake</del>	<del>Other</del>	<b>The activity will not use water</b>
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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 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.](#)

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 50px;">YES</td> <td style="background-color: #cccccc; width: 50px;"></td> </tr> </table>	YES	
YES		

**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:**

<b>Province</b>	Eastern Cape
<b>District Municipality</b>	Cacadu District Municipality
<b>Local Municipality</b>	Blue Crane Route Municipality
<b>Ward Number(s)</b>	6
<b>Farm name and number</b>	1. Palmietfontein 407 2. Palmietfontein 250 3. Kruis River 248 4. Geelhoutboom 247 5. Fonteinsplaats 246 6. Boerslaagte 245 7. Volkers Rivier 244
<b>Portion number</b>	1.) 3, 2, 4 2.) 1, 2 3.) 1, 4, 5, 6, 7, 8 4.) 0 5.) 1, 7, 0, 4, 6 6.) 3, 5, 6, 7 7.) 0, 3
<b>SG Code</b>	Please refer to Appendix K

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 land use zoning is Agriculture.

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

Is a change of land-use or a consent use application required?  YES  NO

# BASIC ASSESSMENT REPORT

## 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

### Alternative S1:

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

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

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

## 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		2.4 Closed valley <b>2.5 Open valley</b> 2.6 Plain 2.7 Undulating plain / low hills 2.8 Dune 2.9 Seafront
--	---	--

## 3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	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

## BASIC ASSESSMENT REPORT

project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

### 4. GROUNDCOVER

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

<b>Natural veld - good condition<sup>E</sup></b>	<del>Natural veld with scattered aliens<sup>E</sup></del>	<del>Natural veld with heavy alien infestation<sup>E</sup></del>	<del>Veld dominated by alien species<sup>E</sup></del>	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	<del>YES</del>		
Non-Perennial River		<del>NO</del>	
Permanent Wetland		<del>NO</del>	
Seasonal Wetland		<del>NO</del>	
Artificial Wetland		<del>NO</del>	
Estuarine / Lagoonal wetland		<del>NO</del>	

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

The proposed remediation and rehabilitation is located on the Skoenmakers river in quaternary catchment N23A located within the Great Karoo and the Drought corridor Ecoregions and within the Fish to Tsitsikama Water Management Area. The Skoenmakers River is a perennial river that flows into the Darlington 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 A, B (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:

<b>Natural area</b>	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station <sup>H</sup>
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential <sup>A</sup>	Church	<b>Agriculture</b>
Retail commercial & warehousing	Old age home	<b>River, stream or wetland</b>
Light industrial	Sewage treatment plant <sup>A</sup>	Nature conservation area
Medium industrial <sup>AN</sup>	Train station or shunting yard <sup>N</sup>	Mountain, koppie or ridge
Heavy industrial <sup>AN</sup>	Railway line <sup>N</sup>	Museum
Power station	Major road (4 lanes or more) <sup>N</sup>	Historical building
Office/consulting room	Airport <sup>N</sup>	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam <sup>A</sup>	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)		<b>NO</b>
Core area of a protected area?		<b>NO</b>
Buffer area of a protected area?		<b>NO</b>
Planned expansion area of an existing protected area?		<b>NO</b>
Existing offset area associated with a previous Environmental Authorisation?		<b>NO</b>
Buffer area of the SKA?		<b>NO</b>

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**

Rehabilitation and remediation will occur within the river channel. 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:

	<del>NO</del>

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:

Palaeontology and heritage impact assessments were undertaken in the area.

The bulk of the site is underlain by the Karoo Supergroup Formations covered by vegetation, grassland and sandstone outcrops.

Fossils in South Africa mainly occur in rocks of sedimentary nature and not in rocks from igneous or metamorphic nature. Therefore, if there is the presence of Karoo Supergroup strata the palaeontological sensitivity is generally low to very high, but here locally very high for the Adelaide Subgroup and moderate for the Ecca Group.

Please refer to Appendix D for more detailed information on the palaeontological and heritage impact assessments.

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)?

	<del>NO</del>
	<del>NO</del>

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

**8. SOCIO-ECONOMIC CHARACTER**

**a) Local Municipality**

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

Level of unemployment:

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,



## BASIC ASSESSMENT REPORT

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?	R20 000 000
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?	<del>YES</del>
Is the activity a public amenity?	<del>YES</del>
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](mailto: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.

**BASIC ASSESSMENT 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
<del>Critical Biodiversity Area (CBA)</del>	<del>Ecological Support Area (ESA)</del>	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	The majority of the Skoenmakers River is located within a CBA which is associated with the Skoenmakers River.

- 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									
	<del>Least Threatened</del>	<del>YES</del>	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 (GN 1002, 2011; <http://bgis.sanbi.org/ecosystems/project.asp>) 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 are indicators of the Albany Broken Veld vegetation type (Cape 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. *Erocooides*, *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

It's important to mention that a request for deviation/exception from aspects of the Public Participation Process has been submitted to the DEA. The request was made on the proposed "Rehabilitation of the Skoenmakers River" project as well as for the proposed "Upgrade of Ten River Crossings situated along the Skoenmakers River" project.

### 1. ADVERTISEMENT AND NOTICE

<b>Publication name</b>	The Herald & Die Burger		
<b>Date published</b>	09 December 2015 – Notification of the DBAR 09 February 2016 – Notification of the FBAR		
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Site Notice Location (Farm and Farm Portion)</b>
	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° 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 4
	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	
<b>Date placed</b>	11 December 2015		

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

Site notices English were placed on 11 December 2015 at the coordinate points provided above. A copy of the advertisement provided in Appendix E1 was placed in 09 December 2015 in Die Burger and on the 11 December 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 41(2)(e) of GN R.982.

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GN R. 982	Action required	Action required
41(2)(a)	fixing a notice board at a place conspicuous to the public at the boundary or on the fence of— (i) the site where the activity to which the application relates is or is to be undertaken; and (ii) any alternative site mentioned in the application;	Site notices were placed in and around the project area (also see above locations). Please see Appendix E1 for the all the Site notices proof.
41 (2)(b)	Giving written notice to –	
41(2)(b)(i)	the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken	Site notices were placed in and around the project area (also see above locations). Please see Appendix E1 for the all the Site notices proof.
41 (2)(b)(ii)	owners, persons in control of, 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	There is as existing servitude which runs along the river and some of the rehabilitation points, with rights owned by DWS. Due to the difficulty in contacting the adjacent land owners, adverts were placed twice, notifying the public of the proposed rehabilitation activities.
41 (2)(b)(iii)	the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	Notification letters were sent to relevant ward councillors, municipalities which has jurisdiction in the area, any organ of state having jurisdiction and any other party as required by the competent authority, via Email, post, fax as well as SMS notification. Proof of notifications. (Please see Appendix E2 for all proof of notification)
41 (2)(b)(iv)	the municipality which has jurisdiction in the area	
41 (2)(b)(v)	any organ of state having jurisdiction in respect of any aspect of the activity; and	
41 (2)(b)(vi)	any other party as required by the competent authority	
41 (2)(c)	placing an advertisement in—	

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	<p>(i) one local newspaper; or  (ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations</p>	<p>Herald newspaper (in English and Die Burger (in Afrikaans). Both newspapers are Provincial newspapers. Newspaper adverts were placed announcing the DBAR as well announcing the FBAR.  (Please see Appendix E1 for all proof of notification)</p>
<p>41 (2)(d)</p>	<p>placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in paragraph (c)(ii);and</p>	
<p>41(2)(e)</p>	<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—  (i) illiteracy;  (ii) disability; or  (iii) any other disadvantage.</p>	<p>Notification were made to all I&amp;APs upon availability of the Draft BAR. (Please see Appendix E2 for all proof of notification)   There was no need for alternative methods during the identification of I&amp;APs process to date.</p>
<p>41(3)(a)</p>	<p>A notice, notice board or advertisement referred to in sub regulation (2) must—  (a) give details of the application which is subjected to public participation; and  (b) state—  (i) that the application has been submitted to the competent authority in terms of these Regulations[, as the case may be];  (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;</p>	<p>All site notices English and advertisements states the following details:  Applicant, namely Department of Water and Sanitation (DWS);  (i) application has been submitted to the Department of Environmental Affairs (DEA) in terms of the NEMA 2014 regulations;  (ii) A Basic Assessment process is being undertaken by SRK Consulting (SA); to allow for the application for environmental authorisation (iii) project activities and location of the activities to which the application relates are</p>

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	<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>listed;</p> <p>(iv) Further information on the application or activity can be obtained from SRK's public participation office and the SRK Website.</p> <p>(vi) Questions, comments were submitted to the SRK public participation Department and has been included in Appendix E. Responses to these comments have also been provided which can be found in Appendix E.</p>
41(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 (60cm by 42cm) in size and display the required information as mentioned in the section above. (Please see Appendix E1 for the Site Notices Proof).</p>
41(5)	<p>Where public participation is conducted in terms of this regulation for an application or proposed application, subregulation (2)(a), (b), (c) and (d) need not be complied with again during the additional public participation process contemplated in regulations 19(1)(b) or 23(1)(b) or the public participation process contemplated in regulation 21(2)(d), on condition that</p>	<p>All conditions were taken into consideration and were implemented.</p>
41 (5)(a)	<p>such process has been preceded by a public participation process which included compliance with subregulation (2)(a), (b), (c) and (d); and</p>	
41 (5)(b)	<p>written notice is given to registered interested and affected parties regarding where the-</p> <p>(i) revised basic assessment report or, EMPr or closure plan, as contemplated in regulation 19(1)(b);</p>	

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	<p>(ii) revised environmental impact report or EMPr as contemplated in regulation 23(1)(b); or</p> <p>(iii) environmental impact report and EMPr as contemplated in regulation 21(2)(d);</p> <p>may be obtained, the manner in which and the person to whom representations on these reports or plans may be made and the date on which such representations are due</p>	
<p>41(6)</p>	<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 or proposed application is made available to potential interested and affected parties; and</p> <p>b) participation by potential or registered interested and affected parties is facilitated in such a manner that all potential or registered interested and affected parties are provided with a reasonable opportunity to comment on the application or proposed application.</p>	<p>The person conducting the public participation process has taken these regulations into consideration and was adhered to.</p>
<p>41 (7)</p>	<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</p>	<p>All public participation activities undertaken will comply with this section. I&amp;AP will were given the opportunity to review and comment on the DBAR. The FBAR is also available for comments in which I&amp;APs can refer all their comments and concerns to the EAP for inclusion in the FBAR for submission and decision making by the DEA.</p>



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	comment on the application.	
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Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN R.982:

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
Please refer to Appendix E3 for copies all of the Comments received and Response provided.	

SRK received comments from;

- The National Department of Environmental Affairs; and
- Department of Economic Development Environmental Affairs and Tourism.

Other stakeholders only requested to be registered and have been included in the register (Appendix E5).

### 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)58 6 0379	CoetseeD@dwa.gov.za	PO 5501 Walmer, Port Elisabeth 6065
DWS - National	Ms Matlakala Motloug	012 336 6828			Private Bag X313 PRETORIA 0001 South Africa

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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 C McLachlan	040 602 4000	(040) 602 4000	info@dpw.ecape.gov.za	Private Bag X0022 Bisho 5605
DEDEAT - Eastern Cape	Mr Bongani Gxilishe	082 458 4593	(0)605 7300	fezeka.boyi@deaet.ecape.gov.za	Private Bag X0054, Bisho 5605
Blue Crane Route Local Municipality	Mr Thabiso Klaas	042 243 1333	(042)24 3 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.

A summary of the stakeholder notification processes;

- Advertisement were places during the announcement of the DBAR as well as the announcement of the FBAR in two provincial newspapers
- Email, postal and sms notification methods and means were used to announce the project and the availability of the DBAR and the FBAR.
- Site Notices were places along the study area and noticeable for stakeholders to see.

Although there has not been a need for deviation from public participation as anticipated, it is important to mentioned that the proposed project runs almost concurrently with the SRK's Application to DEA on the "Proposed Upgrade of the Ten River Crossings" for which a Public Open day was held as well as a

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focus group meeting with the affected landowners (a copy of the comment and response report of these meeting are also included in Annexure E3.

### SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

During the compilation of this report the following assumptions and limitations have been taken into account:

- Palaeontological study
  - Most development areas have never been surveyed by a palaeontologist or geophysicist.
  - Variable accuracy of geological maps and associated information.
  - Poor locality information on sheet explanations for geological maps.
  - Lack of published data.
  - Lack of rocky outcrops.
  - Insufficient data from developer and exact lay-out plan for all structures.
- Archaeological study
  - No severe physical restrictions were encountered as a gravel road provided access to the farming area. However, some areas near the Skoenmakers River were impregnable due to extremely dense vegetation and large Acacia karoo and as a result not all rehabilitation areas could be visited. However most of the rehabilitation areas including all the bridge sites were visited and documented extensively.
- Biodiversity and Aquatic study
  - The assessment is confined to the study area and does not include the neighbouring and adjacent properties, these were however considered as part of the desktop assessment;
  - Due to the extent of the study area, use was made of aerial photographs, digital satellite imagery as well as provincial and national wetland databases to delineate riparian zones and wetland features. However, the boundaries of the riparian and wetland areas associated with bridge crossing areas were verified during the site assessment;
  - Temporal variability: The data presented in this report are based on a single site visit, undertaken in May 2014. The effects of natural seasonal and long-term variation in the ecological conditions are therefore unknown, however the results obtained are deemed sufficient to provide an accurate indication of the EIS of the wetland features;
  - Global Positioning System (GPS) technology is inherently inaccurate and some inaccuracies due to the use of handheld GPS instrumentation may occur. If more accurate assessments are required the wetland will need to be surveyed and pegged according to surveying principles;
  - Wetlands and terrestrial areas form transitional areas where an ecotone is formed as vegetation species change from terrestrial species to facultative wetland species. Within this transition zone some variation of opinion on the wetland boundary may occur however if the DWA 2005 method is followed, all assessors should get largely similar results; and
  - With wetland ecology being dynamic and complex, some aspects (some of which may be important) may have been overlooked.

### 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 activities<sup>2</sup>, aspects<sup>3</sup> and impacts which may occur during the commencement and implementation of a project. This is supported by the identification of receptors<sup>4</sup> and resources<sup>5</sup>, which allows for an understanding of the impact pathway and an assessment of the sensitivity to change. Environmental impacts<sup>6</sup> (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 Table 2. The purpose of the rating is to develop a clear understanding of influences and processes associated with each impact. The severity<sup>7</sup>, spatial scope<sup>8</sup> and duration<sup>9</sup> of the impact together comprise the consequence of the impact and when summed can obtain a maximum value of 15. The frequency of the activity<sup>10</sup> and the frequency of the impact<sup>11</sup> 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 3.

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<sup>2</sup>An *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.

<sup>3</sup>An *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.

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

<sup>5</sup>*Resources* include components of the biophysical environment.

<sup>6</sup>*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.

<sup>7</sup>*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.

<sup>8</sup>*Spatial scope* refers to the geographical scale of the impact.

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

<sup>10</sup>*Frequency of activity* refers to how often the proposed activity will take place.

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

## BASIC ASSESSMENT REPORT

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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.

# BASIC ASSESSMENT REPORT

**Table 2: Criteria for Assessing Significance of Impacts**

<b>SEVERITY OF IMPACT</b>	<b>RATING</b>	
Insignificant / non-harmful	1	
Small / potentially harmful	2	
Significant / slightly harmful	3	
Great / harmful	4	
Disastrous / extremely harmful	5	
<b>CONSEQUENCE</b>		
<b>SPATIAL SCOPE (EXTENT) OF IMPACT</b>	<b>RATING</b>	
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	
<b>DURATION OF IMPACT</b>	<b>RATING</b>	
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	
<b>LIKELIHOOD/PROBABILITY</b>		
<b>FREQUENCY OF ACTIVITY / DURATION OF ASPECT</b>	<b>RATING</b>	
Annually or less / low	1	
6 monthly / temporary	2	
Monthly / infrequent	3	
Weekly / life of operation / regularly / likely	4	
Daily / permanent / high	5	
<b>FREQUENCY OF IMPACT</b>	<b>RATING</b>	
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 3: Interpretation of Impact Rating**

		<b>Consequence</b>														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Likelihood</b>	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											

## BASIC ASSESSMENT REPORT

	Medium Low	26 to 39	
	Low	1 to 25	No management required

**SIGNIFICANCE = CONSEQUENCE x LIKELIHOOD**

**Table 4: Potential Environmental Impacts of the proposed rehabilitation of the Skoenmakers River (Referred to in this table as "construction activities")**

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENT SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MEASURES	MITIGATION	ENVIRONMENT SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management and mitigation measures	and mitigation	SRK Methodology
<b>Surface water</b>				
Construction activities within the river and on the river banks will loosen sedimentary material resulting in an increase in the current sediment load.	<b>36 ML Maintain Current Management</b>	The construction footprint must be declared and no construction activities must extend past the demarcated construction zone.		<b>15 L No Management Required</b>
		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 take place during the dry season.		
Spillages from the equipment that will be used during construction activities could result in pollution of the water by hydrocarbons.	<b>30 ML Maintain Current Management</b>	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. Vehicles must be parked and plant operated over drip trays		<b>24 L No Management Required</b>
		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 vehicle maintenance will be allowed on site. Except for plant equipment that break down on site. These vehicles are usually too large to tow to an off-site location for servicing. Servicing of these vehicles in the event of breakdown will occur over drip trays.		
<b>Noise</b>				
Construction activities resulting in noise disturbance in the surrounding area	<b>8 L No Management Required</b>	Any potential noise disturbance will be temporary. No mitigation required. Working hours are to be restricted from 06:00 to 18:00 on workdays, 06:00 to 13:00 on Saturdays and no work being performed on Sundays and public holidays		<b>8 L No Management Required</b>
<b>Waste management</b>				



## BASIC ASSESSMENT REPORT

POTENTIAL ENVIRONMENTAL IMPACT (NATURE OF THE IMPACT)	ENVIRONMENT SIGNIFICANCE BEFORE MITIGATION	RECOMMENDED MEASURES	MITIGATION	ENVIRONMENT SIGNIFICANCE AFTER MITIGATION
	SRK Methodology	Management measures	and mitigation	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.	<b>48 MH Maintain Current Management</b>	Any waste produced during the construction should be removed as soon as possible and disposed of at a Municipal Landfill Site. A waste manifest must be obtained for all waste disposed of to prove legal disposal.		<b>.24 L No Management Required</b>
		All construction materials should be stored in designated areas. Where the possibility exists for construction material to impact on the environment, said material (e.g. cement bags) must be stored on plastic lined and banded areas		
		No dumping 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. Contents of the chemical toilets to be discharged at a waste water treatment works and that a safe disposal certificate is issued. The contractor is to ensure that the surrounding bush is not being used as an ablution facility. Sanitary bins must be provided for the women on site. These bins must be serviced regularly.		
		Appropriate disposal facilities, such as litter bins, must be provided within the construction camp. Bins must be provided with lids that will prevent animals from having access to the waste.		
<b>Soil and Land Use</b>				
Indirect Impact: Disturbance of vegetation on the river banks due to the construction activities may lead to further erosion of the river banks.	<b>28 ML Maintain Current Management</b>	No parking of vehicles or equipment should take place off the access road or designated parking areas. Vehicles should be parked over drip trays		<b>18 L No Management Required</b>
		All work must take place within the construction footprint area and the construction area must be rehabilitated once the construction process has been completed.		
<b>Biodiversity</b>				
Construction activities could result in the disturbance of the vegetation specifically on the	<b>30 ML</b>	No vehicles or plant should be parked within the river course when not actively working on the construction.		<b>24 L</b>

**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	
banks of the water course.	<b>Maintain Current Management</b>	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. Plants listed in Schedule 3 and 4 of the Nature Conservation Ordinance (1974) must also be protected.	<b>No Management Required</b>	
Disturbance of fauna during site clearance and construction activities	<b>30 ML Maintain Current Management</b>	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. No trapping or hunting of fauna should be allowed on site during any phase of the project.	<b>24 L No Management Required</b>	
Spread of alien invasive plants during and after construction	<b>30 ML Maintain Current Management</b>	The sites should be monitored on an annual basis post-construction for the spread of alien invasive plants. Should these plants be found, the necessary measures should be taken to remove them in line with the recommendations of Working for Water.	<b>24 L No Management Required</b>	
<b>Heritage</b>				
Erection of construction camps	<b>80</b>	The location of all heritage sites should be known to the construction subcontractor.	<b>56</b>	
Construction of access roads				
Vibrations caused by heavy construction vehicles				
Compression of underground archaeological deposits		A buffer zone around heritage sites of least 100 metres should be maintained.		
Leaching of archaeological deposits and features by excess surface water				
Subsurface trenching and any semipermanent structures and beacons				All heritage sites should be fenced off and clearly demarcated.
Construction of any foundation or semi-permanent cement/concrete 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
Constant movement of heavy construction vehicles			
Constant use of construction camps (people and vehicle movement)			
Preliminary preparation of area for construction			

A complete impact assessment in terms of Regulation 19(3) of GN 733 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 rehabilitation of the Skoenmakers River 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 proposed Rehabilitation of the river will result in the fact that there will no longer be sedimentation and blockages in the Skoenmakers River and erosion of the bank of the river will be mitigated. Included in this is the fact that there will be long-term benefits to the local farming community.

**Alternative A (preferred alternative)**



**Alternative B**



**Alternative C**



**No-go alternative (compulsory)**

This alternative is the “no-rehabilitation alternative”. The no rehabilitation option will result in the status quo being maintained. This alternative will prevent the damage caused by increased bulk flow, to the river bank and beds, from being mitigated. This alternative is not viewed as practical from an environmental perspective. If the existing river sections are not rehabilitated, 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.

**SECTION E. RECOMMENDATION OF PRACTITIONER**

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

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

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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 rehabilitation of the Skoenmakers River in the Eastern Cape. The proposed development will minimize siltation, erosion and blockages in the river. 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 rehabilitation of the Skoenmakers River. 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. As part of the river maintenance exercise, crops should not be allowed closer than 32 m from the river banks, and riparian vegetation should be re-established near locations where bank erosion problems have been identified

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?

YES	
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## BASIC ASSESSMENT REPORT

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The EMPr must be attached as Appendix G.

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

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

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

Manda Hinsch

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NAME OF EAP

SRK Consulting - Certified Electronic Signature  
  
472748/42183/Rep01  
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

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SIGNATURE OF EAP

9/02/2016  
DATE

**SECTION F: APPENDIXES**

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Skoenmakers River Erosion Protection Report

Appendix K: SG Codes for Farm Portions

Appendix A: Maps



Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest



Appendix J: Skoenmakers River Erosion Protection Report

Appendix K: SG Codes for Farm Portions

