



# environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA


## DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	12/12/20/
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Application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

### PROJECT TITLE

The proposed hydropower station and associated infrastructure at Boegoeberg Dam on the Orange River, near Groblershoop, Northern Cape

Specialist:

Contact person:

Postal address:

Postal code:

Telephone:

E-mail:

Professional affiliation(s)  
(if any)

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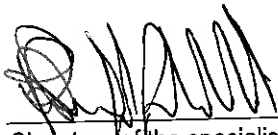
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The specialist appointed in terms of the Regulations

I, **Dr Wayne Duff-Riddell**, declare that

- I act as the independent specialist in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.



Signature of the specialist:

**Aurecon South Africa (Pty) Ltd**

Name of company (if applicable):

15 November 2013

Date:

07 October 2013

Ref: 109636/wdr

Boegoeberg Hydro (Pty) Ltd  
3rd Floor Terminal Building  
ExecJet Business Centre  
Tower Rd  
Cape Town International Airport  
8000

**Att: N. Theron**

Dear Mr Theron

### **BOEGOEBERG HYDRO POWER STATION: TRAFFIC IMPACT STATEMENT**

We submit herewith the Traffic Impact Statement in respect of the Boegoeberg Hydro Power Station.

A consideration of the information available, in the context of the site location, gives rise to the conclusion that:

- Any notable traffic impacts are restricted to those arising from the transportation of the abnormal loads during construction and these will be confined to the expected six abnormal load deliveries.
- The traffic impact of the projected vehicle trips required for the construction and subsequent plant operation are negligible.

It is thus our recommendation that the project not be disallowed on the basis of its traffic impacts. However, it is recommended that the route from Upington to the site along the N10, N8 and DR3040 be considered as to its geometric and structural ability to carry the anticipated abnormal load vehicles.

The detailed considerations are depicted on the accompanying Traffic Impact Statement.

We trust this meets your requirements and look forward to discussing this in more detail with you.

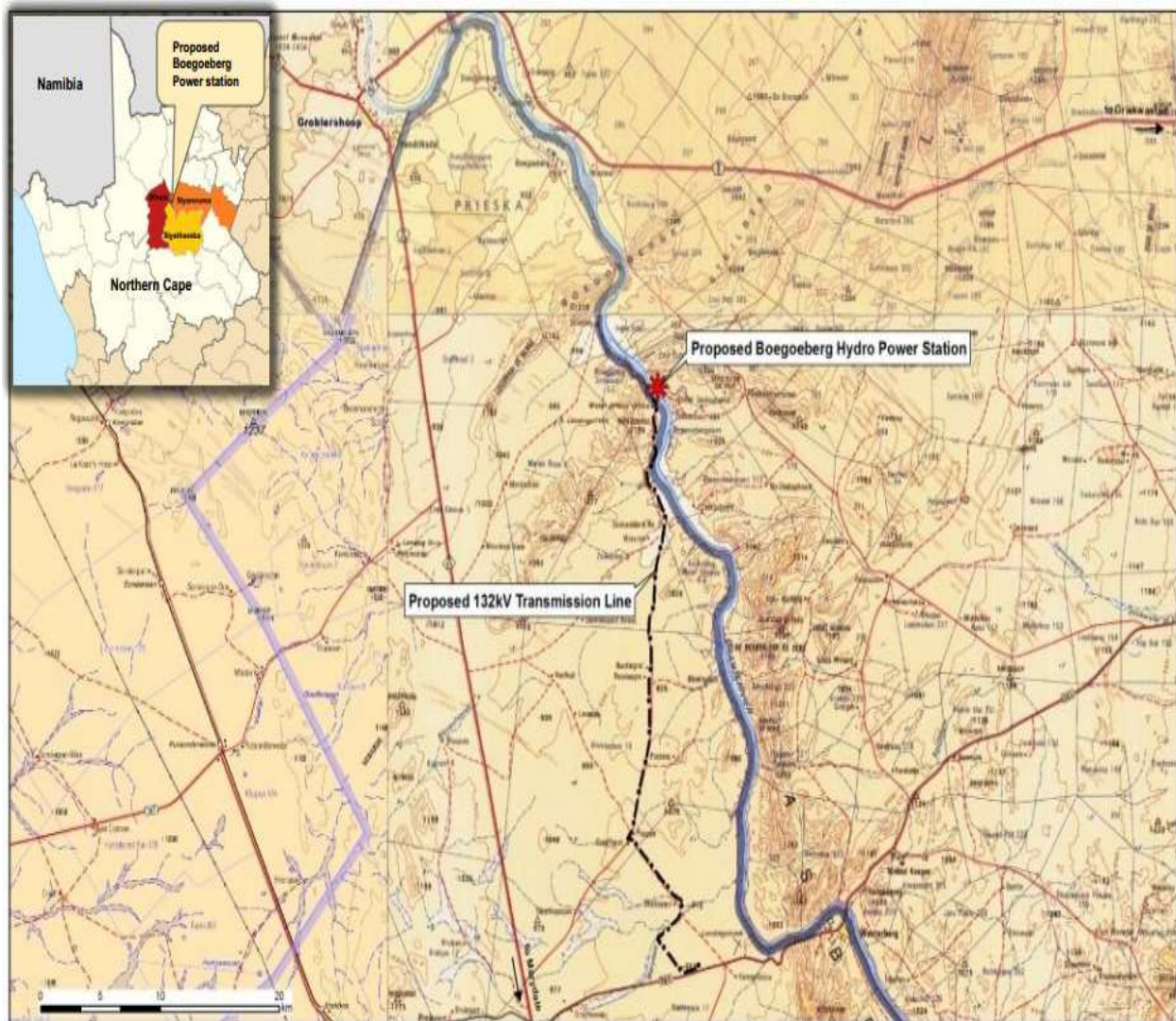
Yours sincerely

**WAYNE DUFF-RIDDELL** Pr.Eng. PhD.

Technical Director – Transportation Planning  
Aurecon (Pty) Ltd)

## BOEGOEBERG HYDRO POWER STATION: TRAFFIC IMPACT STATEMENT

Boegoeberg Hydro Electric (Pty) Ltd (Boegoeberg Hydro) wishes to construct a hydropower station and associated infrastructure with an approximate capacity of 15 Megawatt (MW) at Boegoeberg Dam on the Orange River. The proposed Boegoeberg Hydro Power Station is situated on the northern bank of the Orange River on the farm Zeekoebaart approximately 26km south east of the town of Groblershoop in the Northern Cape Province. Figure 1 illustrates the location of the site and the proposed High Voltage (HV) transmission line from the proposed hydropower station to the Eskom Fibre Substation 36km south of the site.



**Figure 1: Location of the proposed Boegoeberg Hydro Power Station and transmission line**

As part of the Environmental Impact Assessment process, Boegoeberg Hydro has appointed Aurecon SA (Pty) Ltd (Aurecon) to consider the impact of traffic along a segment of the unpaved provincial road DR3040. This traffic impact statement reflects the outcome of that consideration.

The segment of DR3040 under consideration (shown in green in Figure 2) connects the N8 (shown in red in Figure 2) to the farm Zeekoebaart (designated with a purple star in Figure 2).



**Figure 2: Affected road network**

In assessing the impacts of traffic arising from the proposed development, the information shown in Table 1 regarding the expected traffic was obtained from Boegoeberg Hydro.

**Table 1: Daily and irregular anticipated traffic to and from the site**

<b>Daily</b>		
<b>Activity</b>	<b>Anticipated trips</b>	<b>Average trips</b>
Site Management	3 x 2 trips to and from site by Light Duty Vehicle (LDV) per day	6 LDV trips per day
Site staff	3 x 2 trips to and from site by taxis per day	6 taxi trips per day
Site visitors	2 trips to and from site per week	0.4 LDV trips per day
Sub-contractors	60% of the above items per day	7.45 trips per day
<b>Irregularly</b>		
Cement Trucks	21 trips over 24 months	< 1 trip per month
Reinforcing	13.33 trips	< 0.5 trip per month
Turbines & generators	6 Trips to site	6 Trips to site
<b>Operation and Management (O&amp;M)</b>		
O&M	5 Trips a week	5 Trips a week



Also obtained was the Kakamas Hydro Abnormal Route Study which considered the transport of abnormal loads from Johannesburg and Cape Town to Kakamas along the N14. This study indicated no problem in bringing the plant equipment to Upington along the N14. However, it is recommended that the route from Upington to the site along the N10, N8 and DR3040 be considered as to its geometric and structural ability to carry the anticipated abnormal load vehicles.

A consideration of the information available, in the context of the site location, gives rise to the conclusion that:

- Any notable traffic impacts are restricted to those arising from the transportation of the abnormal loads during construction and these will be confined to the expected six abnormal load deliveries.
- The traffic impact of the projected vehicle trips required for the construction and subsequent plant operation are negligible.

It is thus our recommendation that the project not be disallowed on the basis of its traffic impacts along the segment of the unpaved provincial road DR3040.

**WAYNE DUFF-RIDDELL** Pr.Eng. PhD.

Technical Director – Transportation Planning  
Aurecon (Pty) Ltd)