

REPORT ON THE PROPOSED ROAD TO THE BOESMANLAND SOLAR FARM – AGGENEYS

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Introduction

Boesmanland Solar Farm (Pty) Ltd as an Independent Power Producer (IPP) is proposing the establishment of a 75MW commercial solar energy facility on a site within the Northern Cape to be known as Boesmanland Solar Farm. BVi Consulting Engineers compiled this report concerning the condition of the existing road network and proposed access road route to the proposed site for the development of the Solar Farm. A site inspection was held on the 18th April 2012 by Danie Roode a representative of BVi and a team of engineers from Solek.

The Current Situation

Currently, the proposed site is accessible by means of informal vehicle tracks passing through the Vedanta Black Mountain Mine. This route is not preferred, since traffic increases the risk to interfere with the mining activities and would implicate unnecessary safety and security measures and complications for any further mining developments in at the Black Mountain Mine.

The best alternative access route is the existing road along the 220kV Eskom high voltage power line. Eskom also uses this road as a service road for the 220kV power line. At the date of the report, preliminary permission has been received from all the relevant landowners regarding the proposed use of the road.

Approximately 1km of the road passes through sand dunes and has been covered with a layer of gravel. Although the road is in good condition and suitable for 4x2 vehicles, some upgrades would be necessary in order to use the road for heavy motor vehicles during the construction period of the solar facility. The access road passing through the mine's property is part of the old Springbok-Pofadder road and is still in a fair condition.

Another route directly from the N14 national road was also investigated, and is considered as an alternative. The alternative road was damaged by flood water and thus decommissioned. The existing apron is still in a fair condition, but significant civil works would be required to cross the waterway. Comment received from SANRAL in this regard has been included at the end of the report.

Suggested Improvements

The proposed route can be divided into four primary sections as indicated in Figure 1.

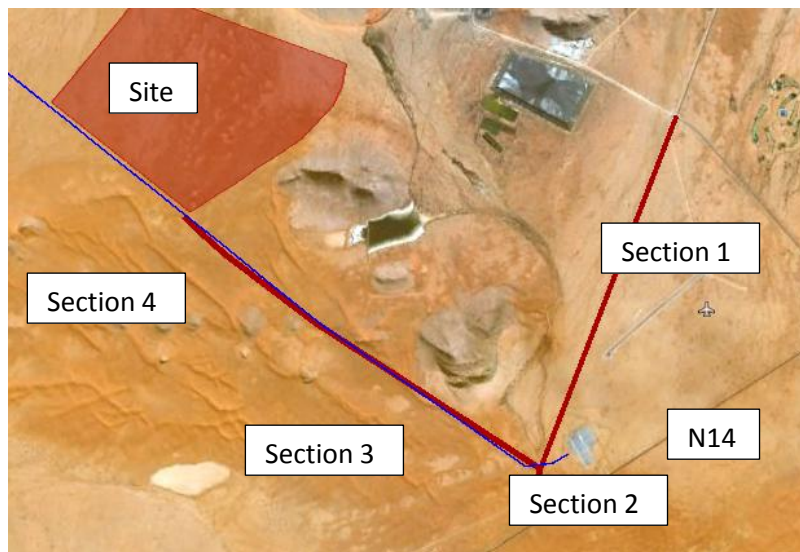


Figure 1: Proposed access road

Section1:

The first part of the proposed route is accessed off the existing tar road into Aggeneys off the N14 and runs along the existing old Springbok-Pofadder road, behind the Aggeneys Airstrip and Aggeneis Substation, for 4.1km. This part of the road is in superb condition and would only have to be graded as shown in the following figure. Due to the fact that this section of road requires minor work and has been used as a national road before, it would most probably have less environmental impact than the alternative described in Section 2. For this reason, and those discussed below, Section 1 is considered to be the preferred access route to the Boesmanland Solar Farm.



Figure 2: Section 1 of proposed road

Section 2:

Section 2 is considered as an alternative to Section 1 and could give direct access to the Eskom service road from the N14 highway. Figure 3 clearly shows the apron from the N14 highway. The two arrows in the

figure indicate the 60m section of road that was damaged by flooding. To restore the road, culverts with bases would have to be laid to correctly deal with the waterways and avoid possible damage to the road and environment. The remaining portion of road under Section 2 would require the same reparations as described under Section 1. The section of road is 0.6km long.

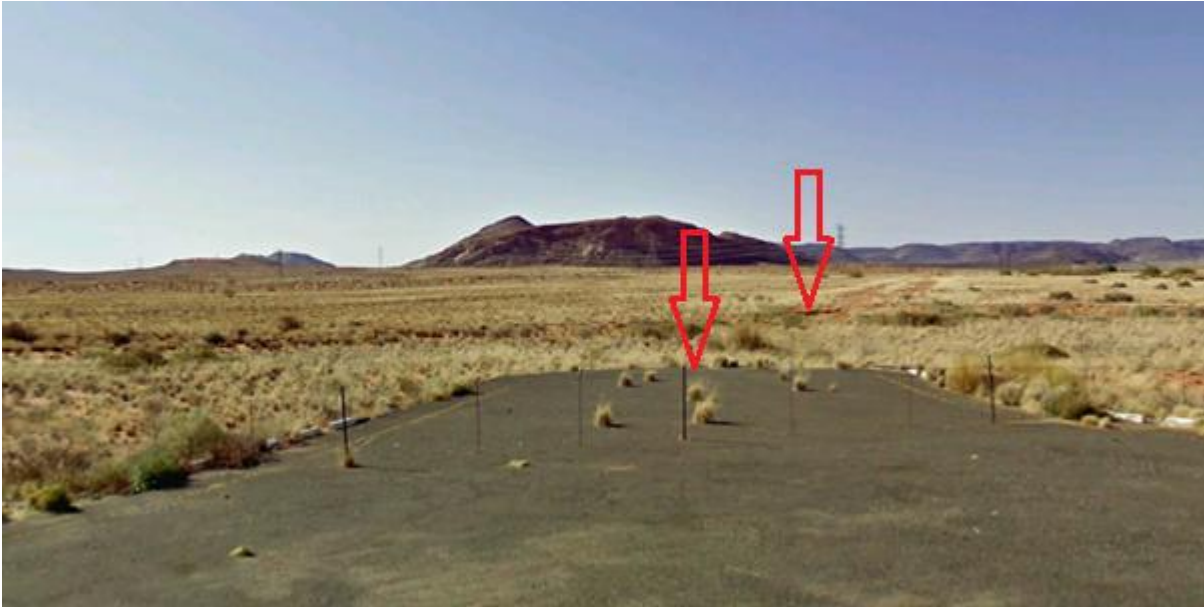


Figure 3 Direct access road from N14

Section 3:

The third section of the existing road covers a distance of approximately 1.8km and is shown in Figure 4 below.



Figure 4: Section 3 of proposed road

The area is characterised by small sand dunes and the incline necessitates more serious upgrades. It is recommended that this part of the road be cleared, ripped and thoroughly compacted. As the road is expected to carry laden heavy vehicles, a selected gravel layer will be needed to compensate for the underlying layers. A gravel layer of 200 – 300mm and at least 3,5 meters wide, will have to be imported and compacted to at least 93% MOD AASHTO. This material can be transported from the Mine's existing borrow pit located near the access gate. The Mine has indicated that their borrow pit is fully licenced. An agreement to be able to make use of this gravel from the Mine borrow pit is currently being drawn up. Using this material is from the existing pit is preferred rather than creating additional borrow-pits and

rehabilitating these afterwards. The borrow pit is located about 4.1km from the access road. The road to the borrow pit is in good condition and capable of handling the expected loads. In the event of this gravel not being available for use, gravel will be transported from a licensed borrow pit in the vicinity by trucks. BVi civil consulting engineers and SPH will assist in this, seeing that this is their core business, and they have done a number of projects in the area.

Section 4:

Section 4 is relatively level stretch of road of approximately 3,8km in length to the proposed site. This road must also be cleared and compacted as the main composition of the material is sandy as can be seen in Figure 5. Additional gravel material of a thickness between 200 and 250mm should also be imported for this section and be compacted to 93% MOD AASTHO.



Figure 5: Section 4 of the proposed road

Comment from SANRAL

The abovementioned proposed access route alternatives were submitted to SANRAL for comment. In their response, SANRAL confirmed their preference of using Section 1 rather than Section 2 as an access route. As this access off the N14 is existing and in use, Section 1 will not require a Traffic Impact Assessment (TIA) and no upgrade of the intersection on the N14 would be required. The use of the Section 2 alternative would require a full TIA to inform the full upgrade of the intersection and road.

In furtherance of SANRAL's recommendation to use Section 1 as the preferred access route to the solar facility, they specified that should the intersection on the N14 be used, that a pre-and post-construction visual inspection of the N14 intersection be undertaken by the consulting engineers in liaison with SANRAL.