

**Agricultural screening for Environmental Authorisation process for
Khauta Solar PV Cluster, Welkom**

Table of Contents

1 Introduction.....	1
2 The factors that influence agricultural approval	1
3 Risk assessment of the likelihood of agricultural approval for the Khauta Solar PV Cluster	3
3.1 Grid connections.....	3
3.2 Solar facilities.....	4
4 Challenges with DALRRD decision making	4
5 Conclusions	5

1 Introduction

The agricultural aspects of Environmental Authorisation are all about getting agricultural approval and although it is administered by the Department of Environment, Forestry and Fisheries (DFFE), it is ultimately the Department of Agriculture, Land Reform and Rural Development (DALRRD) that will control the decision for agricultural approval, either directly through the EA process, although far more likely, through rezoning and/or SALA approval. There are a number of challenges with DALRRD that complicate an assessment of the likelihood that a project will get agricultural approval or not (see Section 4 below).

The aim of this screening assessment is to assess the risk that these projects will not get agricultural approval, and particularly, at this stage of the project, to assess whether there are any red flags, no-go areas or major sensitivities in this regard.

2 The factors that influence agricultural approval

Allowable development limits for renewable energy on agricultural land are prescribed by NEMA's agricultural protocol. DALRRD's viewpoint, which is the foundation of the agricultural protocol and of the classification of agricultural sensitivity by the screening tool, is that land which is suitable for the viable and sustainable production of cultivated crops, should not be used for solar power generation, but rather conserved for agricultural use. This is justified by the fact that there is a scarcity of arable production land in South Africa, but there is plenty of land that is unsuitable for crop production, and only suitable as grazing land, which could be used for solar power instead.

The allowable development limits are shown in Table 1. The implications for solar facilities are that they are only allowed on land of allowable footprint category 6 in the table.

Table 1. Allowable development limits for renewable energy facilities on agricultural land as specified in the agricultural protocol.

Allowable footprint category	Agricultural sensitivity on screening tool	Allowable footprint (ha/MW)	Definition of category
1	Very high	0.00	Land capability of 11-15; or irrigated land; or dryland horticulture or viticulture
2	High	0.20	Land capability of 8-10 on existing fields
3	High	0.25	Land capability of 6-7 on existing fields
4	High	0.30	Land capability of 1-5 on existing fields
5	High Medium	0.35	Land capability of 9-10 outside of existing fields Land capability of 8 outside of existing fields
6	Medium Low	2.50	Land capability of 6-7 outside of existing fields Land capability of 1-5 outside of existing fields

The Khauta Solar PV Cluster sites include land that, according to the screening tool classification (see Figure 1), falls into category 3, which would prohibit solar development on those parts of the site. However, it is highly likely that there are good reasons on which the agricultural assessment can verify the agricultural sensitivity as being category 6 across the entirety of the solar facility sites, as shown in Figure 1. In order to do this, it will be necessary for the agricultural assessment to show, with evidence, that those areas, despite their high sensitivity classification by the screening tool, are in fact unsuitable or very marginal for crop production. It should be noted that concern for the conservation of agricultural land is not influenced by the current agricultural production from that land, but by its future potential for agricultural production. So even if no crop production is currently taking place on a piece of land, if it is considered suitable for potential future crop production, then it will be considered by DALRRD to be out of bounds for solar development.

Theoretically, if an agricultural assessment shows that a project is within the allowable development limits, according to the assessment's verified agricultural sensitivity, then agricultural approval should be forthcoming. However, this is not guaranteed due to the uncertainties of predicting DALRRD decision making (see below).

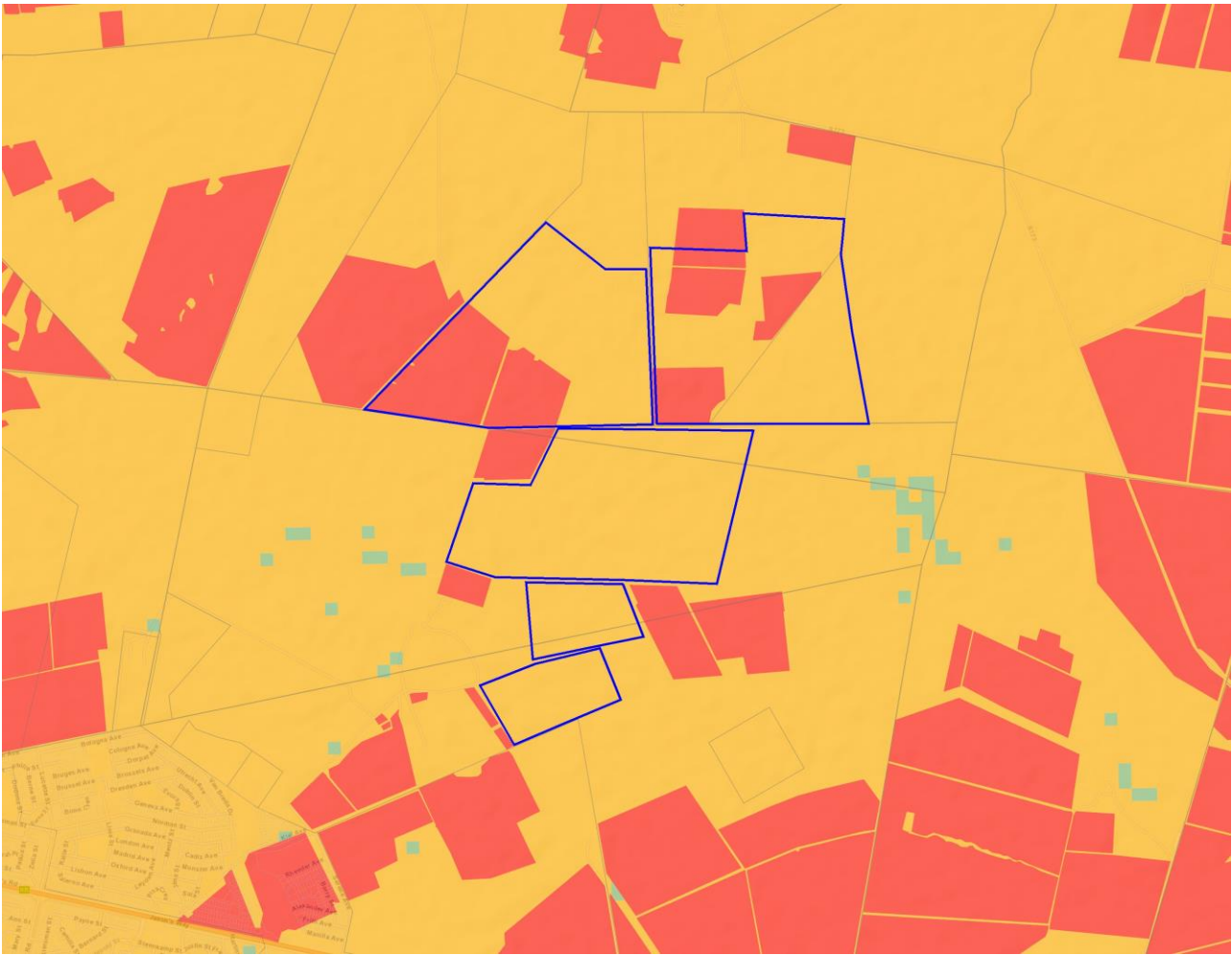


Figure 1. The proposed development site overlaid on agricultural sensitivity, as given by the screening tool (yellow = medium; red = high).

3 Risk assessment of the likelihood of agricultural approval for the Khauta Solar PV Cluster

3.1 Grid connections

Grid connection infrastructure has negligible agricultural impact, regardless of the agricultural sensitivity of the site. This is because its direct, permanent, physical footprint that has any potential to interfere with or exclude agriculture, is insignificantly small. All agricultural activities can continue completely unhindered underneath transmission lines. Agricultural approval for grid connections is therefore a non-issue, and there are no risks for the Khauta project in this regard.

Because of a grid's negligible agricultural impact, there is no material difference to the significance of the agricultural impacts of the proposed alternative grid corridor options. Therefore, all proposed alternatives are considered acceptable and there are no preferred corridor alternatives from an agricultural impact perspective.

3.2 Solar facilities

Khauta 1 and both small solar facilities are entirely on category 6 land and are therefore within the allowable development limits. There is therefore a low risk of not getting agricultural approval for all three of these facilities.

Khauta 2 and 3 are both on sites that include category 3 land (indicated in red in Figure 1). However, it is highly likely that there are good reasons on which the agricultural assessment can verify the agricultural sensitivity of these areas as being category 6, and therefore verify the facilities as being within the allowable development limits.

Arguments in favour of this are:

- that none of these previously cultivated fields have been under cultivation for an extended period of at least 6 years and therefore should no longer be classified as cultivated land on the screening tool or allocated high sensitivity because of it.
- That the land type soil data suggests that the combination of soil and climate on the sites makes them unsuitable or very marginal for viable crop production.

There is therefore a low risk of not getting agricultural approval for both of the Khauta 2 and 3 facilities as well.

There is however a complicating factor for all 5 facilities. This is the so called 10% 'rule' that the land use committee of DALRRD, who are responsible for decision making for agricultural approval, seem to somewhat inconsistently apply to their decisions. This 'rule' states that a renewable energy facility may not result in the exclusion from agricultural use of more than 10% of a farm portion. All 5 of the facilities would fall foul of this rule. This issue is discussed further in Section 4, below.

4 Challenges with DALRRD decision making

Unfortunately DALRRD decision making is not transparent and seemingly often not backed up by logic. They will make their own decision, regardless of the findings and recommendations of an agricultural assessment, and it may well be in contradiction to the defensible logic that is presented in that assessment. Also unfortunately, they will only respond to an official application. They will not usefully discuss and indicate the likely success of an application, prior to it actually being officially submitted.

They seem to, very inconsistently, apply their 10% rule, even though its value to agriculture can logically be invalidated and it has definite disadvantages in terms of other environmental impacts, infrastructural practicalities and the costs to the country of renewable energy.

This leaves developers largely in the dark about what to expect in terms of agricultural approval. When the protocols came out, I had hoped that the specificity of the allowable development limits in them would provide developers with a reliable prediction of whether they could expect agricultural approval or not, based on whether they were within the allowable limits or not.

Unfortunately, again, DALRRD has recently indicated that they do not think that the allowable development limits support the entirety of their mandate to protect agricultural land and that they therefore do not necessarily follow them and may in fact be more stringent in their decision making than the allowable limits are.

As a result of this, I am now recommending, especially if projects exceed the allowable development limits, and possibly the 10% rule as well, that developers try to get rezoning/SALA approval as soon as possible in the project development process. It would obviously be pointless to incur all the costs of EA approval only to have the project stopped in its tracks by a denial of rezoning/SALA approval.

5 Conclusions

This screening assessment has found that there are no red flags, no-go areas or major sensitivities, associated with achieving agricultural approval for all of the proposed facilities and grid connections. There are no preferred grid connection alternatives and all are acceptable from an agricultural impact point of view. The risk of not achieving agricultural approval for all projects is assessed as being low. Approval will however require, at least, that the agricultural assessment finds the entirety of the solar facility sites to be unsuitable or marginal for viable crop production and can provide evidence of this. The available evidence from this desktop assessment suggests that this is highly likely. It must further be noted that the risk of not achieving agricultural approval is subject to the unpredictability of DALRRD decision making, and that their 10% rule does pose some risk to the projects.