

# Aggeneys 1, North West Province

Social Input for the amendment of the Environmental  
Authorisation

October 2020



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**Prepared for:**

ABO Wind Aggeneys 1 PV (Pty) Ltd



## PROJECT DETAILS

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<b>Title</b>	:	Aggeneys 1, Northern Cape Province: Social Input for the Amendment of the Environmental Authorisation
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<b>Client</b>	:	ABO Wind Aggeneys 1 PV (Pty) Ltd
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**When used as a reference this report should be cited as:** Savannah Environmental (2020), Social Input for the amendment of the Aggeneys 1 Environmental Authorisation, Northern Cape Province.

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## SPECIALIST DECLARATION OF INTEREST

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I, Lisa Opperman, 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.
- » I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the Act.

Lisa Opperman

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Name

October 2020

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Date



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Signature

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## PURPOSE OF THE REPORT

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ABO Wind Aggeneys 1 PV (Pty) Ltd proposes the development of Aggeneys 1, a PV solar energy facility and associated infrastructure on a site located 11km south-east of Aggeneys in the Northern Cape Province. The proposed project comprises of a commercial solar energy facility and is intended to form part of the Department of Mineral Resources and Energy's (DMRE's) Renewable Energy Independent Power Producer Procurement (REIPPP) Programme.

Aggeneys 1 received Environmental Authorisation (EA) from the National Department of Environment, Forestry and Fisheries (DEFF) in accordance with the National Environmental Management Act (No. 107 of 1998) (NEMA), and the Environmental Impact Assessment (EIA) Regulations, 2014 (GNR 326) after the completion of a Basic Assessment (BA) process. The Environmental Authorisation was obtained on 25 July 2019 under the reference number 14/12/16/3/3/1/2019.

A Social Impact Assessment (SIA) Report was prepared by Dr Neville Bews of Dr Neville Bews & Associates in April 2019<sup>1</sup> in order to assess the positive and negative social impacts associated with the project.

ABO Wind Aggeneys 1 PV (Pty) Ltd is now proposing the construction and operation of a Battery Energy Storage System (BESS) of up to 500MW/500MWh within the authorised footprint of the solar PV facility. This results in a change of the project description and the infrastructure associated with the project. It must be noted that the inputs provided as part of this report assumes that no new areas or properties will be affected by the amendment (i.e. addition of BESS), other than those previously assessed within the SIA, and that no new listed activities in terms of the EIA Regulations, 2014, are triggered.

## 1. OVERVIEW OF THE PROJECT AS INDICATED AND CONSIDERED IN THE SIA

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### 1.1. Project Description

The Aggeneys 1 project is a 100 MW solar photovoltaic facility consisting of approximately 300 000 – 400 000 solar panels that will utilise fixed-tilt PV, single-axis tracking or double-axis tracking PV technology. The approximate height of these panels from ground level is 3.5 meters. The approximate surface areas to be covered by the facility and associated infrastructure are as follows:

- » PV structures/modules up to ~233 ha
- » Laydown area ~5 ha
- » Internal roads ~10 ha
- » Auxiliary buildings ~1 ha
- » Substation up to ~1 ha.

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<sup>1</sup> Dr Neville Bews & Associates (2019), Social Impact Assessment (SIA) for the proposed Aggeneys 1 100MW PV Facility Project, Northern Cape Province

It is estimated that construction will stretch over approximately 18 months and that the facility will have an operational lifespan of about 20 years.

The project is located on the Remaining Extent of Farm Bloemhoek 61 which falls within the Khâi-Ma Non-Urban area of the Khâi-Ma Local Municipality, Namakwa District, Northern Cape Province. The project also falls within the Renewable Energy Development Zone 8 (Springbok) and is in close proximity to Black Mountain Mine and the town of Aggeneys which services the mine.

## **1.2. Potential Social Impacts as determined through the BA Process**

The SIA that was undertaken as part of the BA process for the solar energy facility identified impacts during both the construction, operation and decommissioning phases. Both positive and negative impacts were identified for these development phases.

The following positive impacts are expected to occur during the construction phase:

- » Positive economic impacts associated with job creation and stimulation of the local and regional economies.

The following negative impacts are expected to occur during the construction phase:

- » Annoyance, dust and noise generated through construction activities;
- » An increase in crime;
- » Increased risk of HIV and AIDS due to the influx of workers, job seekers, deliveries and availability of disposable income;
- » Influx of construction workers and job seekers resulting in a temporary change in the demographics;
- » Exposure to hazards associated with the construction activities and the delivery of heavy machinery and equipment to site;
- » Disruption of daily living patterns; and
- » Disruption of services supplies and infrastructure.

The following positive impacts are expected to occur during the operation phase:

- » The creation of jobs, business opportunities and a source of revenue for local authorities.

The following negative impacts are expected to occur during the operation phase:

- » Transformation of the sense of place due to the nature of the project.

Impacts during the decommissioning phase were also identified and linked to loss of jobs and revenue stream that stimulated the local economy and flowed into the municipal coffers. Other impacts associated with decommissioning are considered to be similar to the impacts identified during the construction phase. Decommissioning will also result in a limited number of jobs being created over a short period of time as components are dismantled and the site is cleared. Although positive, this will be a rather insignificant benefit considering the size of the project and the limited time period attached to decommissioning.

Positive and negative cumulative impacts were also assessed as part of the SIA.

The positive cumulative impacts include:

- » Cumulative impacts associated with the creation of jobs, business opportunities and revenue sources for local authorities.

The negative cumulative impacts include:

- » Cumulative impacts associated with increased risk of HIV and AIDS due to the influx of workers, job seekers, deliveries and availability of disposable income;
- » Cumulative impacts associated with the transformation of the sense of place;
- » Cumulative impacts associated with the disruption of services, supplies and infrastructure.

Overall conclusion of the Social Impact Assessment:

The SIA concluded that the project is aligned with national, provincial and municipal policy. Regarding the impacts associated with the project, it was identified that most impacts apply over the short term to the construction phase of the project. Of these impacts, all can be mitigated to acceptable levels and there are no fatal flaws associated with the construction of the project. Should any significant social issues arise at a later stage these must be given the appropriate attention.

Although the project is likely to change the sense of place of the area during the operation phase, it will also have significant benefits in respect of the supply of renewable energy into a grid system heavily reliant on coal powered technology. In this sense the project forms part of a national effort to reduce South Africa's carbon emissions and therefore carries a significant benefit.

Considering the project-specific impacts it is evident that the cumulative impacts associated with changes to the social environment of the region are more significant than those attached to the project. As the cumulative impacts are broad based in that they stretch across various developments in the area it is beyond the scope of a single project developer to address the impacts and would require attention on a regional and possibly a national basis.

Having considered all the social impacts associated with the development of Aggeneys 1, it was concluded that the benefits attached to the generation of renewable energy and local economic and social development will offset the negative impacts. On this basis the project is considered acceptable, subject to the implementation of the recommended mitigation measures.

## **2. DETAILS OF THE AMENDMENTS**

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The requested amendment will result in a change in the layout, with the main change being the addition of a BESS to the associated infrastructure of the facility. The BESS will be located within the authorised development footprint and will not affect any areas not previously assessed as part of the SIA. The BESS will be developed within the authorised laydown area, and with an extent of no more than 5ha. It is understood that the BESS will require the storage of dangerous goods for the operation and maintenance of the system, however these will be limited and will fall within the capacity of what was authorised for the solar energy facility.

The generation capacity of the facility will remain at 100MW.

The amended layout illustrating the location of the BESS is included as **Figure 2.1**.

The proposed technology will be electrochemical batteries with a maximum height of 3.5m. The BESS will connect to the authorised on-site facility substation of Aggeneys 1 via multi-core 22kV or 33kV underground cables, to follow internal access roads of the PV facility.

### **3. POTENTIAL FOR CHANGE IN THE SIGNIFICANCE OF SOCIAL IMPACTS AS A RESULT OF THE PROPOSED AMENDMENTS**

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In terms of Regulation 32(1)(a)(i) of the EIA Regulations, the following section provides an assessment of the social impacts related to the proposed amendment for Aggeneys 1. Understanding the nature of the proposed amendment and the fact that the addition of the BESS does not change the assessed and authorised development footprint, which was fully assessed as part of the SIA, it is concluded that the proposed amendment will not introduce any new social impacts, nor significantly alter the social impacts as previously assessed in the SIA. It is understood that the BESS may result in additional employment opportunities during the construction and operation phases, however these are limited and do not affect the significance ratings of the related impacts. The general purpose and utilisation of a BESS is to save and store excess electrical output as it is generated, allowing for a timed release when the capacity is required. BESS systems therefore provide flexibility in the efficient operation of the electricity grid through decoupling of the energy supply and demand. This is seen as a benefit from a social perspective but does not change the significance of the positive impact related to the project as previously assessed.

As required in terms of Regulation 32(1)(a)(iii) of the EIA Regulations, consideration was given to the requirement for additional measures to ensure avoidance, management and mitigation of impacts associated with the proposed change. Considering that there will be no change in impacts, no additional mitigation or enhancement measures are required for the addition of the BESS to the layout from a social perspective. The recommendations, mitigation and enhancement measures provided in the SIA are considered sufficient for the enhancement of the positive impacts and the management and mitigation of the negative impacts to acceptable levels. Therefore, all enhancement and mitigation measures, as proposed in the SIA are still required to be implemented for the amended Aggeneys 1 development.

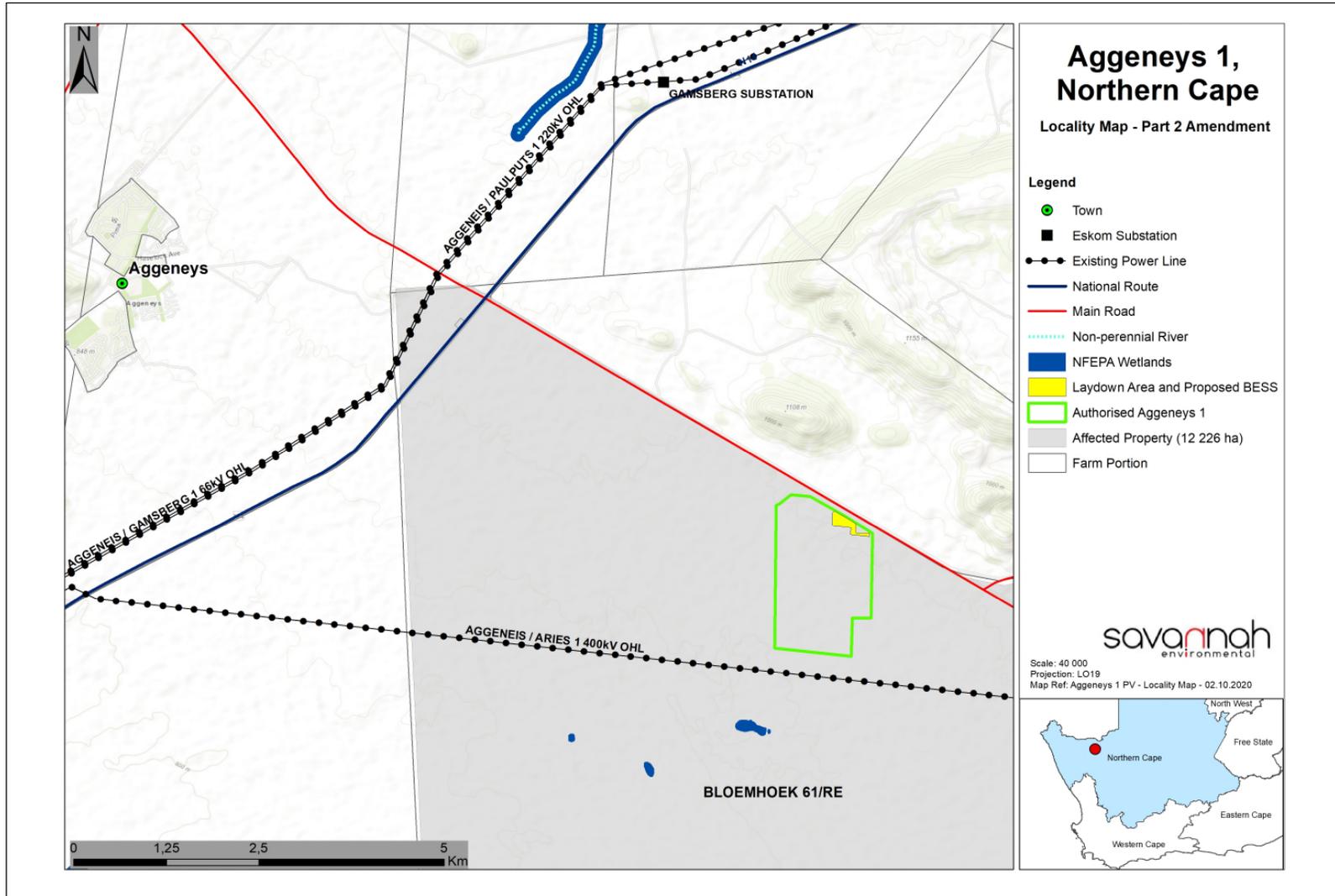
### **4. ADVANTAGES AND DISADVANTAGES OF THE PROPOSED AMENDMENTS**

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In terms of Regulation 32(1)(a)(ii) of the EIA Regulations, this section provides details of the advantages and disadvantages of the proposed amendment from a social perspective.

One advantage has been identified from a social perspective which is the opportunity provided by the installation of the BESS for flexibility in the efficient operation of the electricity grid.

No specific disadvantages have been identified from a social perspective with the implementation of the proposed amendment as part of the Aggeneys 1 project.



**Figure 2.1:** Proposed amended Aggeneys 1 layout map, as considered within this report.

## **5. CONCLUSION**

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Based on the nature of the proposed amendment for Aggeneys 1, and the fact that the proposed BESS falls within the properties and development footprint which was fully assessed as part of the SIA (April 2019), it can be concluded that the amendment will not lead to any additional impacts other than those identified and assessed within the SIA (undertaken in 2019). No change in the significance of the impacts is expected to occur and there is no need for any additional recommendations or mitigation measures other than those already specified in the SIA (2019).

The proposed amendment is considered to be acceptable from a social perspective and can be approved, subject to the implementation of the mitigation and enhancement measures as specified in the SIA (April 2019).

