

PROPOSED CONSTRUCTION OF GRASPAN PV PLANT  
PHASE 1 (90MW), LOCATED ON THE REMAINING  
EXTENT OF FARM GRASPAN (NO. 172), IN THE  
SIYANCUMA LOCAL MUNICIPALITY, NORTHERN CAPE  
PROVINCE

Motivation for Amendment of the Environmental  
Authorisation (DFFE Ref No.: 14/12/16/3/3/2/276/1)

Final Report

September 2023

savannah  
environmental

t +27 (0)11 656 3237

f +27 (0)86 684 0547

e info@savannahsa.com

w www.savannahsa.com

**Prepared for:**

Graspan Solar PV(Pty) Ltd  
21 Woodlands Drive  
Woodmead  
2191



## PROJECT DETAILS

---

<b>Title</b>	:	Proposed construction of Graspan Solar PV Plant Phase 1 (90MW), located on the remaining extent of Farm Graspan (No. 172), in the Siyancuma Local Municipality, Northern Cape Province.
<b>DFFE Reference</b>	:	14/12/16/3/3/2/276/1
<b>Authors</b>	:	Savannah Environmental (Pty) Ltd Jo-Anne Thomas
<b>Specialist Consultants</b>	:	Andrew Husted of The Biodiversity Company Jenna Lavin of CTS Heritage Lourens du Plessis of LOGIS Cornelius Holtzhausen of Savannah Environmental
<b>Client</b>	:	Graspan Solar PV (Pty) Ltd
<b>Report Status</b>	:	Final Motivation Report for authority review and decision-making

**When used as a reference this report should be cited as:** Savannah Environmental (2023) Motivation Report for the Amendment to the Environmental Authorisation for the proposed construction of Graspan PV Plant Phase 1 (90MW), located on the remaining extent of Farm Graspan (No. 172), in the Siyancuma Local Municipality, Northern Cape Province

### **COPYRIGHT RESERVED**

This technical report has been produced for Graspan Solar PPV (Pty) Ltd. The intellectual property contained in this report remains vested in Savannah Environmental (Pty) Ltd. No part of the report may be reproduced in any manner without written permission from Savannah Environmental (Pty) Ltd or Graspan Solar PV (Pty) Ltd.

## TABLE OF CONTENTS

	<b>PAGE</b>
<b>PROJECT DETAILS</b> .....	<b>i</b>
<b>TABLE OF CONTENTS</b> .....	<b>ii</b>
<b>LIST OF APPENDICES</b> .....	<b>iii</b>
<b>PURPOSE OF THE REPORT</b> .....	<b>iv</b>
<b>1. OVERVIEW OF THE PROJECT</b> .....	<b>1</b>
1.1. Status (baseline) of the Environment assessed through the Environmental Impact Assessment (EIA) Process (EIA report, July 2012) .....	1
1.2. Summary of potential Environmental Impacts Determined through the Environmental Impact Assessment (EIA) Process .....	6
<b>2. DESCRIPTION OF REQUESTED AMENDMENT</b> .....	<b>9</b>
2.1. Amendment 1: Extension of the validity of the Environmental Authorisation.....	9
<b>3. MOTIVATION FOR THE REQUESTED AMENDMENT</b> .....	<b>10</b>
3.1. Extension of the validity of the Environmental Authorisation.....	10
<b>4. CONSIDERATIONS IN TERMS OF THE REQUIREMENTS OF THE EIA REGULATIONS AND DFFE</b> .....	<b>11</b>
4.1. Details of Environmental Assessment Practitioner and Expertise to conduct the Amendment Process .....	11
<b>5. POTENTIAL FOR CHANGE IN THE SIGNIFICANCE OF IMPACTS AS ASSESSED IN THE EIA AS A RESULT OF THE REQUESTED AMENDMENT</b> .....	<b>13</b>
5.1. Current State of the Environment .....	13
5.2. Impacts on Ecology (including fauna, vegetation, soils and agriculture, and freshwater).....	16
5.2.1. Conclusion .....	18
5.3. Heritage Impacts .....	18
5.3.1. Conclusion .....	18
5.4. Visual Impacts.....	19
5.4.1. Conclusion .....	20
5.5. Social Impacts .....	20
5.5.1. Conclusion .....	23
<b>6. CONCLUSION AND MOTIVATION FOR APPROVAL OF the REQUESTED AMENDMENTS</b> .....	<b>24</b>
<b>7. PUBLIC PARTICIPATION</b> .....	<b>27</b>

---

## LIST OF APPENDICES

---

<b>Appendix A:</b>	Ecological Specialist Input
<b>Appendix B:</b>	Heritage Specialist Input
<b>Appendix C:</b>	Visual Specialist Input
<b>Appendix D:</b>	Social Specialist Input
<b>Appendix E:</b>	Public Participation Documentation
<b>Appendix E1:</b>	I&AP Database
<b>Appendix E2:</b>	Proof of advert and Site Notices
<b>Appendix E3:</b>	Proof of Notification
<b>Appendix E4:</b>	Comments received
<b>Appendix E5:</b>	Comments and Responses Report
<b>Appendix F:</b>	Environmental Team CVs
<b>Appendix G:</b>	Specialist Declarations

## PURPOSE OF THE REPORT

---

Graspan Solar PV (Pty) Ltd has requested an amendment to an existing Environmental Authorisation (EA) for the authorised Graspan PV Facility (DFFE Reference: 14/12/16/3/3/276). The project is located on remaining extent of Farm Graspan (No. 172), in the Siyancuma Local Municipality, Northern Cape Province. The project was authorised in June 2013, with various subsequent amendments issued, including a split EA issued in November 2021 (DFFE Reference: 14/12/16/3/3/276/1). A developmental footprint of 150 ha in extent is authorised for the facility and associated infrastructure. The following infrastructure is authorised:

- » PV solar panels/modules (arranged in arrays);
- » PV module mountings;
- » DC-AC current inverters and transformers;
- » An on-site 132kV Independent Power Producer (IPP) substation to facilitate the grid connection.
- » Underground cabling/ overhead power lines;
- » On-site buildings (including an operational control centre, office, ablutions, and a guard house);
- » Access roads and internal road network; and
- » Ancillary infrastructure.

The project (PV facility and associated grid connection) is a Preferred Bidder project under Round 5 of REIPPPP and is registered as a Strategic Infrastructure Project.

An application for amendment has been submitted to the Department of Forestry, Fisheries and the Environment (DFFE) on 28 April 2023. The amendment being applied for relates to an extension of the validity of the Environmental Authorisation by an additional 2 years. Additional information has been requested (in terms of Regulation 30(1)(a) of the EIA Regulations, 2014 as amended) for the Department to be able to process the application for amendment. Savannah Environmental, as independent consultant, has prepared this Motivation Report in support of the application for the proposed amendment on behalf of the applicant, and in accordance with the requirements of the DFFE.

This report aims to provide details pertaining to the environmental impacts as a result of the requested amendment in order for interested and affected parties to be informed and submit comments for the competent authority to be able to reach a decision in this regard. This report is supported by specialist site verification and motivation reports to inform the conclusion and recommendations regarding the proposed amendment (refer to **Appendix A-D** of this report). This Site Verification and Motivation Report must be read together with these specialist reports to obtain a complete understanding of the proposed amendment and the implications thereof from an environmental perspective.

This Motivation Report was made available for a 30-day review and comment period in accordance with the requirements of the DFFE from **Thursday 03 August 2023** to **Monday 04 September 2023**. The availability of the Motivation Report for the 30-day comment and review period was communicated via email to all registered I&APs and advertised in the **NoordKaap Bulletin** on **Thursday 03 August 2023**.

The Motivation Report was available for download from Savannah Environmental's website: <https://www.savannahsa.com/public-documents/energy-generation/>. All comments received during the 30-day review and comment period and responses have been included within a Comments and Responses Report (C&RR) and included within this Final Amendment Motivation Report submitted to the DFFE for consideration and decision-making.

# 1. OVERVIEW OF THE PROJECT

---

The proposed Graspan PV Plant (75MW) and associated grid connection infrastructure is located on the Farm Graspan (No. 172), in the Siyancuma Local Municipality, Northern Cape Province (refer to **Figure 1.1**). The project was authorised in June 2013 ((DFFE Reference: 14/12/16/3/3/276), with various subsequent amendments issued including a split EA issued in November 2021 (DFFE Reference: 14/12/16/3/3/276/1). A developmental footprint of 150 ha in extent is authorised for the facility and associated infrastructure. The following infrastructure is authorised:

- » PV solar panels/modules (arranged in arrays);
- » PV module mountings;
- » DC-AC current inverters and transformers;
- » An on-site 132kV Independent Power Producer (IPP) substation to facilitate the grid connection.
- » Underground cabling/ overhead power lines;
- » On-site buildings (including an operational control centre, office, ablutions, and a guard house);
- » Access roads and internal road network; and
- » Ancillary infrastructure.

The project is a Preferred Bidder project under Round 5 of REIPPPP and is registered as a Strategic Infrastructure Project.

In order to implement the preferred technology for the project, an additional 50ha is required. This additional area for development was assessed through an EIA process undertaken by Savannah Environmental (DFFE Ref No.: 14/12/16/3/3/2/2124). This assessment included specialist studies which included review of the previous specialist studies undertaken and fieldwork where required, as well as a public participation process. An EA for the additional development area was issued in October 2022.

## 1.1. Status (baseline) of the Environment assessed through the Environmental Impact Assessment (EIA) Process (EIA report, July 2012)

The findings of the specialist studies undertaken by Environmental Resources Management Southern Africa (Pty) Ltd (ERM) during the EIA assessed both the benefits and potential negative impacts anticipated as a result of the proposed development and concluded that there are no environmental fatal flaws that should prevent the proposed project from proceeding.

Table 1.1 summarises the baseline status of the environment that was assessed through the EIA process for the proposed project.

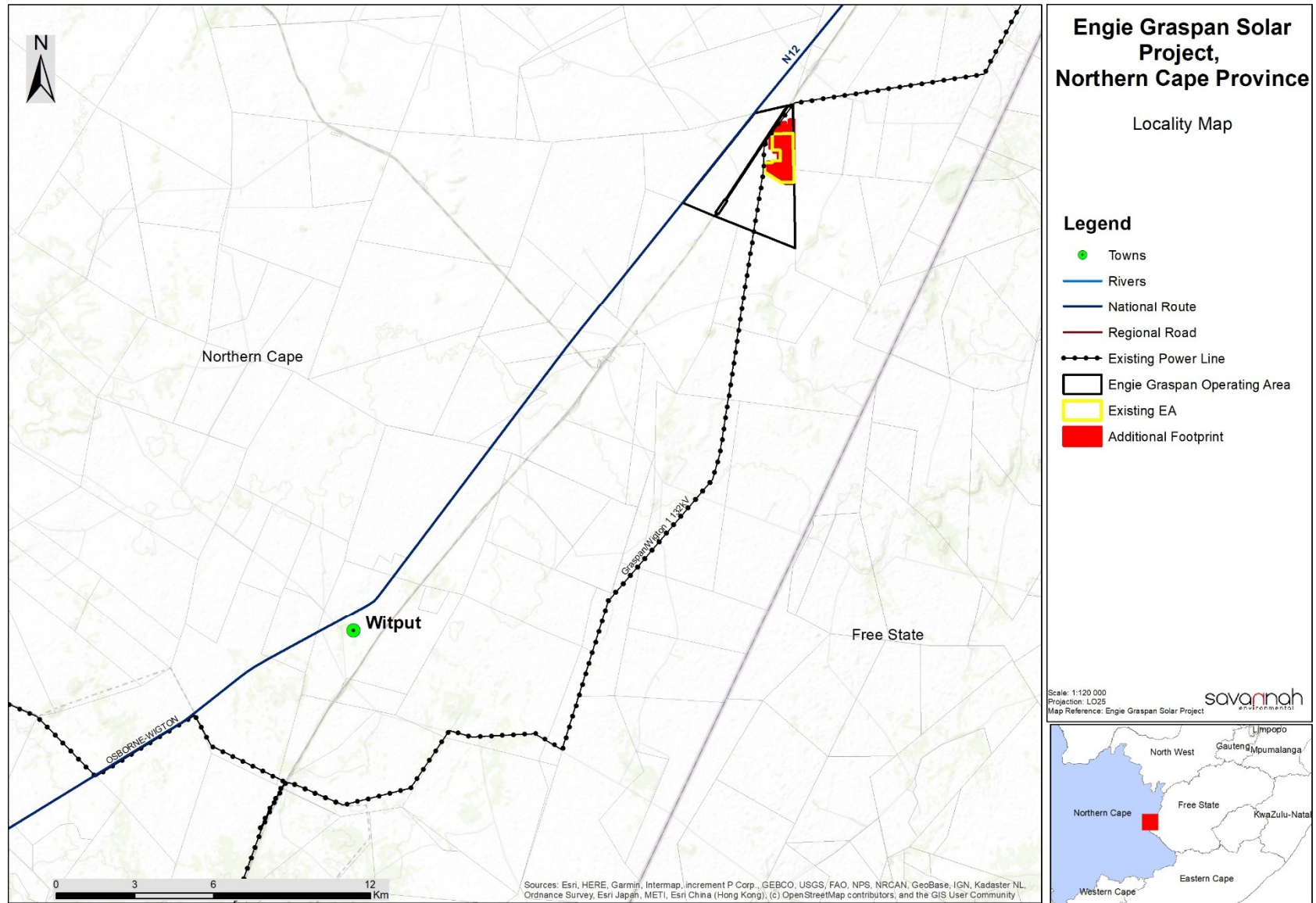


Figure 1.1: Locality map



**Table 1.1:** Baseline status of the environment assessed through the EIA process.

Aspect	Summary
Biophysical Baseline	<p>The site is located in a semi-arid region, and is designated for agricultural use, with current agricultural practices including sheep and cattle farming. Land use in the surrounding area includes further sheep and cattle farming, cultivation approximately 15 km to the east and 30 km to the north east of the site, and various salt works within a 15 km radius of the site.</p> <p>Although the site is remote, there are existing man-made features present in the immediate landscape. There is an existing railway line traversing the site in a northeast-southwest direction. An existing gravel road network exists on the site, which crosses the railway line. The existing 132kV Graspan Traction Substation is located within the northern section of the site, and an existing 132kV overhead power line traverses the site from the Graspan Traction Substation in a north-south direction, exiting the southern boundary of the site. The total area of the site is 2,080.82 ha.</p> <p>The topography of the area is generally flat with a gentle slope up towards the dolerite hills (referred to as 'koppies') around Klein Kareelaagte to the southeast. A small boulder-strewn dolerite koppie is located on the northern edge of the site. There are no major drainage features on the site. The Driekops Pan located approximately 1 km southeast of the site is a major feature in the surrounding landscape.</p> <p>The surrounding area has a rural character consisting mainly of open grassland, with clumps of trees around farmsteads, such as the Graspan homestead to the west. Farmsteads in the area tend to be 2 km or more apart. The Graspan and Enslin Battle Site, dating to the Boer War (1899), is located approximately 7 km to the north of the site.</p> <p>The affected project area has a semi-arid, continental climate with a late summer rainfall regime, i.e. most of the rainfall is confined to mid and late summer.</p> <p>The geology of the site contains rocks of the Tierberg Formation, Eccca Group and the Karoo Supergroup, which are Early Permian in age (approximately 270 million years old). Fossils from the Eccca Group have mostly been recovered from the underlying Whitehill Formation. Presence of fossils on the site is possible due to the presence of the Eccca Group formations. The entire site is underlain by red apedal soil types. The following major soil forms were identified at the site:</p> <ul style="list-style-type: none"> <li>• Mispah Form</li> <li>• Glenrosa Form</li> <li>• Coega Form</li> </ul> <p>The overall agricultural potential of the site is based on a number of inter-related factors including climate, topography, soil type, soil limitations and current land use. The combination of low rainfall and a severe moisture deficit means that sustainable crop production cannot take place without some form of irrigation. The entire Graspan site is classified as having low potential for crop production, due to the arid climate and highly restrictive soil characteristics.</p> <p>During the site visit, six small pans were identified and mapped. Of these, three have also been identified and mapped by the Freshwater Ecosystem Priority Areas (FEPAs) assessment produced by the CSIR (Nel et al., 2011). The pans identified under the FEPA were, however, given a rank of 4 indicating that they are wetlands which are perceived to be in good condition and which occur in proximity to other such wetlands, but have not been identified by experts as priority wetlands.</p> <p>The national vegetation map for the site indicates a dominance of the Northern Upper Karoo vegetation type and a small section of Kimberley Thornveld located in the south eastern section of</p>

Aspect	Summary
	<p>the site (Mucina and Rutherford, 2006). Field surveys undertaken, however, identified several small pans on the site corresponding to the Highveld Salt Pans vegetation types and an area of rock outcrop which corresponds to the Vaalbos Rocky Shrubland vegetation type. The field survey further identified the Kimberley Thornveld to be of greater extent on the site than as depicted by the national vegetation map. The above-mentioned vegetation types are all classified as Least Threatened according to the IUCN (1). Of the vegetation types present on site, the Vaalbos Rocky Shrubland found in the vicinity of the rocky outcrop is considered the most ecologically sensitive, and as a habitat type is not found anywhere else on the site. On a broad scale, the Kimberley Thornveld vegetation type is considered to be more ecologically sensitive than the northern Upper Karoo vegetation type. This is due to the Kimberley Thornveld containing numerous large trees, while the Northern Upper Karoo vegetation type is dominated by low bushes and grasses.</p> <p>The site has been found to be generally free of alien species. There were, however, alien species present around water points and other disturbed areas. Alien species identified on site included <i>Opuntia imbricata</i>, <i>Malva parviflora</i>, <i>Conyza bonariensis</i>, <i>Datura stramonium</i> and <i>Tagetes minuta</i>.</p> <p>The Graspan site is located within the distribution range of 49 terrestrial mammalian species, indicating that the mammalian diversity at the site is potentially high. Of the 49 species, the Brown Hyaena (Near Threatened) and Black-footed Cat (Vulnerable) are IUCN listed species. The likelihood that the Brown Hyaena occurs at the site is low, given the agricultural activity on the site. The Black-footed Cat, however, is more likely to occur at the site, as this species favours a mixture of open and densely vegetated areas which occurs on the site. The rocky outcrops are the most important habitats and, compared to the adjacent plains habitats on the site, are likely to harbour a greater mammalian species richness, particularly of small mammals (Round-eared Elephant Shrew) were observed during the field survey within the rocky outcrop habitat, and are likely to occur within the <i>Rhus ciliata</i> shrubland). The pans identified are likely to be an important habitat for gerbil species and Springhares, the burrows of which were common in the vicinity of the pans.</p> <p>Evidence of Aardvark (<i>Orycteropus afer</i>) activity was common at the site.</p> <p>The Graspan site is located in or near the distribution range of at least 37 reptile species, indicating that the reptile diversity for the site is relatively low. However, given the diversity of habitats present on the site, these reptile species are likely to be found on the site. Based on distribution maps and habitat requirements, the composition of the reptile species is likely to comprise one terrapin, two tortoises, 18 snakes, 13 lizards and skinks and three geckos. There are no listed reptile species known from the area.</p> <p>The Graspan site is located within the distribution range of 12 amphibian species. However, given the paucity of surface water at the site, only those species able to survive away from perennial water are likely to occur at the site. Only the Giant Bullfrog is of conservation concern and is listed as Near Threatened according to the IUCN. Should this species occur at the site, it would be associated with the pans. However, based on field evidence, the small pans present at the site do not hold water for sufficient periods to offer suitable breeding habitat, and it is unlikely that the site represents an important area for this species.</p> <p>There are 225 bird species known to occur in the broad area surrounding the Graspan site, according to the SABAP (1) 1 and 2 data sets. Of these species, there are 13 IUCN (2) listed species. All of the listed species are susceptible to some degree to both electrocution by, or collision with, power line infrastructure. Larger raptors are susceptible to both collision and electrocution, while storks, bustards and flamingos are all vulnerable to collision with power lines.</p>

Aspect	Summary
	<p>There has been no fine-scale conservation planning for the affected project area. Furthermore, the Graspan site does not fall within a National Protected Areas Expansion Strategy focus area, and therefore has not been identified as a potentially important area for future conservation. The Mokala National Park (MNP) is located approximately 13 km to the north of the site. The park was proclaimed on 19 June 2007 to conserve the interface between the Savanna Biome and the Nama-Karoo Biome. The deproclamation of Vaalbos National Park (VNP) in the Northern Cape Province resulted in the establishment of MNP. As part of the conservation and management plan strategy for MNP, there is a proposed expansion programme which would increase the size of MNP, bringing the MNP border to the N12 and adjacent to the Graspan site (South African National Parks, 2008).</p>
<p><b>Social Baseline</b></p>	<p>The project is located within the Siyancuma Local Municipality, which falls within the Pixley Ka Seme District Municipality, in the Northern Cape.</p> <p>Within this administrative structure, the provincial government is responsible for providing a strategic vision and framework for the province, as well as ensuring cooperation between municipalities and ensuring each municipality performs their respective functions.</p> <p>It must be noted that while the site falls within the Siyancuma Local Municipality (SLM), the town of Hopetown (where Solaire Direct are likely to source local labour) is located in the neighbouring Thembelihle Local Municipality (TLM). The administrative centre of the SLM is located in the town of Douglas. There are six Wards within the Municipality and the Graspan site is located in Ward 2. The Vaal and Orange Rivers run through the SLM and are important from an agricultural perspective. The N12 national road bisects the Municipality from north to south and links a number of the smaller towns to Kimberley, the capital of the Northern Cape.</p> <p>According to the Water Services Development Plan, Siyancuma Municipality 2011/12, agriculture, fishing and forestry form the backbone of the local economy, contributing 27 percent towards the Municipal Gross Geographic Product (1) (GGP).</p> <p>The population in the SLM was estimated to be 35,967 at the time of the 2007 Community Survey, totaling approximately 22 percent of the Pixley Ka Seme District Municipality population. General education levels are low within the SLM. An estimated 20.3 percent of the population over 20 years of age are illiterate, as they have not received any schooling. It is estimated that 66.6 percent of the population over 20 years have completed schooling (from Grade 0 to Grade 12), and a low 7.3 percent have attained a higher education qualification (2). The economically active population (aged 16 – 65 years) of the SLM was estimated to be 22,862 people in 2007, making up 63.6 percent of the total population. Of that total, 34 percent are employed, while 17 percent are unemployed. A further 49 percent are considered economically inactive (3). The SLM does have a higher population of economically inactive people when compared to that of the Province, (42 percent).</p> <p>There are two primary types of farming activities that take place in the area, namely, dryland farming and intense irrigation farming. The irrigation farming is practiced along the Vaal and Orange Rivers, where water from the rivers can be used to irrigate lucerne, wheat, oats, maize and vegetables. The irrigated fields also facilitate dairy farming. The dryland farming consists of stock farming (sheep, cattle, and goats), ostrich farming and game. The farming activity surrounding the project site is large-scale, commercial farming. The Graspan site is considered dryland and the main activity on the site is grazing. The farmer keeps cattle and sheep on the Graspan farm. The carrying capacity on the site is one small stock unit (SSU) per three hectares, and one large stock unit (LSU) per 15 ha (4).</p>

Aspect	Summary
	<p>There is a hospital located in Hopetown and a primary health care clinic located in Steynville. The most prevalent illnesses in the area are Tuberculosis (TB), HIV/Aids and Hypertension (high blood pressure).</p> <p>A large portion (79 percent) of the population of SLM live in a house on a separate stand, while 14 percent reside in an informal dwelling/ shack. Two percent live in informal dwellings/ shacks that are located in a backyard, while another two percent of the population live in a block of flats (5). The majority of the households within the SLM (89 percent) have access to electricity. An estimated 56 percent of households in the SLM have access to tap water inside their homes, while 32 percent have access to water outside their homes (within their yard) (6). Four percent of households have access to piped water from an access point outside of their yard and eight percent do not have access to piped water and obtain water from boreholes, dams, rainwater tanks or streams.</p> <p>Little archaeological information is available for the project site and most of the local archaeological knowledge is based around the railway line and the Riet River. A range of different heritage sites were identified during the field survey. These includes stone artefact scatters, dolerite boulders with grinding surfaces, a single incidence of historical graffiti on a dolerite boulder, a circular stone structure near the railway line, some calcrete cairns and a distribution of late 19th/early 20th century historical dump material along the railway line. The region is steeped in cultural heritage as numerous battles forming part of the Boer wars were fought along the Kimberley railway line. The Battle of Graspan (also known as Enslin or Rooilaagte) was fought during the second Anglo-South African War (1899-1902) and the battle site is approximately seven kilometres to the north-east of the project site.</p> <p>The site and surrounds has a rural character consisting mainly of open grassland, with clumps of trees around farmsteads, such as the Graspan homestead to the west of the site. Farmsteads in the area tend to be 2 km or more apart and, combined with the large extent of open farmland, create a sense of openness and space in the Karoo landscape.</p> <p>Two concentric circles of packed stone, historic material strewn around the stone structure, historic material found mainly concentrated along the railway line, historic late 19th or early 20th century dump material, including glass bottles, tin cans, etc. were found on the site. These materials are particularly concentrated within a swathe of 50 m to 100 m from the railway line.</p>
<p><b>Other planned Projects in the area (during EIA Phase)</b></p>	<p>There are no other known energy facilities, existing or proposed, within 30 km. Another solar energy facility is proposed 55 km away at Ruimte on the R705 near Koffiefontein. The proposed solar park will add further industrial-type facilities and power lines to the existing rail and power line infrastructure.</p>

## 1.2. Summary of potential Environmental Impacts Determined through the Environmental Impact Assessment (EIA) Process

The following environmental impacts relevant to the site and the amendment application were identified and assessed as part of the EIA undertaken by for the project:

- » Ecological
- » Soil and Agricultural Assessment
- » Heritage, Archaeology and Palaeontology
- » Visual
- » Social

According to the EIA:

*"The implementation of the mitigation measures detailed in Chapters 7 to 14 and listed in the Environmental Management Programme (EMPr), including monitoring, will provide a basis for ensuring that the potential positive and negative impacts associated with the establishment of the development are enhanced and mitigated to a level which is deemed adequate for the development to proceed.*

*In summary, based on the findings of this assessment, ERM finds no reason why the 90 MW PV power facility proposed for the Graspan site (Layout Alternative 2) should not be authorised, contingent on the mitigations and monitoring for potential environmental and socio-economic impacts as outlined in the EIR and EMPr being implemented."*

The key conclusions and recommendations of the original EIA pertinent to this application, as reported in the EIA are summarised in Tables 1.2 and 1.3 below.

**Table 1.2:** Summary of Pre-mitigation Significance during Construction Phase for Layout Alternative 1 and Layout Alternative 2 and Residual Impact Significance for Layout Alternative 2 (preferred and final layout)

	<b>Impact</b>	<b>Pre-mitigation Significance (Based on Layout Alternative 1)</b>	<b>Pre-mitigation Significance (Based on Layout Alternative 2)</b>	<b>Residual Impact Significance (Based on mitigation and Layout Alternative 2)</b>
Soils	Loss of Topsoil, Soil Compaction and Soil Erosion	<b>MODERATE (-VE)</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Water	Impact on Surface and Groundwater	<b>MAJOR-MODERATE (- VE)</b>	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Flora	Destruction and Loss of Natural Vegetation and Sensitive Plant Communities	<b>MAJOR (-VE)</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Fauna	Impacts from Habitat Loss and Disturbance	<b>MAJOR (-VE)</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Avifauna	Impacts on Avifauna	<b>MAJOR (-VE)</b>	<b>MODERATE-MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Visual	Visual Impacts	<b>N/A</b>	<b>MODERATE(-VE)</b>	<b>MODERATE(-VE)</b>
Palaeontology	Damage or Destruction to Paleontological Resources	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
Archaeology	Archaeological Finds	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>MINOR (+VE)</b>
	Destruction or Disturbance to Archaeological Resources	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Cultural Heritage	Destruction or Disturbance of Cultural Heritage	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
Socio-economic	Direct Employment and Training	<b>N/A</b>	<b>MINOR - MODERATE (+VE)</b>	<b>MODERATE (+VE)</b>
	Procurement and Indirect Employment	<b>N/A</b>	<b>MINOR - MODERATE (+VE)</b>	<b>MODERATE (+VE)</b>
	Induced Economic Benefits	<b>N/A</b>	<b>MINOR (+VE)</b>	<b>MINOR (+VE)</b>
	Increased Community Investment	<b>N/A</b>	<b>MODERATE (+VE)</b>	<b>MODERATE-MAJOR (+VE)</b>
	Inflation and Increased Cost of Living	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
	Social Nuisance Factors	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
	Impact on Agricultural Activities	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
	Impact on Tourism	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
Traffic	Impact from Increased Traffic	<b>N/A</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Waste	Impact from Waste and Effluent	<b>N/A</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Air Quality	Dust and Emissions	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>

\* The visual, cultural heritage, socio-economic, traffic, waste and air quality impact assessments only assessed the preferred and final layout, Site Layout Alternative 2

**Table 1.3:** Summary of Pre-mitigation Significance during Operational Phase for Layout Alternative 1 and Layout Alternative 2 and Residual Impact Significance for Layout Alternative 2 (preferred and final layout)

	<b>Impact</b>	<b>Pre-mitigation Significance (Based on Layout Alternative 1)</b>	<b>Pre-mitigation Significance (Based on Layout Alternative 2)</b>	<b>Residual Impact Significance (Based on mitigation and Layout Alternative 2)</b>
Soils	Loss of Topsoil, Soil Compaction and Soil Erosion	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Water	Impact on Surface and Groundwater	<b>MODERATE (-VE)</b>	<b>MODERATE-MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Agriculture	Loss of Agricultural Land and/or Production	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
Flora	Impacts of Maintenance Activities on Vegetation	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
	Alien Plant Invasion	<b>MODERATE (-VE)</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Fauna	Impacts from Habitat Loss and Disturbance	<b>MODERATE (-VE)</b>	<b>MODERATE-MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Avifauna	Impacts on Avifauna	<b>MAJOR (-VE)</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Visual	Visual Impacts	<b>N/A</b>	<b>MODERATE(-VE)</b>	<b>MODERATE(-VE)</b>
Cultural Heritage	Impact on Sense of Place	<b>N/A</b>	<b>MODERATE (-VE)</b>	<b>MINOR (-VE)</b>
Socio-economic	Direct Employment and Training	<b>N/A</b>	<b>MINOR (+VE)</b>	<b>MINOR (+VE)</b>
	Procurement and Indirect Employment	<b>N/A</b>	<b>MINOR (+VE)</b>	<b>MINOR (+VE)</b>
	Induced Economic Benefits	<b>N/A</b>	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Increased Community Investment	<b>N/A</b>	<b>MODERATE (+VE)</b>	<b>MODERATE-MAJOR (+VE)</b>
	Inflation and Increased Cost of Living	<b>N/A</b>	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Social Nuisance Factors	<b>N/A</b>	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Impact on Agricultural Activities	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
	Impact on Tourism	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>NEGLIGIBLE</b>
Traffic	Impact of Increased Traffic	<b>N/A</b>	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
Waste	Impact from Waste and Effluent	<b>N/A</b>	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Air Quality	Dust and Emissions	<b>N/A</b>	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>

\*The agricultural, visual, cultural heritage, socio-economic, traffic, waste and air quality impact assessments only assessed the preferred and final layout, Site Layout Alternative 2

## **2. DESCRIPTION OF REQUESTED AMENDMENT**

---

This section of the Motivation Report details the amendments considered within this report and by the specialist site verification investigations (refer to **Appendix A -D**).

### **2.1. Amendment 1: Extension of the validity of the Environmental Authorisation**

Condition 6 of the original EA (Page 5) dated 30 April 2013 (DFFE Reference:14/12/16/3/3/2/276) states that the proposed activity must commence within a period of five (5) years from the date of issue. Thereafter, subsequent amendment applications have been completed and further validity period extensions granted. The current authorised validity period expires on 30 April 2023 (refer to Condition 7 on page 7 of the Amendment EA dated 02 November 2021 (DFFE Reference:14/12/16/3/3/2/276/1). The amendment therefore requests that the validity period be extended by an additional 2 years until 30 April 2025.



### **3. MOTIVATION FOR THE REQUESTED AMENDMENT**

---

#### **3.1. Extension of the validity of the Environmental Authorisation**

The project has been granted a preferred bidder project under Round 5 of the REIPPPP in the Department of Mineral Resources and Energy Renewable Energy Power Producer Procurement Programme (REIPPPP). The Applicant is working towards Financial Close (which was recently extended by the IPP Office to 30 November 2023). However, due to certain delays that are beyond the control of the Applicant construction will not commence before the EA validity expires. The applicant, Graspan Solar PV (Pty) Ltd, therefore requires the validity of the EA to be extended by an additional 2 years to ensure that the project can be implemented and all benefits to be realised.

## 4. CONSIDERATIONS IN TERMS OF THE REQUIREMENTS OF THE EIA REGULATIONS AND DFFE

---

In terms of Condition 6 of the EA dated 20 March 2013 and Regulation 29 of the EIA Regulations 2014, as amended, it is possible for an applicant to apply, in writing, to the competent authority for an amendment of the environmental authorisation if the amendment will not change the scope of a valid environmental authorisation nor increase the level or nature of the impact. The amendment to extend the EA validity will not increase the level, nature or significance of impacts which were initially assessed, and the amendment will take place within the authorised development footprint therefore not impacting on any additional stakeholders. An application in this regard has been submitted to the DFFE who have confirmed that the application falls within the ambit of a Part 1 amendment process.

Further to the receipt of the application, the DFFE have requested additional information be provided in the way of a site verification and motivation report, and that a public participation process is required to be undertaken in support of the application.

The results of the review of all specialist studies undertaken in the EIA complete by ERM, information from the EIA process completed for the additional area adjacent to the PV facility in 2022, and a current assessment, including a site verification evaluation providing an indication of the status of the receiving environment (by the relative specialists) is included in **Section 5**.

### 4.1. Details of Environmental Assessment Practitioner and Expertise to conduct the Amendment Process

In accordance with Regulation 12 of the 2014 EIA Regulations (GNR 326), the applicant, the applicant has appointed Savannah Environmental (Pty) Ltd as the independent environmental consultant responsible for managing the Application for Amendment; inclusive of the required independent specialist studies and public participation process.

Neither Savannah Environmental nor any of its specialists are subsidiaries or are affiliated to the applicant. Furthermore, Savannah Environmental does not have any interests in secondary developments that may arise out of the authorisation of the proposed facility.

Savannah Environmental is a specialist environmental consulting company providing a holistic environmental management service, including environmental assessment, and planning to ensure compliance and evaluate the risk of development, and the development and implementation of environmental management tools. Savannah Environmental benefits from the pooled resources, diverse skills and experience in the environmental field held by its team. The Savannah Environmental team for this project includes:

- » **Jo-Anne Thomas**, the principle EAP on this Project, is a registered EAP with the Environmental Assessment Practitioners Association of South Africa (EAPASA - 2019/726). She provides technical input for projects in the environmental management field, specialising in Strategic Environmental Advice, Environmental Impact Assessment studies, environmental auditing and monitoring, environmental permitting, public participation, Environmental Management Plans and Programmes, environmental policy, strategy and guideline formulation, and integrated environmental management. Her key focus is on integration of

the specialist environmental studies and findings into larger engineering-based projects, strategic assessment, and providing practical and achievable environmental management solutions and mitigation measures. Responsibilities for environmental studies include project management (including client and authority liaison and management of specialist teams); review and manipulation of data; identification and assessment of potential negative environmental impacts and benefits; review of specialist studies; and the identification of mitigation measures.

- » **Cornelius Holtzhausen** is registered with the International Association for Public Participation (IAP2SA145), South Africa and holds an MSocSci in Cultural Anthropology as well as a postgraduate degree in Social Impact Assessment and Public Participation. He has produced a growing list of social impact reports for a wide range of projects and is currently employed as a Social and Public Participation Consultant at Savannah Environmental.

CVs of the Savannah Environmental project team are included in **Appendix F**.

## 5. POTENTIAL FOR CHANGE IN THE SIGNIFICANCE OF IMPACTS AS ASSESSED IN THE EIA AS A RESULT OF THE REQUESTED AMENDMENT

The DFFE in reference to Regulation 30(1)(a) requires assessment of the impacts related to the proposed amendments. Understanding the nature of the proposed amendments and the impacts associated with the project (as assessed within the EIA), the following has been considered:

- » Ecology (including flora and fauna, avifauna, freshwater and soils)
- » Heritage, Archaeology and Palaeontology
- » Visual
- » Social

The potential for change in the significance and/or nature of impacts based on the proposed amendment as described within the site verifications undertaken by the various specialists and this Motivation Report is discussed below and detailed in the specialist's assessment reports (conducted in 2023) contained in **Appendix A - D**<sup>1</sup>. These reports consider both the PV facility and the grid connection infrastructure. This section of the Motivation Report must be read together with the specialist reports contained in **Appendix A - D** in order for the reader to obtain a complete understanding of the proposed amendments and the implications thereof.

### 5.1. Current State of the Environment

Table 5.1 summarises the current status of the project environment.

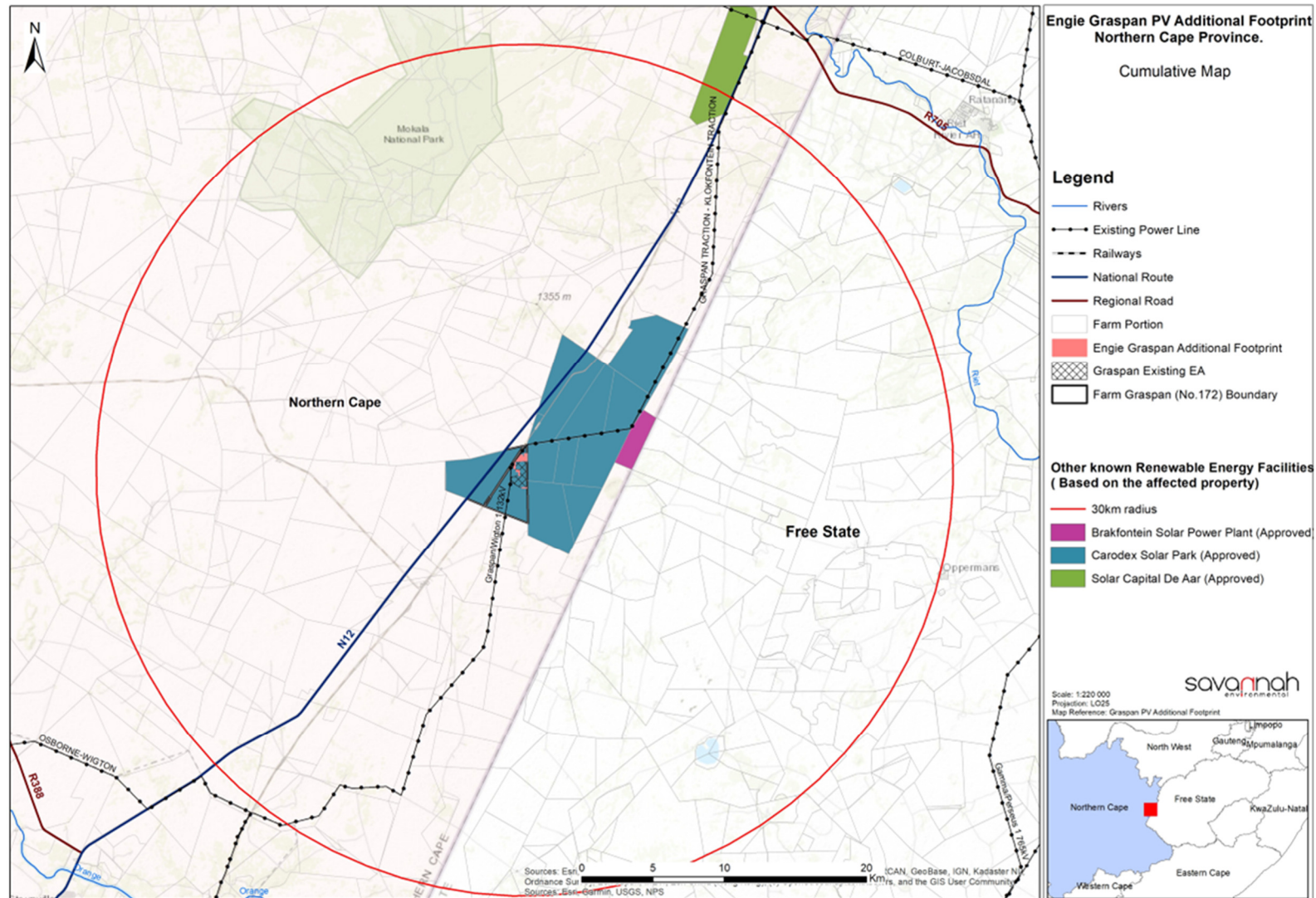
**Table 5.1:** Current status of the environment

Aspect	Summary
Ecology (including fauna, vegetation, soils and agriculture, and freshwater)	Based on the most recent available reports (TBC, 2021 - 1/2) the current status of the assessed environment (biophysical) was largely confirmatory of the original 2012 reports, suggesting that little to no change has occurred within the project area of influence (PAOI) between 2012 to present.
Heritage	Archaeological and palaeontological heritage resources reflect the environments of the past and are unlikely to change drastically in as short a geological time span as 10 years. Some changes to the visible heritage resources may take place through processes of erosion and deposition but these finds tend to represent heavily disturbed contexts.
Visual	The description of the affected environment, as described in the original VIA report remains unchanged. There have been no change in land use for the proposed development site, no new developments have been constructed on or near the development site, and the land use zonation (agriculture) remains the same.

<sup>1</sup> It must be noted that the original specialists who undertook the EIA studies and subsequent amendments have been used for these assessments as far as possible. However, where the original specialists were not available for whatever reason, suitably qualified and experienced specialists have been used to provide an assessment of the proposed amendments.

Aspect	Summary		
	The above conclusion was verified through consultation with the project proponent and the current land owner(s), as well as the observation of satellite imagery of the study area taken during 2012 and 2023.		
Social	Based on the available secondary data sources, the demographics in the area are similar to the early 2010s, and the same can be said about the baseline economic data, service delivery access, and other facets of society. While there have been a few more solar developments in the area, the cumulative effect of these tends to have a positive impact on the environment and the social status of the area.		
Other planned Projects in the area (during EIA Phase)	The following project are proposed within a 30km radius of the project site (refer to <b>Figure 5.1</b> ) <sup>2</sup> :		
	Project Name	Distance from the proposed site	Project Status
	Additional footprint for the Graspan PV facility	Directly adjacent to the additional footprint.	Environmental Authorisation issued
	Carodex (Pty) Ltd, Northern Cape. Carodex Solar Park on Portion 1 of the Farm Klein Kareelaagte 168, Herbert RD: Process: Scoping and EIR (DEA reference number 4/12/16/3/3/2/748)	Located directly opposite the project site and additional footprint on Farm Klein Kareelaagte 168	Environmental Authorisation issued
	Brakfontein Solar Power Plant (Pty) Ltd, Northern Cape. Process: Amendment (DEA 14/12/16/3/3/2/731)	6 km northeast	Environmental Authorisation issued
Solar Capital De Aar (Pty) Ltd, construction of the Ramphela 2 PV energy facility near Ritchie, Northern Cape Province. Process: Scoping & EIA (DEA reference number: 12/12/20/2051/2)	14 km north	Environmental Authorisation issued	

<sup>2</sup> Source: The DFFE's Environment Geographic Information Systems (EGIS) website (<https://egis.environment.gov.za/>).



**Figure 5.1:** Cumulative map illustrating other approved and/or constructed PV facilities located within the vicinity of the Graspan PV site

## 5.2. Impacts on Ecology (including fauna, vegetation, soils and agriculture, and freshwater)

The Biodiversity Company was appointed to provide specialist inputs regarding ecological aspects for this Amendment Application. The Site Sensitivity Verification (**Appendix A**) for the Graspan site does not include a full impact assessment and associated tables due to its nature as a Site Sensitivity Verification.

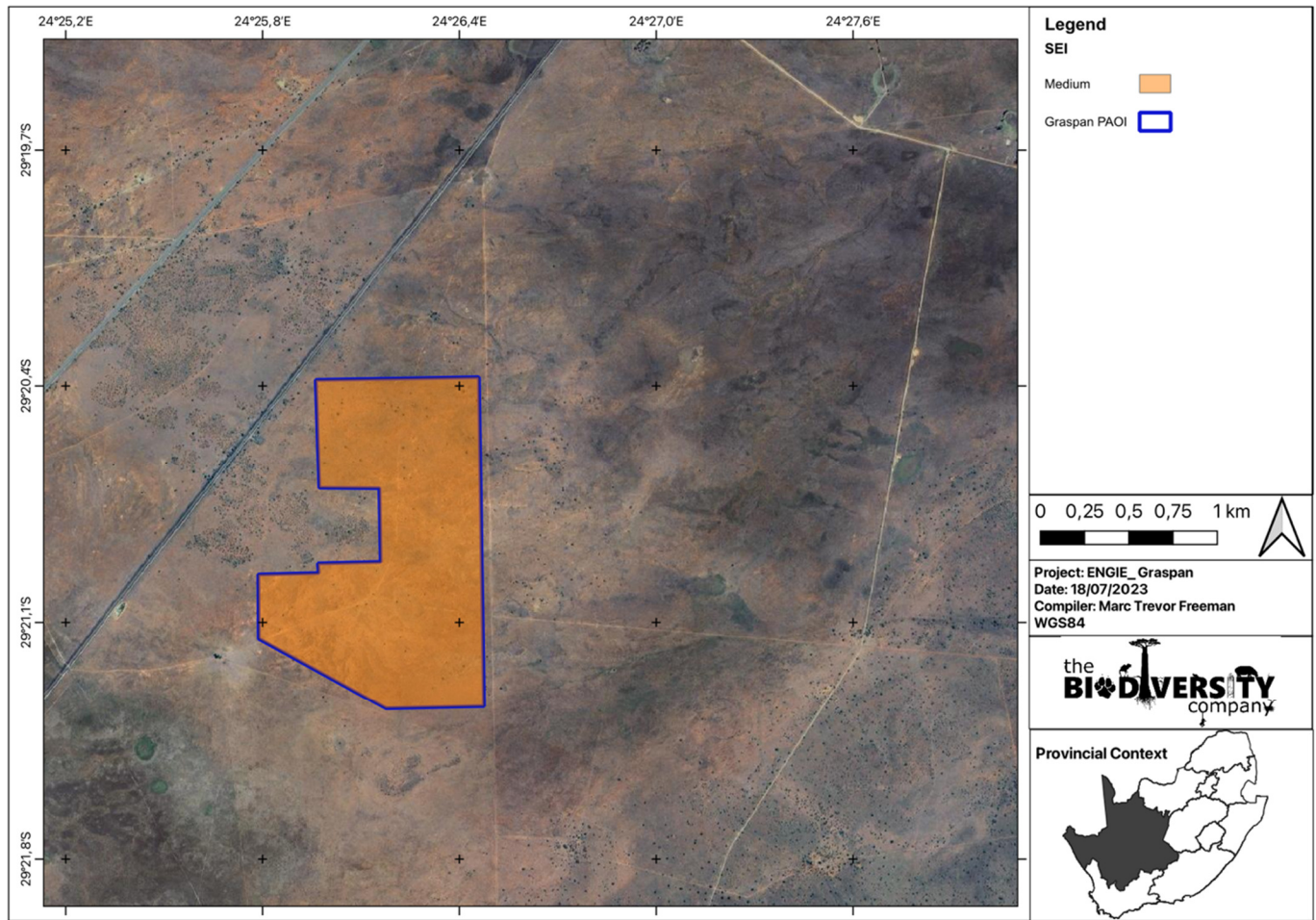
The conclusions of the Site Sensitivity Verification for the Graspan site are as follows:

- » The Project Area was identified with the Environmental Screening Tool as possessing a mix of 'Very High' and 'Low' sensitivity within a Terrestrial Biodiversity Theme. The Very High sensitivity was due to overlap with Ecological Support Areas;
- » The Project Area was identified with the Environmental Screening Tool as possessing a Medium sensitivity within the Animal Theme. The designation of a medium sensitivity was due to the presence of Ludwig's Bustard *Neotis ludwigii*;
- » The Project Area was identified with the Environmental Screening Tool as possessing a Medium sensitivity within the Agricultural Theme;
- » The Project Area was identified with the Environmental Screening Tool as possessing a Low sensitivity within the Aquatic Biodiversity Theme; and
- » The Project Area was identified with the Environmental Screening Tool as possessing a Low sensitivity within the Avian Sensitivity Theme.

**Table 5.2:** Summary of the Screening Tool Sensitivity versus the Specialist assigned Site Ecological Importance (SEI) for the proposed Solar Power Plant (SPP) Project Area

Screening Theme	Tool	Screening Tool	Specialist	Tool Validated or Disputed by Specialist - Reasoning
Animal Theme		Medium	Medium	Validated – habitat is homogenous with little to no presence of SCC's. This conclusion also aligns with that found in the original assessment done in 2012 by S. Todd.
Aquatic theme		Low	Low	Validated - No wetlands were detected within a 500 m regulated area of the PAOI.
Avian Theme		Low	Low	Validated – Low likelihood of SCC occurring within the PAOI
Terrestrial Theme		Very high	Medium	Disputed – Based on the findings of the Simon Todd, 2012 and TBC, 2021-2 reports, the POAI is a mosaic of 'Very High' and 'Low' sensitivity but following surveys and assessments overall deemed to be a 'Medium' sensitivity.
Agricultural theme		Medium	Low	Disputed - Only "Low" sensitivities were determined throughout previous reports. [(SiVest, 2012), (TBC, 2021-2)]

The Site Ecological Importance (SEI) as provided by the Species Environmental Assessment Guidelines (SANBI, 2020) was determined for the PAOI. This will provide the most appropriate and up to date sensitivity information. A multi-taxon approach was considered for the SEI determination.



**Figure 5.2:** Map illustrating the Site Ecological Importance (SEI) for the proposed Project Area

Based on the layout design, there is overlap of infrastructure with 'Medium' SEI areas. Appropriate mitigation measures would be to minimise the footprints of these as much as possible and rehabilitation of degraded areas.

There are no new considerations or guidelines that need to be incorporated for this amendment for the proposed Graspan PV development.

The initial impact ratings for terrestrial, pedology and aquatics sections of the project provided in the original reports remain valid. As such mitigation measures prescribed by each of the reviewed specialist reports remain applicable and must be adhered to.

An assessment of the surrounding environment, in relation to new developments or changes in land use which might impact on the authorised project was conducted through cumulative impacts. Cumulative impacts were assessed as part of the initial studies and are again assessed as part of the Sensitivity Verification Report. The total area within the 30 km buffer around the project area amounts to 403,440 ha, but when considering the transformation (17,702 ha) that has taken place within this radius, 385,738 ha of intact habitat remains, according to the 2018 National Biodiversity Assessment. Therefore, the area within 30 km of the project has experienced approximately 4.39% loss in natural habitat. The proposed solar developments will result in a further cumulative loss of approximately 4.52% from only similar developments (Solar, approved and in process) in the area, as such the cumulative impact from the proposed



development is rated as medium (Figure 2). This means that the careful spatial management and planning of the entire region must be a priority, and existing large infrastructure projects must be carefully monitored over the long term.

All prescribed mitigation measures and supporting recommendations presented will help to achieve an acceptable residual impact. These measures and recommendations will remain applicable for the requested extension of the EA. In order to manage the impacts effectively, additional best practice mitigation management is recommended for the general impacts associated with flora and fauna.

### **5.2.1. Conclusion**

It is the opinion of the specialist that based on the observations made from the desktop studies, available information and the findings of the previous reports that the ecological (terrestrial, pedology and aquatic) status of the site has not decreased or changed since the original report in 2012. In consideration that the project has been previously authorised the proposed development may proceed, under the condition that all mitigation measures provided in this report and previous reports are adhered to.

## **5.3. Heritage Impacts**

CTS Heritage was appointed to provide specialist inputs regarding heritage aspects for this Amendment Application (**Appendix B**). The area proposed for the Graspan PV Facility was thoroughly assessed for impacts to heritage resources in a Heritage Impact Assessment conducted by ACO Associates (2012, SAHRIS NID 92728) and a Palaeontological Impact Assessment by Botha-Brink (2012, SAHRIS NID 8924). 4 sites of heritage significance were identified which need to be considered for the development of the expanded Graspan PV facility. The impact ratings articulated in the ACO Report (2012), as well as the recommended mitigation measures remain appropriate and applicable.

No additional heritage cumulative impacts were identified by the specialist as a result of the proposed extension. Therefore, the cumulative impacts identified by the Heritage Impact Assessment (2012) remain unchanged and would be applicable for the proposed extension.

### **5.3.1. Conclusion**

In light of the above, there is no heritage objection to granting the extension to the validity to develop the Graspan SEF based on the current site conditions on condition that the relevant recommendations included in the previous heritage assessments conducted are implemented. These are included below:

- » The Environmental Officer (EO) responsible for the development must remain aware that all sedimentary deposits have the potential to contain fossils and he/she should thus monitor all substantial excavations into sedimentary bedrock for fossil remains. If any fossils are found during construction, SAHRA should be notified immediately;
- » No construction should be allowed on the koppie to the north and south of the proposed facility. This includes access roads, underground cabling or power lines;
- » No development takes place within 100m of the railway line to ensure the stone structure and historical material relating to the railway line and possibly the South African War, are not destroyed;
- » If concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately and be reported to SAHRA so that systematic and

professional investigation/ excavation can be undertaken.

#### **5.4. Visual Impacts**

LOGIS was appointed to provide specialist inputs regarding visual aspects for this Amendment Application (**Appendix C**).

A number of dominant view corridors and receptor sites were identified (in the VIA report) within the region, namely:

- » Graspan rail siding
- » Spes Bona West farmstead
- » Klein Kareelaagte farmstead
- » N12 near low koppie on the western edge of the site
- » N12 on the western corner of the site

The visual impact analysis of the VIA and assessment from the relevant observation points are summarised as follows:

- » Intensity or magnitude of impact: Medium
- » Spatial extent: Local
- » Duration: Long term
- » Probability: Highly probable
- » Confidence: High
- » Overall significance: Medium

The proposed extension of the validity of the EA by an additional two years is not expected to alter the influence of the project infrastructure on areas of higher viewer incidence (observers traveling along the roads within the region) or potential sensitive visual receptors (residents of homesteads in closer proximity to the infrastructure).

The proposed amendment to the validity of the EA is consequently not expected to influence the anticipated visual impact, as stated in the original VIA report (i.e. the visual impact is expected to occur regardless of the amendment). This statement relates specifically to the assessment of the visual impact within a 1km (and potentially up to 3km) radius of the SEF structures (potentially medium/moderate significance), but also generally apply to potentially moderate to low visual impacts at distances of up to 5km from the structures.

From a visual perspective, the proposed amendment will therefore require no (zero) changes to the significance rating within the original visual impact assessment report that was used to inform the approved EIA. In addition to this, no new mitigation measures are required.

There are no new assessment guidelines which are now relevant to the authorised development which were not undertaken as part of the initial visual impact assessment. Additional to this, and as stated above, there have been no changes to the environment of the region surrounding the proposed development site, or on the farm earmarked for the PV Facility.

## **Cumulative visual impact**

There are two authorised/approved (not yet constructed) solar energy facility developments within a 30km radius of the proposed Graspan PV SEF. These include<sup>3</sup>:

- » Proposed Carodex Solar Park on Portion 1 of the Farm Klein Kareelaagte 168, Herbert RD (2014/10/10)
- » Proposed construction of the Ramphel1 PV energy facility near Ritchie, Northern Cape Province (2014/03/24)

The former proposed solar energy facility is located immediately adjacent to the proposed Graspan PV SEF, and the latter 25.5km north-east of the Graspan development site.

It is worth noting that even though none of these proposed facilities are located within the Kimberley Renewable Energy Development Zone (REDZ5, located north-east of these sites) they do fall within the Central Corridor of the Strategic Transmission Corridors.

Strategic Transmission Corridors are:

*“areas where long term electricity grid infrastructure will be developed and where an integrated decision-making process for applications for environmental authorisation in terms of the National Environmental Act (1998) will be followed.”*

The consolidation and concentration of renewable energy facilities (and associated grid connection infrastructure) within these zones are therefore preferred and the cumulative visual impact is deemed to be of an acceptable level i.e. the amendment is not expected to alter the potential cumulative visual impact rating (moderate) as stated in the original EIA report.

### **5.4.1. Conclusion**

The proposed amendment will require no changes to the impact significance ratings as stated within the original VIA report which was used to inform the approved EIA. In addition to this, no new mitigation measures are required.

It is suggested that the amendment to the validity of the EA be supported, subject to the conditions and recommendations as stipulated in the original EA, and according to the Environmental Management Programme (EMPr) and suggested mitigation measures, as provided in the original VIA report.

## **5.5. Social Impacts**

Cornelius Holtzhausen of Savannah Environmental was appointed to provide specialist inputs regarding social aspects for this Amendment Application (**Appendix D**)<sup>4</sup>.

---

<sup>3</sup> The names are provided verbatim from the REEA\_OR\_2022\_Q3 database.

<sup>4</sup> External peer review by Dr Sithandiwe Khoza, a Senior Independent Social Consultant

The Scoping Report and Draft Environmental Impact Report released in 2012 as part of the original EA granted in April 2013, identified, assessed and suggested the mitigation/enhancement of the following Socio-economic impacts.

The 2012 Draft Environmental Report identified and assessed the following impacts related to the project during the construction phase.

- » The negative impacts on fauna due to noise, pollution, potential poaching and disturbance caused by construction activities will be of Minor residual significance.
- » A negative visual impact will occur during construction as a result of the presence of construction vehicles, equipment and project components. This impact is considered to be of Moderate residual significance.
- » The positive impact of the creation of direct employment and training opportunities, and for indirect employment and procurement for the local economy, will be of Moderate residual significance. The positive impact from
- » induced economic benefits as a result of an increase in disposable income in the local economy will be of Minor residual significance. The positive impact of community investment through the Community Trust to be established is considered to be of Moderate-Major residual significance.
- » During construction, the negative impact of inflation and an increased cost of living as a result of increased demand for goods, services and accommodation will be of Minor residual significance. The possible negative
- » impact due to social nuisances, such as increased levels of crime, drug and alcohol abuse, increased incidences of sex workers, domestic violence, and the additional pressure on the existing infrastructure and services as a result of an influx of workers is considered to be Negligible. The potential negative impact on the socio-economic aspects of agricultural activities is considered to be of Negligible residual significance. Any potential impact on tourism is considered to be Negligible.

The 2012 Draft Environmental Report identified the following impacts related to the project during the operation phase.

- » The potential impact on the agricultural potential of the site due to the installation of the PV arrays and loss of land for agricultural purposes is considered to be of Negligible residual significance, primarily as a result of the low rated existing agricultural potential of the site.
- » The negative visual impact of the PV power facility on the landscape is considered to be of Moderate residual significance.
- » The negative cultural heritage impact on the landscape and sense of place due to the presence of the PV power facility in a currently rural and remote area is considered to be of Minor residual significance.
- » The positive impact from the creation of direct employment and training, and for indirect employment and procurement for the local economy during operations is considered to be of Minor residual significance owing to the relatively lower number of job opportunities compared to the construction phase. The positive impact from induced economic benefits as a result of an increase in disposable income is considered to be of Negligible residual significance, due to relatively fewer jobs during the operational phase. The Moderate-Major residual significance for the positive impact of community investment derived from the establishment of a Community Trust will continue through the operational phase.
- » The negative impact of inflation and an increased cost of living as a result of increased demand in the local economy for goods, services and accommodation is considered to be of Negligible residual significance. The possible negative impact of social nuisances, such as increased levels of crime, drug

and alcohol abuse, increased incidences of sex workers, domestic violence, and the additional pressure on the existing infrastructure and services as a result of an influx of workers is considered to be Negligible. Any potential negative impact on the socio-economic aspects of a loss of agricultural activities during operations is considered to be Negligible. There will be a Negligible impact on tourism in the area.

The previous report noted the following regarding cumulative impacts:

Benefits to the local, regional and national economy through employment and procurement of services could be substantial should all the renewable energy facilities proceed. This benefit will increase significantly should a critical mass be reached that allows local companies to develop the necessary skills to support construction and maintenance activities and that allows for components of the solar energy facilities to be manufactured in South Africa. Over time, as businesses develop locally to meet the needs of the solar energy sector, levels of procurement may increase.

The potential for the proposed Graspan PV Power Facility and other future projects to result in greater impacts on the local and national economy as a whole is primarily dependent on economies of scale. Initially, import content will be high. However, if the sector grows in size it should provide opportunities for growth of the local supply chain and the additional benefits that would flow from this. The introduction of large numbers of PV plants could provide local economic opportunities for component manufacture, and with an appropriate industrial policy, it would be possible to leverage South Africa's relatively cheap steel resources. The distance from other international manufacturers will also present a competitive advantage, especially for less specialised large-scale components such as PV array support structures.

The cumulative impact in terms of loss of agricultural land could potentially be extensive due to the large land take required for PV solar plants and considering the number of plants planned in the Northern Cape. However, the agricultural potential of the land is classified as low and therefore these impacts are not considered to be significant.

As the original report concludes the cumulative effects and benefits on various environmental and social receptors will occur to varying degrees with the development of solar power plants in the Northern Cape. The alignment of renewable energy developments with South Africa's National Energy Response Plan and the global drive to move away from the use of non-renewable energy resources and to reduce greenhouse gas emissions is undoubtedly positive. The economic benefits of renewable energy developments at a local, regional and national level have the potential to be significant. Should impacts be managed and appropriate monitoring implemented, cumulative effects on environmental receptors as a result of the proposed Graspan PV Facility are not considered to be significant.

### **Specialist Opinion on Previously Identified Impacts**

Based on the available secondary data sources, the demographics in the area are similar to the early 2010s, and the same can be said about the baseline economic data, service delivery access, and other facets of society. While there have been a few more solar developments in the area, the cumulative effect of these tends to have a positive impact on the environment and the social status of the area.

The author sees no reason to doubt or contradict the findings as laid out in the original DEIA and Scoping Report that formed part of the EA authorized in April 2013. The author concurs with the impacts and ratings as identified. While mitigation measures were suggested for visual and cultural heritage impacts as a result

of the project, other mitigating and enhancing measures were not clearly specified. While this is a shortcoming, it alone does not constitute a reason to dismiss the conclusions of the report regarding the socio-economic impacts of the report.

The rural nature of the project means that few of the socio-economic indicators related to the project have significantly changed since the undertaking of the original EA. Similarly, no new communities or other developments have been established close to or on the project site. As such, it is unlikely that new social impacts have arisen, similarly, no changes to the original assessment ratings are likely.

The amendment would give the developers more time to bring the project to financial closure and thus for the impacts resulting from the project to occur. The Graspan PV Energy Facility is unlikely to result in permanent damaging social impacts and has the potential to result in significant positive impacts both as a lone project and cumulatively. The project will likely result in a number of socio-economic opportunities for the region, which in turn will result in social benefits. The positive cumulative impacts include the creation of employment, skills development and training opportunities, and downstream business opportunities. The cumulative benefits to the local, and regional economy through employment and procurement of services are more considerable than that of the Graspan PV Energy Facility alone.

#### **5.5.1. Conclusion**

To conclude, the specialist assessed the proposed amendments and confirms that there is no significant change to the affected social environment or the scope and nature of the proposed project. Therefore, from a socio-economic perspective, there is no reason why the proposed amendment should not be authorised.

## 6. CONCLUSION AND MOTIVATION FOR APPROVAL OF THE REQUESTED AMENDMENTS

---

The proposed Graspan PV Plant (75MW) and associated infrastructure was authorised in June 2013 ((DFFE Reference: 14/12/16/3/3/276/1), with various subsequent amendments issued. The project has been granted a preferred bidder project under Round 5 of the REIPPPP in the Department of Mineral Resources and Energy Renewable Energy Power Producer Procurement Programme (REIPPPP) and is registered as a Strategic Infrastructure Project. The Applicant is working towards achieving Financial Close on 30 November 2023. However due to certain delays that are beyond the control of the Applicant, construction will not commence before the EA validity expires. The applicant, Graspan Solar PV (Pty) Ltd, therefore requires the validity of the EA to be extended by an additional 2 years until 30 April 2025.

The following are the key motivating factors which indicate the advantages to granting the requested amendment:

1. Impacts identified within the original report are still applicable for the proposed project, as concluded by the specialists who provided inputs to this motivation for amendment (refer to Appendix A-D and Tables 6.1 and 6.2). **No additional impacts or changes in impact significance will result because of the amendments as the environment has not changed.** Following specialist inputs for the proposed amendment, provided that mitigation measures as documented in the EMPr and as required in the specialist reports are implemented, the recommendation is that the amendment be approved.
2. There is no objection to the proposed amendment by any of the specialist consultants who have completed a site sensitivity verification assessment as part of this amendment application process.
3. The development has the ability to create employment, opportunities for contractors in the region, ownership opportunities for local communities, skills, supplier and enterprise development spend and the implementation of socio-economic development initiatives. As the project is a Preferred Bidder, these benefits will definitely be realised should the amendment be granted.
4. All the potential cumulative impacts associated with the project planned within the area (30km radius) will not change as a result of the proposed amendment due to the limited number of projects proposed within this broader region.

Based on the nature of the requested amendment for the Graspan PV Plant (75MW) and associated infrastructure, the specialist findings confirmed that the environment has not materially changed since the undertaking of the EIA in 2012, the impact ratings as provided in the initial assessment remain valid, and the mitigation measures provided in the initial assessment are still applicable.

Therefore, taking into consideration the conclusions from the specialist site verification and motivation reports (**Appendix A - D**) and the findings of this report, it is concluded that the proposed amendment to the validity of the EA is not expected to result in an increase to the significance ratings for the identified potential impacts, and should accordingly be approved.

**Table 6.1:** Comparative summary of impact significance during construction for Layout Alternative 2 (preferred and final layout) from the original EIA and this amendment process

	<b>Impact</b>	<b>ORIGINAL EIA</b> <b>Residual Impact Significance</b> <i>(Based on mitigation and Layout Alternative 2)</i>	<b>AMENDMENT</b> <b>Residual Impact Significance</b> <i>(Based on mitigation and Layout Alternative 2)</i>
Soils	Loss of Topsoil, Soil Compaction and Soil Erosion	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Water	Impact on Surface and Groundwater	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Flora	Destruction and Loss of Natural Vegetation and Sensitive Plant Communities	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Fauna	Impacts from Habitat Loss and Disturbance	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Avifauna	Impacts on Avifauna	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Visual	Visual Impacts	<b>MODERATE(-VE)</b>	<b>MODERATE(-VE)</b>
Palaeontology	Damage or Destruction to Paleontological Resources	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
Archaeology	Archaeological Finds	<b>MINOR (+VE)</b>	<b>MINOR (+VE)</b>
	Destruction or Disturbance to Archaeological Resources	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Cultural Heritage	Destruction or Disturbance of Cultural Heritage	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
Socio-economic	Direct Employment and Training	<b>MODERATE (+VE)</b>	<b>MODERATE (+VE)</b>
	Procurement and Indirect Employment	<b>MODERATE (+VE)</b>	<b>MODERATE (+VE)</b>
	Induced Economic Benefits	<b>MINOR (+VE)</b>	<b>MINOR (+VE)</b>
	Increased Community Investment	<b>MODERATE- MAJOR (+VE)</b>	<b>MODERATE- MAJOR (+VE)</b>
	Inflation and Increased Cost of Living	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
	Social Nuisance Factors	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Impact on Agricultural Activities	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Impact on Tourism	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>



**Table 6.2:** Comparative summary of impact significance during operation for Layout Alternative 2 (preferred and final layout) from the original EIA and this amendment process

	<b>Impact</b>	<b>ORIGINAL EIA</b>  <b>Residual Impact Significance (Based on mitigation and Layout Alternative 2)</b>	<b>AMENDMENT</b>  <b>Residual Impact Significance (Based on mitigation and Layout Alternative 2)</b>
Soils	Loss of Topsoil, Soil Compaction and Soil Erosion	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Water	Impact on Surface and Groundwater	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Agriculture	Loss of Agricultural Land and/or Production	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
Flora	Impacts of Maintenance Activities on Vegetation	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
	Alien Plant Invasion	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Fauna	Impacts from Habitat Loss and Disturbance	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Avifauna	Impacts on Avifauna	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Visual	Visual Impacts	<b>MODERATE(-VE)</b>	<b>MODERATE(-VE)</b>
Cultural Heritage	Impact on Sense of Place	<b>MINOR (-VE)</b>	<b>MINOR (-VE)</b>
Socio-economic	Direct Employment and Training	<b>MINOR (+VE)</b>	<b>MINOR (+VE)</b>
	Procurement and Indirect Employment	<b>MINOR (+VE)</b>	<b>MINOR (+VE)</b>
	Induced Economic Benefits	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Increased Community Investment	<b>MODERATE- MAJOR (+VE)</b>	<b>MODERATE- MAJOR (+VE)</b>
	Inflation and Increased Cost of Living	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Social Nuisance Factors	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Impact on Agricultural Activities	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>
	Impact on Tourism	<b>NEGLIGIBLE</b>	<b>NEGLIGIBLE</b>

## 7. PUBLIC PARTICIPATION

---

A public participation process was conducted in support of the Application for Amendment, as per the requirements of the DFFE. The Public Participation was undertaken in accordance with the requirement of Chapter 6 of the EIA Regulations of December 2014, as amended. The following key public participation tasks were undertaken:

- » The database/register of I&APs has been updated and maintained.
- » Placement of site notices at the site during **July 2023**.
- » Written notifications to registered I&APs as well as Organs of State regarding the availability of the Motivation Report were distributed on **03 August 2023**.
- » Placement of an advertisement in the **NoordKaap Bulletin** newspaper on **Thursday, 03 August 2023** announcing the availability of the Motivation Report for a 30-day review and comment period.
- » The Motivation Report was made available for the 30-day review and comment period from **Thursday, 03 August to Monday, 04 September 2023**. The report was available for download on the Savannah Environmental website: <https://savannahsa.com/public-documents/>.

Comments received during the 30-day review and comment period have been included in the final submission of the Motivation Report to the DFFE for consideration in the decision-making process. Comments have also been included and responded to in a Comments and Responses Report included within **Appendix E5** this Final Motivation Report.