

# **Beaufort West Solar PV Energy Facility (SEF) and Associated Infrastructure near Beaufort West in the Western Cape Province:**

## **Draft Amendment Report for Environmental Authorisation (EA) (DFFE Reference: 14/16/12/3/3/1/2673)**

Report Prepared for

**Beaufort West Solar PV Energy Facility**

Report Number 612156/1/ Rev1



Report Prepared by

 **srk** consulting

May 2025

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### **Report Prepared for**

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### **SRK Project Number 612156**

**May 2025**

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## Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (South Africa) (Pty) Ltd (SRK) by Beaufort West Solar Energy Facility (Pty) Ltd. The opinions in this Report are provided in response to a specific request from Mulilo to do so. SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

## List of Abbreviations

ABA	Aquatic Biodiversity Assessment
BA	Basic Assessment
BAR	Basic Assessment Report
BESS	Battery Energy Storage System
DEADP	Department of Environmental Affairs and Development Planning
DFFE	Department of Forestry, Fisheries and the Environment
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
HWC	Heritage Western Cape
I&AP	Interested and Affected Party
IA	Impact Assessment
IPP	Independent Power Producer
LPS	Lightning Protection System
LV	Low Voltage
MV	Medium Voltage
NEMA	National Environmental Management Act
NHRA	National Heritage Resources Act
NWA	National Water Act
O&M	Operations & Maintenance
PPP	Public Participation Process
PV	Photovoltaic
SEF	Solar Energy Facility
-ve	negative

# 1 Introduction and background

The Developer, Beaufort West Solar Energy Facility (Pty) Ltd, currently holds an Environmental Authorisation (EA) (DFFE Reference Number: 14/12/16/3/3/1/2673, issued on 27 April 2023) for a Photovoltaic (PV) Solar Energy Facility (SEF) facility near Beaufort West, Western Cape. The authorisation was originally issued to Upgrade Energy (Pty) Ltd, following a Basic Assessment process undertaken by SiVest SA (Pty) Ltd in 2022. Two subsequent amendments were issued to the EA, one (14/16/12/3/3/1/2673/AM1, dated 7 May 2024) to correct administrative errors resulting in Listing Notice 2 activities erroneously being excluded from the original EA, and the second (14/16/12/3/3/1/2673/AM2, dated 11 June 2024) to change the holder of the authorisation to the current applicant. Copies of the EA and amendments thereto are provided in Appendix D.

Subsequent to the issuing of the EA, layout refinements were undertaken based on detailed design optimisation and updated environmental sensitivity verification. This process was undertaken with input from the same specialist consultants involved in the original BA process. The revised layout seeks to improve design efficiency, constructability, and cost-effectiveness, while remaining consistent with the scope and intent of the existing EA.

The current submission constitutes a Part 2 (Substantive) Amendment Application in terms of Section 31 of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), promulgated under the National Environmental Management Act (NEMA), Act No. 107 of 1998. This report provides the motivation for the proposed amendments, a detailed description of the proposed changes, and a concise assessment of their potential environmental implications.

The report is made available to all registered Interested and Affected Parties (I&APs) for the project, to review and provide comment, for a period of 30 days.

This Amendment Report is a revision of the previous Amendment Report (as part of a Part 2 amendment application) that was distributed to Interested and Affected Parties (I&APs) for comment. The original EA amendment application, and the associated Amendment Report, has been withdrawn and a new EA amendment application, together with this revised Amendment Report, has been submitted to DFFE. The new application and this revised Amendment Report include further revisions to the layout presented in the previous version of this report, primarily to reduce encroachment of the PV array area onto Critical Biodiversity Areas (CBAs).

The revised layout provided in this report also introduces minor changes to the internal road alignment, reduces the number of satellite laydown areas from three to two, and provides detail on the vegetation clearing approach to be implemented during construction of the solar PV arrays.

A strip-clearing method will be used for vegetation clearing, whereby only the areas beneath the solar PV panel rows will be cleared, with natural vegetation retained between rows. This significantly reduces the total amount of vegetation clearing and ensures that the proposed amendments do not result in additional clearing beyond the hectareage that is already authorised.

The layout provided herewith should be considered as the final site layout plan, which is made available for review and comment in accordance with Condition 12 of the original EA, prior to submission to the DFFE for approval.

A 30-day comment period is provided for this revised Draft Amendment Report, from 15 May to 17 June 2025. I&APs are invited to review and submit any comments by close of business on 17 June 2025, for inclusion in the final Amendment Report (and the associated layout) to be submitted to DFFE for decision-making. Comments received on the original Amendment Report will also be included and addressed in the final version of this report.

The revised layout (and associated amendments applied for) includes:

- Consolidation of supporting infrastructure (Substation, operation and maintenance (O&M) building, Battery Energy Storage Solution (BESS), etc. in a single central area (the layout presented in the original EA application process provided for two separate areas of supporting infrastructure);
- Expansion of the fenced area surrounding the PV panel arrays, to accommodate increased spacing between the rows of panels;
- Linked to this, the adoption of a strip clearing approach for PV panel installation. Under this method, only the areas beneath panel rows are cleared of vegetation, retaining natural vegetation between rows. This significantly reduces vegetation loss, including within Critical Biodiversity Areas (CBAs); and
- Minor adjustments to the internal road alignment.

SRK Consulting (South Africa) (Pty) Ltd. (SRK) has been appointed to facilitate the required Part 2 amendment process, including the preparation of this report.

The proposed amendments remain within the development area previously assessed through the BA process. They include refinement to the layout, reflecting practical insights gained from the Developer's experience with similar facilities, with the aim of ensuring that all project components, whether temporary or permanent, remain within the originally assessed site boundary, and support optimal operation of the facility.

The same specialists who contributed to the original Basic Assessment (BA) process have reviewed the proposed amendments and confirmed, through letters/reports (Attached as Appendix B of this report), that the amendments proposed will not materially alter the impact assessment or mitigation measures outlined in the approved Basic Assessment Report (BAR) (dated 11 November 2022) compiled by SiVEST SA (Pty) Ltd.

The final layout presented in this report includes minor revisions not specifically evaluated during the specialist reviews. These revisions reflect reduced encroachment into sensitive areas and remain within the footprint previously assessed. As such, the EAP is confident that the findings of the specialist reports / letters remain applicable to the revised layout, and that, in some cases, environmental impacts may be reduced for the layout presented, compared to the layout they assessed (and presented in the previous version of the amendment report), due to decreased overlap with CBAs.

Two solar PV array layouts were provided for assessment – a preferred, and alternative layout. As will become evident in this report, the Developer's preferred alternative is the most favourable from an environmental perspective and is therefore the alternative that is applied for in this amendment application. Specialist reports / letters of confirmation are provided as Appendix B, and details of the specialist studies conducted are provided in Table 6-1.

## 2 Environmental Assessment Practitioner

This Amendment Report was prepared by Abby van Nierop and Nicola Rump and reviewed by Rob Gardiner, all of whom are EAPASA registered EAPs. Details of the core project team are provided below and in Table 2-1 and CVs are provided in Appendix A.

**Rob Gardiner** (MSc, Pr Sci Nat, Reg. EAP (EAPASA)) is the Principal Environmental Scientist and head of SRK's Environmental Department in Port Elizabeth. He has more than 30 years environmental consulting experience covering a broad range of projects, including Environmental Impact Assessments (EIA), Environmental Management Systems (EMS), environmental management plans (EMP), and environmental auditing. His experience in the development, manufacturing, mining, and public sectors has been gained in projects within South Africa, Lesotho, Botswana, Angola and Argentina, and Suriname.

**Nicola Rump** (MSc, Reg. EAP (EAPASA)) is a Principal Environmental Scientist in the SRK Port Elizabeth office. Nicola has been involved in EIA's and environmental management for the last 16 years. Her expertise includes Environmental Impact Assessments and associated licensing applications, ESIA's for lender requirements, Environmental Management Plans, environmental compliance auditing, and management system implementation, for a broad range of local and international projects. Nicola has a particular interest in renewable energy and rehabilitation.

**Abby van Nierop** (BSc Hons, Reg. EAP (EAPASA)) is an Environmental Scientist in the Port Elizabeth office. Abby has been involved in environmental management for the past 11 years. Her expertise includes Environmental Impact Assessments (EIAs), Environmental Management Programmes (EMPrs), and environmental compliance auditing.

**Table 2-1: Summary of qualifications/registrations of team members**

Name	Designation	Role	Qualifications	Years of Experience
Rob Gardiner	Partner, Principal Environmental Scientist	Quality Control and Review	MSc, MBA Pr Sci Nat 400079/03 EAPASA 2020/1390	30
Nicola Rump	Principal Environmental Scientist	Project Manager, EAP, Project co-ordinator	MSc (Animal physiology) EAPASA 2019/611	16
Abby van Nierop	Environmental Scientist	Environmental Assessment Practitioner	BSc Hons EAPASA 2024/8119	11

## 3 Description of proposed amendments

### 3.1 Overview of amendments applied for

The development site is located on privately owned farmland, on Remainder of the Farm Oude Volks Kraal No 164, and Remainder of the Farm Quaggas Fontein No 166. The site is approximately 12.5 km south-east from the town of Beaufort West, within the Beaufort West Local Municipality, in the Central Karoo District Municipality, Western Cape Province (Figure 3-2). The site is approximately 3 763 ha in extent, and the Solar Photovoltaic (PV) energy facility will generate up to 415 MW, which will be transmitted to the Eskom power grid.

This amendment application seeks approval for revisions to the internal layout and specific project components. The overall project capacity, site boundary, and listed activities<sup>1</sup> remain unchanged, as do the triggers and thresholds of those activities. The following changes are noted:

- Slight change to the alignment of the internal roads. *Note: In the previous version of this report, it was reported that internal and access roads would increase from 4 m to 6 m and 6 m to 8 m, respectively. This is no longer the case and the road widths remain the same as those approved in the Environmental Authorisation;*
- Consolidation of the Battery Energy Storage System (BESS), substations, Operations and Maintenance (O&M) building, and permanent laydown area into a single area at the start of the overhead line (OHL), as opposed to separate smaller BESS, substations, and O&M at the western PV array area and at the start of the OHL. *Note: the wording with regard to the amendment relating to the BESS has been revised compared to the previous amendment application to provide clarity that the BESS will not require on-site assembly;*
- Changes to the location of temporary laydown areas (for construction only and subsequent rehabilitation) at the PV array areas, totalling 4 ha, as shown on **Figure 3-5**. *Note: the previous version of this report showed three temporary laydown areas – this has been reduced to two, as one of these areas was considered to be unnecessary due to its proximity to the permanent laydown area;*
- Inclusion of security guard huts at strategic areas around the site;
- Inclusion of a diesel storage facilities of less than 30 m<sup>3</sup>, within a properly designed and bunded area at the O&M area;
- Revision of the layout of the solar PV arrays, largely remaining within the previously authorised footprint area, and avoiding sensitive areas identified by specialists based on their previous studies, with updated sensitivity mapping with regard to aquatic features. The Developer worked closely with the relevant specialists to ensure the proposed amendments to the development footprint are acceptable. *Note: the layout presented in this report differs from that in the previous version of the amendment report, in that it reduces overlap with CBAs.*
- The PV panel row spacing has increased from 6 m (in the approved layout) to 8 m to improve efficiency of the panels by decreasing shading from nearby panels. This has resulted in a reduced ground cover ratio (i.e. more open space between panels). While this increases the fenced perimeter, the vegetation clearing required remains within authorised thresholds due to the retention of intact vegetation (strip clearing) between PV panel rows. Additional detail of this is provided in Section 3.3. *Note: this difference in panel spacing and vegetation clearing was not specifically described in the previous version of the amendment report.*

The amended layout presented in this report reduces encroachment into CBAs (relative to the previously presented layout amendment) and remains largely within previously authorised areas. Where deviations occur beyond the authorised footprint, specialists have confirmed these areas are not environmentally sensitive, and the impacts associated with the revised

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<sup>1</sup> No authorised or new listed activities are triggered by the proposed amendments

layout have been confirmed by all specialists to remain consistent with their previous assessments, with no new or increased impacts or additional mitigation measures required.

All proposed amendments remain within the originally assessed project area and do not alter the nature or thresholds of authorised listed activities.

No on-site assembly or storage of dangerous goods is required for the BESS, either during construction or maintenance of the facility. Water supply (for construction and operation will be sourced from existing boreholes on site and stored in above-ground storage tanks or reservoirs (total volume less than 250 m<sup>3</sup>).

Two layout alternatives were considered in the preparation of this amendment application – with slight differences in the footprint of the solar PV arrays. Maps showing each layout alternative in relation to surrounding environmental sensitivities are provided in Figure 3-3 and Figure 3-4. The specialist assessments concluded that either layout alternative would be acceptable, however, the preferred alternative is favoured from an aquatic ecology perspective in particular, and therefore is the layout presented for authorisation via this amendment application.

The previously authorised (via a separate BA process – DFFE reference no 14/12116/3/3/1/2672) overhead grid connection from the SEF development to the Eskom Droeriver Main Transmission Station, located approximately 10 km northwest of the site, remains unchanged. Similarly, the on-site Eskom switching substation, located adjacent to the Independent Power Producer (IPP) substation, which forms part of the SEF EA, also remains unchanged.

The amended layout, which is the subject of this application, will include the following components:

- PV fields (arrays) comprising multiple PV . The modules will be either crystalline silicon or thin film technology. The modules will be mounted on a fixed/single or double axis tracking technology. Each PV module will be approximately 2.4 m long and 1.3 m wide, mounted, and elevated above ground level. The PV modules / panels will be arranged in rows, with a spacing of approximately 8 m between rows. As a result of this, the entire area for the PV arrays will not be cleared, and strips of vegetation will remain intact between the rows, while only the area for the panel mounts will be cleared (estimated at 1 m<sup>2</sup> for every 5 m of panel row).
- A 33/132 kV on-site substation (facility substation) will occupy an area of up to 1 ha and will step-up from 33 kV to 132 kV. This will be adjacent to the Eskom on-site substation (covered under the authorisation for the grid connection OHL (DFFE Ref: 14/16/12/3/3/1/2672).
- Internal 33 kV lines connecting the substations to the facilities (either underground/above ground).
- 1 000 MWh Battery Energy Storage System (BESS) occupying an area of approximately 4 ha next to the onsite 33/132 kV substation. Pre-assembled BESS containers will be delivered to site for installation.
- Auxiliary/ Operations & Maintenance (O&M) buildings of approximately 1 ha. The functions within these buildings include (but not limited to) office/administration, control centre, ablution, workshops, storage areas, and security centre.

- The O&M building, substation, construction camp and the permanent laydown area (approximately 7.7 ha) will be located together, totalling approximately 9.7 ha.
- Site and internal access roads, up to 6 m wide, will provide access to the PV arrays. Existing site roads will be used wherever possible, with new roads constructed where necessary. The existing access road from the north of the site will be used, with upgrades as required.
- Galvanised palisade perimeter fencing with a height of at least 2.1 m, is proposed around each PV cluster. Security access control will include six guard / security huts, positioned at access points to the site, and security lighting.
- Associated infrastructure includes a lightning protection system, telecommunication infrastructure, diesel storage facilities (less than 30 m<sup>3</sup>, within a properly designed bunded area for the purpose) and a batching plant (if required).
- Abstraction of water will be from existing or new boreholes if required. The anticipated volume required is 220 kL per day. Water will be stored in above-ground storage tanks or temporary cement-lined reservoirs, with total onsite water storage capacity not exceeding 250 m<sup>3</sup>

### 3.2 Proposed Amendments to wording in EA

The required changes to the EA in response to this amendment are detailed in the Amendment Application Form, a copy of which is provided as Appendix F, as well as Table 3-1 below (changes indicated in **bold** text). A map showing the previously authorised layout relative to environmental sensitivities identified on site is provided in Figure 3-6, and a comparison of the authorised and proposed amended layout is provided in Figure 3-7, with zoomed in layout maps showing this comparison of layouts provided in Appendix G.

**Table 3-1: Summary of technical details as provided in the EA, noting proposed changes**

Components	Description / Dimensions - From (As authorised)	Description / Dimensions -To (Proposed Amendment)
Project location	The development is located approximately 7 km North East of Beaufort West, within the Beaufort West Local Municipality, in the Central Karoo District Municipality of the Western Cape Province	The development is located approximately <b>12.5 km</b> south east of Beaufort West, within the Beaufort West Local Municipality, in the Central Karoo District Municipality of the Western Cape Province. <u>Reason for amendment:</u> The original location description in the Basic Assessment was inaccurate. This amendment corrects the description of the site's actual location, while the physical site remains unchanged.
PV panels	The solar PV plant will include PV fields (arrays) comprising multiple PV modules with the maximum capacity of up to approximately 415 MWac. The modules will be either crystalline silicon or thin film technology. The modules will be mounted on a fixed/single or double axis tracking technology. <ul style="list-style-type: none"> <li>• Each PV module will be approximately 2.4 m long and 1.3 m wide and mounted on supporting structures above ground. At this stage it is anticipated that the PV</li> </ul>	No amendments proposed.

Components	Description / Dimensions - From (As authorised)	Description / Dimensions -To (Proposed Amendment)
	<p>modules will be mono- or bifacial modules.</p> <ul style="list-style-type: none"> <li>The foundations will most likely be either predrilled and filled or rammed piles. The final foundation design will be determined at the detailed design phase of the proposed development. Structure height less than 10 m.</li> </ul>	
PV Panel Orientation	The PV panels will be mounted on single axis trackers. North-facing or single-tracking will be orientated N-S	<p>The PV panels will either be north-facing or orientated north-south, <b>depending on whether they are fixed tilt or tracking.</b></p> <p>Reason for amendment:</p> <p>The original description of PV panel orientation did not account for the possibility of using both fixed-tilt and tracking systems. The updated wording reflects the flexible design approach, accommodating both mounting options to optimise the system's efficiency. The layout presented accommodates both mounting options.</p>
On-site IPP Electrical Infrastructure	<p>Two new 33/132 kV on-site substations (facility substation) (stepdown from 132 kV to 32 kV) occupying an area of up to approximately 1 ha each as follows:</p> <ul style="list-style-type: none"> <li>IPP 132kV/33 kV Substation 1 : 1 x 80 MVA Transformers.</li> <li>IPP 132kV/33 kV Substation 2 : 3 x 80 MVA Transformers.</li> <li>Medium voltage cabling will link PV facility to grid connection infrastructure.</li> <li>The medium voltage will be stepped up to high voltage. The step-up transformers will most likely be 132/33 kV. The final voltage levels will be determined at the detailed design phase of the proposed development.</li> <li>The medium voltage cabling (anticipated to be 0.8x0.6 m wide at this stage) will link the various PV arrays to the internal on-site IPP substation.</li> </ul> <p>These cables will be laid underground, wherever technically feasible. Area occupied by substation.</p>	<p><b>One</b> new 33/132 kV on-site substation (facility substation) (<b>step up from 33 kV to 132 kV</b>), occupying an area of up to approximately 1 ha.</p> <ul style="list-style-type: none"> <li>Medium voltage cabling will link the PV facility to the grid connection infrastructure.</li> <li>The medium voltage will be stepped up to high voltage. The step-up transformers will most likely be 132/33 kV. The final voltage levels will be determined at the detailed design phase of the proposed development.</li> <li>The medium voltage cabling will link the various PV arrays to the internal on-site IPP substation. These cables will be laid underground, wherever technically feasible."</li> </ul> <p>Reason for amendment:</p> <p>The number of on-site substations has been revised from two to one to reflect the consolidated infrastructure layout, streamlining the project design and optimising space and resources. In addition, while the original EA referred to both step-down and step-up transformers, the final design confirms that only a step-up configuration (from 33 kV to 132 kV) will be required. This amendment provides clarity on the final technical design without increasing the significance of associated impacts.</p>
Area occupied by substation	Up to approximately 1 hectare.	No amendments proposed.
Height of substation	Height of substation will be confirmed during the final design stages of the substation, prior to construction commencing.	<p><b>The substation, including pylons and the lightning rod, will be up to 32 m high. The substation building will be approximately 4–6 m high, with outdoor equipment reaching up to 8 m.</b></p> <p>Reason for amendment:</p>

Components	Description / Dimensions - From (As authorised)	Description / Dimensions -To (Proposed Amendment)
		The final design has now confirmed the height of the substation, which was previously unspecified in the EA. The amendment provides clarity without altering the scope or nature of the authorised infrastructure.
Cables	The electrical reticulation will comprise of Low Voltage ("LV") and Medium Voltage ("MV") underground installed cables of up to 33 kV. Where required as per the technical assessments these may be aboveground.	No amendments proposed.
Battery Energy Storage System (BESS)	<p>Battery Energy Storage System (BESS) will be located next to onsite 33/132 kV substation and included in the IPP substation area. The BESS will be brought to the site already constructed."</p> <ul style="list-style-type: none"> <li>BESS 1 240 MWh (1 ha);</li> <li>BESS 2 760 MWh (4 ha).</li> </ul>	<p>Battery Energy Storage System (BESS) will be located next to <b>the</b> onsite 33/132 kV substation and <b>adjacent to the</b> IPP substation area. Pre-assembled BESS containers will be delivered to the <b>site for installation. Total BESS capacity will be up to 1 000 MWh and will occupy approximately 4 ha.</b></p> <p>Reason for amendment:</p> <p>The BESS configuration has been revised to align with project requirements, consolidating the two originally proposed systems into a single pre-assembled BESS installation.</p>
Operation and Maintenance building	Auxiliary building of approximately 0.2 ha. The functions within these buildings include (but not limited to) to office/administration, control centre, ablution, workshops, storage areas and security centre	<p>Auxiliary building of approximately <b>1 ha</b>. The functions within these buildings include (but not limited to) to office/administration, control centre, ablution, workshops, storage areas and security centre."</p> <p>Reason for amendment:</p> <p>The O&amp;M building footprint has been consolidated into a single 1 ha structure to centralise all operational functions within one facility, optimising space utilisation and streamlining the overall site design. The footprint has been increased in line with typical requirements for such facilities.</p>
Construction Camp laydown area	<p>Temporary infrastructure required during the construction phase (estimated to be between 12-18 months)</p> <ul style="list-style-type: none"> <li>Construction equipment camps</li> <li>Construction yard</li> <li>Storage Areas."</li> </ul>	<p>Temporary infrastructure required during the construction phase (estimated to be up to <b>24 months</b>)</p> <ul style="list-style-type: none"> <li>Construction equipment camps</li> <li>Construction yard</li> <li><b>Storage Areas, including diesel storage facilities for up to 30 m³.</b></li> </ul> <p>Reason for amendment:</p> <p>The construction camp laydown description has been updated to reflect what is considered to be a more realistic construction duration (up to 24 months) and the inclusion of bundled diesel storage facilities (≤30 m³) makes provision for on-site diesel storage during construction.</p>
Temporary laydown or staging area	Around 5-9 ha of laydowns areas will be required, but will not exceed 9 ha (5 laydown areas, one on each site)	<p>One central permanent laydown area of 7.7 ha, as well as two satellite temporary laydown areas (totalling approximately 4 ha), to be used during construction and rehabilitated thereafter.</p> <p>Reason for amendment:</p>

Components	Description / Dimensions - From (As authorised)	Description / Dimensions -To (Proposed Amendment)
		The updated design consolidates laydown requirements into a 7.7 ha permanent central area and approximately 4 ha of temporary satellite laydown areas (one for the western PV cluster, and one for the northern-most cluster – the other clusters will use the central permanent laydown area), to optimise construction logistics and enable rehabilitation of temporary areas post-construction.
Site Access	An access to the facility already exists in the form of a farm access point but may require minor upgrades (including widening to 8 m) in order to accommodate the proposed adjusted land use.	No amendments proposed.
Roads	Existing internal gravel site roads will be used wherever possible. However, where required, new internal gravel roads may be constructed. Access and internal roads with a width of 5-6 m and up to 8 m at bends, and a road reserve width of 20 m to accommodate cable trenches, stormwater channels (as required), and turning circle/bypass areas. (Note: the layout and design of internal roads is yet to be finalized). Internal roads of approximately 16 ha total footprint, consisting of existing gravel roads wherever possible and new roads where required	No amendments proposed.
Associated infrastructure	<ul style="list-style-type: none"> <li>Fencing and lighting. Lightning Protection System ("LPS").</li> <li>Telecommunication infrastructure.</li> <li>Batching plant (if required).</li> </ul>	<ul style="list-style-type: none"> <li>Fencing and lighting. Lightning Protection System ("LPS").</li> <li>Telecommunication infrastructure.</li> <li>Batching plant (if required).</li> <li><b>Six Guard / security huts are included at access points to the site.</b></li> </ul> <p>Reason for amendment: The inclusion of six guard/security huts at site access points is intended to enhance operational security in accordance with standard site access control requirements.</p>
Fencing	New galvanized steel fencing with electrification on top, approximately 2.1 m high. The fencing will surround each solar PV plant, 23km fencing, approx. 585 ha.	<p>New galvanized steel fencing with electrification on top, approximately 2.1 m high. The fencing will surround each solar PV plant, <b>approximately 27 km, of perimeter fencing, enclosing a total area of approx. 720 ha.</b></p> <p>Reason for amendment: The increased fencing perimeter and area is due to the expansion of the PV panel footprint, resulting from greater spacing between panel rows to optimise generation efficiency.</p>
Water supply	Storage and /or Abstraction of water from existing or new boreholes if required. The anticipated volumes are 220 kl per day	Storage and /or Abstraction of water from existing or new boreholes if required. The anticipated volumes are 220 kl per day. <b>Water will be stored in above-ground storage tanks or temporary cement-lined reservoirs, and total water storage on site will remain below 250 m³.</b>

Components	Description / Dimensions - From (As authorised)	Description / Dimensions -To (Proposed Amendment)
		Reason for amendment: The water supply parameters recorded in the EA remain applicable, with additional detail provided to demonstrate that Activity 2 of Listing Notice 3 would not be triggered.
Centre Coordinates	<u>Centre coordinates as per pg. 10 of EA.</u>	The centre coordinates have been updated to align with the final layout of key infrastructure components, including the Battery Energy Storage System (BESS), IPP substation, and other associated infrastructure, as provided in Table 3-2 below. These updates remain within the originally assessed site and does not alter the thresholds or nature of authorised activities.
Final Site Layout Plan	<p>A final site layout plan for the grid connection infrastructure and associated infrastructure, as determined by the detailed engineering phase and micro-siting, and all mitigation measures as dictated by the final site layout plan, must be submitted to the Department for approval prior to construction. A copy of the final site layout map must be made available for comments to registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval, prior to commencement of the activity. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible. The layout map must indicate the following:</p> <p>12.1 The position of the grid connection infrastructure;</p> <p>12.2 All associated infrastructure;</p> <p>12.3 The finalised access routes;</p> <p>12.4 The on-site and/or switching substation, indicating the Independent Power Producer's section and Eskom's section;</p> <p>12.5 All sensitive features; and</p> <p>12.6 All "no-go" and buffer areas."</p>	<p>A final site layout plan for the <b>Solar Energy Facility</b> and associated infrastructure, as determined by the detailed engineering phase and micro-siting, and all mitigation measures as dictated by the final site layout plan, must be submitted to the Department for approval prior to construction. A copy of the final site layout map must be made available for comments to registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval, prior to commencement of the activity. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible. The layout map must indicate the following:</p> <p>12.1 The position of the <b>Solar Energy Facility</b> infrastructure;</p> <p>12.2 All associated infrastructure;</p> <p>12.3 The finalised access routes;</p> <p>12.4 The on-site and/or switching substation, indicating the Independent Power Producer's section and Eskom's section;</p> <p>12.5 All sensitive features; and</p> <p>12.6 All "no-go" and buffer areas."</p> <p>Reason for amendment: A separate EA was issued for the grid connection infrastructure (DFFE ref 14/16/12/3/3/1/2672), which included this same condition. These particular requirements relating to approval of the final site layout plan for the grid connection infrastructure will therefore be addressed in terms of that authorisation. The above mentioned changes to the wording are proposed to address the finalisation of the layout of the solar energy facility, as the subject of this authorisation.</p>

**Table 3-2: Coordinates at Centre Points for components of the revised layout**

<b>BEAUFORT WEST SEF: PV AREA, SUBSTATION, BESS AND LAYDOWN AREA</b>		
<b>COORDINATES AT CENTRE POINTS (DD)</b>		
<b>Point/ component</b>	<b>South</b>	<b>East</b>
PV Area 1	-32.438056	22.685278
PV Area 2	-32.450361	22.630556
PV Area 3	-32.456667	22.668611
PV Area 4	-32.443423	22.642662
PV Area 5	-32.447222	22.687111
Laydown Area - Satellite 1	-32.446801	22.644060
Laydown Area - Satellite 2	-32.434816	22.670180
O&M Building	-32.452514	22.668476
Construction Camp	-32.450417	22.667572
Laydown Area - permanent	-32.449872	22.666456
BESS area	-32.451049	22.668928
IPP Substation	-32.452128	22.667582

### 3.3 Description of vegetation clearing

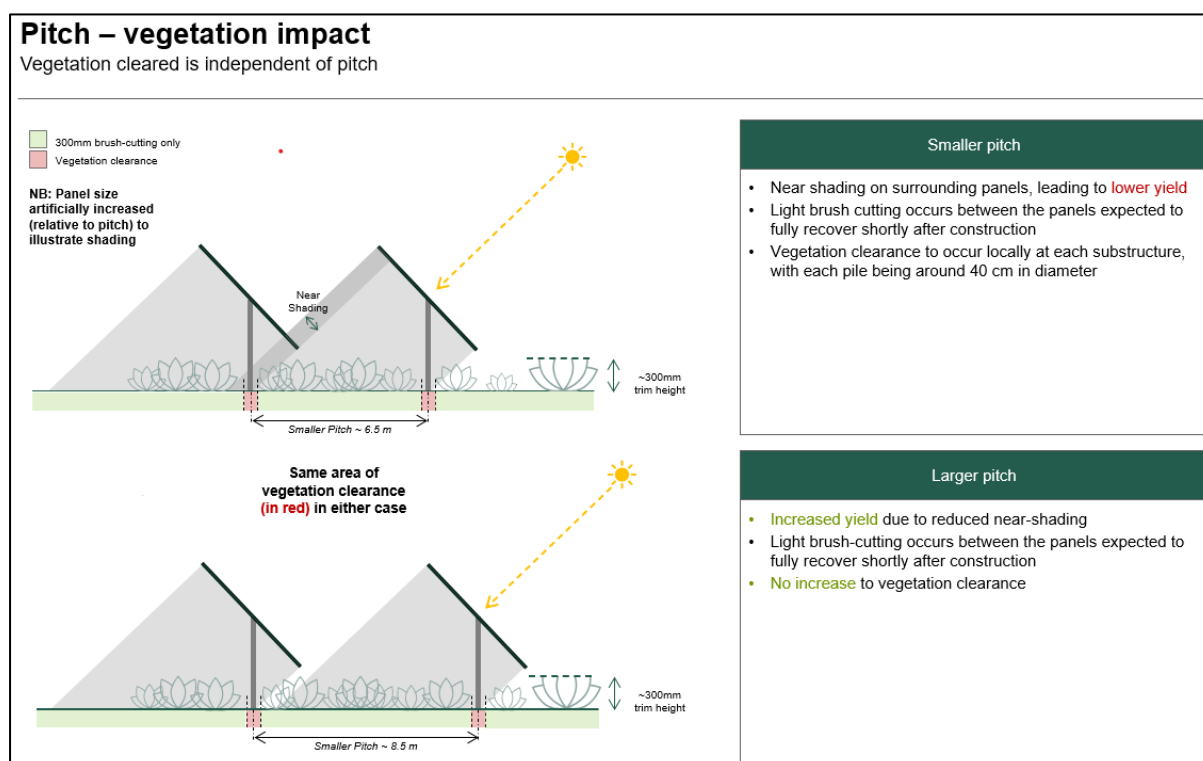
A key change to the project description relates to the ratio of vegetation cleared to vegetation retained within the solar PV array footprint. While the proposed amended layout covers a larger fenced area of approximately 720 ha, compared to the 585 ha originally approved (representing a 23% increase), this will not result in increased vegetation clearance. Instead, less vegetation will be cleared overall due to an optimised design approach that introduces wider spacing between PV panel rows, while the total number of panels and total generation capacity will not increase.

The increased spacing between the rows of panels (from 6 m to 8m), is primarily to accommodate a higher pitch of the solar panels, which reduces near shading from adjacent panels and improves operational efficiency. This design change has a direct impact on vegetation clearance requirements, as it facilitates the retention of vegetation strips between the panel rows. The effect of pitch on near shading and vegetation clearing is illustrated in Figure 3-1 below.

Neither the original BA for the development nor the associated EA make reference to retaining vegetated areas within the approved PV array footprint. It is therefore understood that the BA and EA are based on the assumption that the entire approved layout area will be cleared, particularly given the original design incorporated a narrower row spacing of 6 m. In contrast, the amended layout incorporates a technically more efficient panel configuration, resulting in an estimated vegetation clearance of approximately 126.29 ha, compared to 129.26 ha for the original approved layout (assuming vegetated strips were left intact between rows, as opposed to the whole PV panel area being cleared, which would result in approximated 500 ha of vegetation being cleared). The strip clearing approach significantly reduces the total area of vegetation clearance required for PV infrastructure installation, with strips of vegetation being

left intact between the rows. Where required, vegetation between the rows of panel would be brush cut to a minimum height of 30 cm.

This reduction in vegetation clearing requirement is also supported by a 21% reduction in the number of PV rows and a more regularised layout that promotes more efficient land use (from a technical and logistical perspective). These figures are summarised in Table 3-3 below, which compares calculated estimates for vegetation clearing for the original approved layout with the proposed amended layout across key infrastructure components.



**Figure 3-1: Illustration of the effect of change in pitch on panel yield and vegetation clearing requirements**

**Table 3-3: Comparison of Key Metrics relating to Layout: Approved vs Proposed Amendment PV Array**

Item	Approved Layout	Amended Layout	Difference	Difference %	Comment
Fenced Area (this land is not all cleared - refer to Figure 3-1)	585 ha	720 ha	135 ha	23%	The fenced area increases, but this does not result in additional vegetation clearance (see below).
Estimated vegetation clearance (assuming 1m strip clearance under the substructures)	97,45 Ha	89,98 Ha	-7,47 Ha	-8%	Reduced vegetation clearance is due to the optimised panel layout with wider row spacing.
Pitch (PV panel row spacing)	6.00m	8.00m	2.00m	33%	Increased spacing between rows (pitch) to improve operational efficiency and reduce shading, leading to more retained vegetation.

Item	Approved Layout	Amended Layout	Difference	Difference %	Comment
Estimated Total Cleared Area	129,26 Ha	126,29 Ha	-2,97 Ha	-2%	Total clearance includes vegetation under panels, roads, substations, laydown areas, etc. Overall reduced cleared area due to the optimised design, without increasing ground disturbance.
Estimated cleared area within CBA	12.66 ha	12 ha	-0.66 ha	-5%	Total vegetation clearance within CBAs will reduce slightly due to the strip clearing approach proposed for the amended layout.

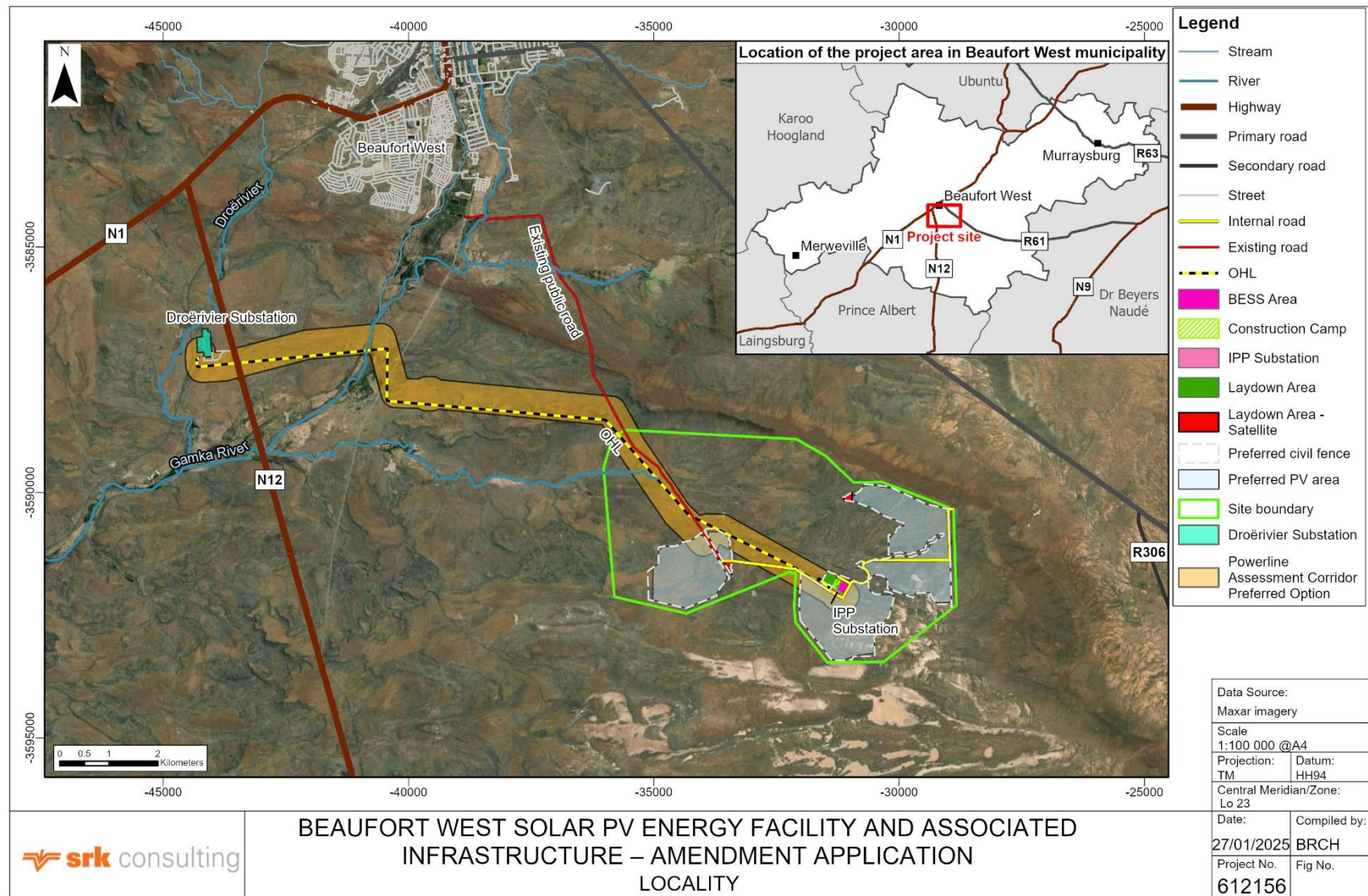


Figure 3-2: Locality Map (proposed amendment layout shown in grey)

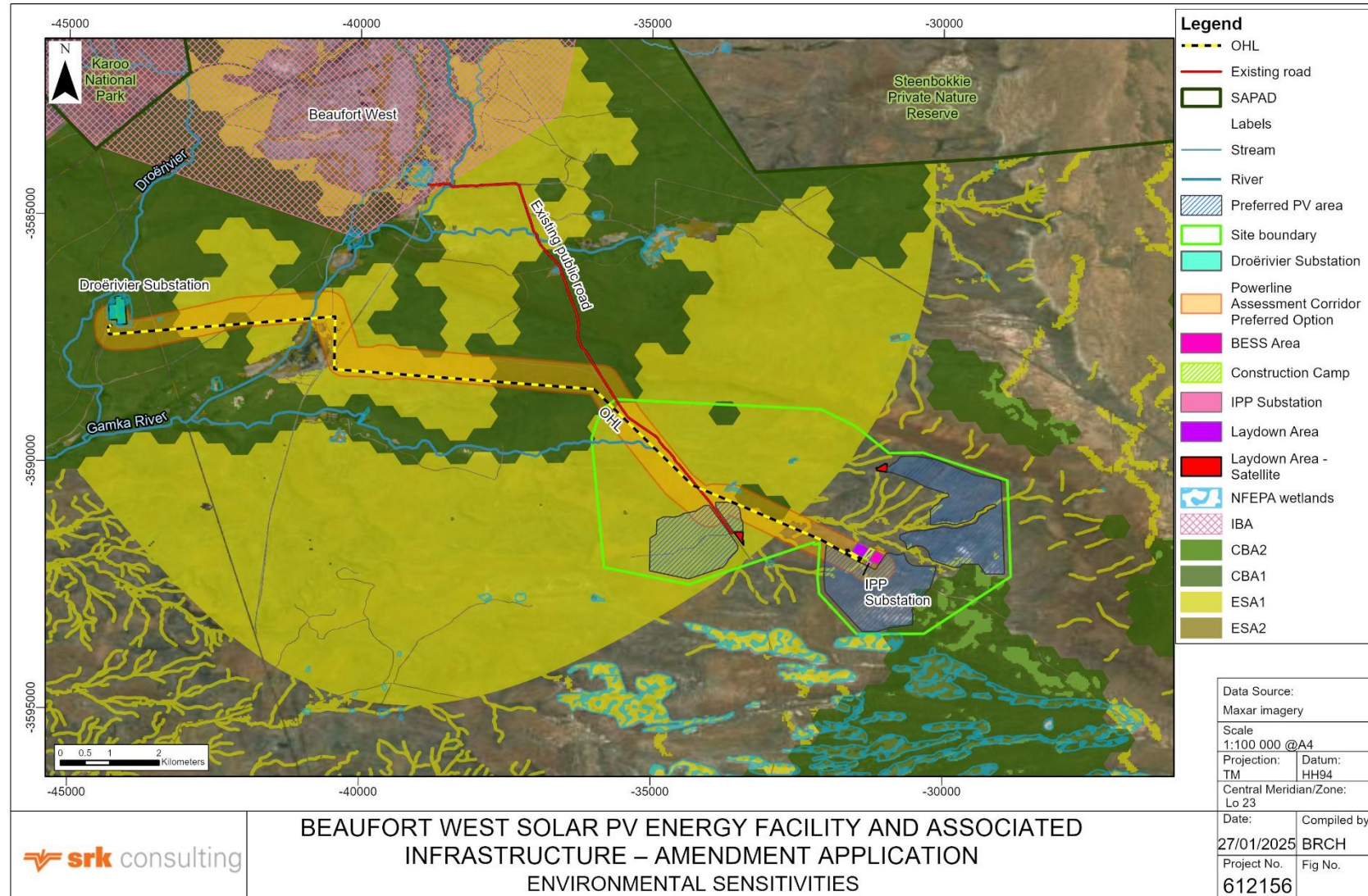


Figure 3-3: Environmental sensitivities in relation to preferred amendment layout

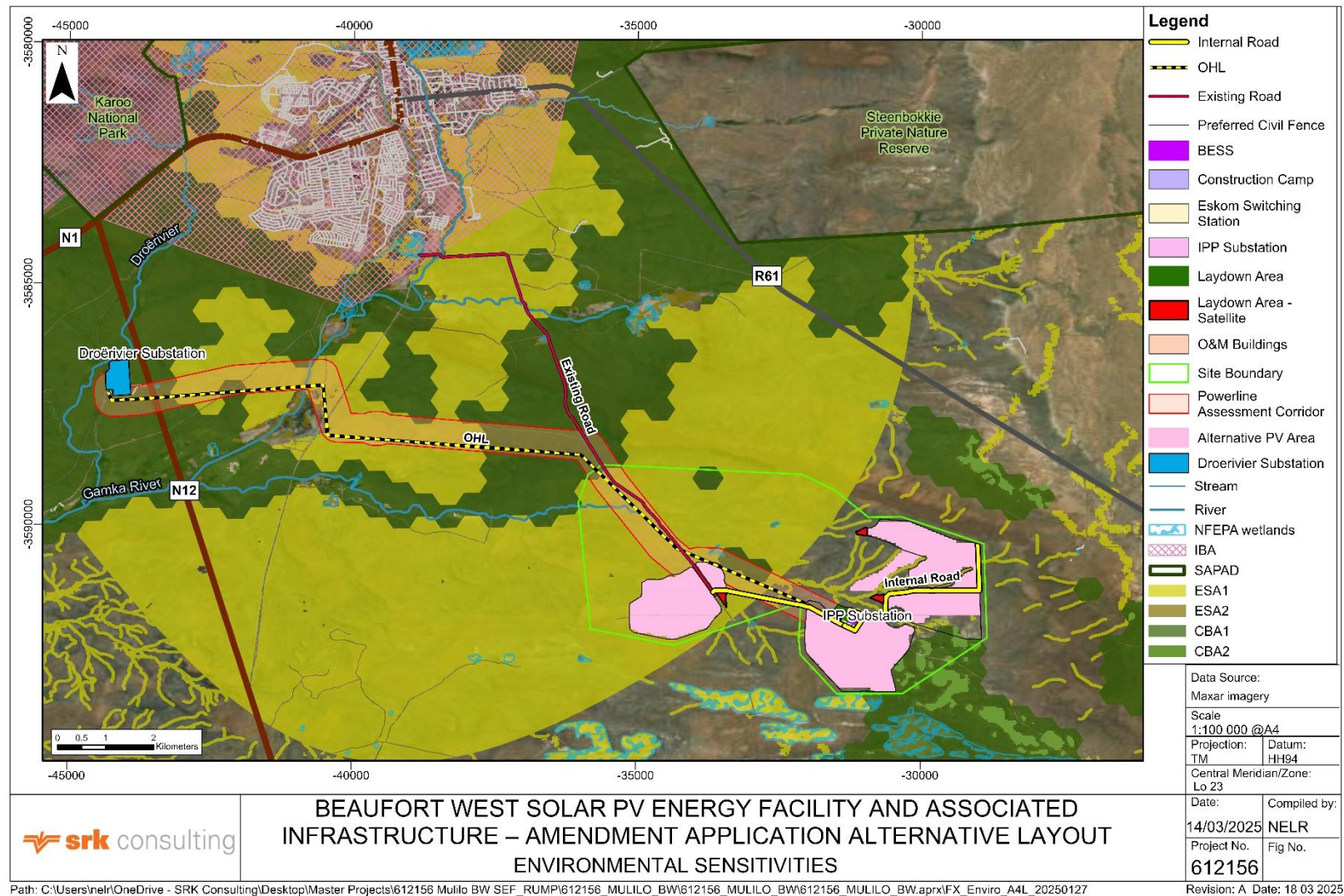


Figure 3-4: Environmental sensitivities in relation to alternative amendment layout

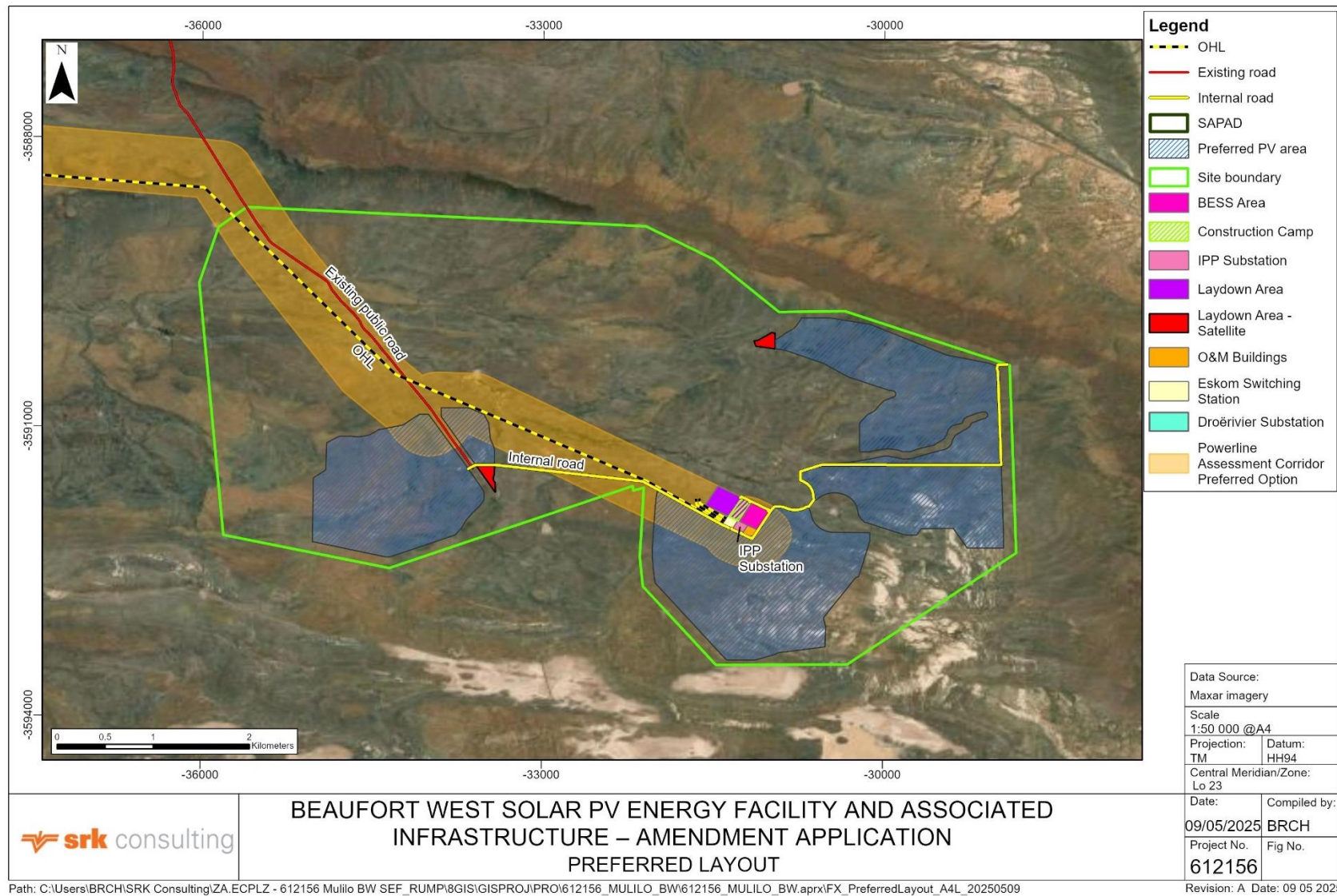


Figure 3-5: Proposed (preferred) amendment layout

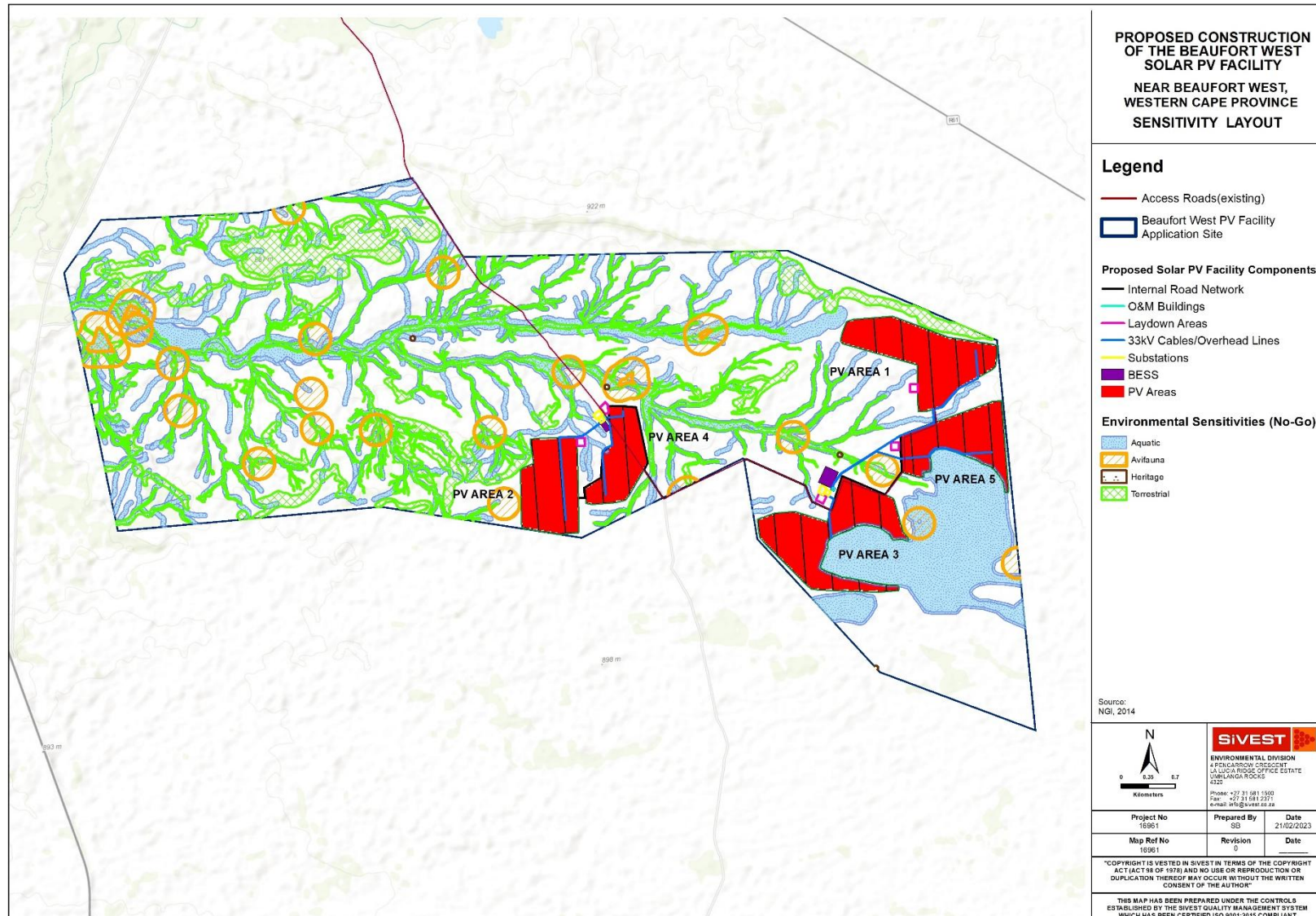
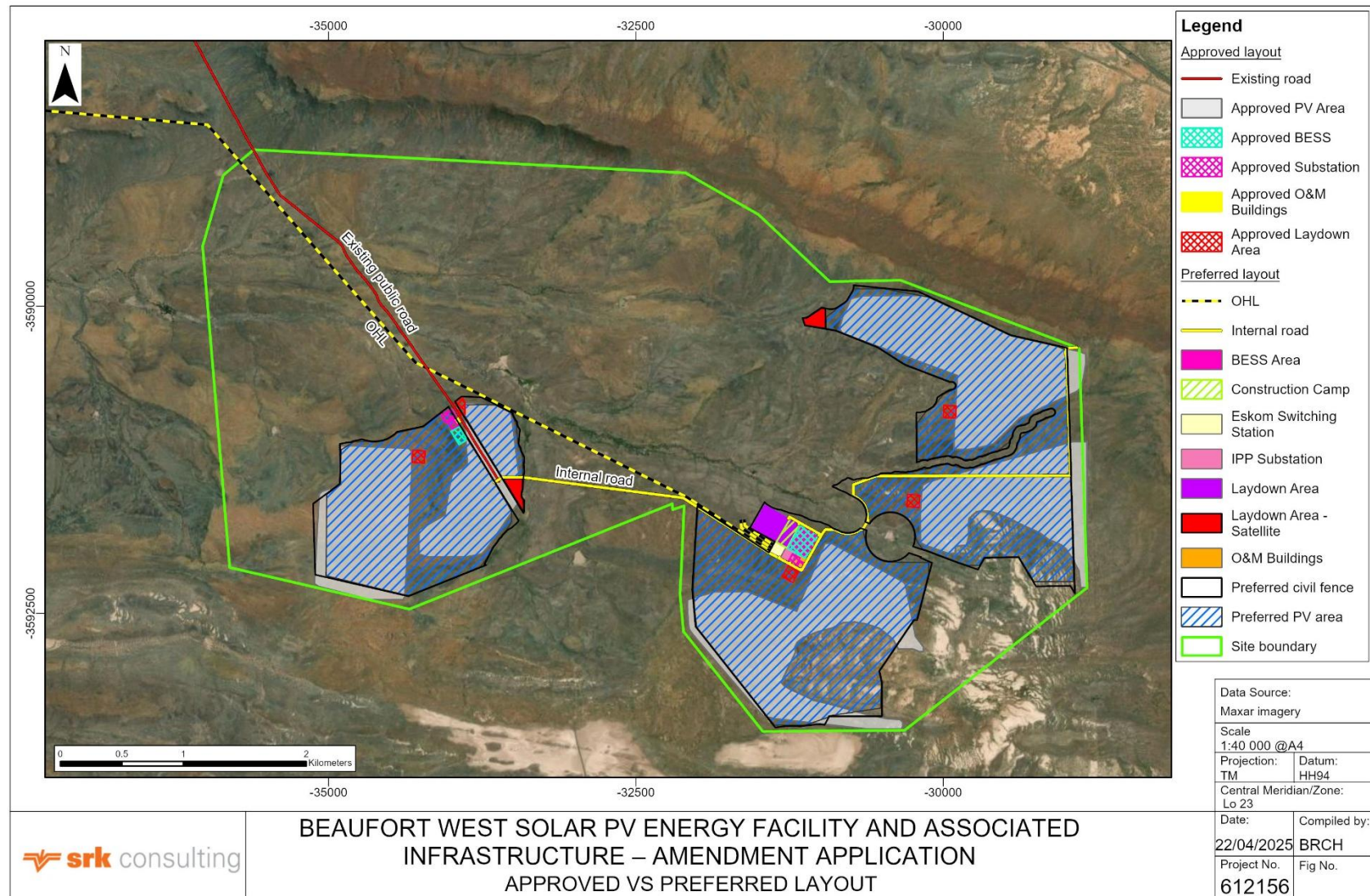


Figure 3-6: Map showing previously authorised layout relative to environmental sensitivities identified by specialists (Source: SiVest, 2023)



**Figure 3-7: Previously authorised (in grey) vs. proposed preferred (in black) amendment layout map**

## 4 Applicable Legislation

This section provides an outline of the legislative requirements specifically relating to the amendment application. A complete summary of legislative requirements relating to the project is provided in the SiVest BAR and is not reproduced here.

### 4.1 NEMA EIA Regulations (2014, as amended)

In terms of the NEMA EIA regulations (2014, as amended), Regulation 31: Amendments to be applied for in terms of Part 2:

*An environmental authorisation may be amended by following the process prescribed in this Part if the amendment will result in a change to the scope of a valid environmental authorisation where such change will result in an increased level or change in the nature of impact where such level or change in nature of impact was not—*

*(a) assessed and included in the initial application for environmental authorisation; or*

*(b) taken into consideration in the initial environmental authorisation;*

*and the change does not, on its own, constitute a listed or specified activity.*

The proposed amendments would change the project description and footprint as provided in the valid EA for the development. The proposed changes have however been shown not to result in an increased level of impact and do not constitute a listed or specified activity. Importantly, this report also demonstrates that the proposed amendments do not, on their own, trigger any (new or already authorised) listed or specified activities in terms of the NEMA EIA regulations (2014, as amended).

The following process has been undertaken in accordance with the NEMA requirements for a Part 2 application:

- Submission of an amendment application form to DFFE in accordance with regulation 31 of the EIA regulations, 2014, as amended;
- Compilation of an Amendment Report (i.e. this report) complying with Regulation 32 of the NEMA EIA regulations, which includes:
  - An assessment of all impacts related to the proposed change (refer to Section 7.1);
  - Advantages and disadvantages associated with the proposed change (Section 7.2);
  - Measures to ensure avoidance, management and mitigation of impacts (refer to individual specialist reports in Appendix B and EMPr in Appendix D); and
  - Any changes to the Environmental Management Programme (EMPr) (Section 7.2).
- The Amendment Report (this report) is being subjected to a public participation process, which is detailed as follows:
  - Publication of an advert notifying Interested and Affected Parties (I&APs) of the proposed amendment to the EA;
  - Updating of the IAP database and notification to all registered IAPs of the availability of the draft Amendment Report for comment;
  - The Amendment Report will be made available for public comment for a period of 30 days;
  - All comments received from stakeholders will be consolidated and a response provided in the form of a Comments and Responses Table in the Final Amendment Report; and

- Submission of the Final Amendment Report including the Comments and Response Table to the DFFE for a decision.

## 4.2 National Water Act No. 36 of 1998

The National Water Act 36 of 1998 (NWA) provides for the promotion of efficient, sustainable and beneficial use of water in the public interest; for the facilitation of social and economic development; for the protection of aquatic and associated ecosystems and their biological diversity; and for the reduction and prevention of pollution and degradation of water resources. The NWA also provides for emergency situations where pollution of water resources occurs.

Section 21 of the NWA describes water uses that will require permitting before these activities may be implemented, including any changes to the river course and banks, changes to water flows and the discharge of water containing waste.

The following Section 21 water uses have been identified for this project:

- (a) Taking water from a water resource;
- (c) Impeding or diverting the flow of water in a watercourse;
- (g) Disposing of waste in a manner which may detrimentally impact a water resource; and
- (i) Altering the bed, banks, course or characteristics of a watercourse

### Legal requirements for this project

The development will include activities that trigger water uses listed under section 21 of the NWA, as follows:

- Altering of bed or banks of a watercourse, associated with the widening or development of access roads and other infrastructure within the site, within the regulated area of a watercourse (100 m or 500 m for rivers / drainage lines or wetlands, respectively);
- Abstraction of water from boreholes on site, for construction and operation; and
- Operation of onsite septic tanks (e.g., at guard / security huts), which may result in the discharge of treated effluent to nearby water resources

Water Use authorisation was previously obtained based on the authorised project layout. A new water use authorisation application process will commence shortly to accommodate the proposed changes to the project layout.

## 4.3 National Heritage Resources Act No. 25, 1999

The protection and management of South Africa's heritage resources is controlled by the National Heritage Resources Act 25 of 1999 (NHRA). The enforcing authority for the NHRA is the South African Heritage Resources Agency (SAHRA).

In terms of the NHRA, historically important features such as graves, archaeological artefacts/sites, and fossil beds are protected. Similarly, culturally significant symbols, spaces and landscapes are also afforded protection. In terms of Section 38 of NHRA, SAHRA can call for a Heritage Impact Assessment (IA) where certain categories of development are proposed. The Act also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is deemed adequate, a separate HIA is not required.

The Act requires that:

*“...any person who intends to undertake a development categorised as the ... or any development or other activity which will change the character of a site exceeding 5 000 m<sup>2</sup> in extent or involving three or more existing erven or subdivisions thereof must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development...”*

## Legal requirements for this project

A Notice of Intent to develop (NID) was submitted to Heritage Western Cape (HWC) by Asha Consulting on the 25 October 2022.

The proposed layout amendment avoids known heritage features as identified during the BA, and has been confirmed by the heritage specialists not to result in any additional impacts or sensitivities above those identified based on the authorised layout.

## 5 Public Participation

### 5.1 Identification of Interested and Affected Parties

The purpose of the Public Participation Process (PPP) is to provide details regarding the nature of the amendment application, and to ensure that all registered I&APs are informed of the project, given an opportunity to request further information, and afforded the opportunity to submit comments or objections. The PPP for the project involved updating the I&AP database provided by SiVest for the project (based on the previous BA process), and publication of a newspaper notice informing the public of the Part 2 Amendment process and providing contact details for registration as an I&AP or submission of comments.

This Amendment Report is a revision of the previous Amendment Report (as part of a Part 2 amendment application) that was distributed to Interested and Affected Parties (I&APs) for comment. The original EA amendment application, and the associated Amendment Report, has been withdrawn and a new EA amendment application, together with this revised Amendment Report, has been submitted to DFFE. The new application and this revised Amendment Report include further revisions to the layout presented in the previous version of this report, primarily to reduce encroachment of the PV array area onto Critical Biodiversity Areas (CBAs).

The revised layout provided in this report also introduces minor changes to the internal road alignment, reduces the number of satellite laydown areas from three to two, and provides detail on the vegetation clearing approach to be implemented during construction of the solar PV arrays.

A strip-clearing method will be used for vegetation clearing, whereby only the areas beneath the solar PV panel rows will be cleared, with natural vegetation retained between rows. This significantly reduces the total amount of vegetation clearing and ensures that the proposed amendments do not result in additional clearing beyond the hectareage that is already authorised.

The layout provided herewith should be considered as a final layout, which is made available for review and comment in accordance with Condition 12 of the original EA, prior to submission to the DFFE for approval.

A 30-day comment period is provided for this Draft Amendment Report and the layout provided in the report, from **15 May to 17 June 2025**, Interested and Affected Parties (I&APs) are invited to review and submit any comments by close of business on **17 June**, for inclusion in the final Amendment Report and layout to be submitted to DFFE for decision-making. Where relevant, comments received on the original Amendment Report will also be included and addressed in the final version of this report.

A newspaper notice (in both English and Afrikaans) was published through People's Post on their Facebook platform on 25 March 2025, notifying the public of the amendment application, where to find additional information, and how to submit comments. All additional I&AP registrations received in response to this have been included on the I&AP database. A second newspaper notice (in English) was also published in May 2025 in Die Courier, notifying the public of the availability of this amendment report for comment. A copy of this notice will be provided in the Final Amendment Report. Comments received on this report and the layout presented herein will be included and addressed in the Final Amendment Report and layout, which will be submitted to DFFE for approval.

Refer to Appendix C for a copy of the I&AP database, and proof of the newspaper notice.

Notifications to registered I&APs have been sent, with a copy of the executive summary of this amendment report, and details as to how they can access the full amendment report via the SRK website <https://www.srk.com/en/public-documents>. A 30-day comment period on the draft amendment report and layout (as provided in this report) is provided from 15 May 2025 – 17 June 2025.

Comments on the Draft Amendment Report and / or layout should be submitted before 12pm on 17 June 2025, to Abby van Nierop of SRK Consulting, via email: [vnab@srk.co.za](mailto:vnab@srk.co.za)

## 5.2 Comments and Responses

All comments received from I&APs within the comment period and associated responses will be included in the comments and response table that will be included in the final Amendment report for submission to the DFFE for decision making. Notification will be sent to all registered I&APs of the submission, providing a link to the final report (including comments and responses) that was submitted.

## 6 Specialist Studies

As part of the amendment process, the original specialists who contributed to the 2022 Basic Assessment (refer to Table 6-1) were appointed to evaluate whether the proposed amendments to the approved final layout of the SEF would trigger any additional impacts, or changes to any impacts or the significance thereof as originally assessed. They were also required to confirm whether any additional management measures, or changes to the management measures that were identified in their initial assessments, would be required.

Each specialist was requested to review the amended layout and provide a report or professional opinion confirming whether, in their expert judgment, the proposed changes remain acceptable or change any of their original findings. Summaries of the various specialist findings are provided below. A summary of the impact significance ratings for both the authorised layout and the proposed amendments is provided in Table 7-1, and the full specialist reports are provided in Appendix B.

**Table 6-1: Specialist Team and Credentials**

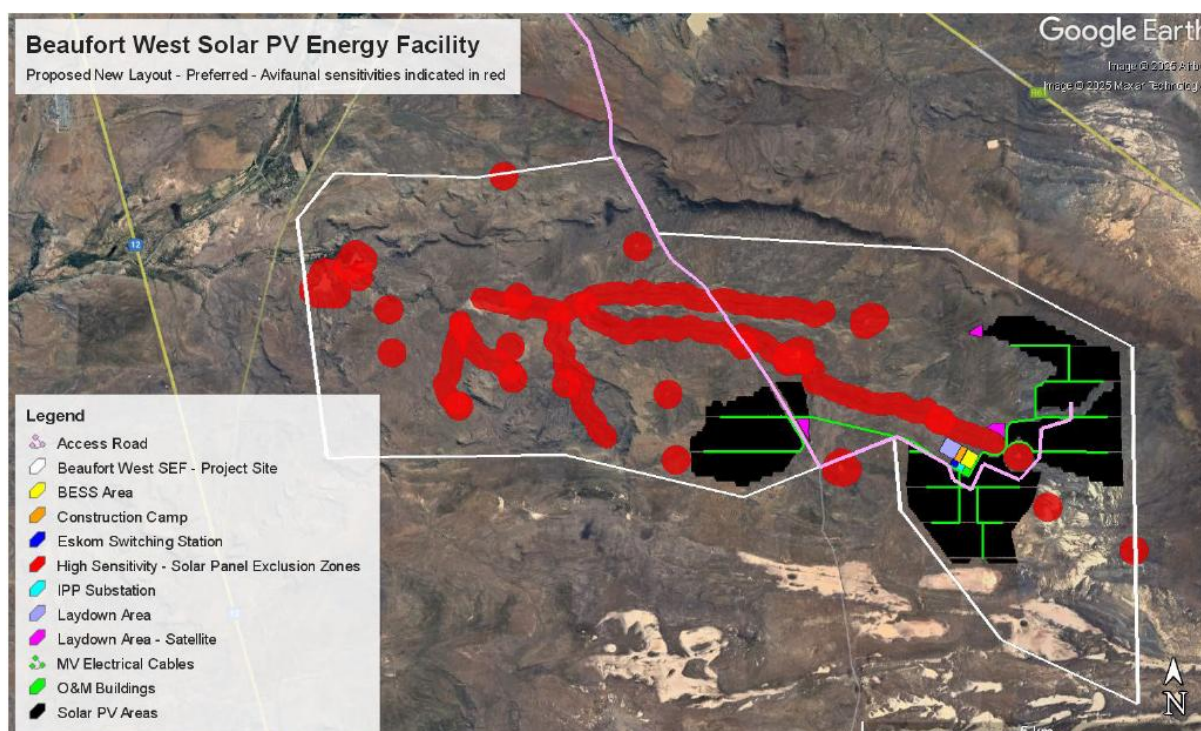
Specialist Field	Company	Representative	Qualifications	Professional Affiliations / Registration	Experience (Years)
Visual Impact Assessment	Visual Resource Management Africa cc	Stephen Stead	BA (Geography)	—	9
Transportation Impact Assessment	SiVEST SA (Pty) Ltd	Ntuthuko Hlanguza (Pr. Eng)	BSc.Eng (Civil)	ECSA (Reg. No. 202202263)	11
Heritage Impact Assessment	Asha Consulting	Jayson Orton	D.Phil (Archaeology, Oxford), MA (Archaeology, UCT)	ASAPA CRM No. 233, APHP No. 043	29
Palaeontological Impact Assessment	Independent	John Almond	PhD (Palaeontology)	Palaeontological Society of South Africa; APHP (W. Cape)	43
Desktop Geotechnical Assessment	JG Afrika (Pty) Ltd	Priantha Subrayen	BSc (Hons) (Environmental & Engineering Geology)	Pr.Sci.Nat. (400066/16)	9
Agricultural and Soil Assessment (Desktop)	Johann Lanz Consulting	Johann Lanz	M.Sc. (Environmental Geochemistry)	—	27
Aquatic Biodiversity Assessment	Blue Science (Pty) Ltd	Antonia Belcher	M.Sc	Pr.Sci.Nat. (400040/10)	33
Biodiversity Impact Assessment	3Foxes Biodiversity Solutions	Simon Todd	MSc (Conservation Biology)	Pr.Sci.Nat. (400425/11)	23
Avifaunal Impact Assessment	Afri Avian Environmental (Pty) Ltd	Albert Froneman	MSc (Conservation)	—	25

## 6.1 Avifaunal Study

The original Avifaunal Impact Assessment (IA) (dated October 2022) the specialist identified 254 bird species in the broader area, including 122 priority species and several Species of Conservation Concern (e.g., Blue Crane, Karoo Korhaan, Ludwig's Bustard, Martial Eagle). The authorised Beaufort West SEF was originally assessed as having LOW - MEDIUM (-ve) impacts during operation, which could be reduced to LOW (-ve) significance with appropriate mitigation. During construction and decommissioning, the impacts were rated as MEDIUM (-ve) significance (both before and after mitigation). No fatal flaws were identified, and the development was supported conditional on strict implementation of mitigation.

In reviewing the proposed amendments, Albert Froneman of AfriAvian Environmental (Pty) Ltd confirmed that neither the preferred nor alternative layouts would change the nature or severity of avifaunal impacts. It was also confirmed that the mitigation measures recommended in the

Avifaunal Impact Assessment (Chris van Rooyen Consulting 2022<sup>2</sup>) would not require any changes and remain valid and both amended layouts were found to be acceptable from an avifaunal perspective. The avifaunal sensitivity areas that were identified in the original assessment are mapped in Figure 6-1 below relative to the proposed preferred layout.



**Figure 6-1: Proposed preferred layout relative to previously identified avifaunal sensitivity areas (Source: AfriAvian, 2025)**

Refer to Appendix B 1 for the Specialist Comment.

## 6.2 Transportation Study

The original Traffic IA (dated November 2022) by SiVEST SA concluded that, with recommended mitigation, the authorised Beaufort West SEF would have LOW (-ve) overall impacts on the surrounding road network during both construction and operation.

In reviewing the proposed amendments, SiVEST confirmed that while the traffic volumes during construction and decommissioning are expected to increase marginally (due to the increased construction requirements associated with increased footprint areas) with the proposed amendments, peak-hour traffic remains well below the TMH 16<sup>3</sup> threshold of 50 peak-hour trips, above which a full traffic impact assessment is required. The increase will also not result in a change in the impact nature or significance, with only a marginal increase in construction traffic and LOW (-ve) cumulative impacts. No difference in traffic impact was found between the proposed preferred and alternative amendment layouts. The original findings, impact ratings, and mitigation measures therefore remain valid, and no changes to traffic management strategies are required.

<sup>2</sup> Due to the passing of Chris van Rooyen, the current study was conducted by Albert Froneman, who is his former business partner and reviewer of the original report

<sup>3</sup> TMH 16: South African Traffic Impact and Site Traffic Assessment Manual

Refer to Appendix B 2 for the Specialist Comment.

### 6.3 Geotechnical Study

The original Geotechnical Impact Assessment (dated November 2022) by JG Afrika concluded from a desktop study that the site is suitable for the Beaufort West SEF, with anticipated LOW (-ve) impacts during both construction and operation and no fatal flaws identified. The site's low rainfall ( $\pm 230$  mm), Teekloof Formation geology, and "d3" fractured aquifer (borehole yields of 0.5–2.0 L/s) support this finding, with only limited mitigation required and a recommendation for detailed investigations during design.

In reviewing the proposed layout amendments, JG Afrika confirmed that both the preferred and alternative amendment layouts would not alter the nature or extent of geotechnical impacts. The original conclusions remain valid, and the site continues to be suitable for development, subject to a detailed geotechnical investigation in the design phase.

Refer to Appendix B 3 for the Specialist Report.

### 6.4 Palaeontological Study

The original Palaeontological Impact Assessment (dated October 2022) by John Almond concluded that the operational phase of the authorised Beaufort West SEF would result in a LOW (-ve) impact on fossil heritage, with cumulative impacts rated as MEDIUM (-ve) without mitigation and reduced to LOW (-ve) with mitigation. No significant further impacts on fossil heritage resources are anticipated in the planning, operational and decommissioning phases. He further concluded that no significant fossil sites were at risk, and no fatal flaws were identified, provided that the recommended mitigation measures were incorporated into and implemented via the EMP.

In reviewing the proposed layout amendments, John Almond confirmed that the amended SEF footprint does not intersect any known fossil sites of scientific or conservation importance. The original Palaeontological Impact Assessment conclusions and recommendations remain valid, and, assuming implementation of the original palaeontological mitigation measures, there are no objections to authorising the amended layout.

Refer to Appendix B 4 for the Specialist Comment.

### 6.5 Heritage Study

The original Heritage Impact Assessment (dated October 2022) by Asha Consulting identified no significant heritage constraints, noting that natural weathering, erosion, and negligible trampling posed minimal risk, and that visible archaeological resources were easily avoidable. Visual impacts were also minimal due to the flat topography and distance from sensitive receptors. Consequently, the project was deemed acceptable for environmental authorisation.

In reviewing the proposed layout changes, Asha Consulting confirmed that both the preferred and alternative amendment layouts remain within the originally assessed area, with no new archaeological, palaeontological, or cultural resources affected and no alteration to previously assessed impacts. The original Heritage Impact Assessment impact ratings and mitigation requirements remain valid, and all Heritage Western Cape conditions, including a Fossil Chance Finds Procedure and pre-construction archaeological survey, continue to apply.

The specialist is of the opinion that the Environmental Authorisation can therefore be amended to incorporate either layout without additional heritage constraints.

Refer to Appendix B 7 for the Specialist Comment

## 6.6 Aquatic Biodiversity Assessment

The original Aquatic Biodiversity Assessment (ABA) (November 2022), conducted by Toni Belcher of Blue Science, identified the Kwagga River and its associated tributaries and depressions as the main aquatic features within the project area. These systems were found to be in a largely natural to moderately modified ecological condition. The mainstem of the Kwagga River was mapped as an aquatic Critical Biodiversity Area (CBA), while the surrounding drainage features and wetlands were designated as Ecological Support Areas or mapped natural wetlands in national and provincial biodiversity planning tools. The assessment concluded that, with the implementation of mitigation measures, the potential impacts to aquatic ecosystems during all phases of the project would be of LOW (-ve) significance. The authorised layout avoided all mapped natural wetlands and high-sensitivity aquatic CBAs, and the specialist confirmed that the project could be authorised from a freshwater perspective, provided the mitigation measures specified in the ABA were implemented and the relevant buffer zones observed.

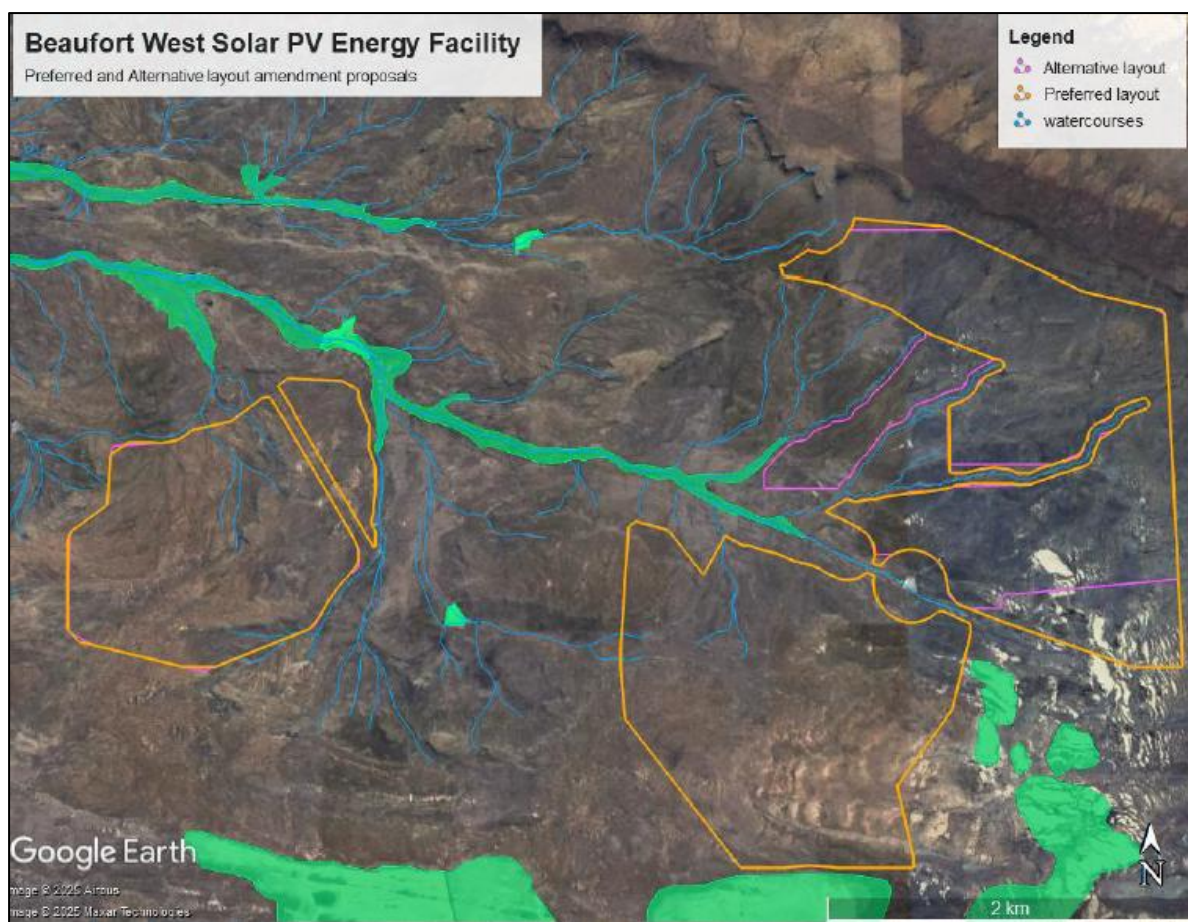
As part of this amendment process, Blue Science conducted a follow-up site visit after rains to verify on-site conditions and assess the impacts of the proposed layout changes. This resulted in a decrease in the extent of high sensitivity features compared to what was mapped in the original assessment. The specialist concluded that widening of access roads where they cross watercourses can easily be mitigated such that there would be no increase in impact. The areas where the PV modules and associated infrastructure (in the proposed amended layout) have extended into the areas mapped as being of very high sensitivity in the southeast of the project area are within an area mapped as a depression wetland. During ground-truthing this area was found to often be higher-lying and with patches devoid of vegetation, and was not associated with any wetland habitat. The other areas mapped as being of very high sensitivity related to smaller watercourses that are tributaries of the Kwagga River, that were mapped as aquatic Ecological Support Areas (ESA), but ground-truthing determined them to comprise minor watercourses and drainage features of little aquatic ecosystem significance and providing little in terms of ecological services. The upper reaches of the larger Kwagga River and a 30m buffer that is mapped as an aquatic CBA are avoided by the proposed amended layout (Figure 6-3 and Figure 6-4). Apart from these changes, aquatic ecosystem characteristics were found to be unchanged, and the ecological condition and sensitivity of aquatic features remained consistent with the original assessment. While the amended layout results in slightly increased proximity to ground-truthed aquatic features, including depression wetlands in the southeastern portion of the site, this was not considered to alter the nature or severity of impacts originally assessed.

The specialist noted the presence of several renewable energy projects within a 30 km radius, primarily in the Gamka River catchment. Although cumulative impacts on surface water features are possible for the proposed amendment, these are not expected to be significant, provided that the mitigation measures proposed in the original assessment are consistently implemented.

The specialist confirmed that the proposed amendments do not alter the conclusions of the original ABA, and the both the preferred and alternative layouts remain acceptable from an aquatic perspective, with no additional mitigation measures required beyond those specified in the 2022 assessment (and EMPr). The preferred layout is preferable, as it avoids sensitive

headwater areas of the Kwagga River affected by the alternative layout. The significance of aquatic impacts remains LOW (-ve), consistent with the original assessment findings.

Refer to Appendix B 9 for the Specialist Comment.



**Figure 6-2: Proposed amended layout alternatives for the project, shown together with the mapped aquatic features**

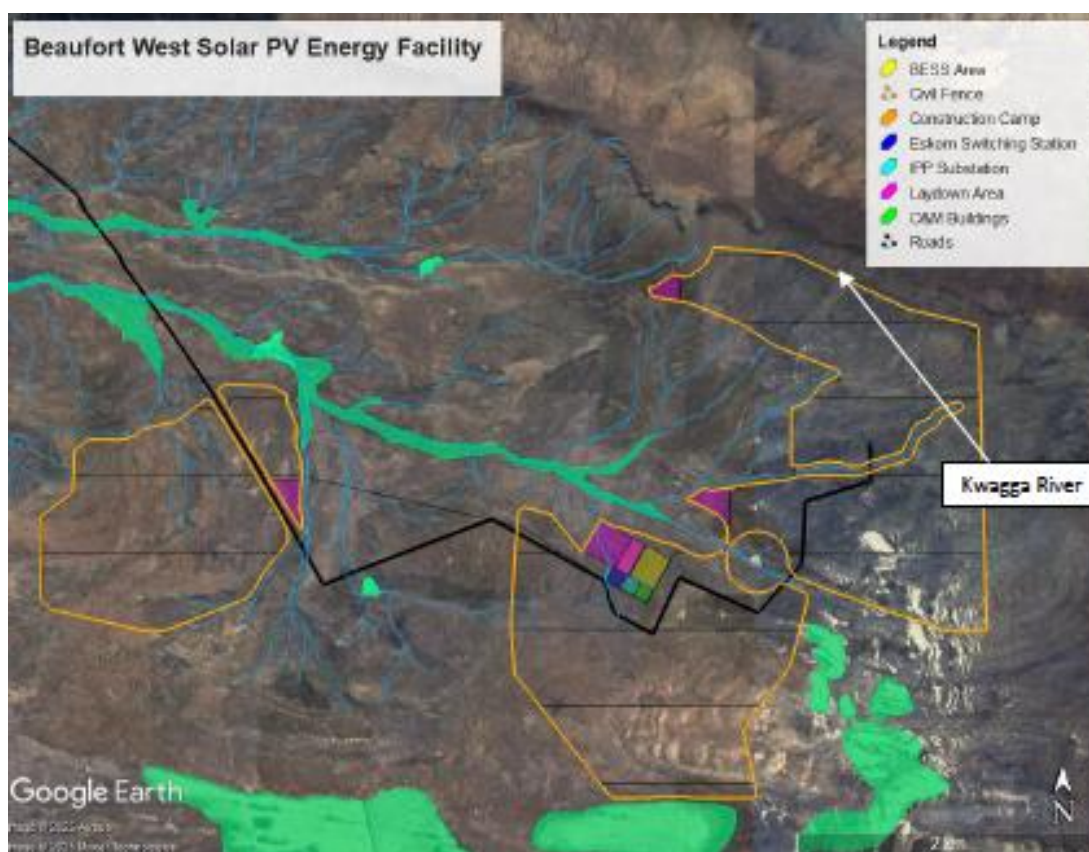


Figure 6-3: Preferred amended layout, with mapped aquatic features (green)

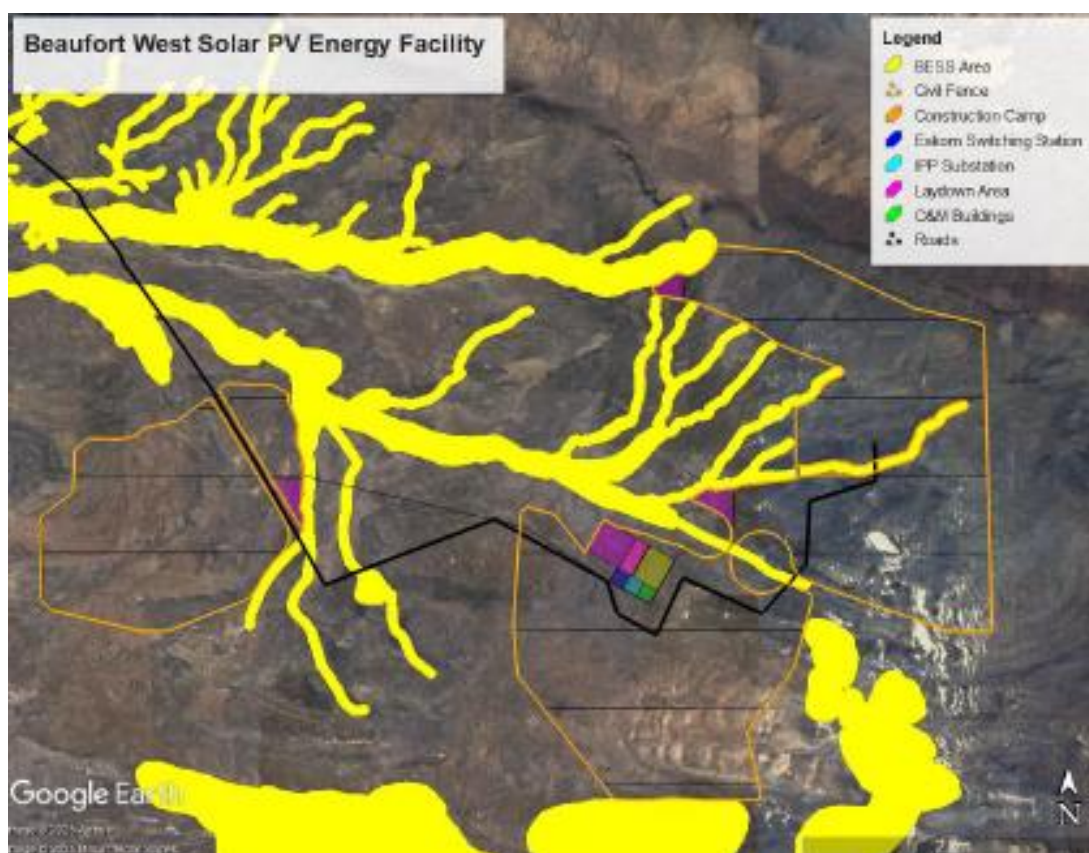


Figure 6-4: Preferred amended layout relative to recommended aquatic buffers (yellow)

## 6.7 Terrestrial Biodiversity Study

The original Terrestrial Biodiversity Assessment (dated October 2022) for the authorised Beaufort West SEF, undertaken by 3Foxes Biodiversity Solutions, comprised a Plant Species Compliance Statement, Animal Species Compliance Statement, and a Terrestrial Biodiversity Assessment. These confirmed that the development footprint is limited to areas of low ecological sensitivity, with no plant or animal Species of Conservation Concern (SCC) recorded. The project was therefore considered acceptable, subject to standard mitigation measures, which were included in the EMPr that formed part of the BAR (and is attached as Appendix D).

As part of the amendment application, 3Foxes Biodiversity Solutions reviewed the proposed changes and confirmed that the changes to the layout would not entail any significant ecological advantages or disadvantages for the development, for terrestrial fauna, flora or overall terrestrial biodiversity. It was further confirmed that the changes would not affect the impacts of the development as assessed. As such, the Preferred Layout is considered by the specialists to be similar to the Alternative Layout in terms of ecological impact and is therefore acceptable.

The specialist confirmed that no additional mitigation is required, and the original findings, significance ratings, and compliance statements remain valid. The project can thus be supported from a terrestrial biodiversity, plant and animal species perspective.

Refer to Appendix B 5 for the Specialist Comment

## 6.8 Visual Study

The original Visual IA (dated November 2022), conducted by Visual Resource Management Africa cc, concluded that, without mitigation, the visual impacts of the authorised Beaufort West SEF would be of MEDIUM (-ve) significance, reducing to LOW (-ve) with appropriate mitigation. The site, located within the visually sensitive Karoo environment, was assessed as having limited visual resources and low receptor sensitivity. Topographic screening and the distance from the Karoo National Park (12 km) further reduced visual exposure.

The Visual IA emphasised the importance of mitigation measures, such as dust suppression, appropriate structure colours, and the avoidance of overhead lighting to reduce cumulative visual effects. These mitigation measures are included in the EMPr that formed part of the BAR (and is attached as Appendix D).

As part of the amendment application, Visual Resource Management Africa reviewed the proposed amendments and confirmed that both preferred and alternative layouts remain within the original assessment footprint, with no changes to the site's topography or visibility. Due to the raised topography surrounding the site, the specialist concluded that there is no visual or landscape difference between the Preferred or the Alternative PV development proposals. The original visual impact findings and mitigation measures are still valid, with no new or intensified impacts identified.

Therefore, the specialist is of the opinion that the project can be supported from a visual perspective.

Refer to Appendix B 6 for the Specialist Comment

## 6.9 Agriculture Study

The original Agricultural and Soil Compliance Statement (dated November 2022) for the authorised Beaufort West SEF, conducted by Johann Lanz Consulting, concluded that the site's

agricultural potential is very low due to its arid climate and shallow soils, with a LOW (-ve) significance rating for agricultural impacts during both construction and operation. The site has historically supported only extensive grazing.

As part of the amendment application, Johann Lanz Consulting reviewed the proposed layout amendments and confirmed that the site's agricultural suitability remains unchanged, with no new or increased agricultural impacts. The review concluded that the original findings remain valid, with no new mitigation measures required and agricultural impacts remaining LOW (-ve), with no agricultural constraints to either the preferred or alternative layout amendments, and no agricultural constraints to the proposed amendments.

Refer to Appendix B 8 for the Specialist Comment

## 6.10 Social Study

The original Social Impact Assessment (dated November 2022) by ACER Africa Environmental Consultants confirmed that the Beaufort West SEF supports national energy objectives and poses no fatal social or socio-economic flaws, recognising the importance of reliable electricity for economic growth. Input from a socio-economic specialist was not sought in compilation of this amendment application, as the site and surrounding land use remains agricultural, and no new developments that would be affected by the proposed development are evident in the immediate surroundings. The slight extension in the proposed construction period (from 18 to 24 months) would increase the duration of any positive impacts of employment (and negative impacts resulting from influx during construction) but not to the extent that it would change the significance rating or require additional mitigation measures. Consequently, the original findings and significance ratings are considered to remain valid, no additional mitigation is required, and there are no new social constraints resulting from the amendment. As such, further specialist input is not deemed necessary.

# 7 Assessment

## 7.1 Impact Assessment

A summary of the impacts and significance ratings thereof, as identified and assessed in the original BA, compared to those for the proposed amendment, for the various project phases, is provided in Table 7-1. All specialists have confirmed that the impacts as identified in their original assessments for the authorised project description remain valid, and the post-mitigation impact significance ratings remain unchanged relative to their original assessments. In the case of the geotechnical impact assessment, the impact significance ratings differ slightly (and are lower during decommissioning), compared to the original assessment, due to a different rating method being used. It is the EAP's opinion that this is not material and does not change the conclusion that the impact significance is not significantly different to that of the original assessment.

From a cumulative impact perspective, the only new renewable energy facility in the vicinity that was not included in the previous BA is the proposed Jessa Wind Energy Facility, located approximately 12 km southwest of the site. This has not resulted in any additional or intensified cumulative impacts being identified.

**Table 7-1: Summary of Impact Significance ratings for the authorised layout and proposed amendment**

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
PLANNING PHASE				
No impacts identified				
CONSTRUCTION PHASE				
<b>Aquatic / Freshwater impacts</b>				
Disturbance and of aquatic habitats within the watercourses with the associated impact to sensitive aquatic biota	Low	Low	Low	Low
Increased sedimentation and risks of contamination of surface water runoff during construction	Low	Low	Low	Low
Demand for water for construction could place stress on the existing available water resources	Low	Low	Low	Low
<b>Avifaunal impacts</b>				
Displacement of priority species due to disturbance (noise and movement) associated with the construction of the PV plant and associated infrastructure	Medium	Medium	Medium	Medium
Displacement of priority avifauna due to habitat transformation associated with the PV facility and associated infrastructure	Medium	Medium	Medium	Medium
<b>Agricultural - compliance statement – no impacts identified</b>				
<b>Geotechnical impacts</b>				
<ul style="list-style-type: none"> <li>Displacement of natural earth material and overlying vegetation.</li> <li>Increase in soil and wind erosion due to clearing of vegetation.</li> <li>Construction and earthmoving vehicles may displace soil during operations.</li> <li>Creation of drainage paths along access tracks.</li> <li>Potential oil spillages from heavy plant.</li> </ul>	Medium	Low	Medium	Low

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
<ul style="list-style-type: none"> <li>Excessive dust.</li> </ul>				
<b>Social – no specialist re-assessment undertaken as socio-economic situation has not changed</b>				
Immigration or potential influx of Job seekers	Low	Low	Low	Low
Increased criminal activity	Low	Low	Low	Low
Potential impacts associated with the presence of construction workers on local Communities	Low	Low	Low	Low
Potential impacts of heavy vehicles and construction related activities	Medium	Low	Medium	Low
Potential risks to livestock, farming infrastructure associated with construction phase	Low	Low	Low	Low
Increased fire hazard	Low	Low	Low	Low
Improvement of site-specific road infrastructure	Low (+ve)	Medium (+ve)	Low (+ve)	Medium (+ve)
Visual impact and impact on sense of place	Low	Low	Low	Low
The creation of local employment and business opportunities, skills development and training	Low (+ve)	Medium (+ve)	Low (+ve)	Medium (+ve)
Increased opportunities for local SMEs	Low (+ve)	Medium (+ve)	Low (+ve)	Medium (+ve)
Unintended damages to private property	Low	Low	Low	Low
<b>Heritage &amp; Archaeology</b>				
Archaeological Resources - Damage to or destruction of archaeological sites during construction of the facility, powerlines, access roads and other infrastructure.	Medium	Low	Medium	Low
Graves - Damage to or destruction of archaeological sites during construction of the facility, powerlines, access roads and other infrastructure.	High	Medium	High	Medium
Cultural landscape and structures - Visual intrusion into the cultural landscape from construction equipment and new infrastructure	Low	Low	Low	Low

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
<b>Palaeontology</b>				
Disturbance, damage or destruction of fossils at or beneath the ground surface due to surface clearance and bedrock excavations	Low	Low	Low	Low
<b>Visual</b>				
Windblown dust and dust from moving vehicles have the potential to become a significant nuisance factor to local farms around the site and along the access road.	Low	Low	Low	Low
Windblown dust and dust from moving vehicles have the potential to become a significant nuisance factor to local farms around the site.	Medium	Low	Medium	Low
Buildings painted bright colours can increase the visual presence of the structures in a rural landscape, creating higher levels of visual contrast and attracting the attention of the casual observer.	Low	Low	Low	Low
Litter has the potential to degrade landscape character and can be contained by fencing around the construction camp/ laydown.	Low	Low	Low	Low
Long fencing lines has the potential to be visually dominating, degrading the rural landscape sense of place.	Low	Low	Low	Low
Light spillage from security lighting of structures can significantly increase the visual impact of a project in a rural landscape in a dark-sky context.	Low	Low	Low	Low
Un-necessary roads have the potential to create a visual disturbance long after the usage as past.	Low	Low	Low	Low
<b>Terrestrial Ecology</b>				
Transformation and presence of the PV Facility and associated infrastructure will contribute to habitat loss within CBAs and ESAs.	Medium	Medium	Medium	Medium
<b>Traffic</b>				
Increase in traffic	Medium	Low	Medium	Low
Increase of Incidents with pedestrians and livestock	Medium	Low	Medium	Low

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
Increase in dust from gravel roads	Low	Low	Low	Low
Increase in Road Maintenance	Low	Low	Low	Low
Additional Abnormal Loads	Low	Low	Low	Low
Increase in dust from gravel roads	Low	Low	Low	Low
New / Larger Access points	Low	Low	Low	Low
OPERATIONAL PHASE				
<b>Aquatic / Freshwater</b>				
Ongoing disturbance and degradation of aquatic features and associated vegetation along access tracks or adjacent to the infrastructure that needs to be maintained	Low	Low	Low	Low
Disturbance of cover vegetation and soil and modified runoff characteristics that have the potential to result in erosion of hillslopes and watercourses and invasion of disturbed areas with alien vegetation	Low	Low	Low	Low
<b>Terrestrial Ecology</b>				
Transformation and presence of the PV Facility and associated infrastructure will contribute to habitat loss within CBAs and ESAs.	Medium	Medium	Medium	Medium
<b>Agricultural - compliance statement – none identified</b>				
<b>Avifaunal</b>				
Mortality of priority species due to electrocution or collision on the medium voltage internal reticulation networks	Medium	Low	Medium	Low
Mortality of priority species due to collision with solar panels	Low	Low	Low	Low
Mortality of priority species due to entrapment in perimeter fences	Low	Low	Low	Low

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
<b>Geotechnical impacts</b>				
<ul style="list-style-type: none"> <li>Displacement of natural earth material.</li> <li>Increase in soil erosion due to concentrated flow received off hardstand areas.</li> <li>Potential oil spillages from maintenance vehicles.</li> <li>Sedimentation of non-perennial features caused by soil erosion.</li> </ul>	Low	Low	Medium	Low
<b>Social – no specialist re-assessment undertaken as socio-economic situation has not changed</b>				
The development of infrastructure for renewable energy	Low	Medium (+ve)	Low	Medium (+ve)
Increased socio-economic development associated with more available electricity	Low (+ve)	Medium (+ve)	Low (+ve)	Medium (+ve)
The impact on tourism	Low	Low	Low	Low
Employment during operation	Low (+ve)	Medium (+ve)	Low (+ve)	Medium (+ve)
Unintended damages to private property	Low	Low	Low	Low
<b>Heritage / archaeology</b>				
Visual intrusion into the cultural landscape from facility and related infrastructure	Medium	Medium	Medium	Medium
<b>Palaeontology – none identified</b>				
<b>Visual</b>				
Compaction of larger areas can result in soil sterilisation and landscape degradation.	Low	Low	Low	Low
Security Light Spillage at night- Light spillage from security lighting of structures can significantly increase the visual impact of a project in a rural landscape in a dark- sky context.	Low	Low	Low	Low
<b>Traffic</b>				
Increase in traffic	Low	Low	Low	Low

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
Increase of incidents with pedestrians and livestock	Low	Low	Low	Low
Increase in dust from gravel roads	Low	Low	Low	Low
Increase in road maintenance	Low	Low	Low	Low
Additional abnormal loads	Low	Low	Low	Low
New / Larger access points	Low	Low	Low	Low
DECOMMISSIONING				
<b>Aquatic / Freshwater</b>				
Increased disturbance of aquatic habitat due to the increased activity on the site	Low	Low	Low	Low
Increased sedimentation and risks of contamination of surface water runoff	Low	Low	Low	Low
<b>Agricultural – none identified</b>				
<b>Avifaunal</b>				
The de-commissioning of the PV plant and associated infrastructure will result in a significant amount of movement and noise, which will lead to displacement of priority avifauna from the site due to disturbance. It is highly likely that most priority species will temporarily vacate the site footprint.	Medium	Medium	Medium	Medium
<b>Geotechnical impacts</b>				
<ul style="list-style-type: none"> <li>Decommissioning of the structure will disturb the geological environment.</li> <li>Increase in soil and wind erosion due to clearance of structures.</li> <li>Construction and earthmoving vehicles will displace the soil.</li> <li>Creation of drainage paths.</li> <li>Potential oil spillages from vehicles.</li> <li>Excessive sediments in non-perennial features.</li> </ul>	Medium	Medium	Low	Low

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
<b>Social – no specialist re-assessment undertaken as socio-economic situation has not changed</b>				
Employment during decommissioning	Low (+ve)	Medium (+ve)	Low (+ve)	Medium (+ve)
Increased opportunities for local SMEs	Low (+ve)	Medium (+ve)	Low (+ve)	Medium (+ve)
Increased criminal activity	Low	Low	Low	Low
Loss of employment	Low	Low	Low	Low
Potential impacts of heavy vehicles and construction related activities	Medium	Low	Medium	Low
<b>Heritage / Archaeology</b>				
Visual intrusion into the cultural landscape from construction equipment and decommissioning activities	Low	Low	Low	Low
<b>Palaeontology – none identified</b>				
<b>Visual</b>				
Old, unused structures have the potential to significantly degrade the landscape character.	Medium	Low	Medium	Low
Windblown dust and dust from moving vehicles have the potential to become a significant nuisance factor to local farms around the site and along the access road	Medium	Low	Medium	Low
<b>Traffic</b>				
Increase in Traffic	Medium	Low	Medium	Low
Increase of Incidents with pedestrians and livestock	Medium	Low	Medium	Low
Increase in dust from gravel roads	Low	Low	Low	Low
Increase in Road Maintenance	Low	Low	Low	Low
Additional Abnormal Loads	Low	Low	Low	Low

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
Increase in dust from gravel roads	Low	Low	Low	Low
New / Larger Access points	Low	Low	Low	Low
CUMULATIVE IMPACTS				
<b>Aquatic / Freshwater</b>				
Increased disturbance of aquatic habitat due to the increased activity in the wider area	Low	Low	Low	Low
Degradation of ecological condition of aquatic ecosystems	Low	Low	Low	Low
Increased disturbance of aquatic habitat due to the increased activity in the wider area	Low	Low	Low	Low
<b>Terrestrial Ecology</b>				
Renewable energy development in the wider area around the site will generate cumulative impacts on habitat loss and fragmentation for fauna and flora.	Medium	Low	Medium	Low
<b>Agricultural – compliance statement - none identified</b>				
<b>Avifaunal</b>				
<ul style="list-style-type: none"> <li>Displacement due to disturbance and habitat transformation associated with the construction of the solar PV plant and associated infrastructure.</li> <li>Collisions with the solar panels</li> <li>Entrapment in perimeter fences</li> <li>Electrocutions on the 33kV OHL and in the substations. Collision with the 33kV OHL</li> </ul>	High	Medium	High	Medium
<b>Social – no specialist re-assessment undertaken as socio-economic situation has not changed</b>				
Immigration or potential influx of Job seekers	Medium	Low	Medium	Low
Increased criminal activity	Medium	Low	Medium	Low
Potential impacts associated with the presence of construction workers on local communities	High	Medium	High	Medium

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
Potential impacts of heavy vehicles and construction related activities	Medium	Low	Medium	Low
Visual impact and impact on sense of place	Medium	Low	Medium	Low
The creation of local employment and business opportunities, skills development and training	Medium (+ve)	Medium (+ve)	Medium	Medium (+ve)
Increased opportunities for local SMEs	Medium (+ve)	Medium (+ve)	Medium (+ve)	Medium (+ve)
The impact on tourism	Medium	Low	Medium	Low
The development of infrastructure for renewable energy	Medium (+ve)	High (+ve)	Medium (+ve)	High (+ve)
Increased socio-economic development associated with more available electricity	Medium (+ve)	Medium (+ve)	Medium (+ve)	Medium (+ve)
<b>Heritage / Archaeology</b>				
Damage to or destruction of archaeological sites during construction of the facility, powerlines, access roads and other infrastructure.	High	Low	High	Low
Damage to or destruction of graves during construction of the facility, powerlines, access roads and other infrastructure.	High	Low	High	Low
Visual intrusion into the cultural landscape from construction equipment and new infrastructure	Medium	Medium	Medium	Medium
<b>Palaeontology</b>				
If fossils of scientific value (rare, complete, index fossils) are present they might be destroyed when excavations for foundations commence	Medium	Low	Medium	Low
<b>Visual</b>				
Intervisibility of the proposed PV project with other PV projects could result in massing effects degrading landscape resources. As the viewshed is locally contained, this effect is only likely to result from pool of light sources.	Low	Low	Low	Low
<b>Traffic</b>				

IMPACT	SIGNIFICANCE RATING (negative unless stated)			
	Authorised layout		Proposed Amendment Layout	
	Pre-mitigation	Post-mitigation	Pre-mitigation	Post-mitigation
Increase in Traffic	Medium	Medium	Medium	Medium
Increase of Incidents with pedestrians and livestock	Medium	Medium	Medium	Medium
Increase in dust from gravel roads	Medium	Low	Medium	Low
Increase in Road Maintenance	Low	Low	Low	Low
Additional Abnormal Loads	Medium	Low	Medium	Low
Increase in dust from gravel roads	Medium	Low	Medium	Low
New / Larger Access points	Low	Low	Low	Low

## 7.2 Advantages and disadvantages of the proposed amendment

The proposed amendments result from detailed design refinements informed by engineering consideration and specialist input, including updated Site Sensitivity Verification. These changes aim to improve the project's land-use efficiency, constructability, operation efficiency, and reduced environmental impact, while remaining within the scope and intent of the existing Environmental Authorisation.

### 7.1.1 Advantages

From a design and implementation perspective, the following benefits are anticipated as a result of the proposed amendments:

- Improved design efficiency and layout optimisation: Consolidation of infrastructure such as the on-site substations and BESS from two to one, optimises space use, reduces disturbance, and supports streamlined operations.
- Increased flexibility and efficiency of design: Allowing for both fixed-tilt and tracking systems, and increasing the spacing between PV panel rows enables improved solar energy generation while maintaining the authorised capacity and remaining largely within previously authorised areas.
- Improved constructability and logistics: Changes to the layout of the various infrastructure on site is expected to improve construction flow and movement between various infrastructure on site.
- Corrections to EA and additional detail provided: some of the changes applied for (e.g. the location of the site relative to Beaufort West, and the reference to the grid connection layout in Condition 12 of the EA) relate to correction of errors in the EA, and others (e.g. detail on the substation height) provide additional information relating to the final design that was not previously available.

From an environmental perspective, while the significance of the assessed impacts is not expected to change, the following potential benefits may result from the proposed amendments:

- Reduced vegetation clearing: The revised vegetation clearing method involves strip-clearing only beneath PV rows. This reduces the amount of vegetation cleared (as opposed to the approved layout, which involved narrower row PV spacing and therefore narrower vegetation strips), by allowing natural vegetation to be retained between rows.
- Reduced site rehabilitation requirements: as a result of strip clearing and the retention of vegetation between the rows of PV panels, revegetation and rehabilitation of these areas would not be required, or would be substantially reduced, compared to the authorised project, if it is assumed that the entire area under the PV arrays would be cleared, or slightly reduced, if it is assumed that narrower strips of intact vegetation would be left between PV rows.

### 7.1.2 Disadvantages

No red flags, concerns or significant environmental disadvantages have been identified as a result of the proposed amendments, however, the following considerations are noted:

- An increase in the fenced area for the PV arrays has been introduced to accommodate the wider spacing between solar panel rows, which is intended to optimise energy generation efficiency. While the fenced footprint has expanded, this change does not require additional vegetation clearance and remains largely within the authorised site boundary. The additional areas where the layout for the PV arrays have expanded onto have been confirmed by specialists not to be environmentally sensitive.

## 7.3 Mitigation measures

The mitigation measures and EMPr that were submitted as part of the BAR for the authorised development remain valid, and no additional mitigation measures are proposed by either the EAP or the specialists.

## 8 Environmental Management Programme

The proposed layout amendments have been reviewed by the relevant specialists, who confirmed that they do not introduce any additional or intensified impacts or require additional mitigation or management measures beyond those presented in the Final Basic Assessment Report for the approved layout. Consequently, the findings, impact ratings, and mitigation measures outlined in the original Environmental Management Programme (EMPr), attached as Appendix D remain valid and applicable, and no changes or additions are proposed. The amendments are intended to streamline compliance with the conditions of both the Environmental Authorisation (EA) and the EMPr for Beaufort West Solar Energy Facility (Pty) Ltd. As such, the approved EMPr submitted with the final BAR is considered sufficient, and no revised EMPr has been compiled.

## 9 Environmental Impact Statement

SRK as the EAP is required to provide a qualified opinion on whether the proposed amendments should be authorised and if so, under what conditions. SRK is of the opinion that this Draft Amendment Report complies with the relevant guidelines and contains all the necessary information, as outlined in GN 982, to enable the DFFE to make an informed decision, and to confirm that the application falls within the ambit of a Part 2 Amendment process. Furthermore, SRK (with input from relevant specialists) believes that the proposed amendments will not add to or change the associated impacts, or management measures required to mitigate or enhance these impacts. Authorisation of the preferred proposed layout is therefore supported by both the EAP and the relevant specialists.


### Prepared by

SRK Consulting - Certified Electronic Signature

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612156/1/Rev 1/45784/Report  
8390-75-793-VNAB-09/05/2025  
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Rob Gardiner Pr. Sci. Nat, EAPASA  
Partner, Principal Environmental Scientist Project

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

## Appendices

## **Appendix A: CVs of EAPs**

## **Appendix B: Specialist Reports**

## **Appendix B 1: Avifaunal Specialist Report**

## **Appendix B 2: Transportation Specialist Report**

## **Appendix B 3: Geotechnical Specialist Report**

## **Appendix B 4: Palaeontological Specialist Report**

## **Appendix B 5: Terrestrial Biodiversity Specialist Report**

## **Appendix B 6: Visual Specialist Report**

## **Appendix B 7: Archaeological / Heritage Specialist Report**

## **Appendix B 8: Agricultural Specialist Report**

## **Appendix B 9: Aquatic Ecology Specialist Report**

## **Appendix C: Records of Public Participation**

## **Appendix C 1: Copy of Newspaper Notification**

## **Appendix C 2: IAP Database**

## **Appendix D: Approved Environmental Management Programme**

## **Appendix E: Copies of EA and amendments thereto**

## **Appendix F: Amendment Application Form**

## **Appendix G: Detailed layout maps**

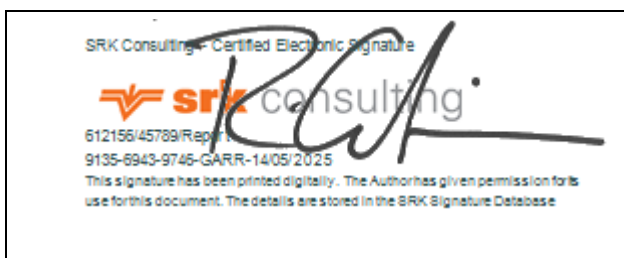
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