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8 April 2025

SRK Consulting (South Africa) Pty Ltd,
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Attention: Ms Rump

Dear Nicola

PART 2 ENVIRONMENTAL AUTHORISATION AMENDMENT APPLICATION FOR THE PROPOSED BEAUFORT WEST SOLAR PV ENERGY FACILITY ON THE REMAINDER OF FARM OUDE VOLKS KRAAL NO. 164, FARM QUAGGAS FONTEIN NO. 166, PORTION 1 AND 3 OF FARM STEENROTSFOUNTAIN NO 168, AND PORTION 10 OF FARM WELTEVREDEN NO. 170, NEAR BEAUFORT WEST IN THE WESTERN CAPE PROVINCE: AQUATIC BIODIVERSITY SPECIALIST ASSESSMENT

Background

The proposed Mulilo Beaufort West Solar PV Energy Facility (SEF) on the Remainder of Farm Oude Volks Kraal No. 164, Farm Quaggas Fontein No. 166, Portion 1 and 3 of Farm Steenrotsfontein No 168, and Portion 10 of Farm Weltevreden No. 170, near Beaufort West in the Western Cape Province, was granted an Environmental Authorisation (EA) in 2023. The proposed changes mainly entail a revision of the footprint of the SEF, within the area previously assessed by me in the original Basic Assessment for the project. The capacity and components of the SEF are not proposed to change, just the configuration of the arrays and various other components within the site, and the area allocated to some of them (e.g. increased access and internal road widths – 8 m and 6 m respectively, increased laydown area (11 ha) and infrastructure areas but also consolidated them on the eastern portion), and inclusion of diesel fuel storage on site (<80 m³).

This aquatic biodiversity impact assessment statement is intended to address the following Terms of Reference that were provided:

- The implications of the proposed amendments, if any, in terms of the potential impacts within your area of expertise;
- An assessment of all impacts (within your area of expertise) related to the proposed amendments, i.e. a re-assessment of the significance (before and after mitigation) of the identified impact(s) considering the proposed amendments (as required in terms of the 2014 EIA Regulations, as

amended), for the construction, operational and decommissioning (where relevant) phases, including consideration of the following:

- Cumulative impacts;
- The nature, significance, and consequence of the impact;
- The extent and duration of the impact;
- The probability of the impact occurring;
- The degree to which the impact can be reversed;
- The degree to which the impact may cause irreplaceable loss of resources;
- The degree to which the impact can be avoided, managed, or mitigated;

Note: If you are of the opinion that the proposed amendments would have no implications in terms of potential impacts within your area of expertise, and that a re-assessment is therefore not required, the inclusion of only the summary impact table in your specialist statement/ report would also be acceptable.

- A statement as to whether the proposed amendment will result in an increased level or change in the nature of the impact.
- Any limitations or assumptions made in your re-assessment;
- An outline of the potential advantages and disadvantages of the proposed amendments in terms of potential impacts (within your area of expertise), if any.
- The specialist statement/ report must please include an impact summary table outlining the findings of your re-assessment in terms of the above-mentioned assessment criteria.
- Your specialist statement/ report must include the impact summary tables for the proposed amended project.
- Confirm whether the proposed amendment will require any changes or additions to the mitigation measures or impact management outcomes recommended in your specialist report for the authorised project. If so, provide a detailed description of the recommended measures to ensure avoidance, management and mitigation of impacts associated with the proposed amendments.
- A concluding statement regarding the acceptability of the proposed amendments to the EA and Final Layout Plan.

Summary of findings of Aquatic Biodiversity Specialist Assessment for the project, dated November 2022

The aquatic features within the study area consist of the Kwagga River, a tributary of the Gouritz River System. The ecological habitat integrity of the rivers within the study area is largely natural to moderately modified. The larger watercourses in the study area have a high ecological importance and sensitivity while the smaller tributaries/drainage features are of moderate ecological importance and sensitivity. The recommended ecological condition of the aquatic features in the area would be that they remain in their current ecological condition and should not be allowed to degrade further.

The catchment of the Kwagga River is mapped as an Upstream Sub-catchment There are also natural FEPA wetlands mapped in the southeastern extent of the study area, outside of the areas indicated for the proposed PV facilities. These wetlands are also included in the National Wetland Map as Lower Karoo Bioregion depressions with an Ecosystem Threat Status (2018) of Least Concern. The mainstem of the Kwagga River, particularly in its lower reach where instream wetland habitat occurs, is mapped

as an aquatic Critical Biodiversity Area (CBA)s (Figure 6) with the wider river corridor also being mapped as a terrestrial CBA. All of the remaining watercourses are mapped as aquatic Ecological Support Areas that are not essential for meeting biodiversity targets, but that play an important role in delivering ecosystem services. The ecological functioning of these watercourses should not be compromised by the proposed project activities.

The proposed layout for the project avoids all mapped natural FEPA wetlands and aquatic CBAs. There is however a pan mapped in the eastern extent of the proposed PV facilities.

*The Screening Tool has mapped the mainstem of the Kwagga River and the mapped wetlands as being of very high sensitivity while the remainder of the site is considered of low Aquatic Biodiversity Combined Sensitivity. This assessment thus largely concurs with the **Very high/high** Aquatic Biodiversity Combined Sensitivity mapping of the screening tool for the Kwagga River and the large pans south of the river. The other smaller watercourses, as well as the recommended buffer areas (100m for the larger streams and 30m for the smaller watercourses), are considered **Low** Aquatic Biodiversity Combined Sensitivity.*

With mitigation, the potential freshwater impacts of the proposed PV Facilities for the construction, operation and decommissioning phases are likely to be low. One can also expect that the cumulative impact of the proposed project would not be significant provided mitigation measures are implemented. In particular, while the current proposed layout has taken into account the initial specialist constraints mapping, the pans in the eastern extent of the site had not been mapped and also need to be considered in a revised layout.

Impact Statement

Based on the findings of this specialist assessment, there is no reason from a freshwater perspective, why the proposed activity (with the implementation of the above-mentioned mitigation measures) should not be authorized with the proposed layout change. The PV facilities are in general located where limited aquatic features occur.

The risk assessment determined that the proposed development of the WEF poses a low risk of impacting aquatic habitat, water flow and water quality. The assessment assumes that the proposed layout will be changed to avoid the depression wetlands in the eastern extent of the site. The water use activities associated with the proposed project could potentially be authorised through the general authorisations for Section 21(c) and (i) water uses. A Water Use Licence may however be required for the abstraction of water for the PV Facility which would require that an application for a WUL be submitted to the Department of Water and Sanitation (DWS) for the entire project-related activities.

A summary of the original assessment of the potential impacts of the proposed activities and the associated recommended mitigation measures is provided on the following page

Table 1. Summary Impact Table for the Original Aquatic Biodiversity Specialist Assessment – Construction Phase:

Environmental Parameter	Nature	Significance Before Mitigation	Recommended Mitigation Measures	Significance After Mitigation
Construction Phase				
Loss of aquatic habitat and biota	Disturbance and possibly loss of aquatic habitats within the watercourses with the associated impact on sensitive aquatic biota	Low negative	Avoid disturbing aquatic habitats	Low negative
Aquatic ecosystem integrity	The removal of aquatic vegetation has the potential to reduce the ecological integrity and functionality of the watercourses; and alien vegetation infestation within the aquatic features due to disturbance.	Low negative	Minimise any works within aquatic ecosystems; Rehabilitate disturbed aquatic habitats by revegetating with suitable local indigenous vegetation, make sure that any construction materials brought onto the site are certified to be free of alien plant seed; Rehabilitate disturbed aquatic habitats once construction works are complete.	Low negative
Stressed water resources	Demand for water for construction could place stress on the existing available water resources.	Low negative	The water should be obtained from an existing water allocation to the property or should be provided from a viable water source for construction purposes.	Low negative
Flow modification	Road crossing structures if not adequately designed could impede flow in the watercourses.	Low negative	The road crossing structures should be designed in such a manner as to not impede flow in the watercourses. For this area, a low water crossing, and concrete slab through the watercourses are preferred.	Low negative
Water quality	Increased sedimentation and risks of contamination of surface water runoff during construction	Low negative	Construction near sensitive aquatic features should preferably be undertaken in the dry season; if necessary, sediment traps should be placed downstream of works to capture sediment; Construction sites and laydown areas should be placed at least 30m away from the delineated aquatic features; Good housekeeping measures should be implemented at the construction sites that are set out in the EMPr and monitored by an appointed ECO for the project.	Low negative

Table 2. Summary Impact Table for the Original Aquatic Biodiversity Specialist Assessment – Operation and Decommissioning Phases:

Environmental Parameter	Nature	Significance Before Mitigation	Recommended Mitigation Measures	Significance After Mitigation
Operation Phase				
Loss of aquatic habitat and biota	Ongoing disturbance of aquatic features and associated vegetation along access roads or adjacent to the infrastructure that needs to be maintained	Low negative	The moderate to high-sensitivity aquatic habitats should be avoided in the layout design such that it is only the low-sensitivity habitats that would be disturbed during construction. The disturbance of these habitats would only result in a slight alteration to aquatic ecosystems and processes.	Low negative
Aquatic ecosystem integrity	Modified runoff characteristics from hardened surfaces at the PV facilities and the substation as well as along the access roads that have the potential to result in the erosion of hillslopes and watercourses	Low negative	Develop a stormwater management plan for the proposed development that addresses the stormwater runoff from the developed site.	Low negative
Stressed water resources and water quality impacts	Possible increase in water consumption and potential for water quality impacts (such as contamination from sewage generated onsite) as a result of the operation of the site	Low negative	The water consumption of the proposed PV is low and unlikely to result in any water use requirement that is more than the General Authorisation for groundwater use. Nevertheless, a sustainable water supply should be sought. The sewage generated within the site should be discharged to a conservancy tank that is properly serviced and the content timeously evacuated to a nearby wastewater treatment works.	Low negative
Decommission Phase				
Loss of aquatic habitat and biota	Increased disturbance of aquatic habitat due to the increased activity on the site	Low negative	Minimise works within aquatic ecosystems as far as possible. If the layout of the WEF has avoided these areas, the decommissioning of the WEF would also be able to avoid aquatic habitats on the property. Rehabilitate disturbed areas.	Low negative
Aquatic ecosystem integrity	Increased sedimentation and risks of contamination of surface water runoff	Low negative	Decommission works near aquatic features should preferably be undertaken in the dry season; if necessary, sediment traps should be placed downstream of works to capture sediment; Laydown areas should be placed at least 30m away from the delineated aquatic features; Good housekeeping measures should be implemented for the decommissioning activities that are set out in the EMP and monitored by an appointed ECO for the project.	Low negative

Table 3. Summary Impact Table for the Original Aquatic Biodiversity Specialist Assessment – Cumulative Construction, Operation and Decommissioning Phases:

Environmental Parameter	Nature	Significance Before Mitigation	Recommended Mitigation Measures	Significance After Mitigation
Construction Phase				
Loss of aquatic habitat and biota	Increased disturbance of aquatic habitat due to the increased activity in the wider area	Low negative	Minimise works within aquatic ecosystems as far as possible. Construct in the dry season. Rehabilitate disturbed areas. Rationalise infrastructure as far as possible by sharing the infrastructure of using existing disturbed areas. Manage stormwater impacts.	Low negative
Operation Phase				
Aquatic ecosystem integrity	Degradation of ecological condition of aquatic ecosystems	Low negative	Monitor and manage for impacts such as alien vegetation growth and erosion. Limit disturbance and rehabilitate disturbed areas. Ensure there is sufficient stormwater management to prevent erosion along roads. Ensure road crossings structures are properly designed to not result in blockage in the watercourses or erosion. Limit and monitor water use.	Low negative
Decommission Phase				
Loss of aquatic habitat and biota	Increased disturbance of aquatic habitat due to the increased activity in the wider area	Low negative	Decommission works near aquatic features should preferably be undertaken in the dry season. Minimise disturbance and rehabilitate.	Low negative

Comment on any changes to the aquatic ecosystems within the site.

The proposed project is located to the south of Beaufort West. Land use comprises natural areas and grazing of livestock. A revisit to the site was conducted on 24 February 2025, following recent rainfall. This land use has not changed since the initial assessment, nor have the aquatic features associated with the project. It can thus be said that no change in the ecological condition (largely natural to moderately modified) or the ecological importance and sensitivity (Kwagga River high and minor tributaries moderate) of these aquatic features has taken place since the initial assessment. **The ecological integrity of the river and wetland habitat at the site thus appears to be essentially unchanged from the 2022 assessment.**

Comment on Site Sensitivity Verification

The Screening Tool (shown below with the preferred amended layout for the PV areas) has indicated that the wider area surrounding the site is mapped as being of low Aquatic Biodiversity Combined Sensitivity with the larger Kwagga River and the depression wetlands to the southeast being of very high sensitivity. The areas of high sensitivity are mostly linked to the depression wetlands in the southeast of the project area of influence that have been included in the National Wetland Map version 5 (NWM5), National Freshwater Ecosystem Priority Area (NFEPA) wetland mapping and in the Western Cape Biodiversity Spatial Plan (WCBSP) as aquatic Critical Biodiversity Areas (CBAs). Sections of the Kwagga River are mapped as aquatic CBAs and Ecological Support Areas. The approved PV footprints avoided all of the high-sensitivity areas however the amended PV footprint extends into some of the areas. These areas were specifically ground-truthed in the recent 24 February 2025 site visit.

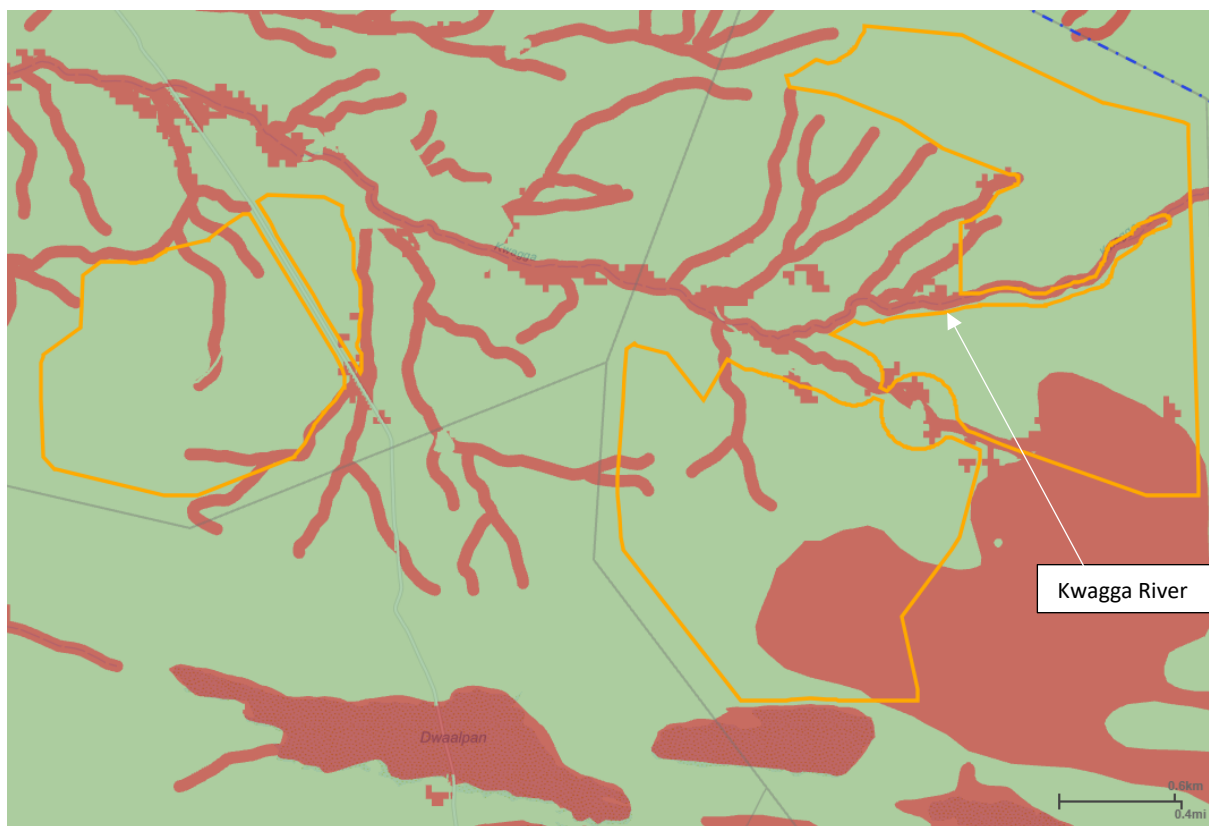


Figure 1. Screening Tool mapping for Aquatic Biodiversity Sensitivity with the proposed amended PV footprint indicated by the orange polygons.

Specialist review of the proposed amendment

The aspects of concern with regards to the proposed amendment are the change to the footprint of the PV areas and the associated infrastructure areas that include the laydown area, O&M buildings, construction camp, Eskom switching station, BESS and IPP substation. The 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 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. This area in the ground-truthing was found to often be a higher-lying area with areas 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 have been mapped as aquatic 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.

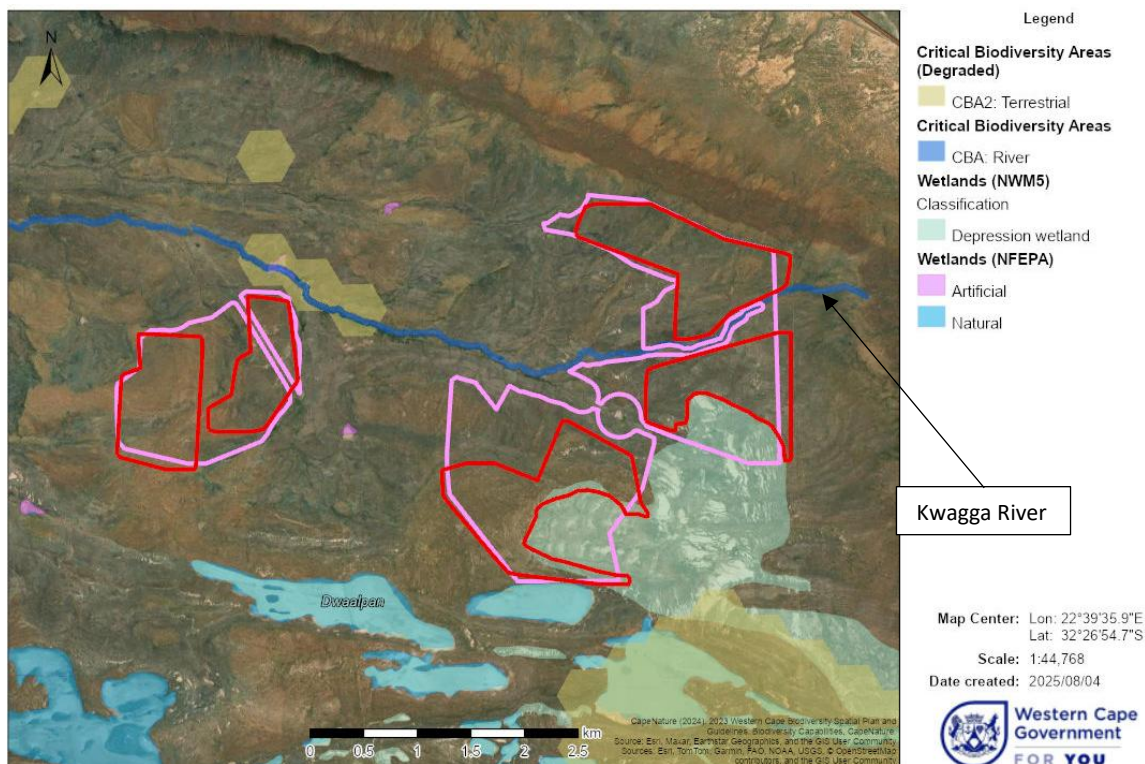


Figure 2. Mapping of the 2023 WCBSP CBAs, NWM5 and the NFEPA Wetlands for the proposed project area of influence.

Figure 3 shows the proposed amended layout for the Beaufort West SEF, together with the mapped aquatic features as well as the recommended setback areas. I, Antonia Belcher who undertook the initial aquatic biodiversity assessment for the proposed project, confirm that the proposed amended layout does not alter the findings of the aquatic ecosystem impact assessment dated November 2022 i.e. **the proposed amended layout slightly increases the risk to the aquatic ecosystems as it is closer to the ground-truthed and mapped features, but does not result in any significant increase in level or change in the nature of impacts. The mitigation measures provided in the original aquatic ecosystem assessment report are deemed sufficient to manage the increase in risk and still maintain the ecosystems in their current ecological state, providing the same level of ecosystem goods and services.**

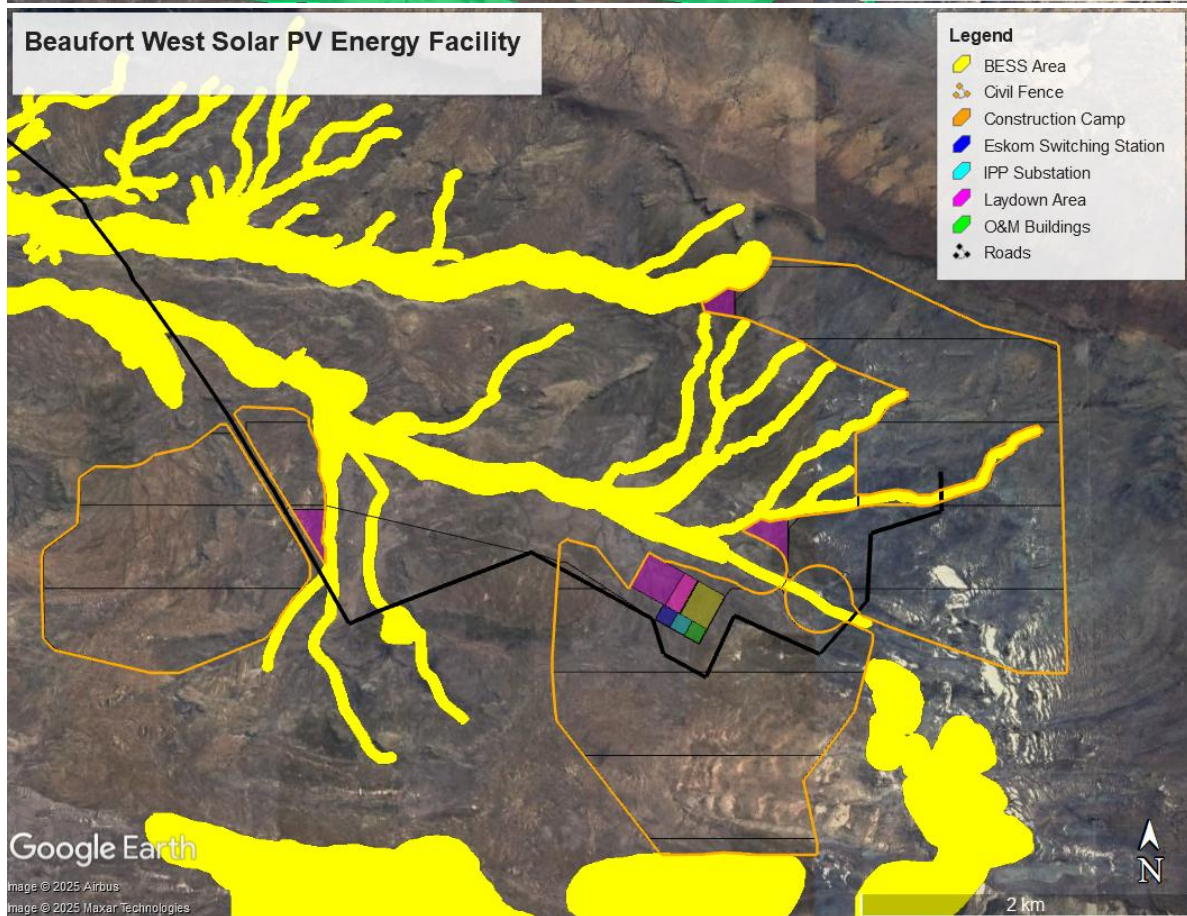
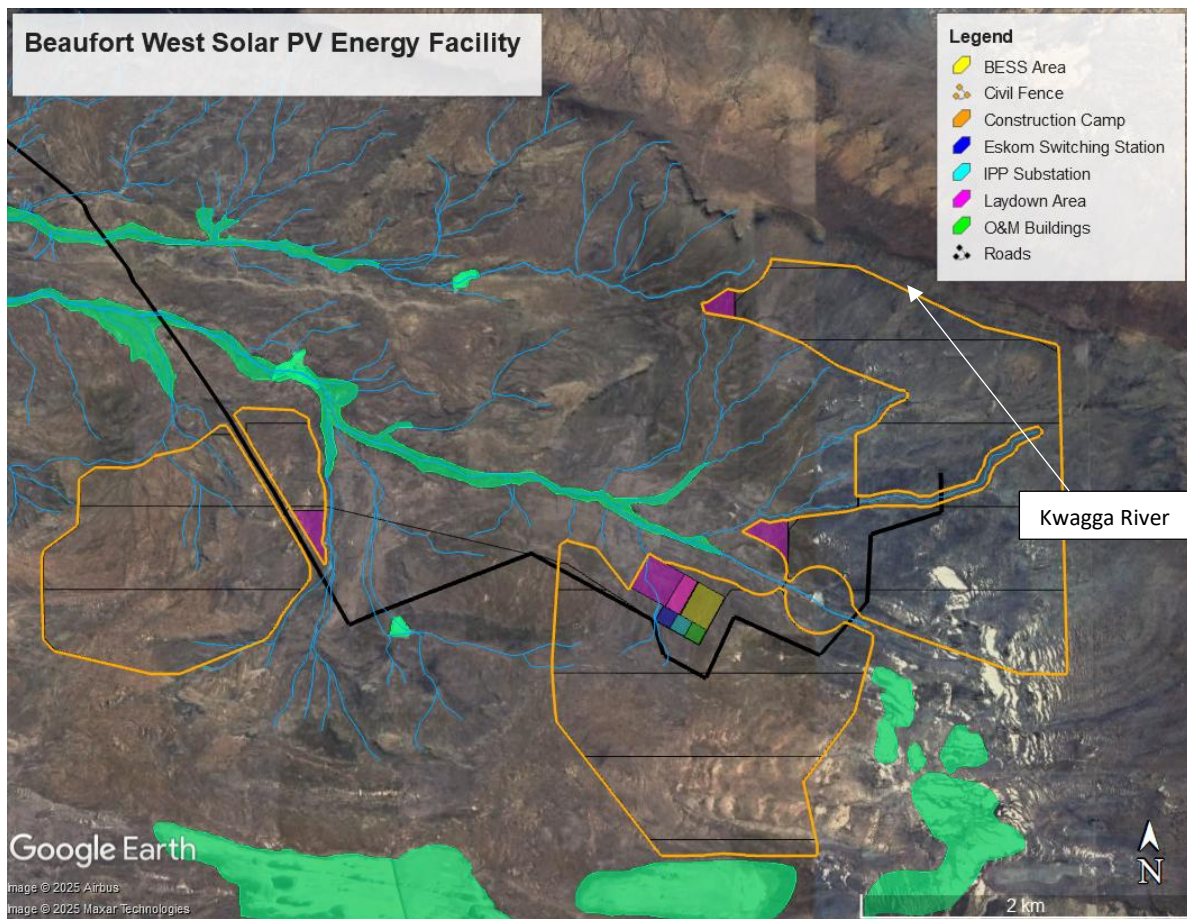


Figure 3. Google Earth image with the proposed amended layout for the project, shown together with the mapped aquatic features (top image) and the recommended buffer or setback areas (bottom image).

Comment on the proposed alternatives

In terms of the proposed alternative layouts, the Preferred alternative is preferred to all of the other alternative layouts proposed that would result in the loss of the very upper reaches of the Kwagga River which is mapped as an aquatic CBA in the 2023 WCBSP. The figures below show a comparison of the preferred and alternative layouts as well as the additional alternatives for the eastern portion of the project.

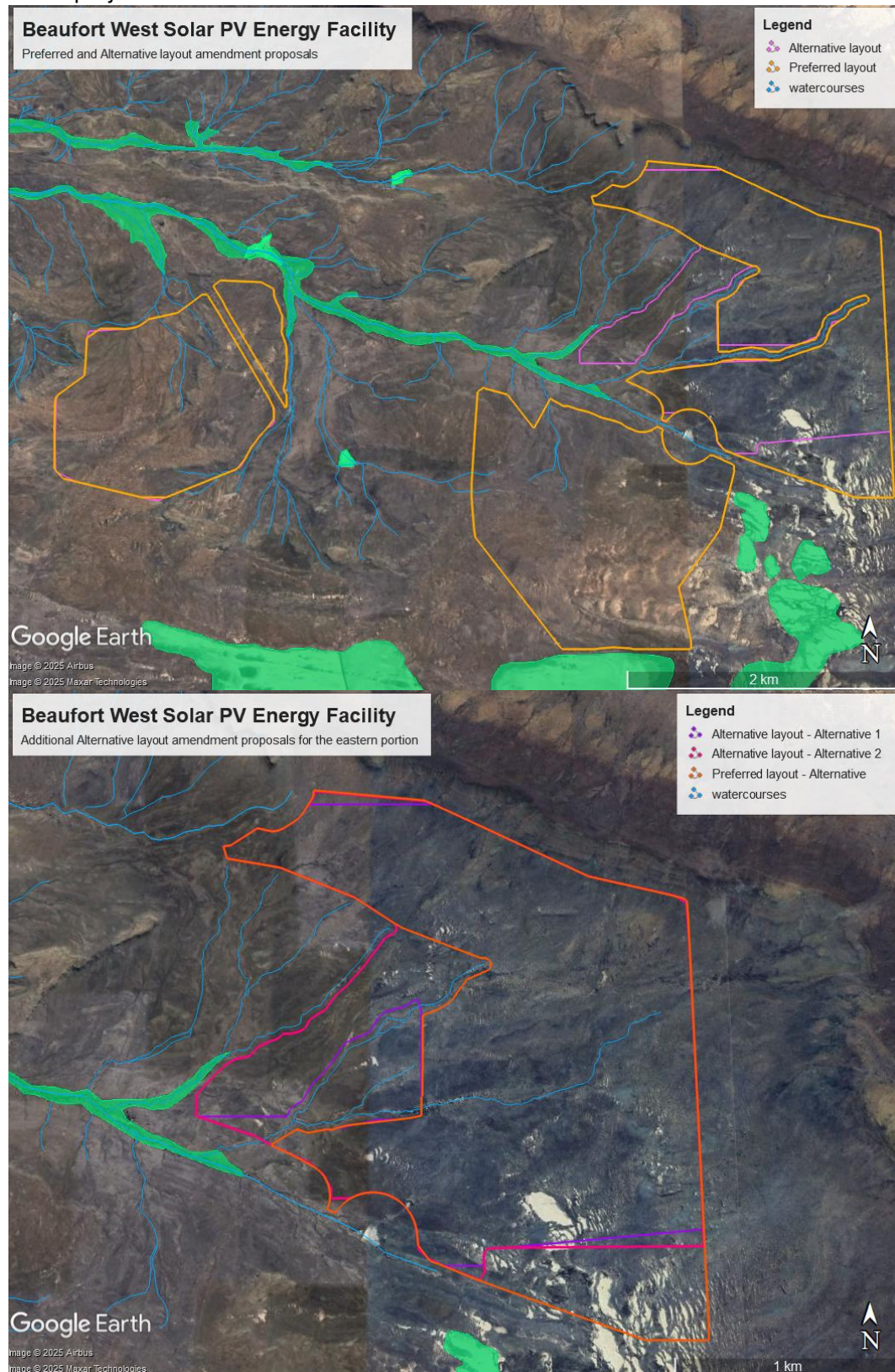


Figure 4. Google Earth image with the proposed amended layout alternatives for the project, shown together with the mapped aquatic features.

General comment on impact significance

No significant changes to the baseline environment have occurred since the previous assessment, and the potential aquatic impacts are well understood. In addition, the impact of the proposed amended layout will not change in significance from that previously assessed. **The assessed impact ratings (Low with mitigation) are thus not likely to alter because of the proposed amendment.**

Comment on Cumulative Impacts

There are several renewable energy projects within a 30km radius of the Beaufort West SEF. Figure 5 shows the renewable energy projects within a 30 km radius of the site and the details are provided in Table 4. The projects primarily occur in the Gamka River Catchment. Cumulative impacts on this river system, given that they are the same catchment, are possible if they are not adequately mitigated. The nature of the proposed projects and their associated infrastructure however allows them to have minimal impact on the surface water features since the project infrastructure can be placed far enough away from the freshwater features to not impact them as is the case for this project.

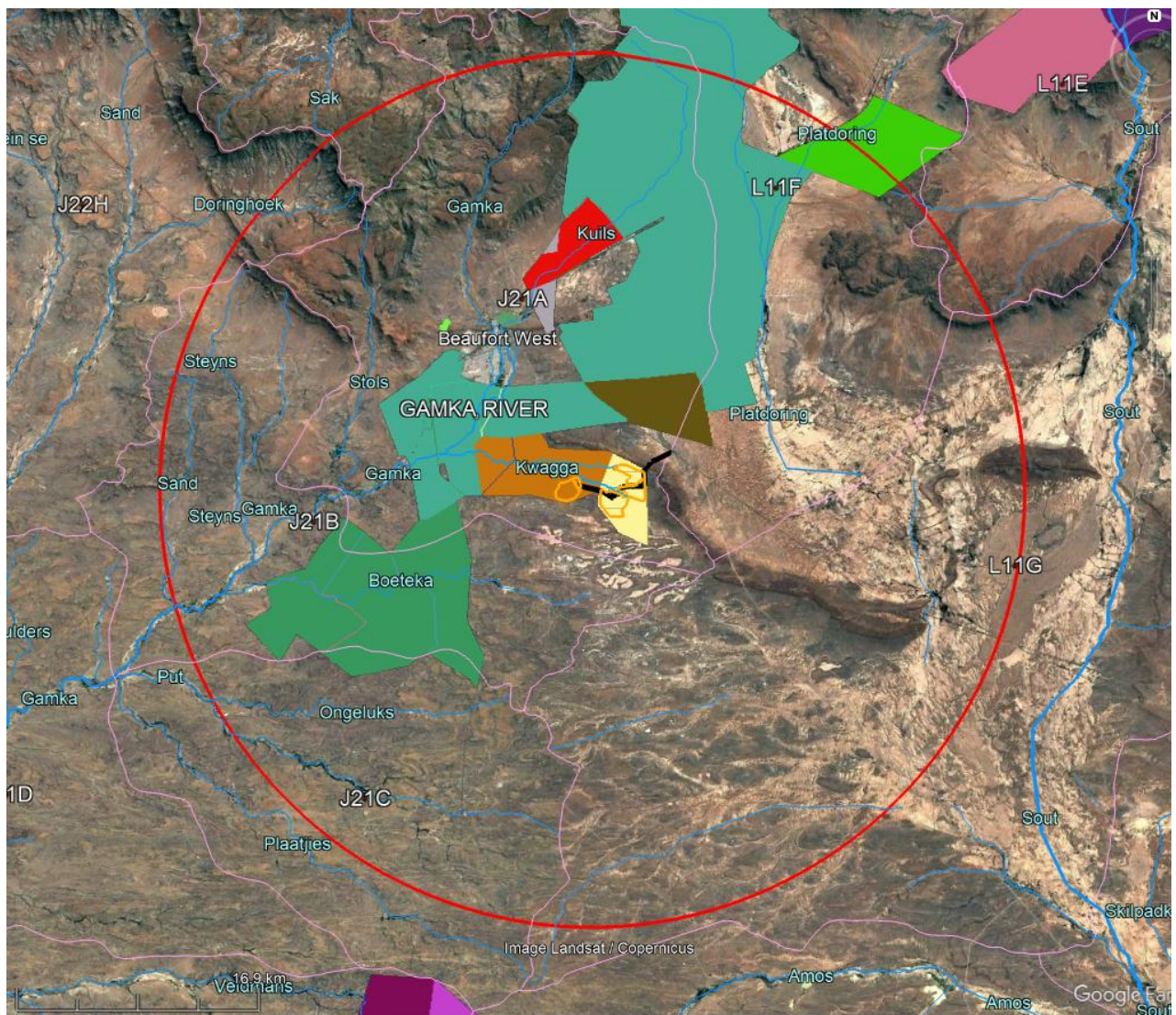


Figure 5. Image showing the renewable energy projects and river systems within 30 km of the proposed project. The project details are provided in the table on the following page.

Table 4. Details of other Renewable Energy Projects within 30 km of the project.

DEA_REF	14/12/16/3/3/1/2571	14/12/16/3/3/1/2336	14/12/16/3/3/1/2522	14/12/16/3/3/1/2336	14/12/16/3/3/1/2921	14/12/16/3/3/1/2332	12/12/20/2286/AM4
EIA_PROCES	IEM-REDZ	IEM-REDZ	IEM-REDZ	IEM-REDZ	IEM-REDZ	BAR	Amendment
PROJ_TITLE	The proposed Jessa S grid connection near Beaufort West in the Western Cape	Development of the 120km up to 400KV Nuweveld gridline west of the town Beaufort West in the Western Cape Province	Proposed Salsola PV in the Western Cape Province	Development of the 120km up to 400KV Nuweveld gridline west of the town Beaufort West in the Western Cape Province	Proposed Solar Photovoltaic Facility, "Rhino" on Rem of Farm Rhinosterkop 155 and "Sunnyside" on Farm 400, Beaufort West, Western Cape Province	Proposed 75MW Beaufort West Photovoltaic (PV) Project, Western Cape Province	The Proposed Beaufort West Photovoltaic Park on Portion 9 of Farm 161 Kuilspoor in The Western Cape Province
APP_RECEIV	2022/06/20	2021/05/19	2022/04/13	2021/05/19	2024/01/31	2021/05/13	2014/07/31
APPLICANT	ENERTRAG South Africa Pty (Ltd)	Red Cap Nuweveld North (Pty) Ltd	Salsola PV (Pty) Ltd	Red Cap Nuweveld North (Pty) Ltd	K2022578692 South Africa (Pty) Ltd	Beaufort West Photovoltaic (Pty) Ltd	EAB Astrum Energy (Pty) Ltd

The significance rating for cumulative impacts would remain unchanged with the proposed amendment. ***One could thus expect that the cumulative impact of the proposed project would not be significant provided mitigation measures as originally recommended and included in the existing authorisation process are implemented.***

Recommendations

I, Antonia Belcher who undertook the initial aquatic biodiversity assessment for the project proposed to be amended, confirm that the proposed amendments and changes to the layout do not alter the findings of the aquatic ecosystem impact assessment dated November 2022. Accordingly, the proposed amendment will not increase the level or change the nature of the impacts.

In addition, the mitigation measures stated in the aquatic ecosystem impact study dated November 2022 that have been taken up in the existing authorisation for the PV facility remain the same, with **no additional mitigation measures being required.**

Concluding Statement

The proposed amended layout plan for the Beaufort West Solar PV Energy Facility is acceptable in terms of the potential aquatic ecosystem impacts. The level or nature of these impacts is not expected to change in any way because of the proposed amendment to the authorised layout plan. The potential aquatic ecosystem impacts for the proposed layout would thus remain of low significance. No new mitigation measures are required because of the proposed amendment to the layout plan. Therefore, there is **no objection to the proposed amendments to the Environmental Authorisation.**

Please feel free to contact me should you have any questions regarding the above.

Kind regards



Toni Belcher

Aquatic Ecologist (SACNASP 005681)