

Vanderkloof Solar: Project BESS 5-1 - Site Layout

Annex
Goemmansberg
0_634

Goedman's
Berg 0_39

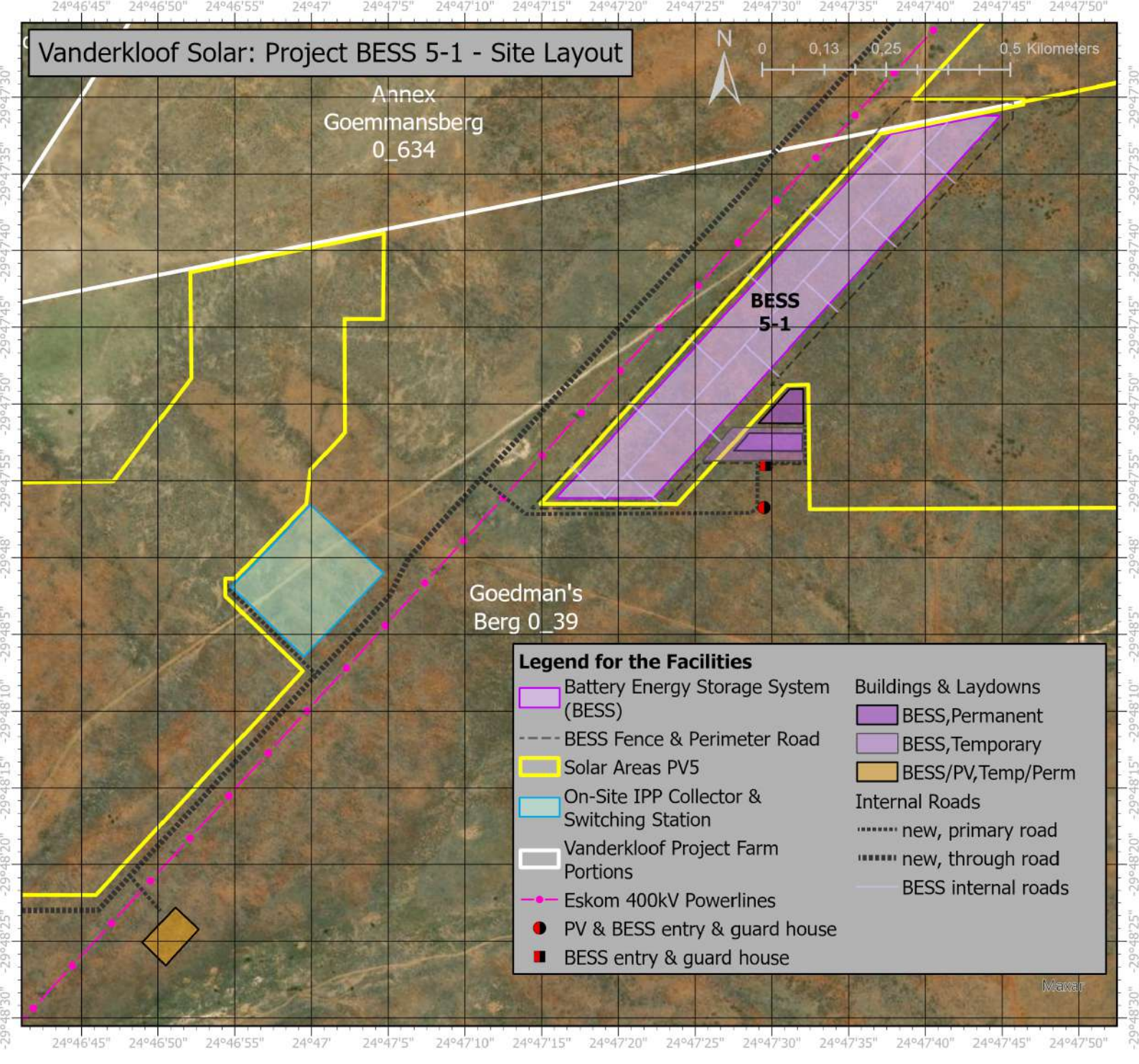
BESS
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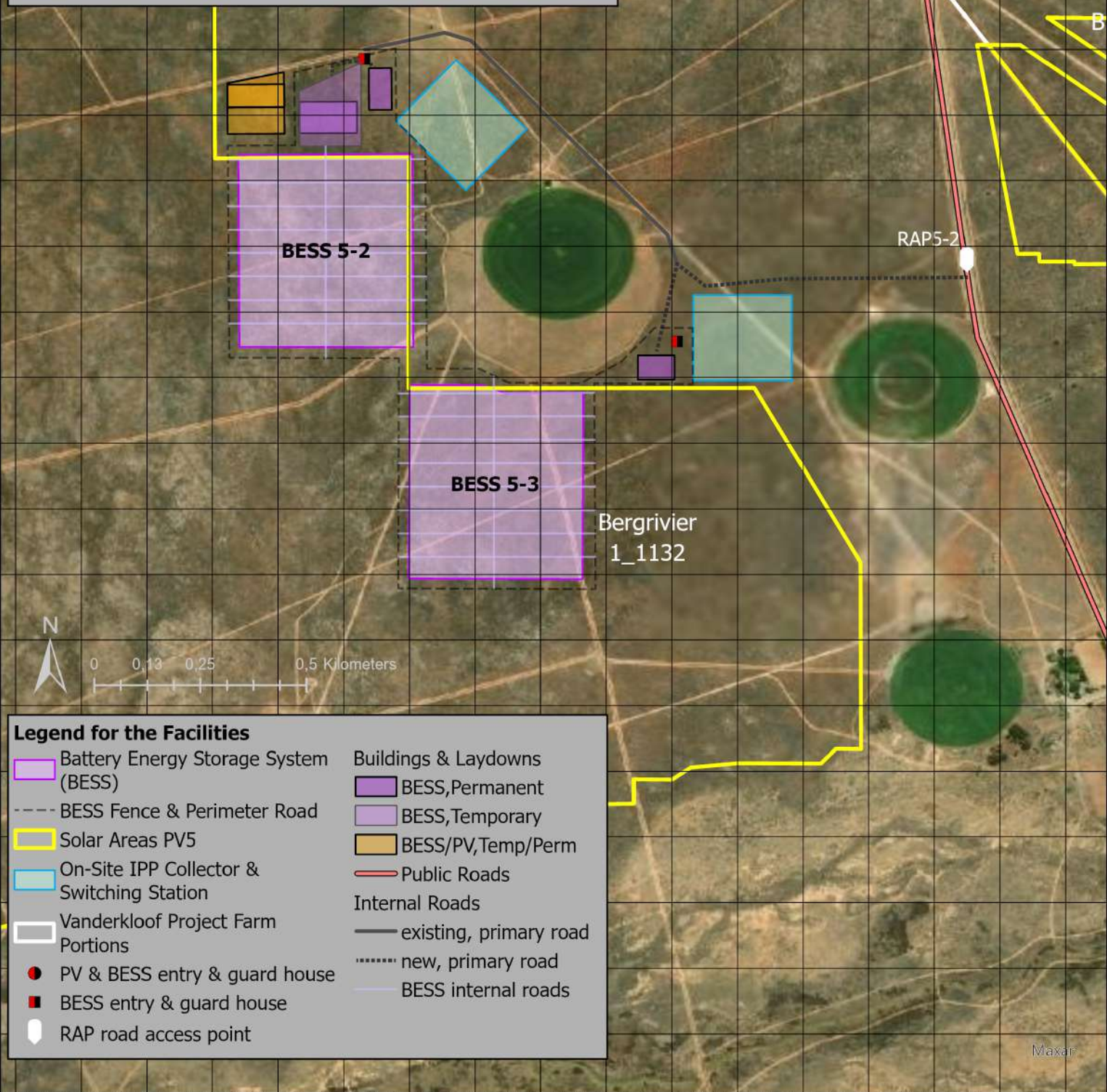
Legend for the Facilities

Battery Energy Storage System (BESS)	Buildings & Laydowns
BESS Fence & Perimeter Road	BESS, Permanent
Solar Areas PV5	BESS, Temporary
On-Site IPP Collector & Switching Station	BESS/PV, Temp/Perm
Vanderkloof Project Farm Portions	Internal Roads
Eskom 400kV Powerlines	new, primary road
PV & BESS entry & guard house	new, through road
BESS entry & guard house	BESS internal roads

Mawar



Vanderkloof Solar: Project BESS 5-2 - Site Layout



Legend for the Facilities

Battery Energy Storage System (BESS)	Buildings & Laydowns
BESS Fence & Perimeter Road	BESS, Permanent
Solar Areas PV5	BESS, Temporary
On-Site IPP Collector & Switching Station	BESS/PV, Temp/Perm
Vanderkloof Project Farm Portions	Public Roads
PV & BESS entry & guard house	Internal Roads
BESS entry & guard house	existing, primary road
RAP road access point	new, primary road
	BESS internal roads

Maxar

Vanderkloof Solar: Project BESS 5-1 - Site Layout

Legend for the Sensitivities

- Aquatic High Sensitivity with 10m buffer
- High Terrestrial Habitat Sensitivity
- Heritage Sensitive areas with 30m buffers
- Agricultural Very High - Centre Pivots, High Crop lands
- Avifauna Habitat Sensitivity
 - High
 - Eagle Nest seasonal buffer of 2.5km
 - Eagle Nest no-go buffer of 1km
- Visual Sensitivity
 - Not suitable
 - Not recommended

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BESS
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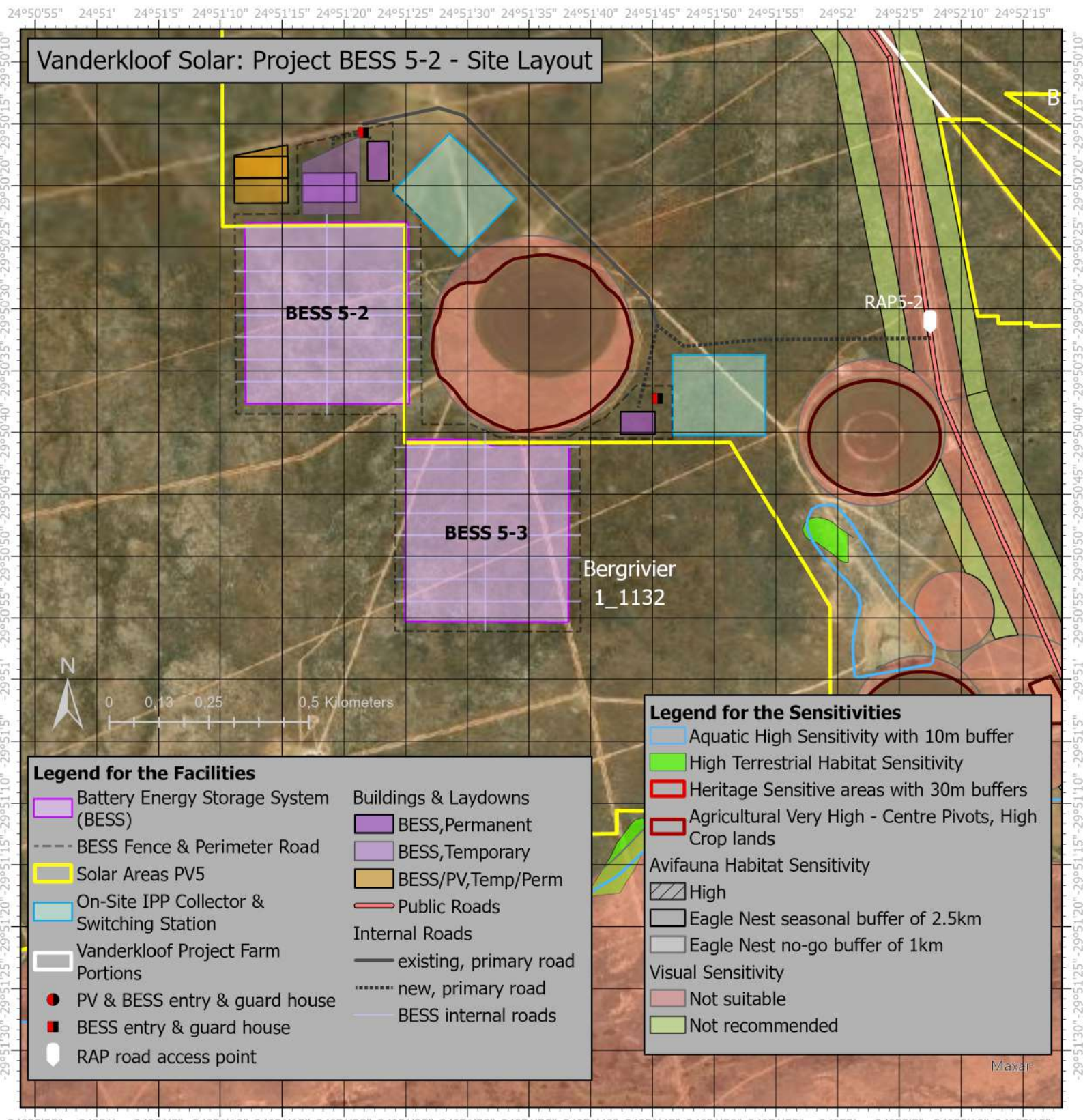
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Berg 0_39

Legend for the Facilities

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- Solar Areas PV5
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- PV & BESS entry &
- BESS entry & guard
- Buildings & Laydowns
 - BESS, Permanent
 - BESS, Temporary
 - BESS/PV, Temp/Perm
- Internal Roads
 - new, primary road
 - new, through road
 - BESS internal roads

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Vanderkloof Solar: Project BESS 5-2 - Site Layout



Legend for the Facilities

Battery Energy Storage System (BESS)	Buildings & Laydowns
BESS Fence & Perimeter Road	BESS, Permanent
Solar Areas PV5	BESS, Temporary
On-Site IPP Collector & Switching Station	BESS/PV, Temp/Perm
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NOTES

<p>All areas outside defined development areas (fenced areas) are considered no-go areas for construction, apart from linking, linear structures, like roads and the EGI. The EGI will be applied for and assessed as part of a separate environmental application.</p>
<p>Internal roads of 4.5 m wide, will be restricted to development areas, or inter-connect PV footprints and other project facilities. Primary roads will have a width of 8m and give heavy-vehicle access to each laydown and the site buildings.</p>
<p>MV cabling to be installed underground within development areas or, where possible, follow roads indicated as “(wide)”. Note that these “wide” roads are still 4.5 wide roads but have a reserved total width of 20m to allow trenching for cable routes. The trenching is for up to 33kV cables and no deeper than 1 meter and about 30cm wide with topsoil re-instatement. Two watercourse crossings will possibly need conduit for cabling, cables will cross watercourses where the road crossing occurs</p>
<p>DC cabling will be installed underground within development areas or attached to PV structures.</p>
<p>Inverters/Transformers and mini-substations are to be distributed within the development areas.</p>
<p>Building footprints include space for Offices, Operations Control Room, Workshops, each with parking and ablutions.</p>
<p>Laydown footprints show temporary larger footprints, which will be reduced to the smaller permanent footprints after construction.</p>
<p>Guard House points will be entry gates and have guard houses up to 200m² and include parking and ablutions at each.</p>
<p>Accommodation footprints will be larger during construction and a part will remain permanently for operations phase on-site accommodation. Accommodations will be shared for the PV and BESS projects.</p>
<p>These footprints include parking and ablutions.</p>
<p><u>Watercourse crossings.</u></p> <ul style="list-style-type: none"> - Access roads bridges. There are two existing narrow bridges on public road S129 that will need upgrading or a second, temporary low level crossing with culverts for construction phase heavy vehicles. - Existing farm access, private road from RAP 1 to PV and BESS projects 1, 2, and 5-1 may need a low level crossing for trucks, in case of rain. - Internal new 4.5m wide road from PV2-1 to PV2-2 and PV5-1- to PV5-1
<p>Fences/Development areas are outside of highly sensitive areas and the PV or buildings are set back 7m from fence lines. Along fence lines, in the 7m gap there will be perimeter 4.5m wide roads. The fence and road can serve as firebreaks. The position and width of firebreaks will be determined as part of the detailed design of the facility</p>
<p>The IPP side of the Collector/Switching On-site Substations are within the fence of each project (note that this demarcation is approximate and will be subject to Eskom’s requirements)</p>