

Appendix A - Maps

Appendix A1: Locality Maps



Figure 1: Indication (red pin and line) of electricity line locality relative to major roads and local town (Dealesville, to the south). Proposed Visserspan Grid Connection development will facilitate tie-in of Visserspan Solar photovoltaic (PV) facilities (Projects 1 to 4) with the national (Eskom) grid. Evacuated power will be generated via four PV facilities on Visserspan Farm No. 40, Tokologo Local Municipality, Lejweleputswa District Municipality, Boshoff Registration Division, Free State Province.

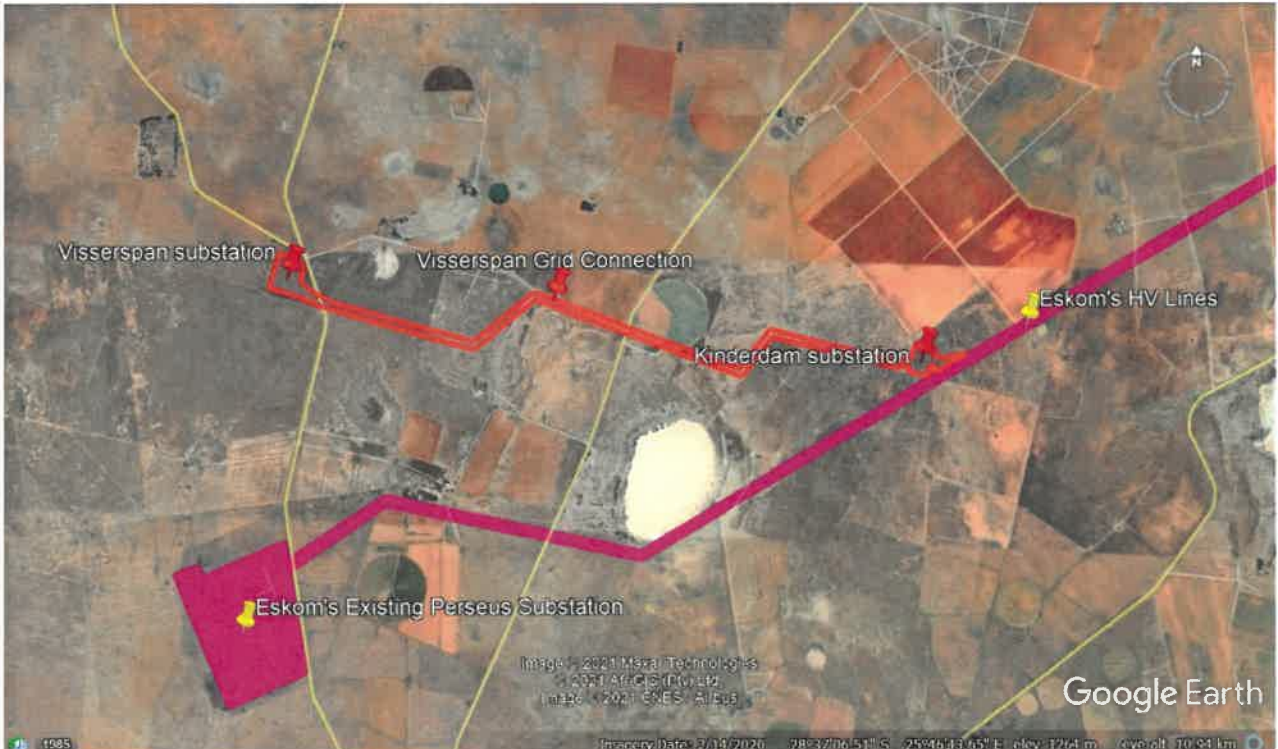


Figure 2: Indication (red outline) of footprint of proposed Visserspan Grid Connection development. Existing Eskom high voltage (HV) powerlines and Perseus substation indicated in purple. Proposed development consists of a substation on Visserspan Farm (total maximum footprint including laydown area = 7.45ha) and a potential substation near the tie-in/connection to the Eskom grid on Kinderdam Farm (total maximum footprint including laydown area = 6.11ha). Proposed development length from western boundary of Visserspan substation to point of tie-in at western boundary of Kinderdam substation footprint = approximately 6,5km



Figure 3: Indication of property (yellow pin and outline) where solar power will be generated utilising four 75MW to 100MW PV facilities i.e. total power to be produced on Visserspan Farm will be not more than 400 MW. Evacuated power will emanate from Visserspan Farm No. 40, Tokologo Local Municipality, Lejweleputswa District Municipality, Boshoff Registration Division, Free State Province and run towards the east (linear route indicated in red).



Figure 4: Indication of Visserspan Farm No. 40 (yellow pin and outline) where solar PV facilities will be located, relative to existing Eskom HV tie-in lines (indicated in purple), Eskom's Perseus substation (indicated in purple), the town of Dealesville and regional roads. Proposed Visserspan, grid connection overhead electricity power line (indicated in red) will run in an approximate east-west plain Vissersapan Farm to facilitate tie-in of Visserspan Solar photovoltaic (PV) facilities with the national (Eskom) grid.

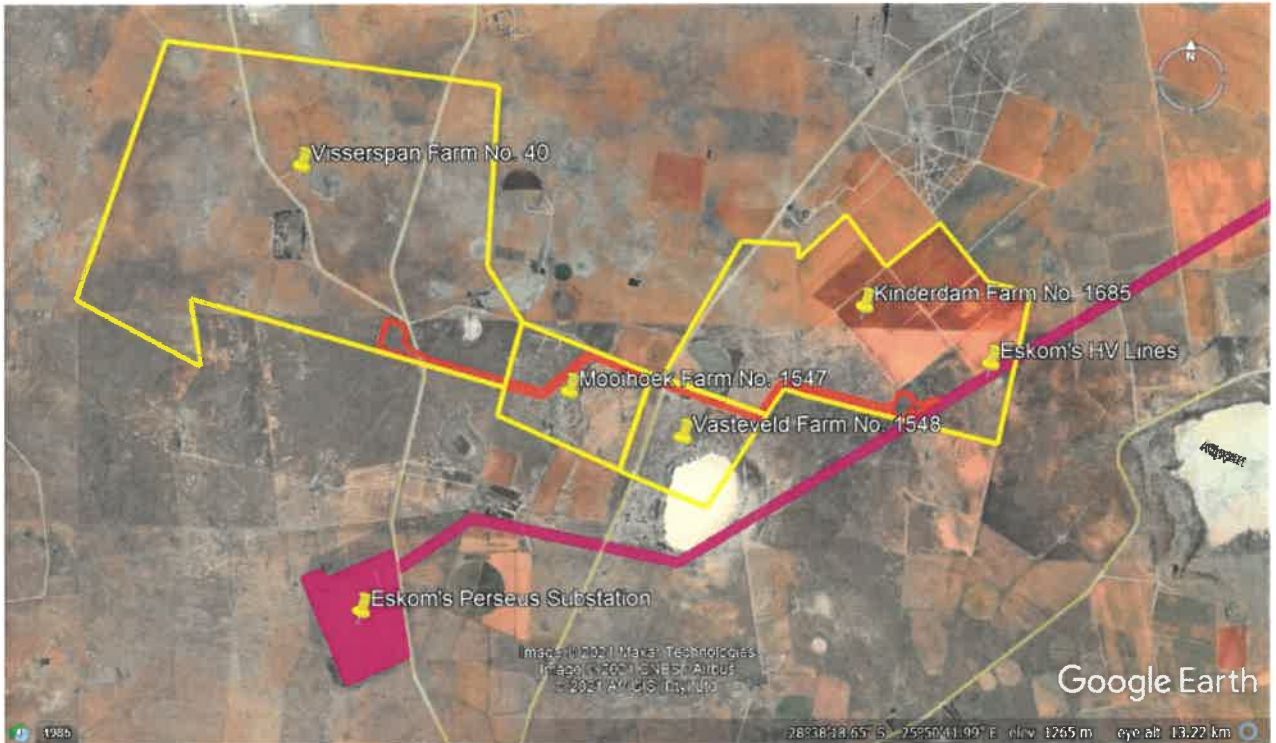


Figure 5: Indication (yellow outlines) of four properties affected by proposed development viz. (from west to east) Visserspan Farm No. 40, Mooihoek Farm No. 1547, Vasteveld Farm No. 1548 and Kinderdam Farm No. 1685. Existing Eskom servitude containing 400kV and 275 kV overhead powerlines, as well as existing Eskom Perseus substation indicated in purple. Proposed Visserspan, Grid Connection development (overhead power line) indicated in red.

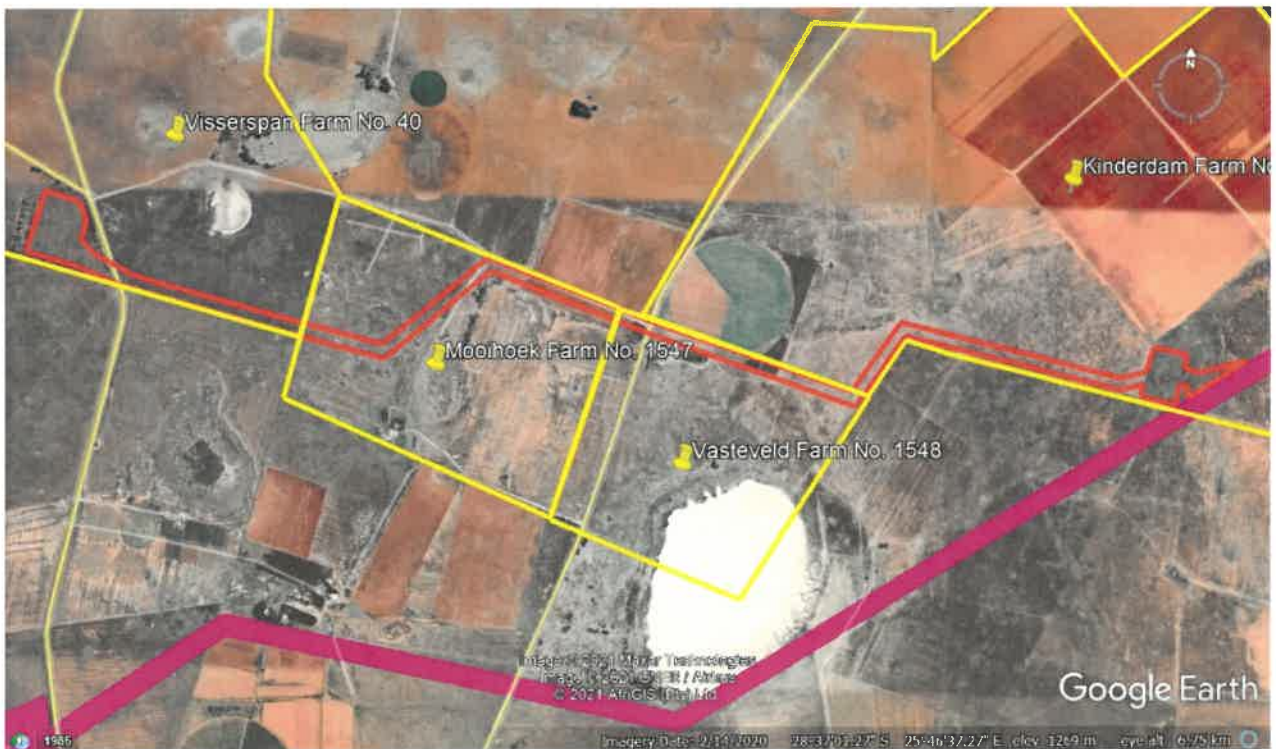


Figure 6: Indication (yellow outlines) of four properties affected by proposed development viz. (from west to east) Visserspan Farm No. 40, Mooihoek Farm No. 1547, Vasteveld Farm No. 1548 and Kinderdam Farm No. 1685. Existing Eskom servitude containing 400kV and 275 kV overhead powerlines, as well as existing Eskom Perseus substation indicated in purple. Proposed Visserspan overhead powerline servitude corridor runs along farm boundary fences using existing access roads wherever, possible (indicated in red).

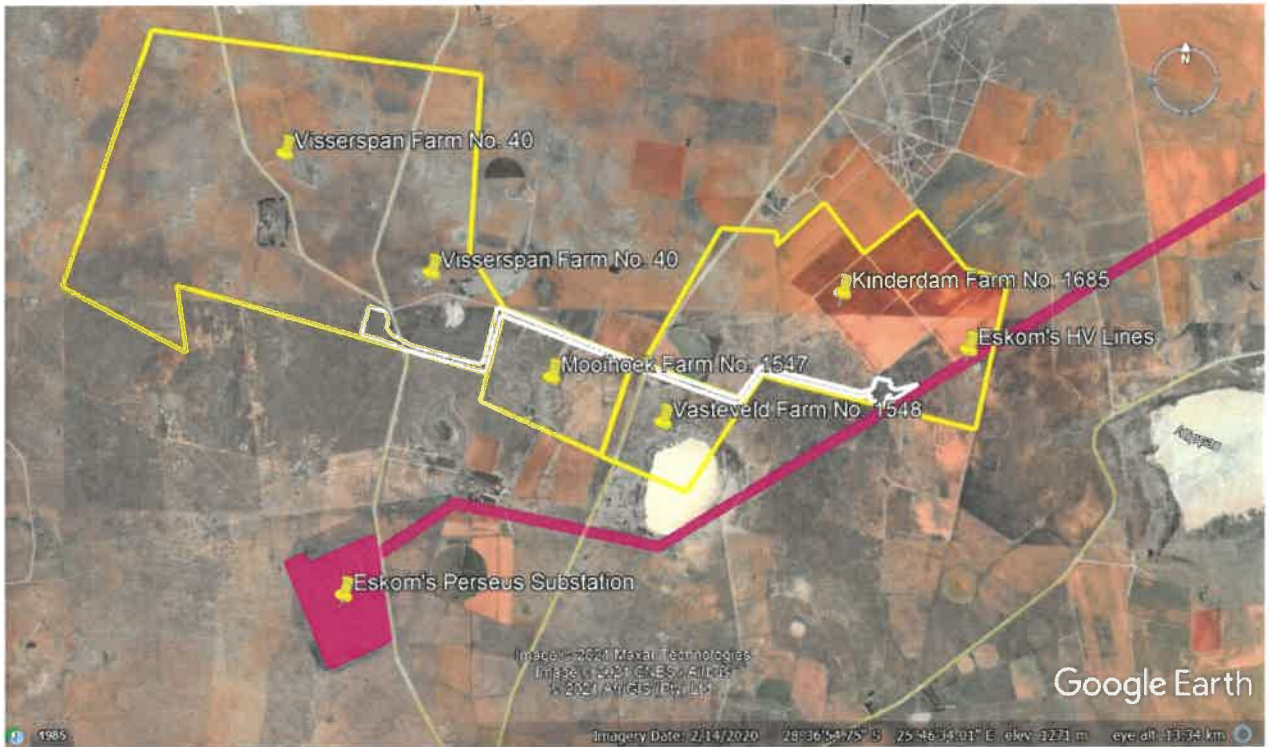


Figure 7: Indication (yellow outlines) of four properties affected by proposed development viz. (from west to east) Visserspan Farm No. 40, Mooihoek Farm No. 1547, Vasteveld Farm No. 1548 and Kinderdam Farm No. 1685. Existing Eskom servitude containing 400kv and 275 kV overhead powerlines, as well as existing Eskom Perseus substation indicated in purple. Proposed alternative Visserspan overhead powerline servitude corridor runs along farm boundary fences using existing access roads.

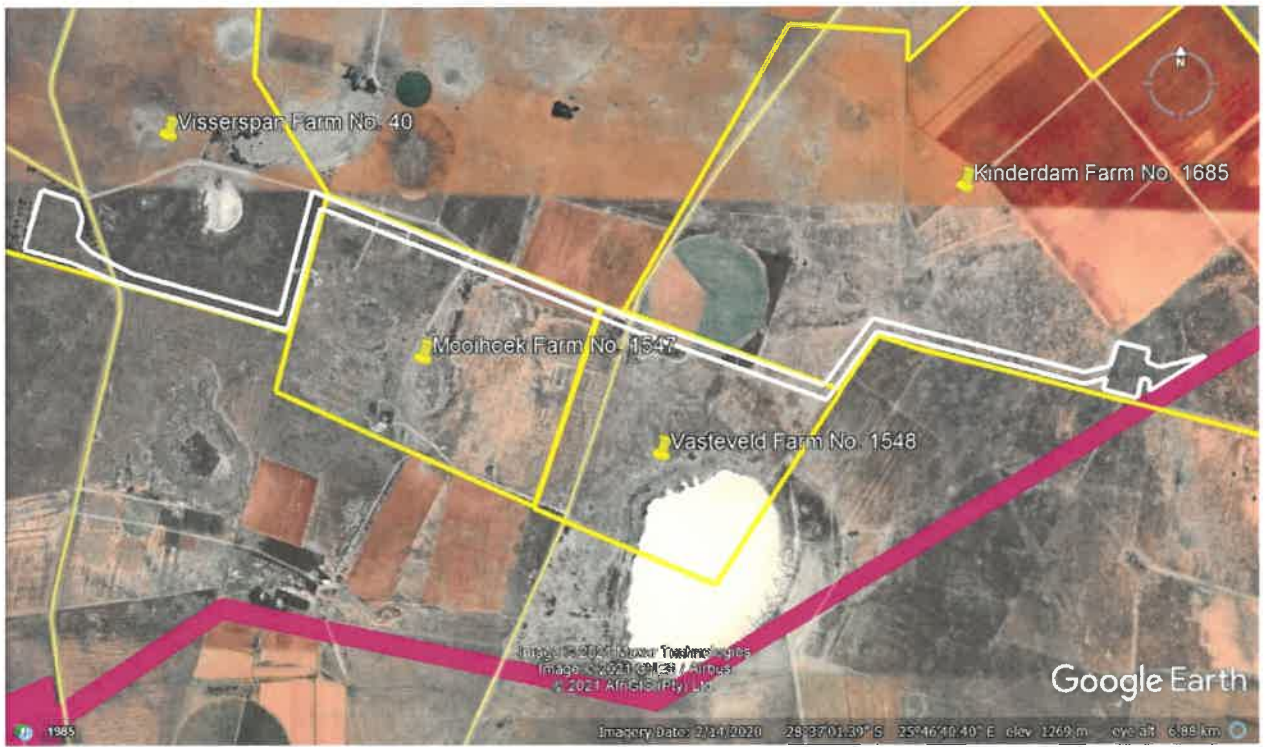


Figure 8: Indication (yellow outlines) of four properties affected by proposed development viz. (from west to east) Visserspan Farm No. 40, Mooihoek Farm No. 1547, Vasteveld Farm No. 1548 and Kinderdam Farm No. 1685. Existing Eskom servitude containing 400kv and 275 kV overhead powerlines, as well as existing Eskom Perseus substation indicated in purple. Proposed development consists of a substation on Visserspan Farm (total maximum footprint including laydown area = 7.45ha) and a potential substation near the tie-in/connection to the Eskom grid on Kinderdam Farm (total maximum footprint including laydown area = 6.11ha). Proposed development length from western boundary of Visserspan substation to point of tie-in at western boundary of Kinderdam substation footprint = approximately 6,8km

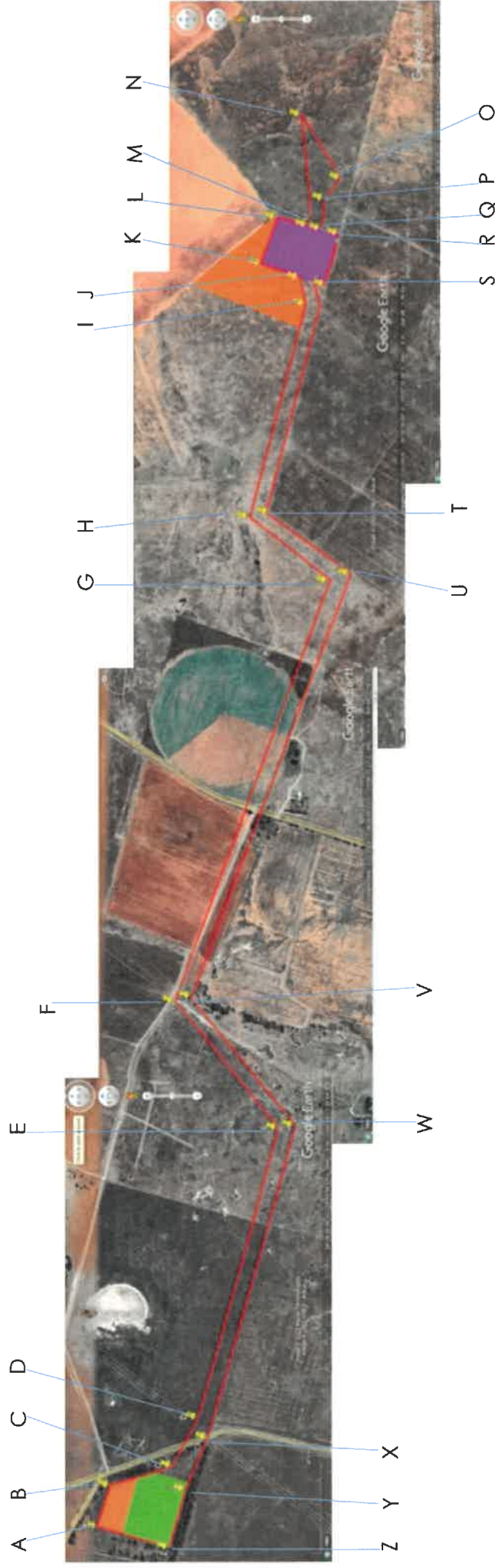
APPENDIX A2: Project Site Coordinates:

POINT	LATITUDE	LONGITUDE
A	28°36'30.40"S	25°44'48.25"E
B	28°36'32.22"S	25°44'54.70"E
C	28°36'40.85"S	25°44'57.69"E
D	28°36'44.37"S	25°45'5.18"E
E	28°36'55.40"S	25°45'50.35"E
F	28°36'41.46"S	25°46'9.81"E
G	28°37'2.71"S	25°47'15.91"E
H	28°36'51.93"S	25°47'25.98"E
I	28°36'59.63"S	25°47'59.04"E
J	28°36'58.83"S	25°48'3.20"E
K	28°36'53.61"S	25°48'5.36"E
L	28°36'55.69"S	25°48'12.60"E
M	28°36'59.89"S	25°48'11.35"E
N	28°36'59.02"S	25°48'28.54"E
O	28°37'4.43"S	25°48'18.72"E
P	28°37'2.16"S	25°48'15.48"E
Q	28°37'1.74"S	25°48'10.79"E
R	28°37'4.16"S	25°48'10.01"E
S	28°37'2.40"S	25°48'2.11"E
T	28°36'54.70"S	25°47'26.65"E
U	28°37'5.67"S	25°47'17.07"E
V	28°36'43.74"S	25°46'10.56"E
W	28°36'57.64"S	25°45'50.78"E
X	28°36'45.68"S	25°45'2.12"E
Y	28°36'42.66"S	25°44'54.03"E
Z	28°36'40.38"S	25°44'45.00"E
	Visserspan Substation	
	Kinderdam MTS	
	Temporary laydown area	

Please refer to satellite image below (page 2) for Visserspan Solar PV Grid Connection footprint (outlined in red). Project locality co-ordinates indicated at each 'bend point'.

Permanent footprints: Visserspan Substation site indicated in green and Kinderdam MTS indicated in purple.

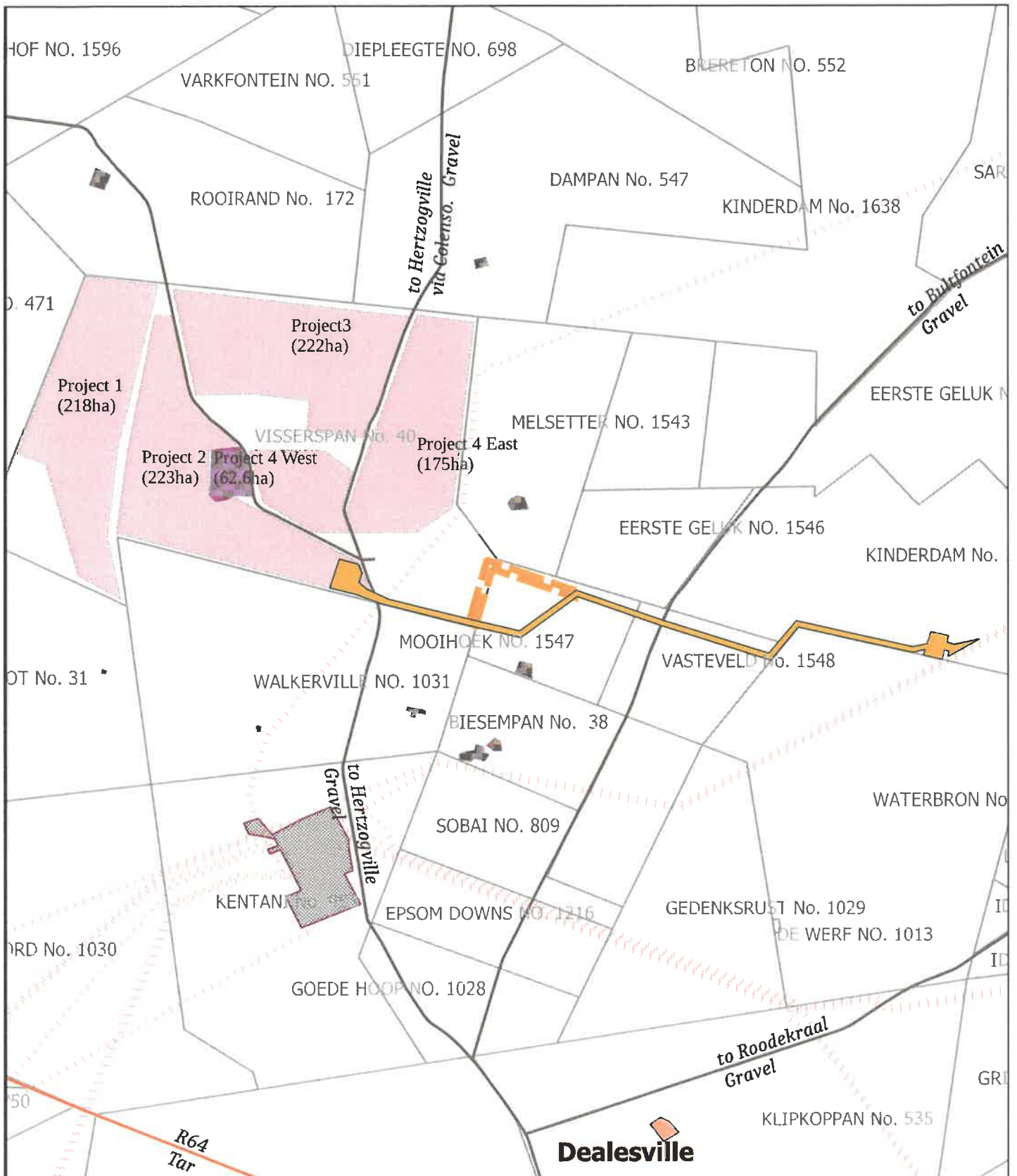
Temporary footprint: laydown, stockpile and batching plant areas indicated in orange).



Satellite image above must be viewed in conjunction with locality co-ordinates listed in table above (page 1) for Visserspan Solar PV Grid Connection footprint (outlined in red). Project locality co-ordinates indicated at each 'bend point'.

Permanent footprints: Visserspan Substation site indicated in green and Kinderdam MTS indicated in purple.

Temporary footprint: laydown, stockpile and batching plant areas indicated in orange).



LEGEND

Visserspan 1 - 4	Farms
Servitude & substation footprint	Electrical Transmission Lines
Alternative servitude alignment	STRUCTURES
ROADS	Substation
Main Road	Homestead
Secondary Road	
Other Access	

1 : 37000

Visserspan PV and Transmission line Overview

Description

Status Quo Map to describe the on-site attributes as per the requirements of the competent authority, for the construction of electrical grid connections for Visserspan PV 1 - 4, Dealesville, Free State.

STATUS QUO MAP (Visserspan Grid Connection)



Legend

- | | | | |
|------------------------------------|---|------------------------|---|
| Servitude and Substation footprint | Barrier Structures within Buffer | Water Points | Land Cover 2018 |
| Servitude alternative | Anti Erosion Wall | Water Reservoir | commercial annual crops pivot irrigated |
| Farm Boundaries | Avenue | Wind Pump | commercial annual crops rain-fed / dryland |
| 1km Buffer | Dam Wall | On-site Boreholes | contiguous & dense plantation forest |
| Structures Within Buffer | Fence | Irrigation 500m Buffer | dry pans |
| Homestead | Roads | Site Elements | herbaceous wetlands (currently mapped) |
| Electrical Transmission lines | SECONDARY ROAD | Dam | herbaceous wetlands (previously mapped) |
| | Artificial Landforms | Homestead | low shrubland (other) |
| | Excavation | | natural grassland |
| | Historical Sites | | open & sparse plantation forest |
| | Contours | | village scattered (bare & low veg/ grass combo) |

Notes

Data sources:
Dept of Rural Development and Land Reform, Eskom holdings, Specialist reports for applications

The following attributes do not occur on site or within 1km -
Ridgelines, High potential Agricultural land, Tourism facilities, Rivers

* All Natural Grassland is used for grazing or game farming

* Landcover 2018 dataset indicates NO pans between the servitude and the pivot irrigation to the south



DATUM "World Geodetic System 1984"

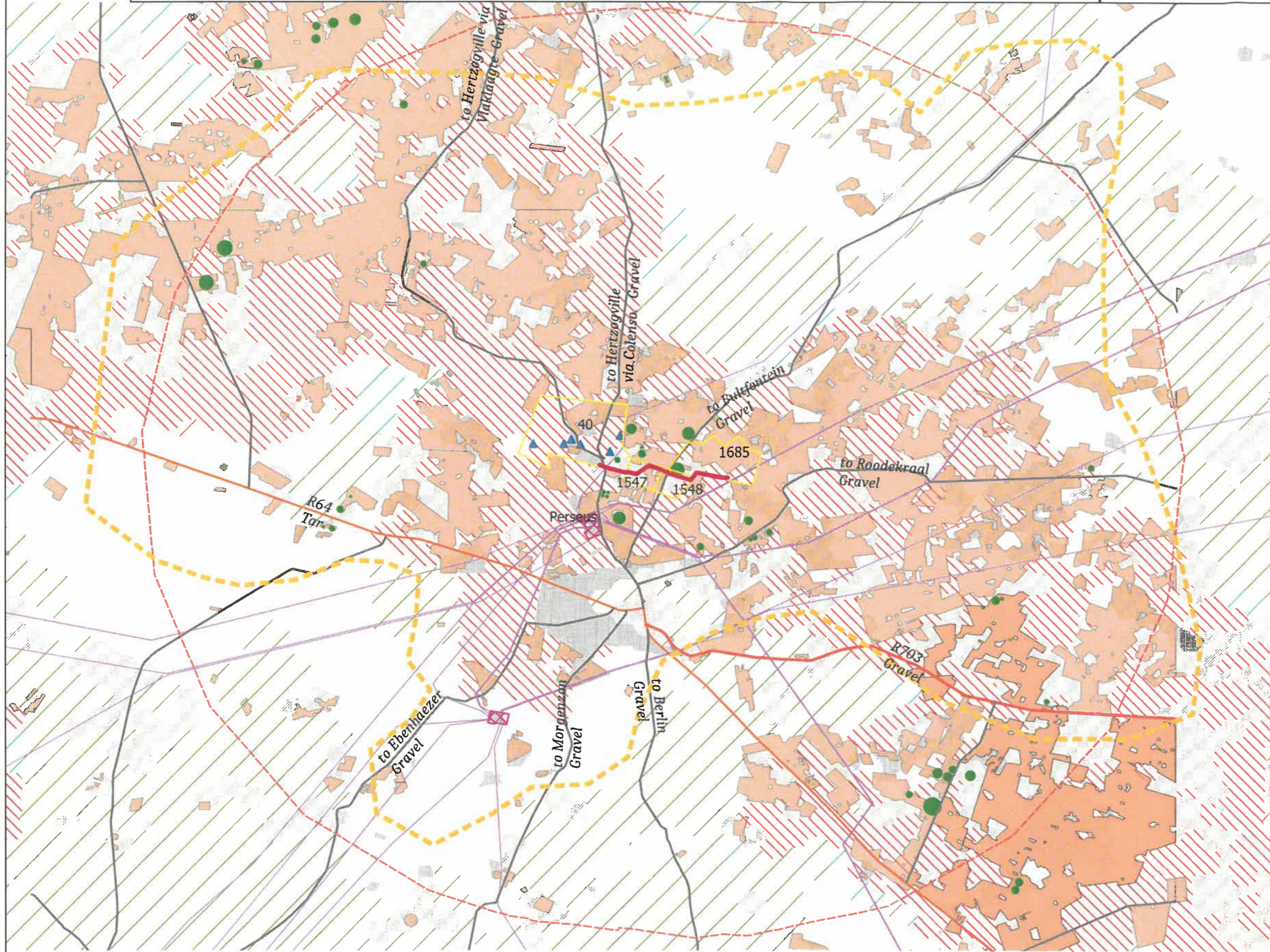
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Compiled by
SC Lategan for EnviroAfrica
July 2020

Description

Regional Map to describe attributes as per the competent authority (DFFE) requirements, for the development of a Electrical grid connection for the Visserspan Solar Facility (Projects 1 - 4)

REGIONAL MAP (Visserspan Grid Connection)



Legend

- Farm Boundaries
 - Grid connection Corridor
 - Potential Viewcatchment
 - 20km Buffer
- Roads**
- Arterial Route
 - Main Road
 - Secondary Road
 - ▲ Boreholes
- Terrestrial CBA**
- CBA1
 - CBA2
 - Degraded
 - ESA1
 - ESA2
 - Other
 - Protected
 - Cultivated Land
 - Irrigated land
- Infrastructure Facilities**
- Other/unknown
 - Sewage works
 - Solar panel array
 - Substation
 - Industrial Areas
 - Electrical Transmission Lines

Data Sources:
 Dept of Rural Development and Land Reform, Eskom holdings, Specialist reports for application
 The following attributes do not occur within the 20km buffer -
 Harbours, Railway lines, Pipelines

DATUM "World Geodetic System 1984"

Compile by SC Lategan for EnviroAfrica, September 2021



1:130000

RENEWABLE ENERGY DEVELOPMENT ZONES (REDZs) & STRATEGIC TRANSMISSION CORRIDORS

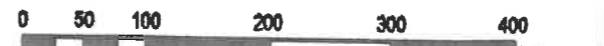
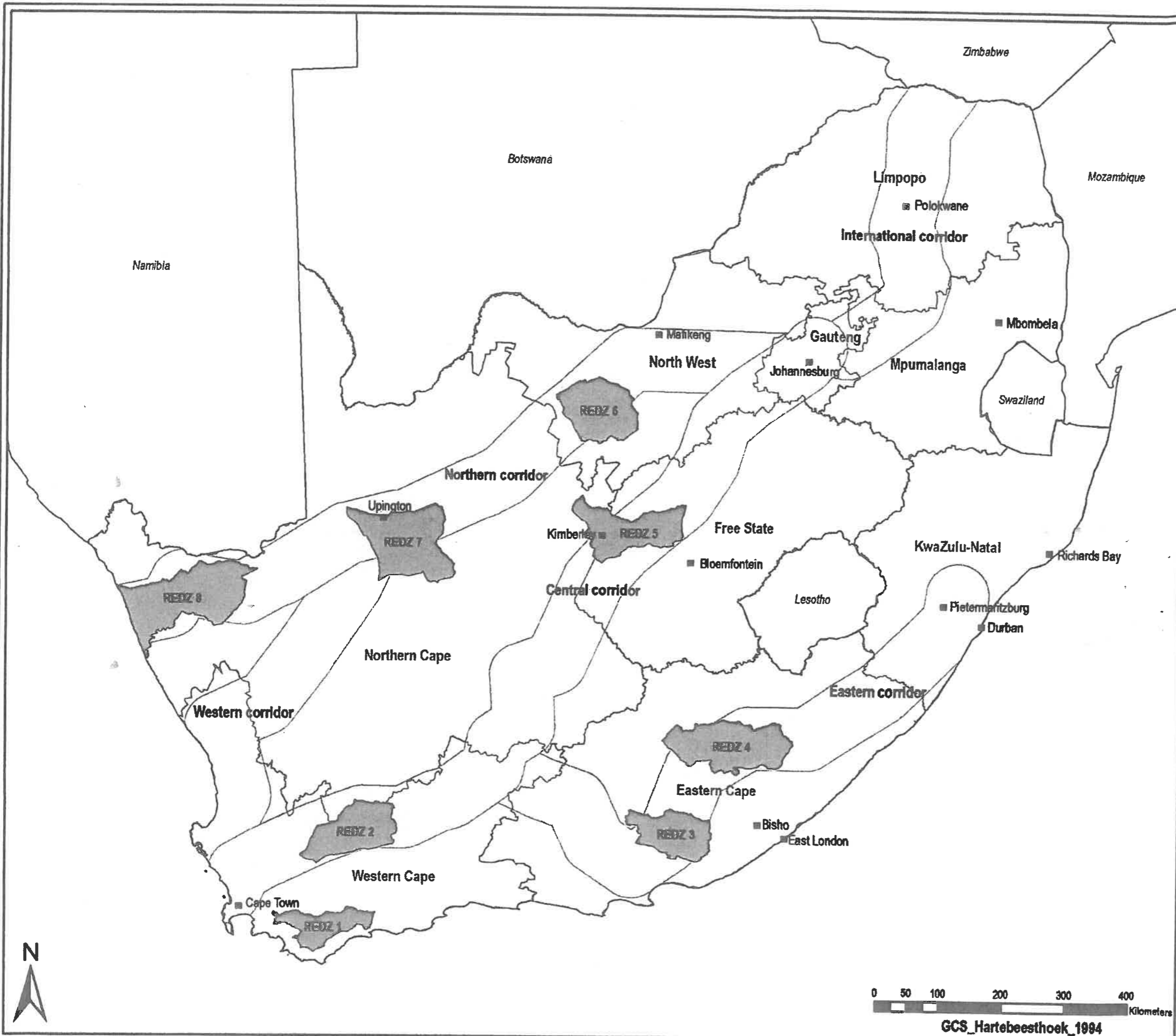
DESCRIPTION:

Map illustrating the Renewable Energy Development Zones sites and Strategic Transmission Corridors within South Africa.

*An interactive version of this map is available from the Department of Environmental Affairs at <http://legis.environment.gov.za> – Geographical Areas.

LEGEND:

- Cities/Towns
- Overberg - REDZ 1
- Komsberg - REDZ 2
- Cookhouse - REDZ 3
- Stormberg - REDZ 4
- Kimberley - REDZ 5
- Vryburg - REDZ 6
- Upington - REDZ 7
- Springbok - REDZ 8
- Central corridor
- Eastern corridor
- International corridor
- Northern corridor
- Western corridor



GCS_Hartebeesthoek_1994

MRS B E E MOLEWA
Minister of Environmental Affairs

Date: 2017/03/13



environmental affairs

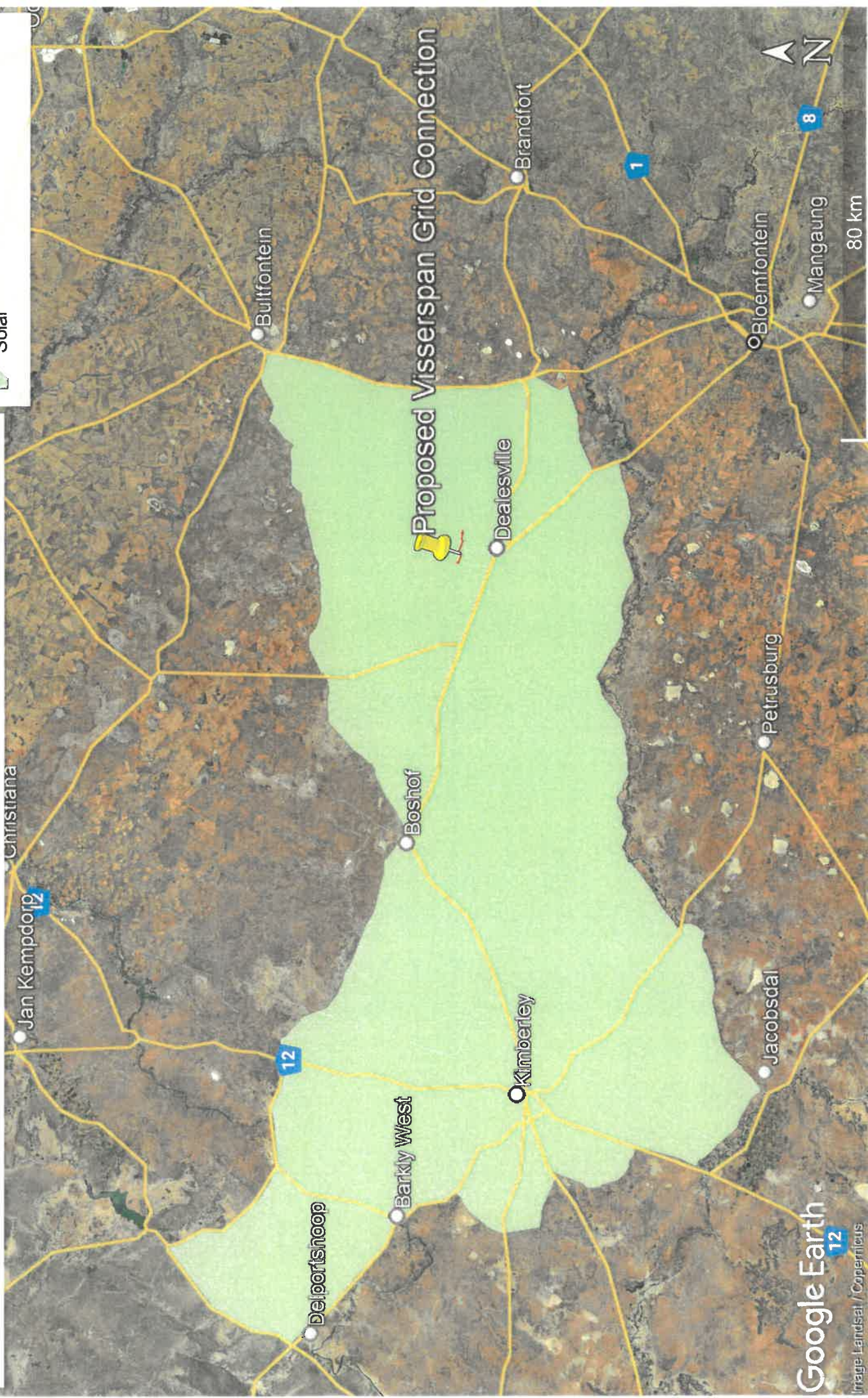
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Renewable Energy Development Zone 5 (Kimberley Solar)

Location of proposed Visserspan Solar PV Grid Connection development footprint (indicated in red) within REDZ 5.

Legend


- Proposed Visserspan Grid Connection
- Solar



Renewable Energy EIA Applications (REDZ5)

Approved solar energy facilities (shaded white) within 30km radius of Visserspan Farm No. 40 solar PV applications (purple outline)

Legend

 Kimberley Solar (REDZ5)



Google Earth

Image Landsat / Copernicus
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