

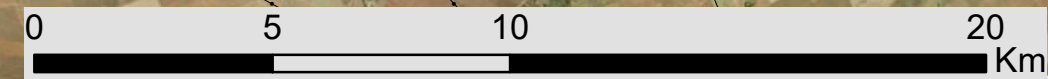
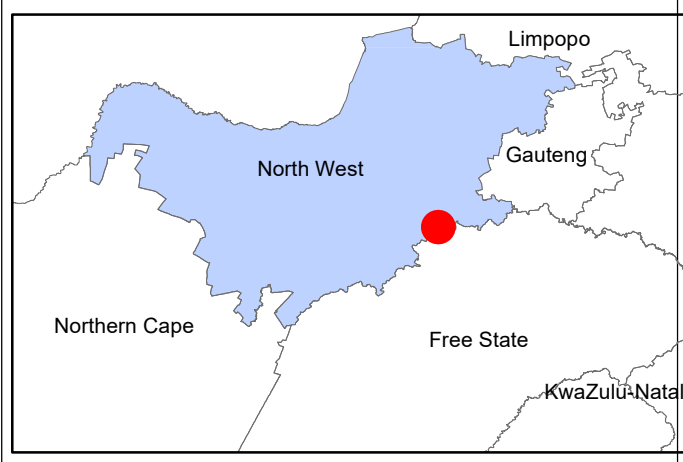
# Vaal River Solar PV Facilities, Substation and 132kV power line projects near Orkney in the North West Province

Cumulative Map

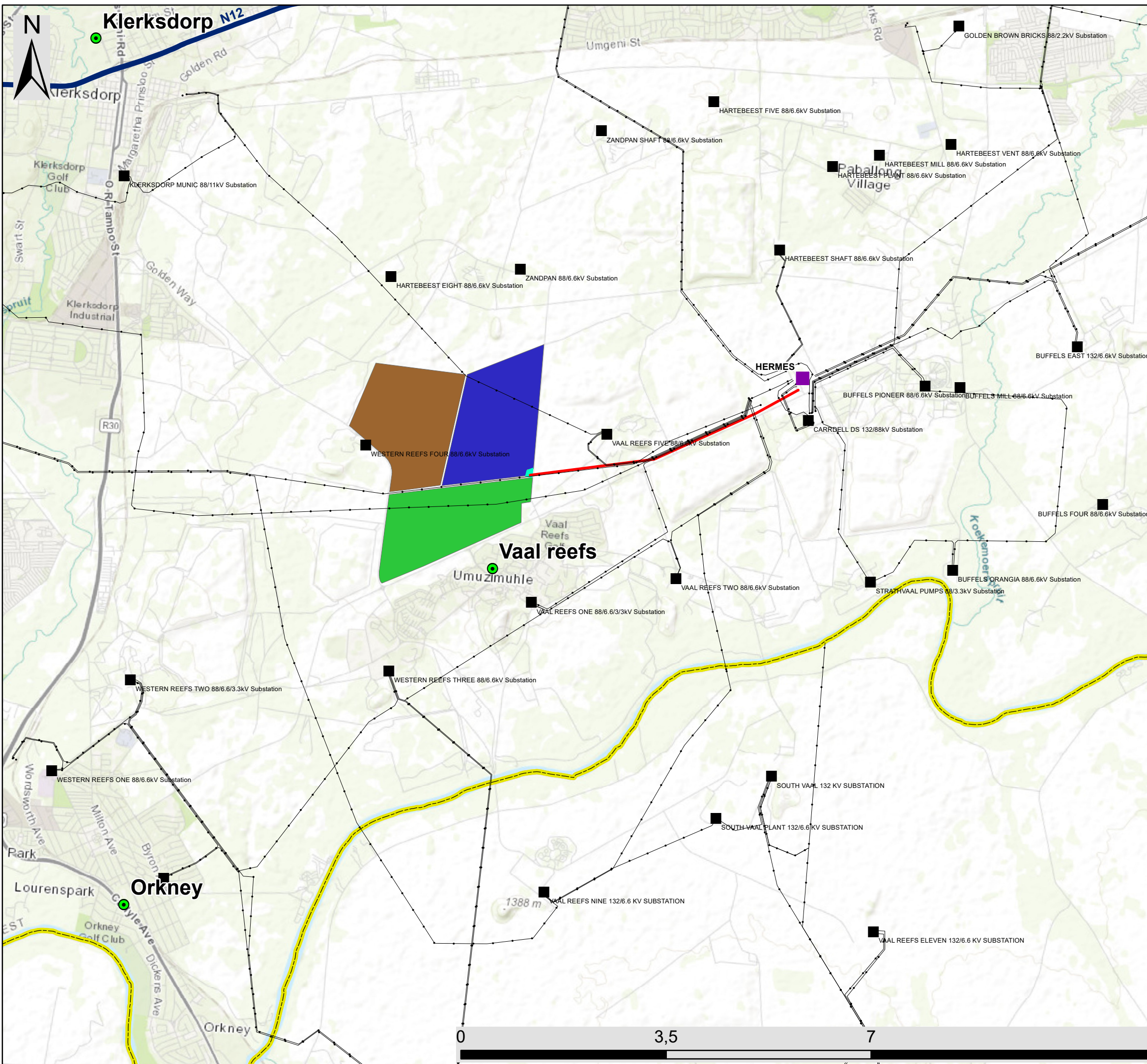
## Legend

- Town
  - Eskom Substation
  - Hermes Eskom Substation
  - Existing Power Line
  - National Route
  - Provincial Boundary
- Properties Associated With Renewable Energy Facilities**
- Buffels Solar PV1 Energy Facility
  - Orkney PV Solar Energy Facility
- Vaal River Solar PV Projects**
- 132kV power line for Vaal River Solar PV Facilities
  - Substation
  - Vaal River Solar 1 PV Facility
  - Vaal River Solar 2 PV Facility
  - Vaal River Solar 3 PV Facility

Scale: 1:200 000  
 Projection: GCS\_WGS\_1984  
 Map Ref: Vaal River Solar PV Facility



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



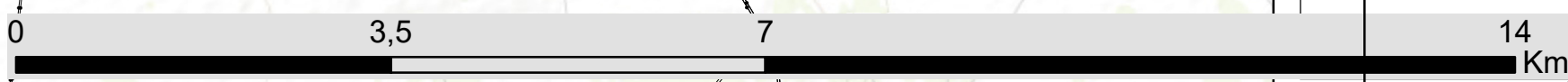
# Vaal River Solar PV Facilities, Substation and 132kV power line projects near Orkney in the North West Province

Locality Map

## Legend

- Town
- Hermes Eskom Substation
- Eskom Substation
- Existing Power Line
- National Route
- Provincial Boundary
- Vaal River Solar PV Projects**
- 132kV power line for Vaal River Solar PV Facilities
- Substation
- Vaal River Solar 1 PV Facility
- Vaal River Solar 2 PV Facility
- Vaal River Solar 3 PV Facility

Scale: 1:200 000  
 Projection: GCS\_WGS\_1984  
 Map Ref: Vaal River Solar PV Facility

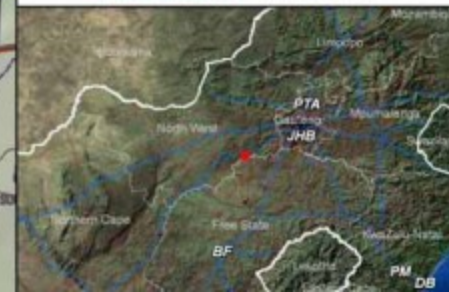


# Vaal River Vaalkop Sites

## Ecological Sensitivity Map

### Legend

- National Road
  - Regional Road
  - Secondary Road
  - Railway Line
  - Perennial River
  - Non-perennial River
  - Existing power Line
  - Distribution Substation
  - Transmission Substation
  - Proposed substation
  - Power line - Vaalkop to Hermes
  - Project Boundary
- Ecological Sensitivity**
- Medium
  - Low



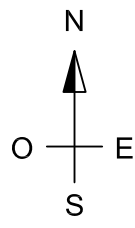


IMAGE FROM GOOGLE EARTH

| POWER UNIT |           |
|------------|-----------|
| 1          | 1,260 MVA |
| 2          | 1,260 MVA |
| 3          | 1,260 MVA |
| 4          | 1,260 MVA |
| 5          | 1,260 MVA |
| 6          | 1,260 MVA |
| 7          | 1,260 MVA |
| 8          | 1,260 MVA |
| 9          | 1,260 MVA |
| 10         | 1,260 MVA |
| 11         | 1,260 MVA |
| 12         | 1,260 MVA |
| 13         | 1,260 MVA |
| 14         | 1,260 MVA |
| 15         | 1,260 MVA |
| 16         | 1,260 MVA |
| 17         | 1,260 MVA |
| 18         | 630 KVA   |
| 19         | 1,260 MVA |
| 20         | 1,260 MVA |
| 21         | 630 KVA   |
| 22         | 1,260 MVA |
| 23         | 1,260 MVA |
| 24         | 1,260 MVA |
| 25         | 630 KVA   |
| 26         | 630 KVA   |
| 27         | 1,260 MVA |
| 28         | 1,260 MVA |
| 29         | 1,260 MVA |
| 30         | 1,260 MVA |
| 31         | 1,260 MVA |
| 32         | 1,260 MVA |

| POWER UNIT |           |
|------------|-----------|
| 33         | 630 KVA   |
| 34         | 1,260 MVA |
| 35         | 1,260 MVA |
| 36         | 1,260 MVA |
| 37         | 1,260 MVA |
| 38         | 1,260 MVA |
| 39         | 1,260 MVA |
| 40         | 630 KVA   |
| 41         | 1,260 MVA |
| 42         | 1,260 MVA |
| 43         | 1,260 MVA |
| 44         | 1,260 MVA |
| 45         | 630 KVA   |
| 46         | 1,260 MVA |
| 47         | 1,260 MVA |
| 48         | 1,260 MVA |
| 49         | 1,260 MVA |
| 50         | 1,260 MVA |
| 51         | 1,260 MVA |
| 52         | 1,260 MVA |
| 53         | 1,260 MVA |
| 54         | 630 KVA   |
| 55         | 1,260 MVA |
| 56         | 1,260 MVA |

**LEGEND (Vaal River Solar 3)**

- POWERLINE 88 kV
- ONE AXIS TRACKING SYSTEM
- SUBSTATION
- TRANSFORMER AND INVERTERS CENTER
- FENCE
- LIMIT PV AGRUPATION 1,25 MVA / 630 KVA
- PLOT LIMIT
- BATTERY ENERGY STORAGE SYSTEM (2HA)

|   |                |
|---|----------------|
| TOTAL FENCE AREA: 280,63 Ha               |                |
| Module                                    | Silicom 290 Wp |
| # Modules                                 | 259.560 units  |
| Total Power                               | 75.272 kWp     |
| Nominal Power                             | 64,89 MWn      |
| Tracker 1 Horizontal axis +/- 55° GCR 1/3 |                |
| LENGTHS                                   |                |
| Fence                                     | 6,896 m        |

**PLOT'S UTM COORDINATES DATUM WGS84**

| POINT | X       | Y         |
|-------|---------|-----------|
| 1     | 471.246 | 7.024.189 |
| 2     | 472.920 | 7.024.065 |
| 3     | 472.579 | 7.022.202 |
| 4     | 471.745 | 7.022.117 |
| 5     | 471.759 | 7.022.427 |
| 6     | 471.683 | 7.022.595 |
| 7     | 470.940 | 7.023.146 |
| 8     | 471.050 | 7.023.368 |
| 9     | 471.027 | 7.023.417 |
| 10    | 471.046 | 7.023.538 |
| 11    | 471.170 | 7.023.757 |

| REVIEW       | DATE | MODIFIES TITLE N° |
|--------------|------|-------------------|
|              |      |                   |
| DESCRIPTION: |      |                   |
|              |      |                   |
| DESCRIPTION: |      |                   |
|              |      |                   |
| DESCRIPTION: |      |                   |

# VAAL RIVER SOLAR 3 PV FACILITY

SITE LOCATION:

**VAAL RIVER**

STATUS: PRELIMINARY LAYOUT

TITLE: 11.005 KVS3-PDES-LYO-1

DATE: 12/12/2011 ESCALE: 1:10.000 ORIGINAL FORMAT A-3

## LAYOUT

