








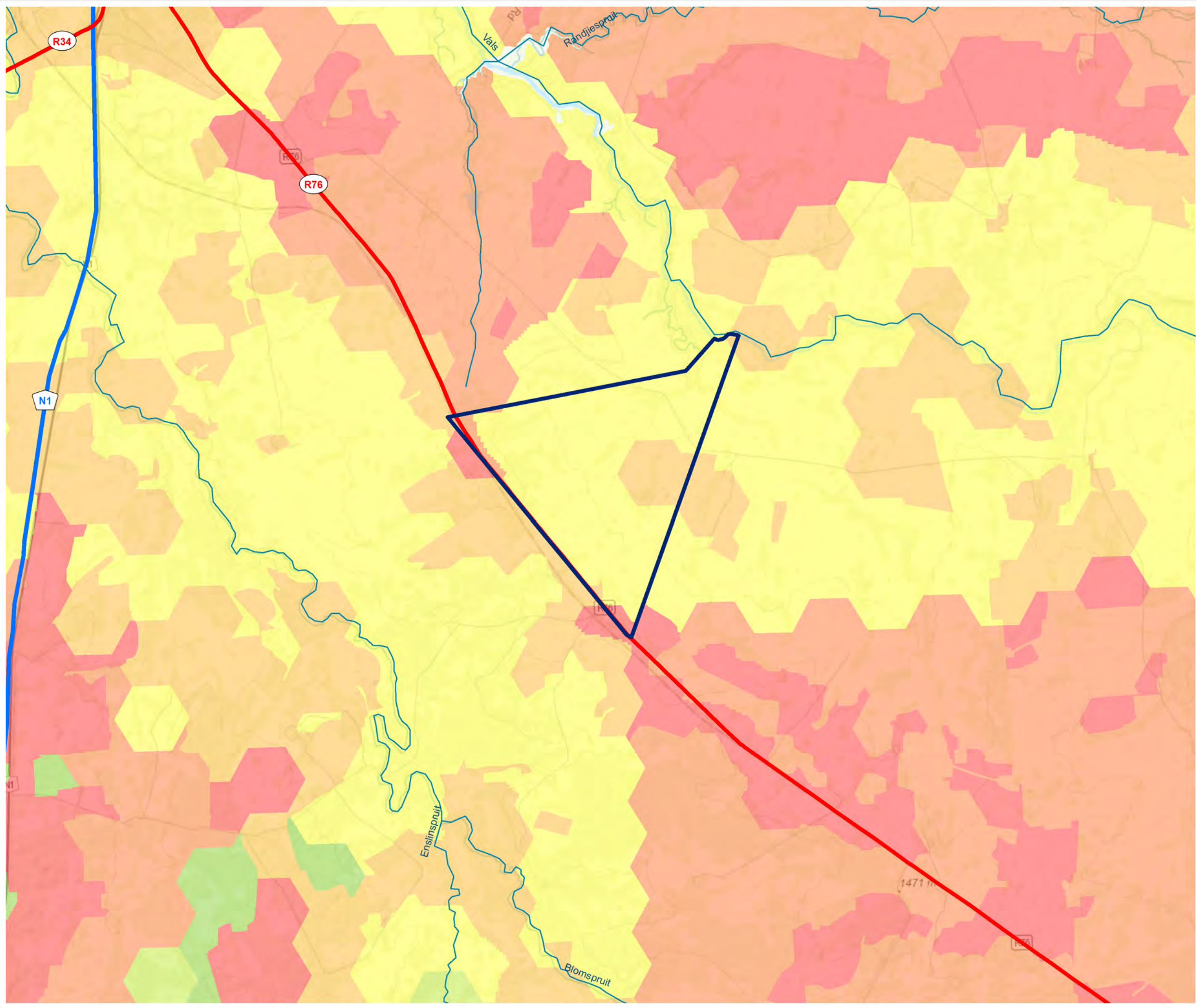
PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY
NEAR KROONSTAD, FREE STATE PROVINCE
CRITICAL BIODIVERSITY AREAS

Legend

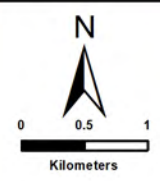
-  National Route
-  Arterial Routes
-  Rivers
-  Bonsmara PV Application Site

CBA Classification

-  Protected
-  CBA1
-  CBA2
-  ESA1
-  ESA2
-  Other
-  Degraded



Source:
 NGI, 2014
 FREE STATE BIODIVERSITY SPATIAL PLAN, 2017
 NFEPA, 2011



SIVEST
 ENVIRONMENTAL DIVISION
 4 PENCARROW CRESCENT
 LA LUCIA RIDGE OFFICE ESTATE
 UMHLANGA ROCKS
 4320
 Phone: +27 31 581 1500
 Fax: +27 31 581 2371
 e-mail: info@sivest.co.za





| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 13/09/2022 |
| Map Ref No 17869 | Revision 0 | Date |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT

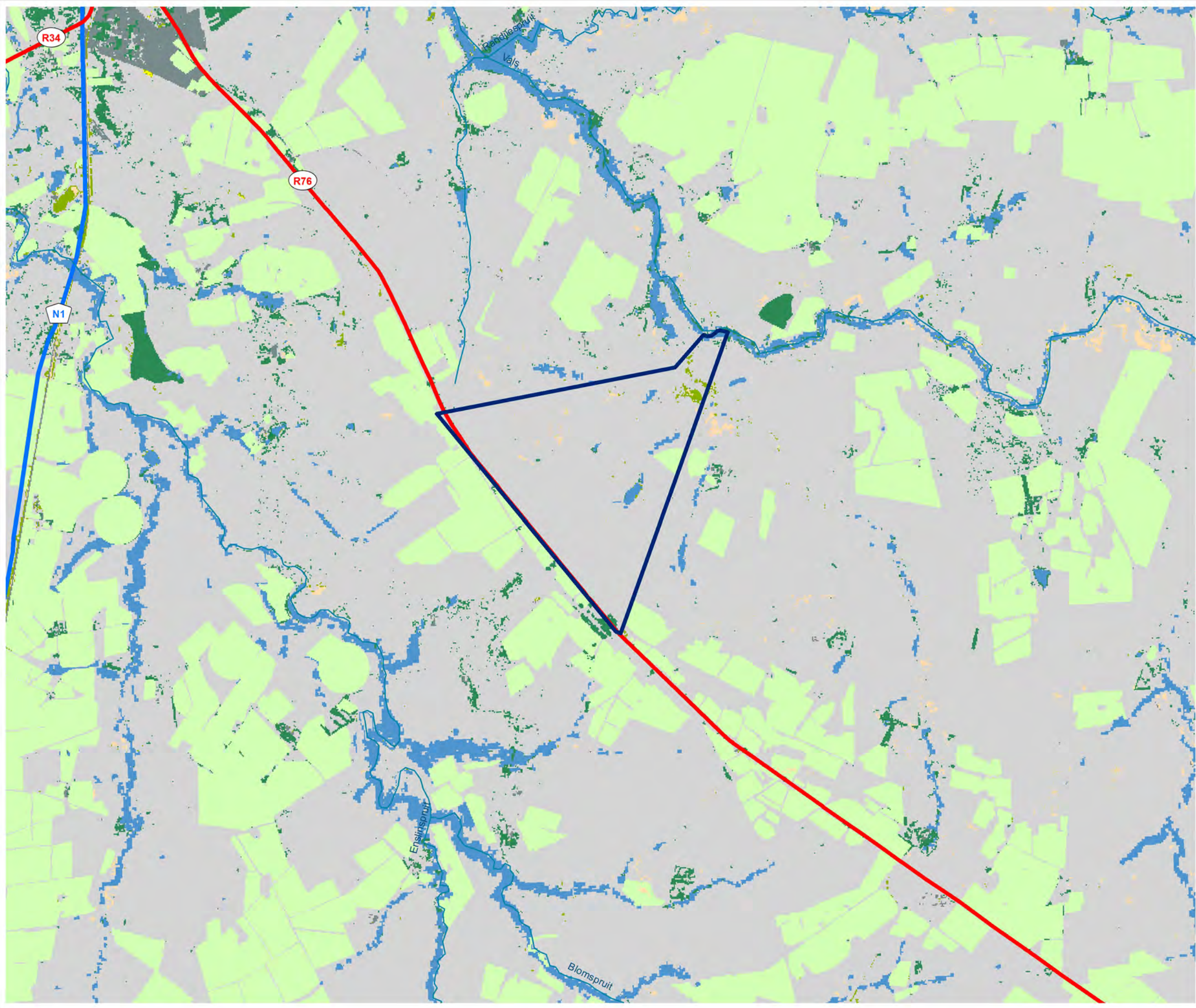
PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY NEAR KROONSTAD, FREE STATE PROVINCE BROAD LAND COVER CLASSIFICATION

Legend

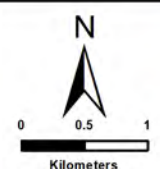
-  National Route
-  Arterial Routes
-  Rivers
-  Bonsmara PV Application Site

Land Cover Classification

-  Barren Land
-  Built-Up Areas
-  Cultivated Land
-  Forested Land
-  Grassland
-  Mines & Quarries
-  Shrubland
-  Wetlands / Waterbodies



NFEPA, 2011
2018 SA NATIONAL LAND COVER
(© GEOTERRAIMAGE - 2018)



SIVEST
ENVIRONMENTAL DIVISION
4 PENCARROW CRESCENT
LA LUCIA RIDGE OFFICE ESTATE
UMHLANGA ROCKS
4320
Phone: +27 31 581 1500
Fax: +27 31 581 2371
e-mail: info@sivest.co.za


| | | |
|---------------------|-------------------|--------------------|
| Project No 17869 | Prepared By SB | Date 01/09/2022 |
| Map Ref No 17869 | Revision 0 | Date |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT


**PROPOSED CONSTRUCTION
OF THE BONSMARA
SOLAR PV FACILITY
NEAR
KROONSTAD,
FREE STATE PROVINCE
SENSITIVITY LAYOUT**


Legend


 Bonsmara PV Application Site


Proposed Solar PV Facility Components

 Internal Road Network


 Additional Roads


 Fencing


 PV Areas

 Substation

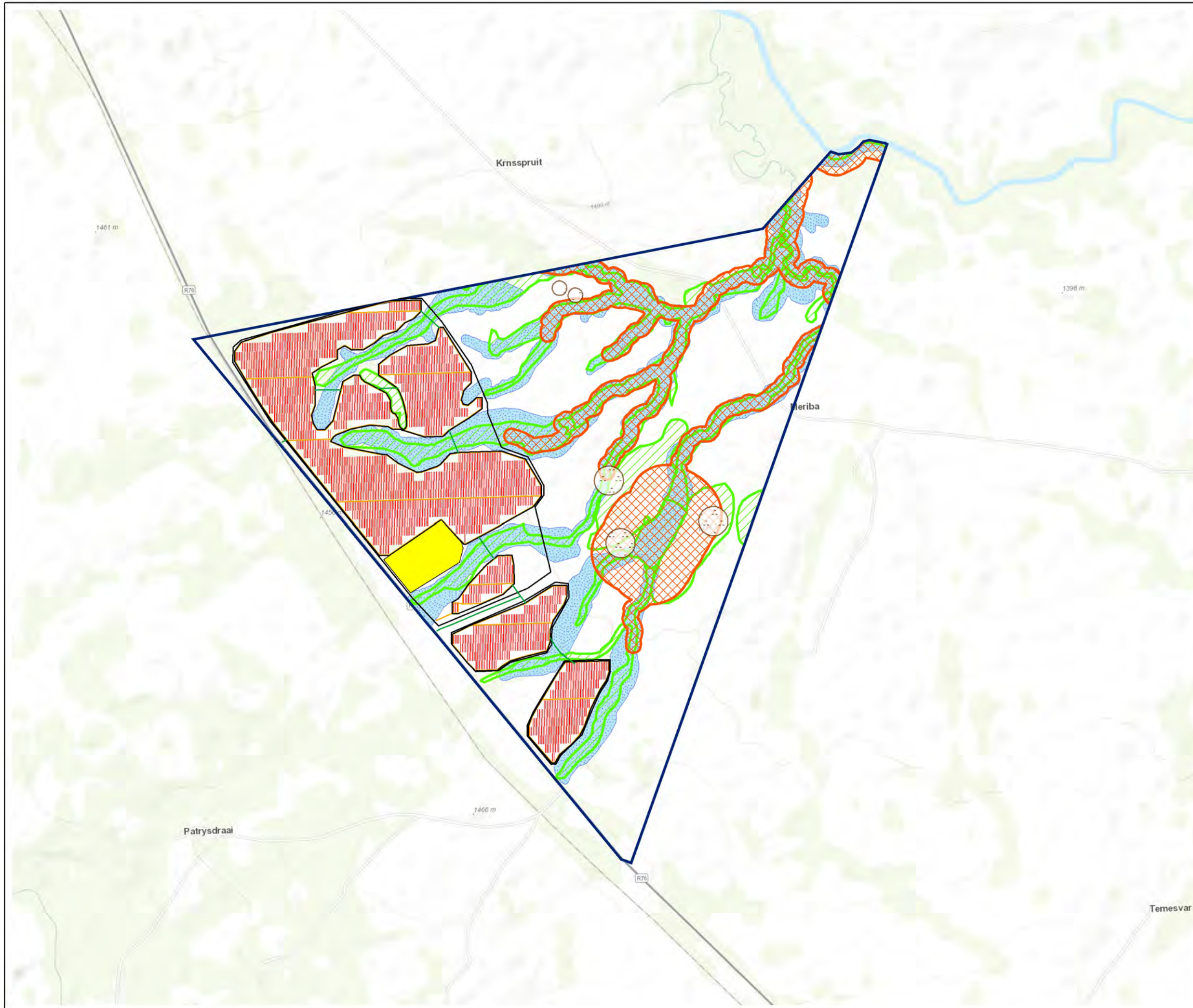
Environmental Sensitivities (No-Go)

 Aquatic Sensitivity

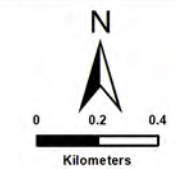
 Avifauna Sensitivity

 Heritage Sensitivity

 Terrestrial Sensitivity



Source:
NGI, 2014



ENVIRONMENTAL DIVISION
4 PENCARROW CRESCENT
LA LUCIA RIDGE OFFICE ESTATE
UMHLANGA ROCKS
4320

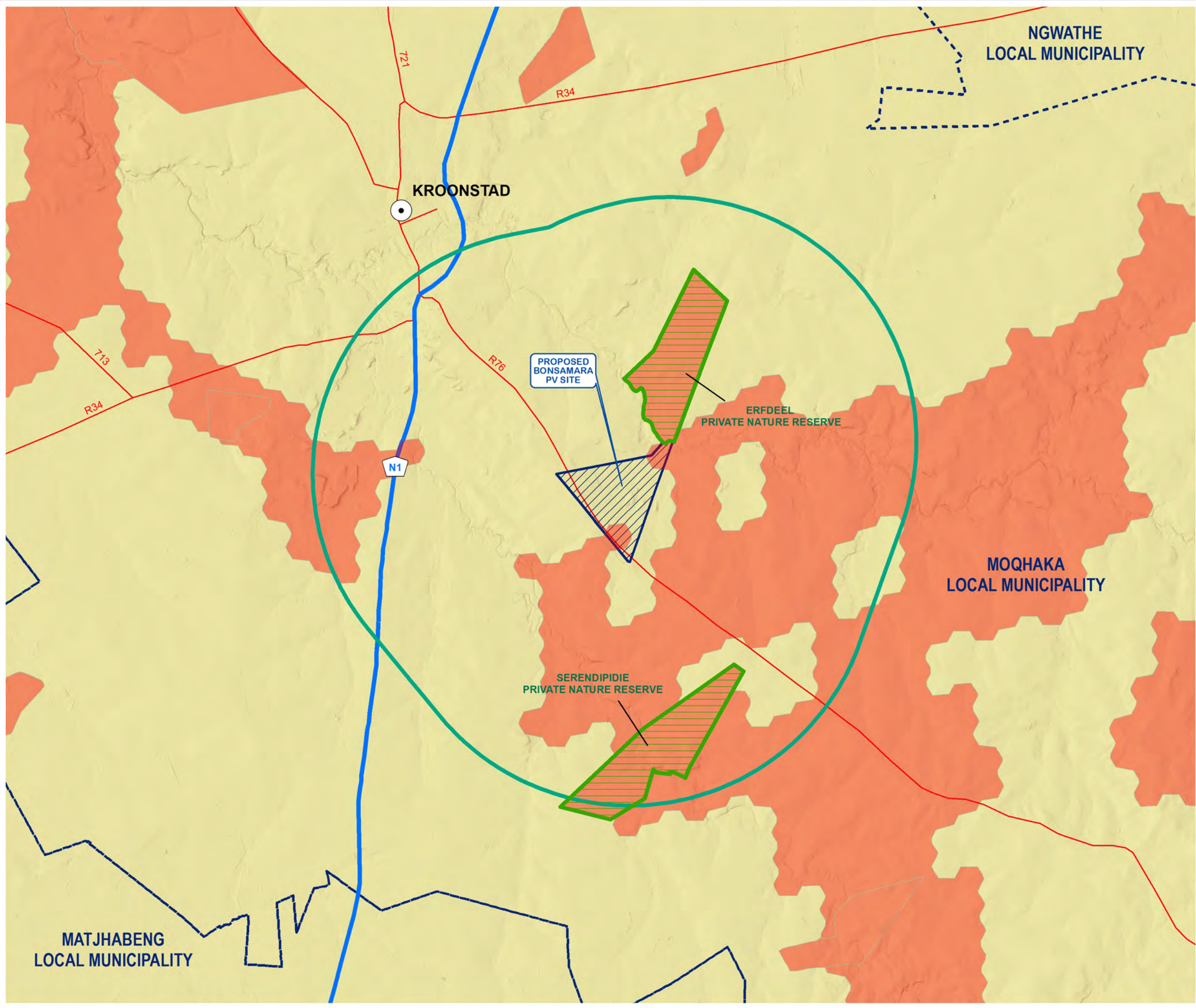
Phone: +27 31 581 1500
Fax: +27 31 581 2371
e-mail: info@sivest.co.za

| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 17/02/2023 |
|----------------------------|--------------------------|---------------------------|

| | | |
|----------------------------|----------------------|----------------------|
| Map Ref No 17869 | Revision 0 | Date _____ |
|----------------------------|----------------------|----------------------|

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

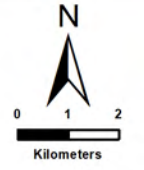
THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT



PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY
NEAR KROONSTAD, FREE STATE PROVINCE
PROTECTED AREAS

- Legend**
- Main Towns
 - National Route
 - Main Arterial Routes
 - Local Municipal Boundaries
 - Protected Areas
 - NPAES: Priority Focus Area
 - 10km Radius
 - Bonsmara PV Application Site

Source:
 DFFE, 2022
 NGI, 2014
 MUNICIPAL DEMARCATION BOARD, 2016

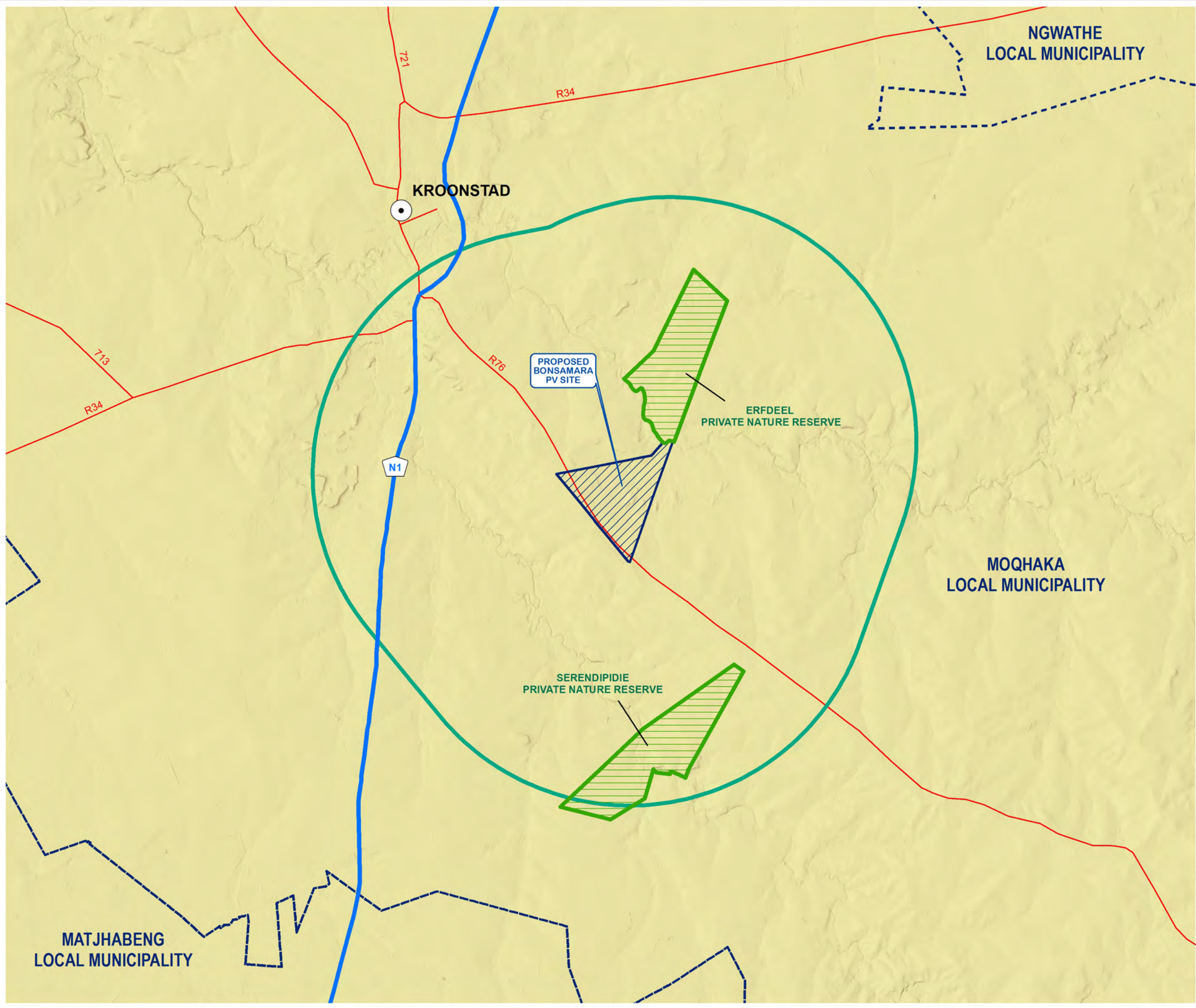


SIVEST
 ENVIRONMENTAL DIVISION
 4 PENCARROW CRESCENT
 LA LUCIA RIDGE OFFICE ESTATE
 UMHLANGA ROCKS
 4320
 Phone: +27 31 581 1500
 Fax: +27 31 581 2371
 e-mail: info@sivest.co.za

| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 10/10/2022 |
| Map Ref No 17869 | Revision 0 | Date |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT

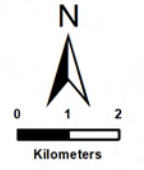


PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY
NEAR KROONSTAD, FREE STATE PROVINCE
PROTECTED AREAS

Legend

- Main Towns
- National Route
- Main Arterial Routes
- Local Municipal Boundaries
- Protected Areas
- 10km Radius
- Bonsmara PV Application Site

Source:
 DFFE, 2022
 NGI, 2014
 MUNICIPAL DEMARCATION BOARD, 2016

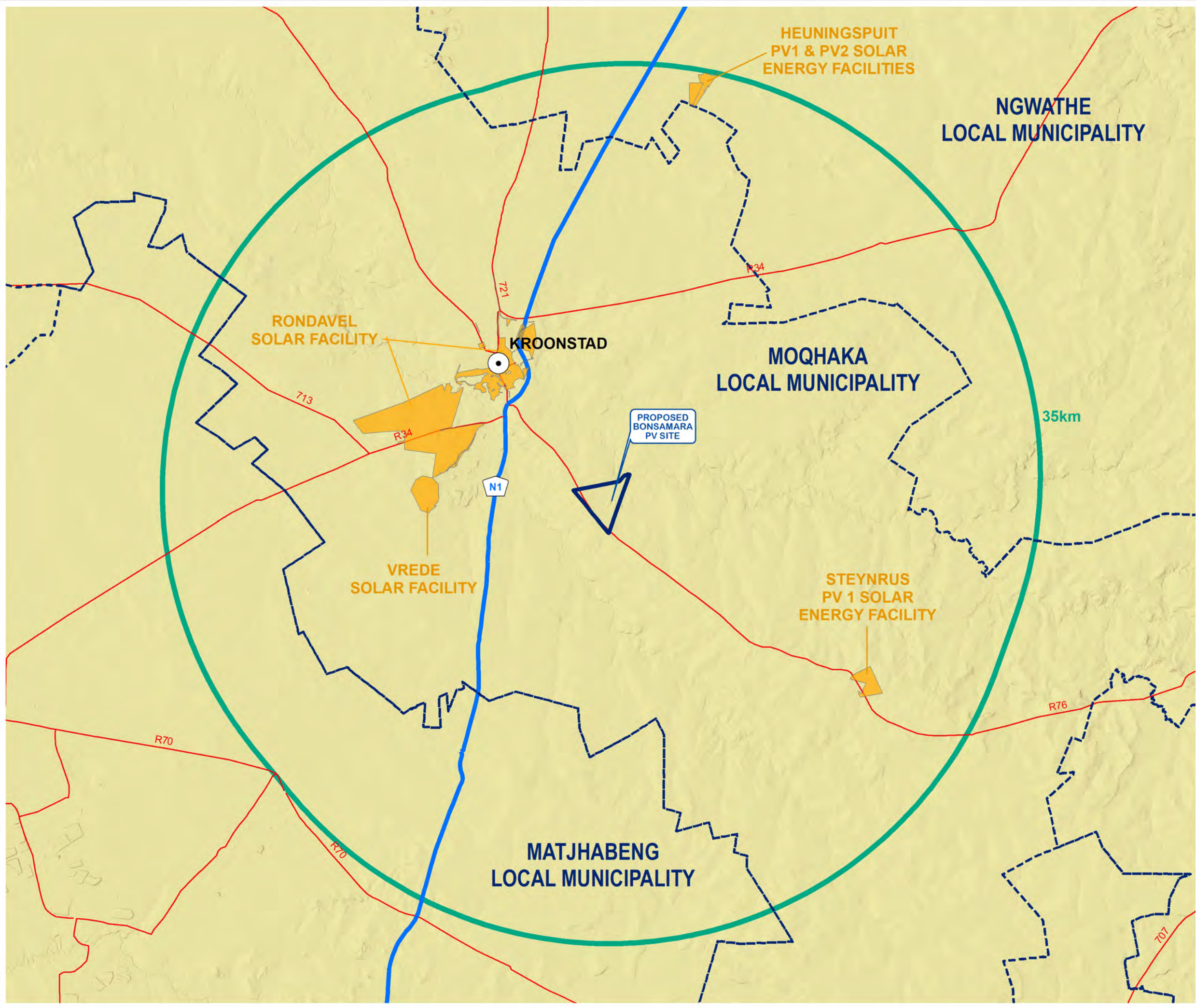


SIVEST
 ENVIRONMENTAL DIVISION
 4 PENCARROW CRESCENT
 LA LUCIA RIDGE OFFICE ESTATE
 UMHLANGA ROCKS
 4320
 Phone: +27 31 581 1500
 Fax: +27 31 581 2371
 e-mail: info@sivest.co.za

| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 06/10/2022 |
| Map Ref No 17869 | Revision 0 | Date |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT



PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY
NEAR KROONSTAD, FREE STATE PROVINCE
RENEWABLE ENERGY PROJECTS (EXISTING AND PROPOSED)

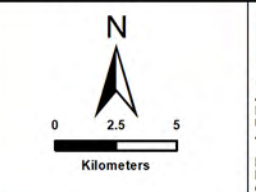
Legend

- Main Towns
- Main Arterial Routes
- National Route
- Local Municipal Boundaries
- Bonsmara PV Application
- 35km Radius

Renewable Energy Application Sites

- Solar PV

Source:
 DFFE, 2022
 NGI, 2014
 MUNICIPAL DEMARCATION BOARD, 2016



SIVEST
 ENVIRONMENTAL DIVISION
 4 PENCARROW CRESCENT
 LA LUCIA RIDGE OFFICE ESTATE
 UMHLANGA ROCKS
 4320
 Phone: +27 31 581 1500
 Fax: +27 31 581 2371
 e-mail: info@sivest.co.za




| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 14/09/2022 |
| Map Ref No 17869 | Revision 0 | Date |

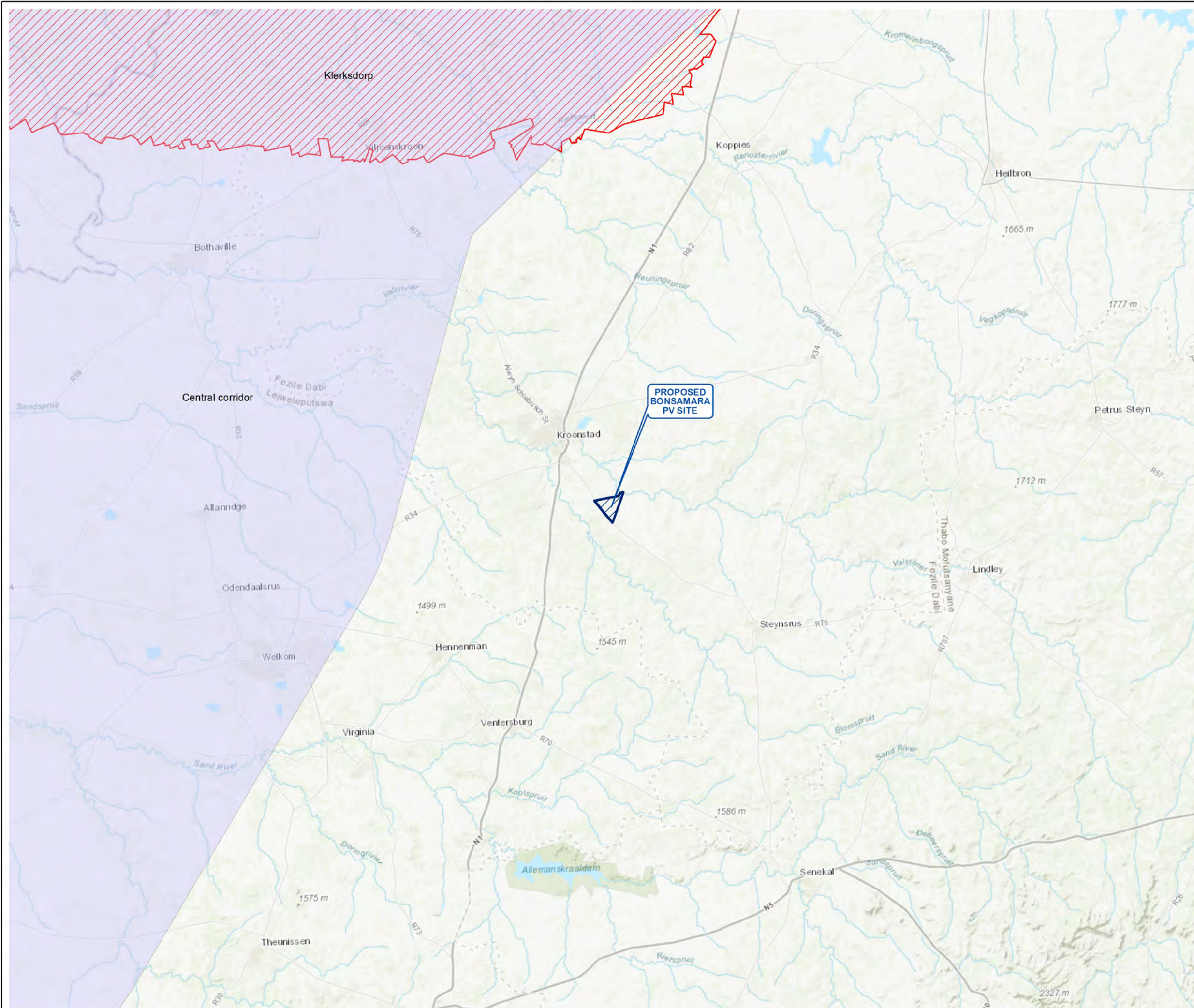
"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT

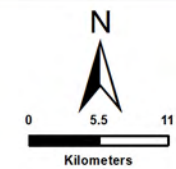
PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY
NEAR KROONSTAD, FREE STATE PROVINCE
REDZ/POWER CORRIDORS

Legend

-  Phase 2 REDZ
-  Power Corridors
-  Bomsara PV Application Site



Source:
 NGI, 2014
 DFFE, 2021



ENVIRONMENTAL DIVISION
 4 PENCARROW CRESCENT
 LA LUCIA RIDGE OFFICE ESTATE
 UMHLANGA ROCKS
 4320
 Phone: +27 31 581 1500
 Fax: +27 31 581 2371
 e-mail: info@sivest.co.za






| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 02/09/2022 |
| Map Ref No 17869 | Revision 0 | Date |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

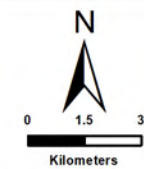
THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT

PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY
NEAR KROONSTAD, FREE STATE PROVINCE
REGIONAL CONTEXT

Legend

-  Main Towns
-  National Route
-  Main Arterial Routes
-  Local Municipal Boundaries
-  Bonsmara PV Application Site

Source:
 NGI, 2014
 MUNICIPAL DEMARCATION BOARD, 2016

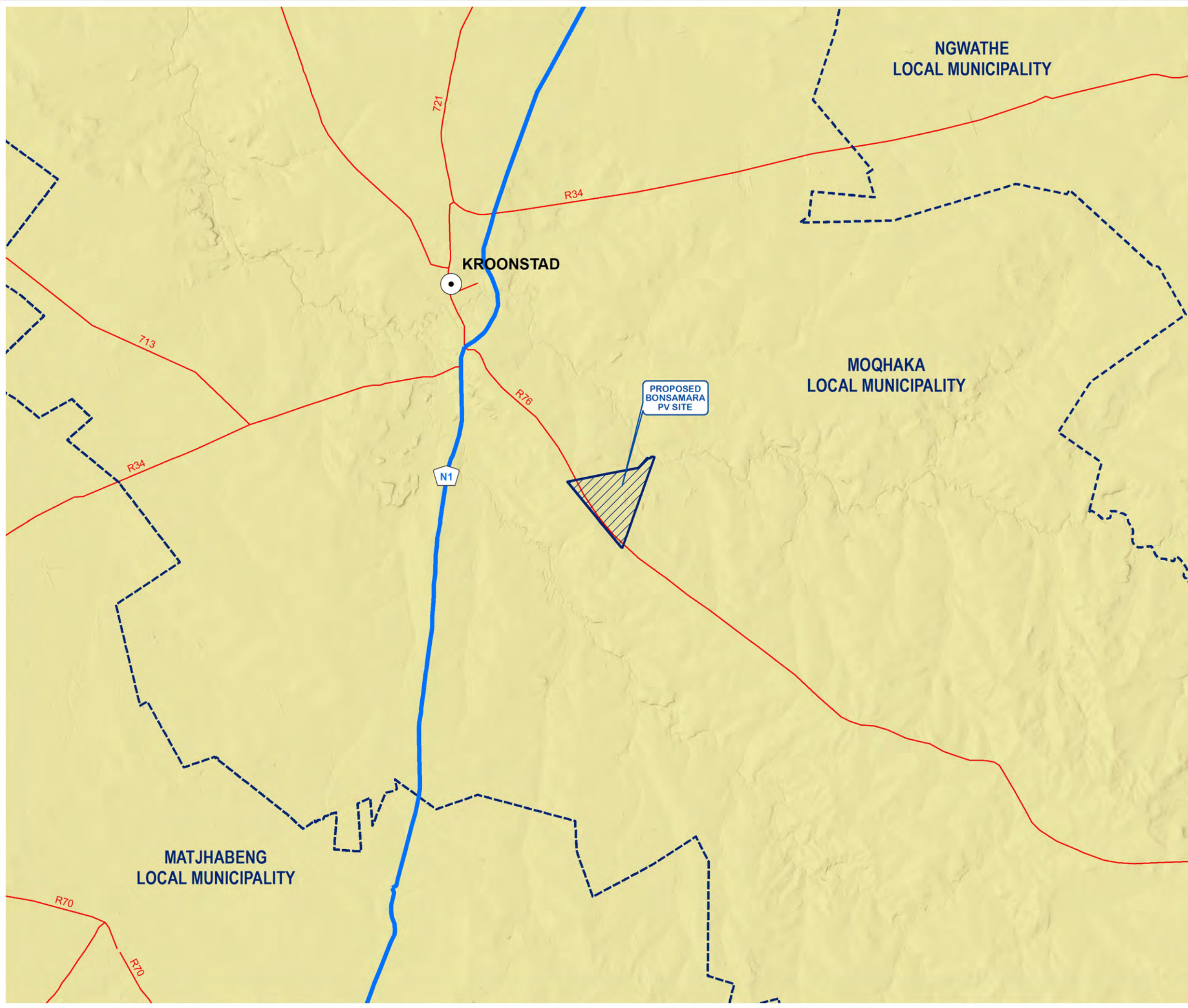


ENVIRONMENTAL DIVISION
 4 PENCARROW CRESCENT
 LA LUCIA RIDGE OFFICE ESTATE
 UMHLANGA ROCKS
 4320
 Phone: +27 31 581 1500
 Fax: +27 31 581 2371
 e-mail: info@sivest.co.za

| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 02/09/2022 |
| Map Ref No 17869 | Revision 0 | Date |







"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

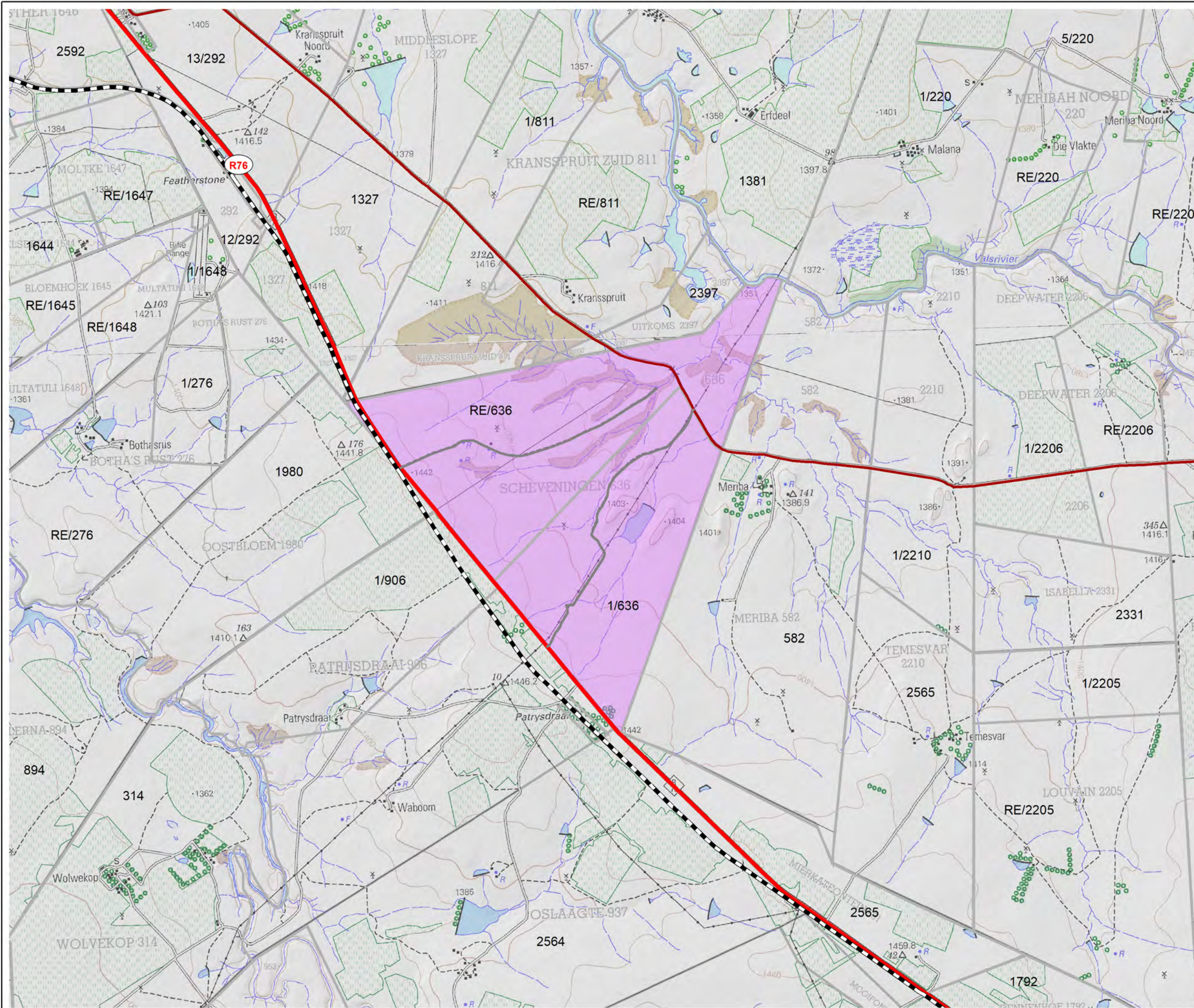
THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT



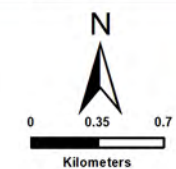
**PROPOSED CONSTRUCTION
OF THE BONSMARA
SOLAR PV FACILITY**
**NEAR
KROONSTAD,
FREE STATE PROVINCE**
SITE LOCALITY

Legend

-  Railway
-  Local Access
-  Arterial Route
-  Secondary Road
-  Farm Portions
-  Bonsmara PV Application Site



Source:
NGI, 2014



ENVIRONMENTAL DIVISION
4 PENCARROW CRESCENT
LA LUCIA RIDGE OFFICE ESTATE
UMHLANGA ROCKS
4320
Phone: +27 31 581 1500
Fax: +27 31 581 2371
e-mail: info@sivest.co.za





| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 06/09/2022 |
| Map Ref No 17869 | Revision 0 | Date |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT

PROPOSED CONSTRUCTION OF THE BONSMARA SOLAR PV FACILITY
NEAR KROONSTAD, FREE STATE PROVINCE
VEGETATION CLASSIFICATION

Legend

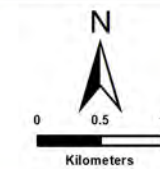
-  National Route
-  Arterial Routes
-  Rivers
-  Bonsmara PV Application Site

Vegetation Classification

-  Central Free State Grassland
-  Highveld Salt Pans
-  Vaal-Vet Sandy Grassland



Source:
 SANBI, 2018
 NFEPA, 2011



ENVIRONMENTAL DIVISION
 4 PENCARROW CRESCENT
 LA LUCIA RIDGE OFFICE ESTATE
 UMHLANGA ROCKS
 4320
 Phone: +27 31 581 1500
 Fax: +27 31 581 2371
 e-mail: info@sivest.co.za


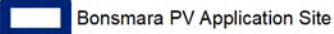
| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 01/09/2022 |
| Map Ref No 17869 | Revision 0 | Date _____ |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT

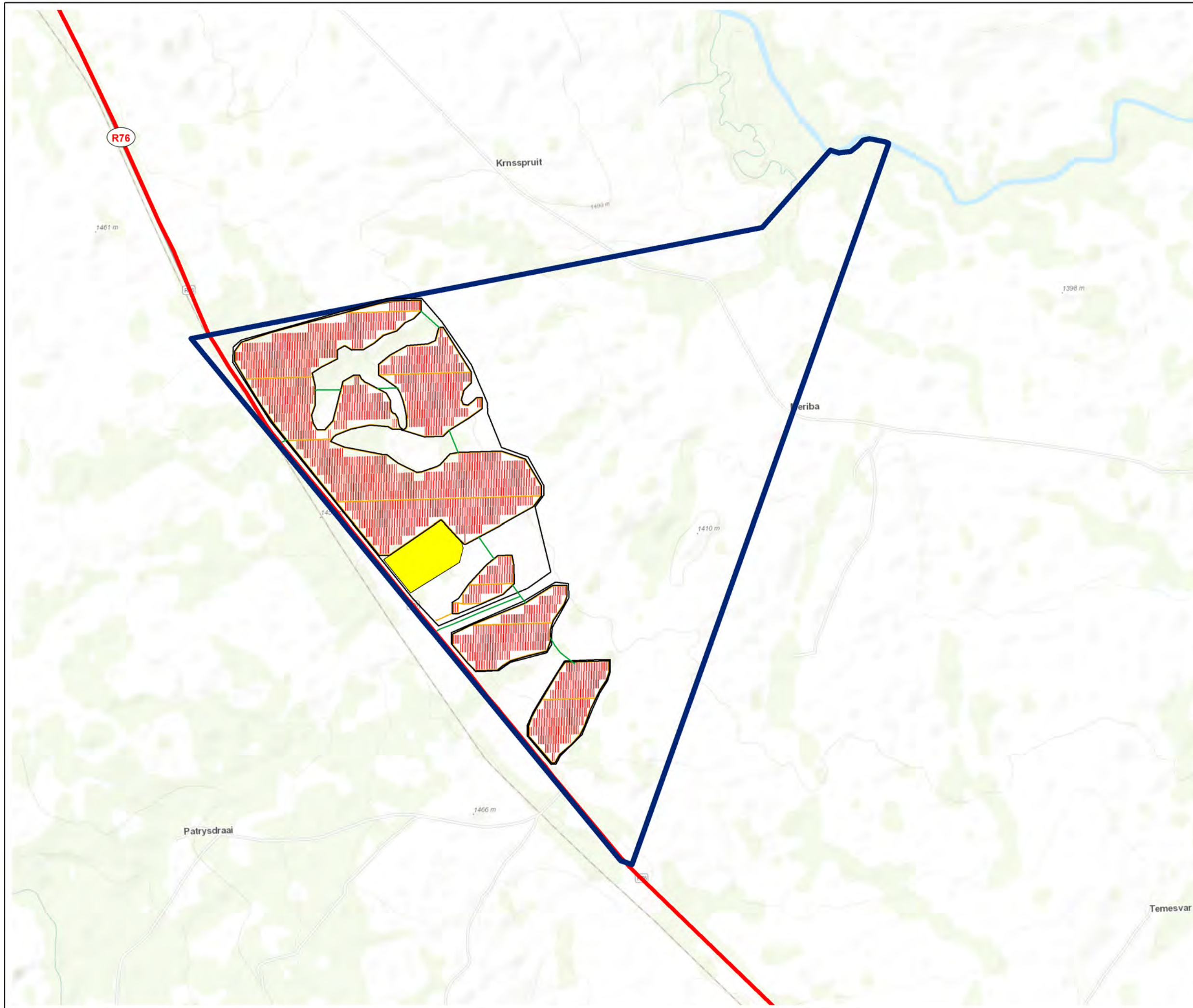
**PROPOSED CONSTRUCTION
OF THE BONSMARA
SOLAR PV FACILITY
NEAR
KROONSTAD,
FREE STATE PROVINCE
PROPOSED LAYOUT**

Legend

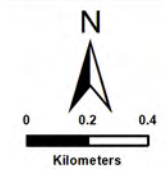
-  Arterial Route
-  Bonsmara PV Application Site

Proposed Solar PV Facility Components

-  Internal Road Network
-  Additional Roads
-  Fencing
-  PV Areas
-  Substation



Source:
NGI, 2014



ENVIRONMENTAL DIVISION
4 PENCARROW CRESCENT
LA LUCIA RIDGE OFFICE ESTATE
UMHLANGA ROCKS
4320
Phone: +27 31 581 1500
Fax: +27 31 581 2371
e-mail: info@sivest.co.za


| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 17/02/2023 |
| Map Ref No 17869 | Revision 0 | Date _____ |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT


**PROPOSED CONSTRUCTION
OF THE BONSMARA
SOLAR PV FACILITY
NEAR
KROONSTAD,
FREE STATE PROVINCE
PV SENSITIVITY LAYOUT**


Legend


 Bonsmara PV Application Site


Proposed Solar PV Facility Components

 Internal Road Network

 Additional Roads

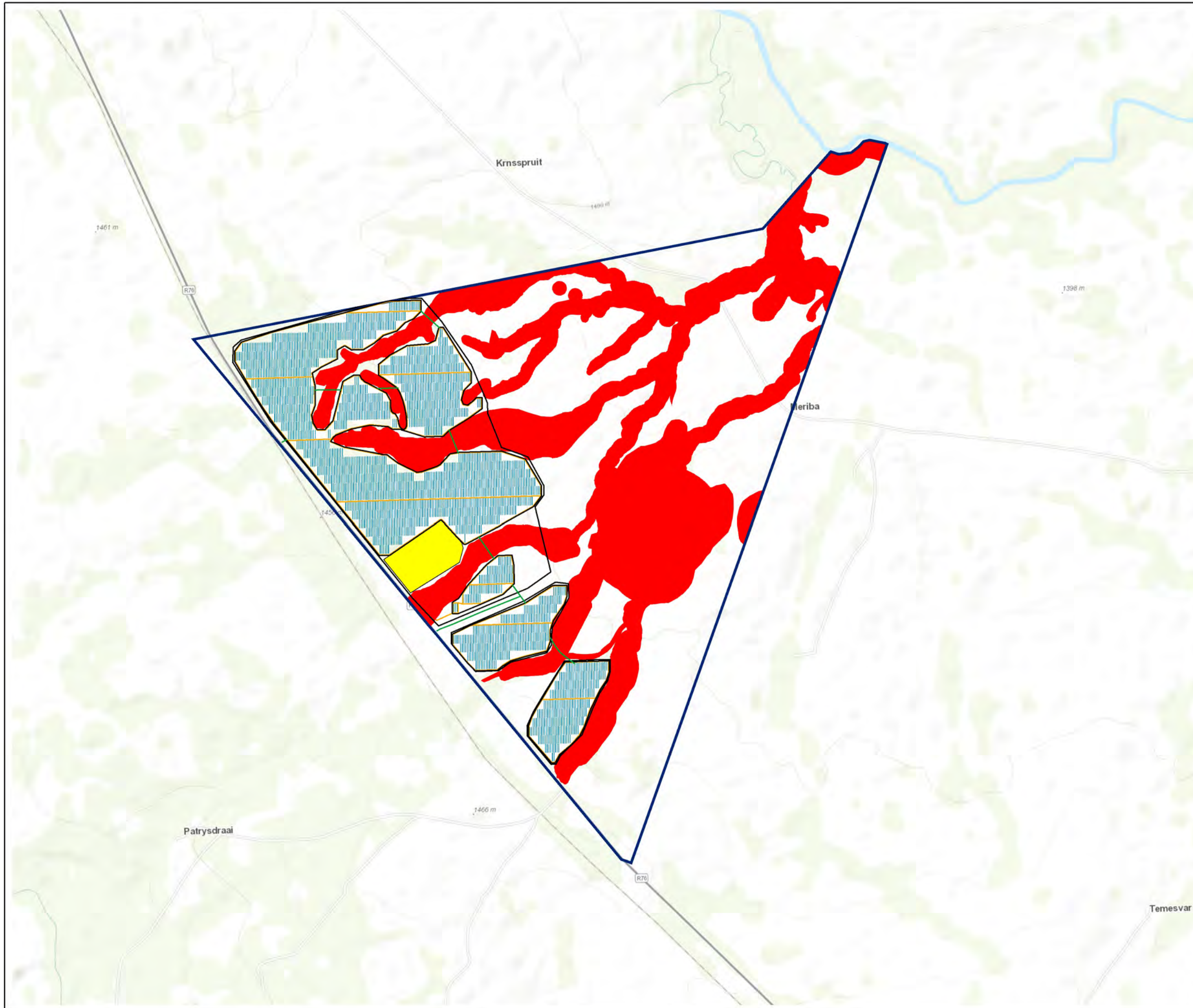
 Fencing

 PV Areas

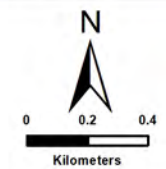
 Substation

Sensitivity Category

 No-Go



Source:
NGI, 2014



ENVIRONMENTAL DIVISION
4 PENCARROW CRESCENT
LA LUCIA RIDGE OFFICE ESTATE
UMHLANGA ROCKS
4320

Phone: +27 31 581 1500
Fax: +27 31 581 2371
e-mail: info@sivest.co.za

| | | |
|----------------------------|--------------------------|---------------------------|
| Project No 17869 | Prepared By SB | Date 17/02/2023 |
| Map Ref No 17869 | Revision 0 | Date _____ |

"COPYRIGHT IS VESTED IN SIVEST IN TERMS OF THE COPYRIGHT ACT (ACT 98 OF 1978) AND NO USE OR REPRODUCTION OR DUPLICATION THEREOF MAY OCCUR WITHOUT THE WRITTEN CONSENT OF THE AUTHOR"

THIS MAP HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE SIVEST QUALITY MANAGEMENT SYSTEM WHICH HAS BEEN CERTIFIED ISO 9001:2015 COMPLIANT