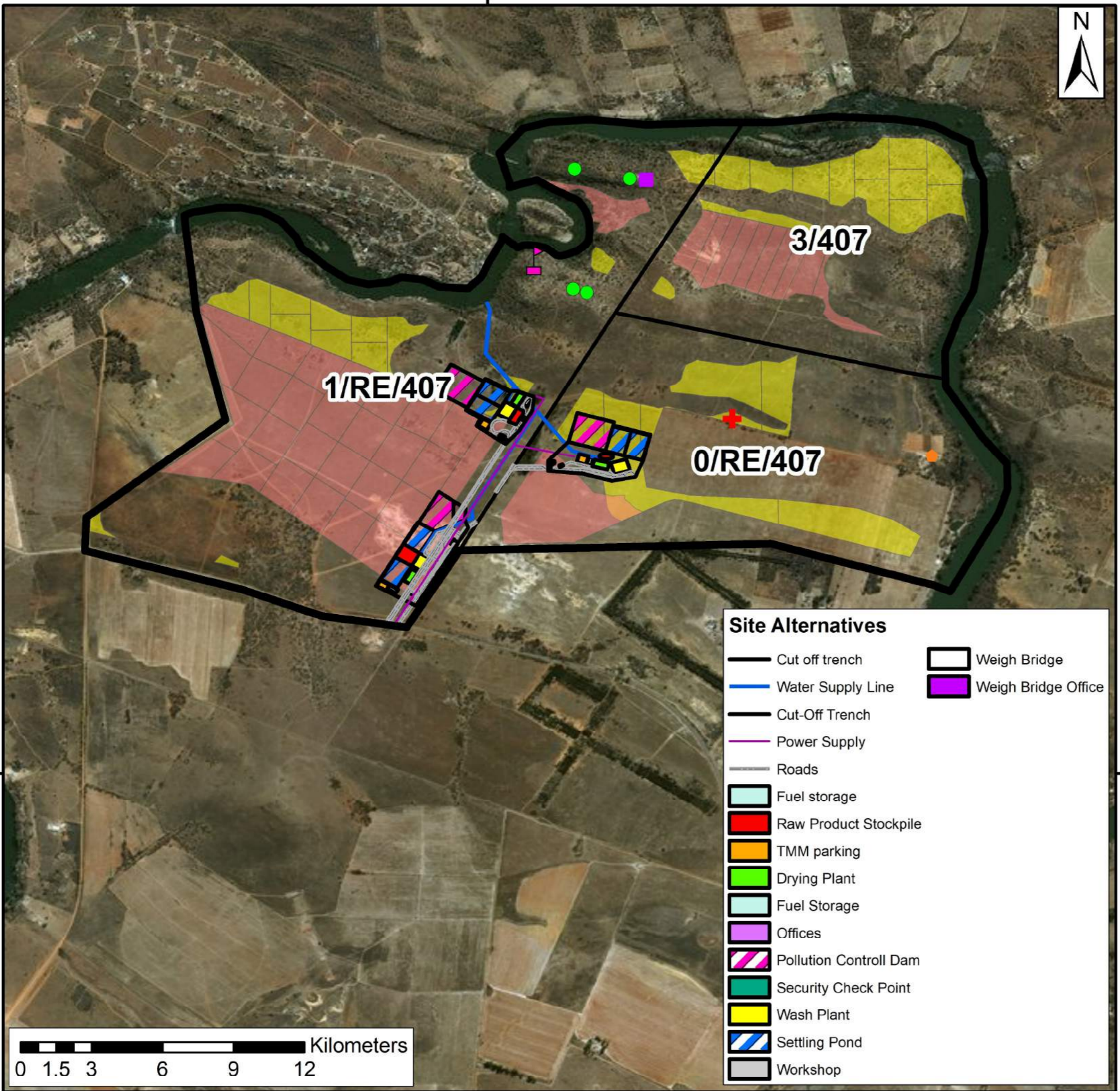


27°36'30"E



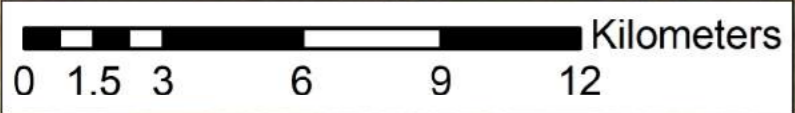
1/RE/407

3/407

0/RE/407

Site Alternatives

- Cut off trench
- Water Supply Line
- Cut-Off Trench
- Power Supply
- Roads
- Fuel storage
- Raw Product Stockpile
- TMM parking
- Drying Plant
- Fuel Storage
- Offices
- Pollution Control Dam
- Security Check Point
- Wash Plant
- Settling Pond
- Workshop
- Weigh Bridge
- Weigh Bridge Office



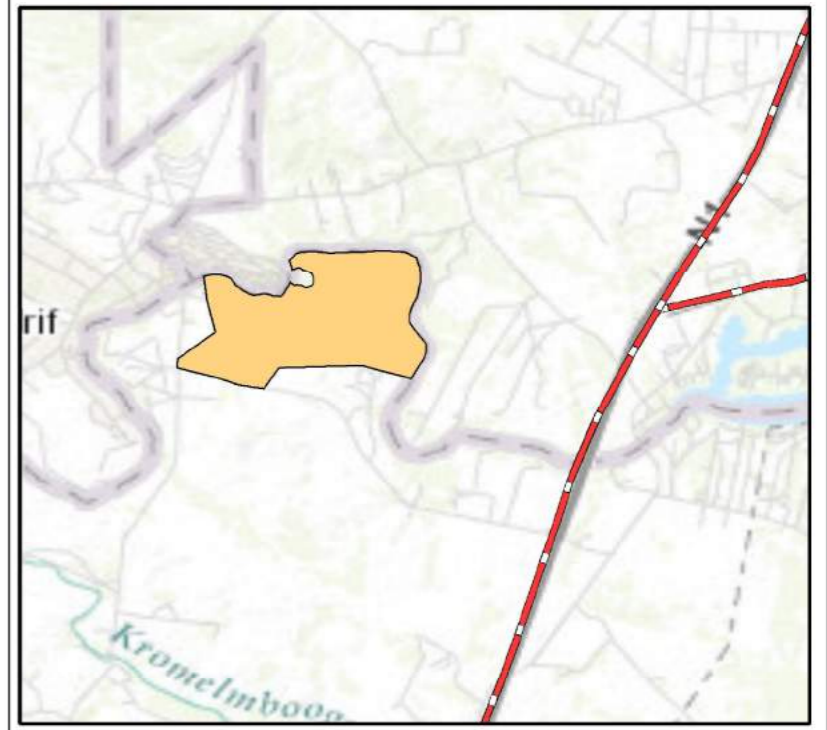
27°36'30"E

Cultural and Heritage

Pure Source Mine

- Square Enclosure
- Modern House
- Circular Enclosure
- ✚ Cemetery (48 Graves)
- ▴ SA War Redoubt
- Project Area
- Farm Portions
- Aggregate Resource
- Sand Resource

Source:
Specialist Report:
HIA: Goosebay Eco Estate



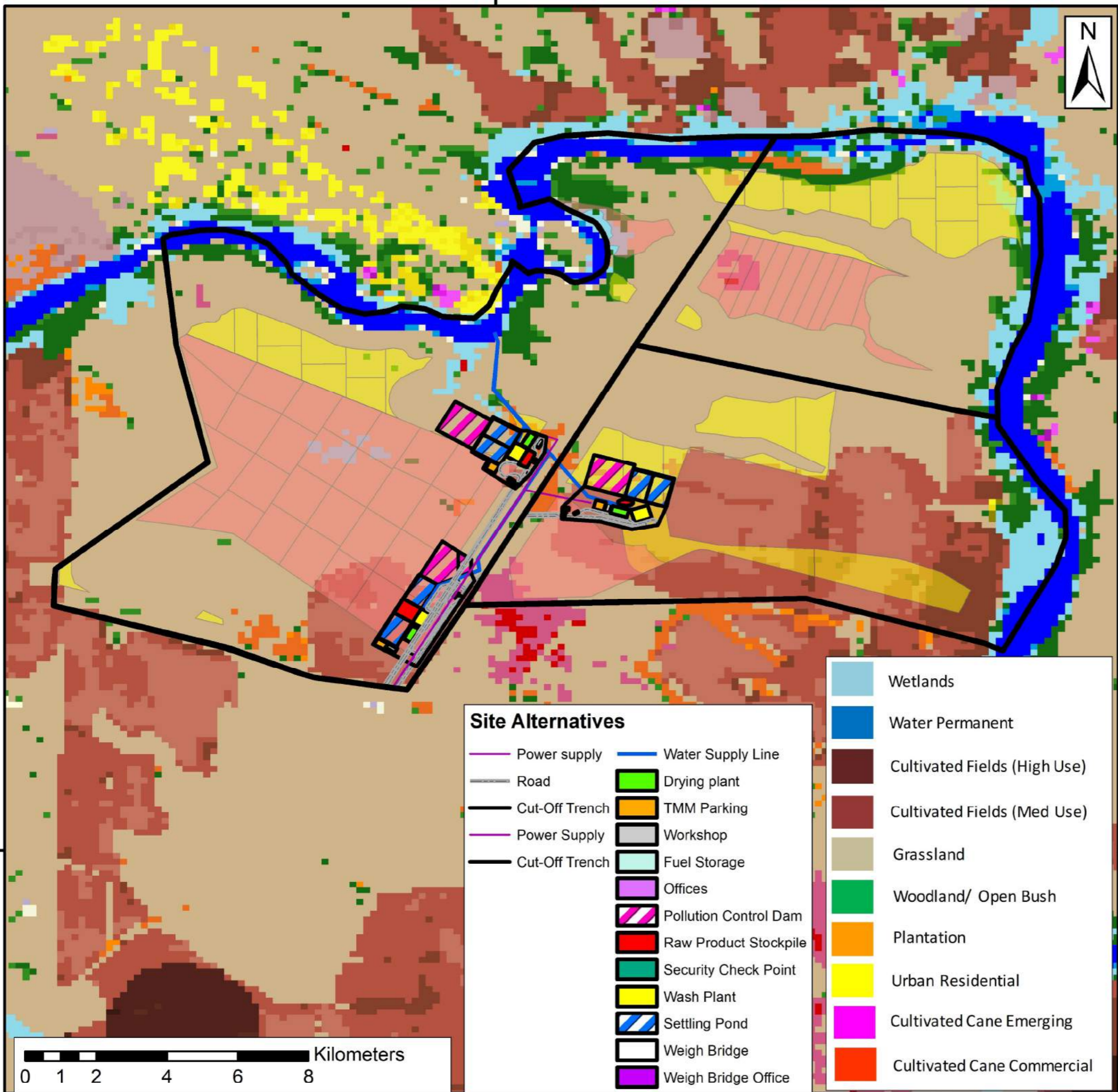
Coord System: GCS WGS 1984

Datum: WGS 1984

Units: Degrees

Prepared by:



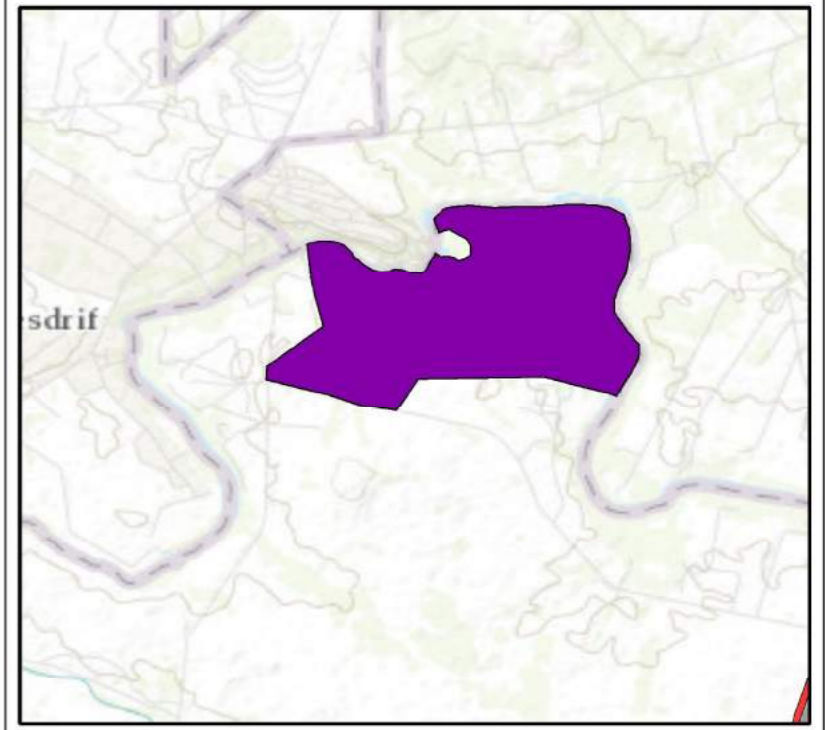


Land Use Cover

Pure Source Mine

- Parent Farm
- Farm Portions
- Aggregate Resource
- Sand Resource

Source:
South African National Biodiversity Institute (SANBI)



Site Alternatives

- Power supply
- Road
- Cut-Off Trench
- Power Supply
- Cut-Off Trench
- Drying plant
- TMM Parking
- Workshop
- Fuel Storage
- Offices
- Pollution Control Dam
- Raw Product Stockpile
- Security Check Point
- Wash Plant
- Settling Pond
- Weigh Bridge
- Weigh Bridge Office
- Water Supply Line

- Wetlands
- Water Permanent
- Cultivated Fields (High Use)
- Cultivated Fields (Med Use)
- Grassland
- Woodland/ Open Bush
- Plantation
- Urban Residential
- Cultivated Cane Emerging
- Cultivated Cane Commercial



Coord System: GCS WGS 1984

Datum: WGS 1984

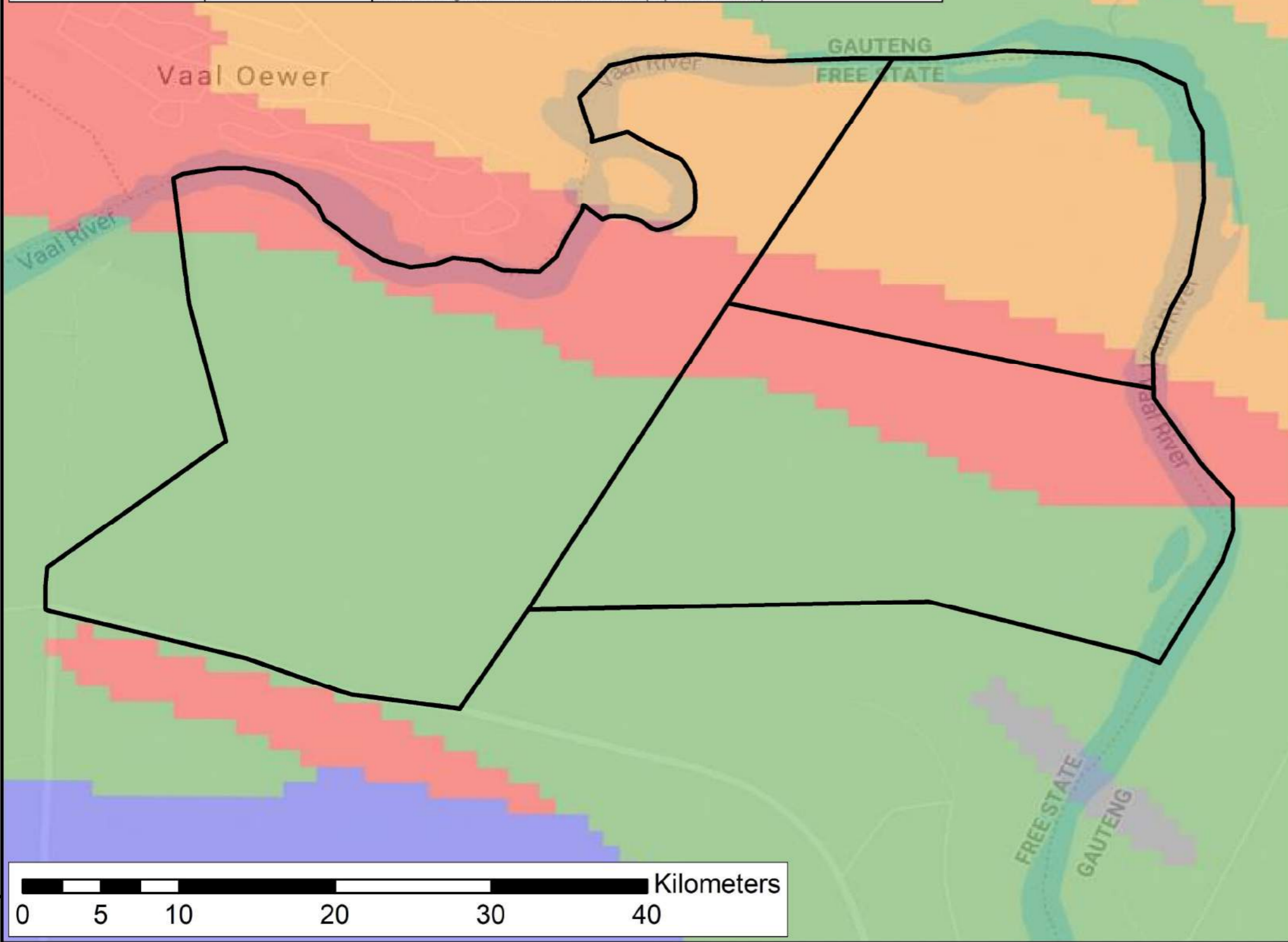
Units: Degrees

Prepared by:



27°36'30"E

Colour	Sensitivity	Required Action
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

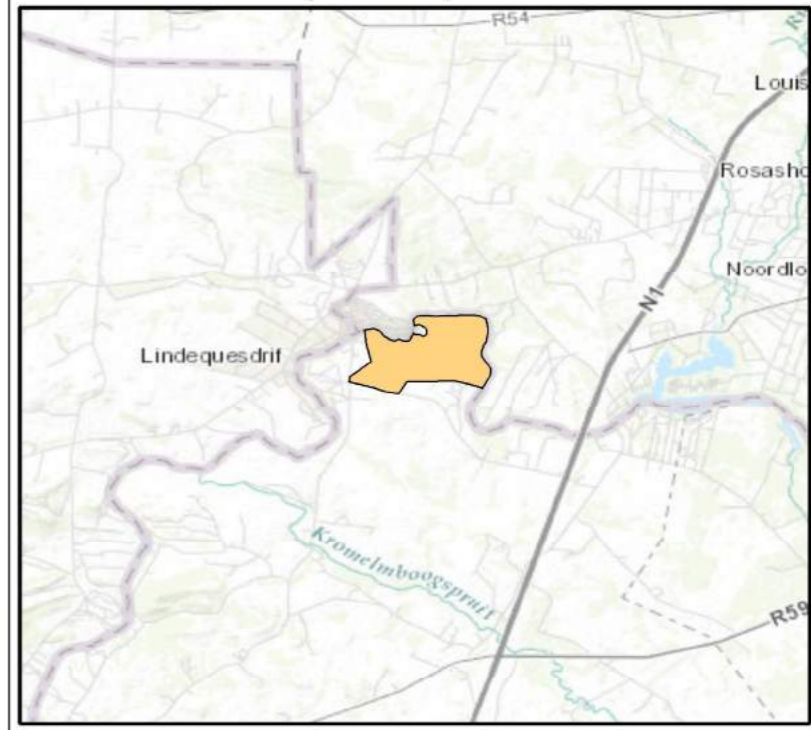


Palaeontology Sensitivity

Pure Source Mine

-  Parent Farm
-  Farm Portions

Source:
South African Heritage Resources Agency (SAHRA)



Coord System: GCS WGS 1984

Datum: WGS 1984

Units: Degrees

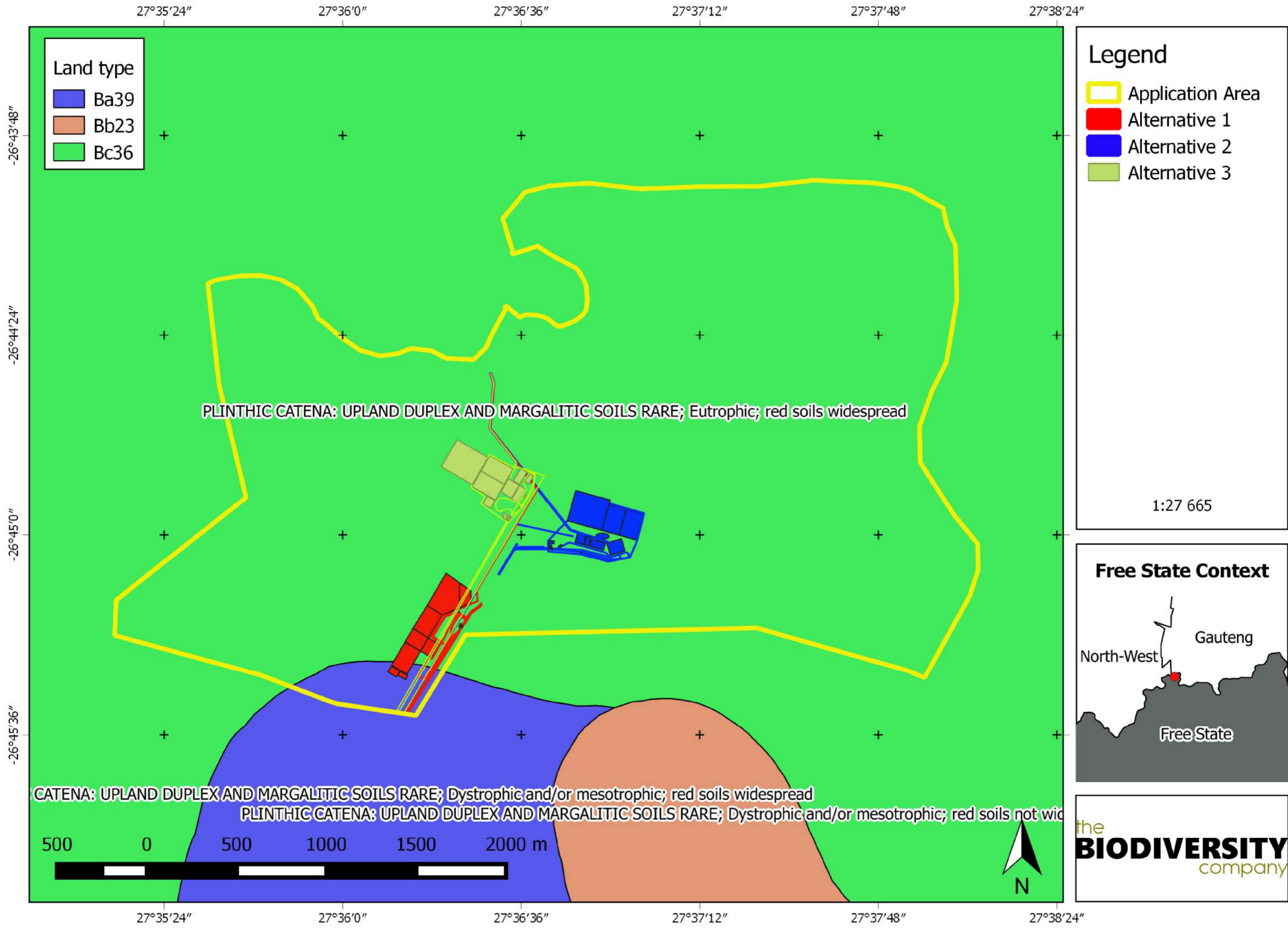
Prepared by:



26°46'0"S

27°36'30"E

26°46'0"S



Land type

- Ba39
- Bb23
- Bc36

Legend

- Application Area
- Alternative 1
- Alternative 2
- Alternative 3

PLINTHIC CATENA: UPLAND DUPLEX AND MARGALITIC SOILS RARE; Eutrophic; red soils widespread

CATENA: UPLAND DUPLEX AND MARGALITIC SOILS RARE; Dystrophic and/or mesotrophic; red soils widespread

PLINTHIC CATENA: UPLAND DUPLEX AND MARGALITIC SOILS RARE; Dystrophic and/or mesotrophic; red soils not wide

500 0 500 1000 1500 2000 m

1:27 665

Free State Context



27°36'0"

27°37'12"

Legend

- Application area
- Oakleaf
- Mispah
- Longlands
- Hutton
- Glenrosa
- Fernwood
- Clovelly
- Avalon
- Westleigh

1:0

National Context



the
BIODIVERSITY
company

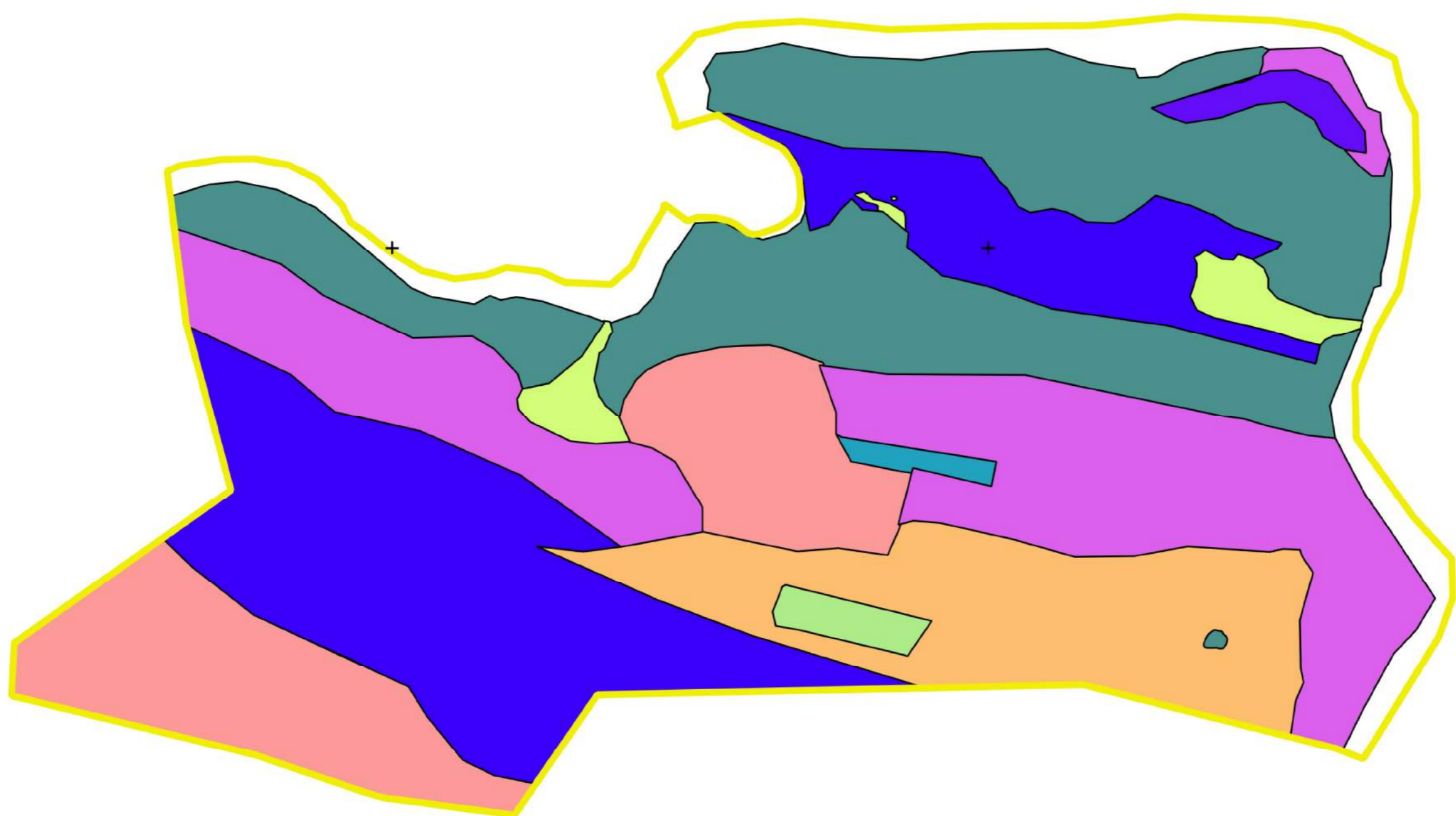
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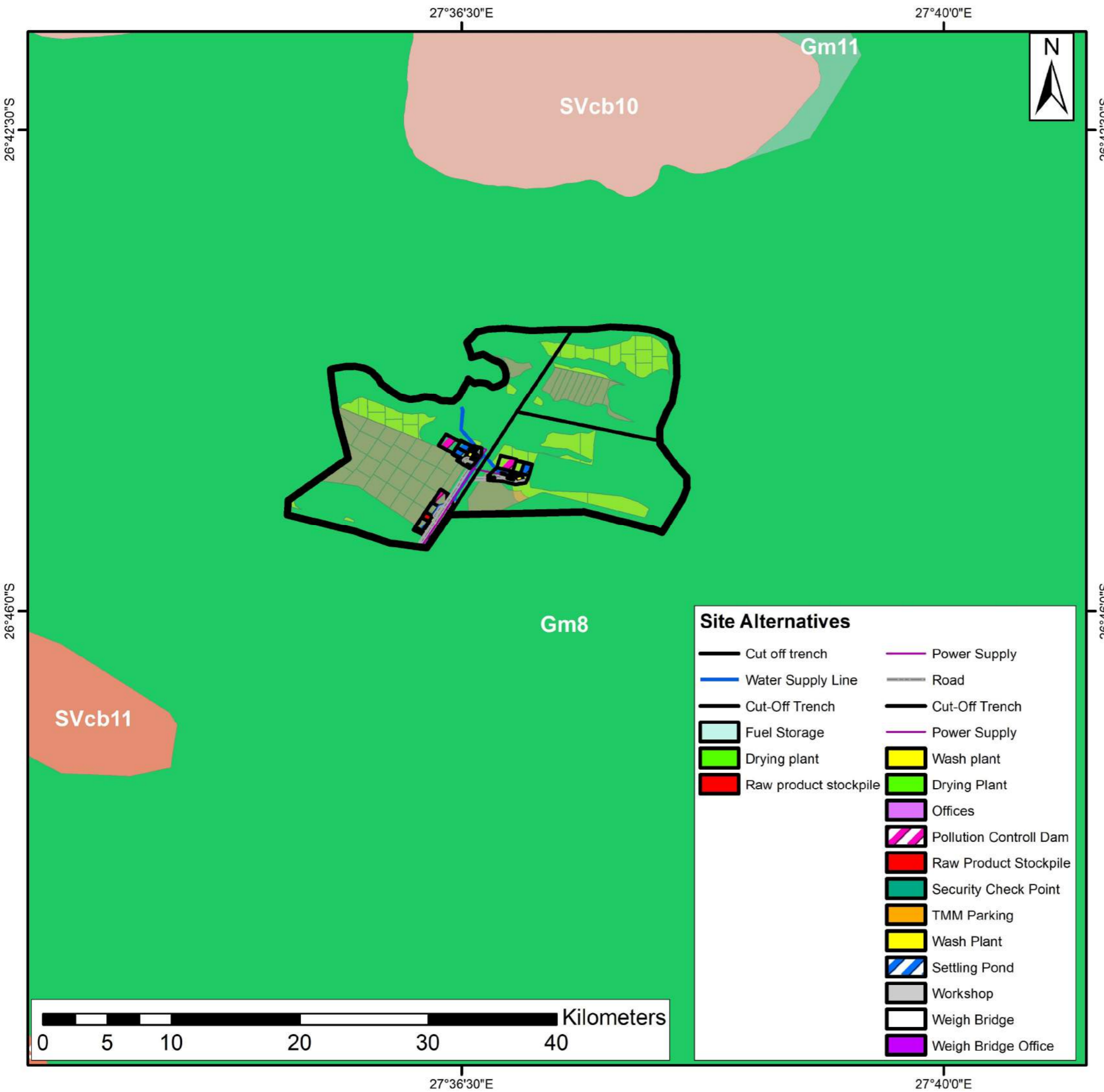
-26°45'36"

27°36'0"

27°37'12"

500 0 500 1000 1500 2000 m



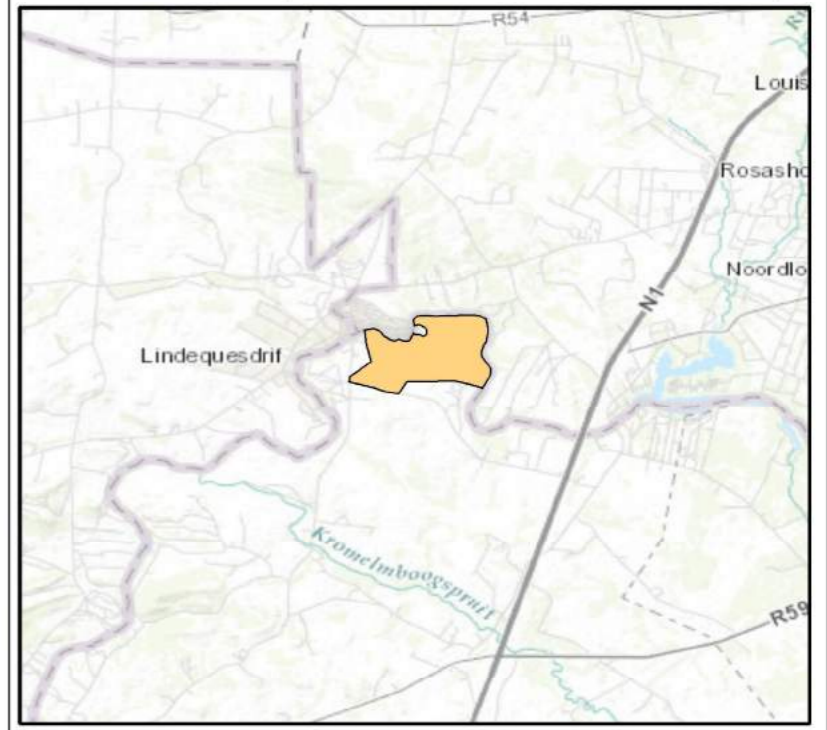


Vegetation

Pure Source Mine

- Parent Farm
- Farm Portions
- Aggregate Resource
- Sand Resource
- Soweto Highveld Grassland

Source:
Vegetation of South Africa, Lesotho and Swaziland (Mucina and Rutherford 2006)



- ### Site Alternatives
- | | |
|-----------------------|-----------------------|
| Cut off trench | Power Supply |
| Water Supply Line | Road |
| Cut-Off Trench | Cut-Off Trench |
| Fuel Storage | Power Supply |
| Drying plant | Wash plant |
| Raw product stockpile | Drying Plant |
| | Offices |
| | Pollution Control Dam |
| | Raw Product Stockpile |
| | Security Check Point |
| | TMM Parking |
| | Wash Plant |
| | Settling Pond |
| | Workshop |
| | Weigh Bridge |
| | Weigh Bridge Office |



Coord System: GCS WGS 1984
Datum: WGS 1984
Units: Degrees

Prepared by:

Free State Terrestrial CBA Plan Pure Source Mine Project

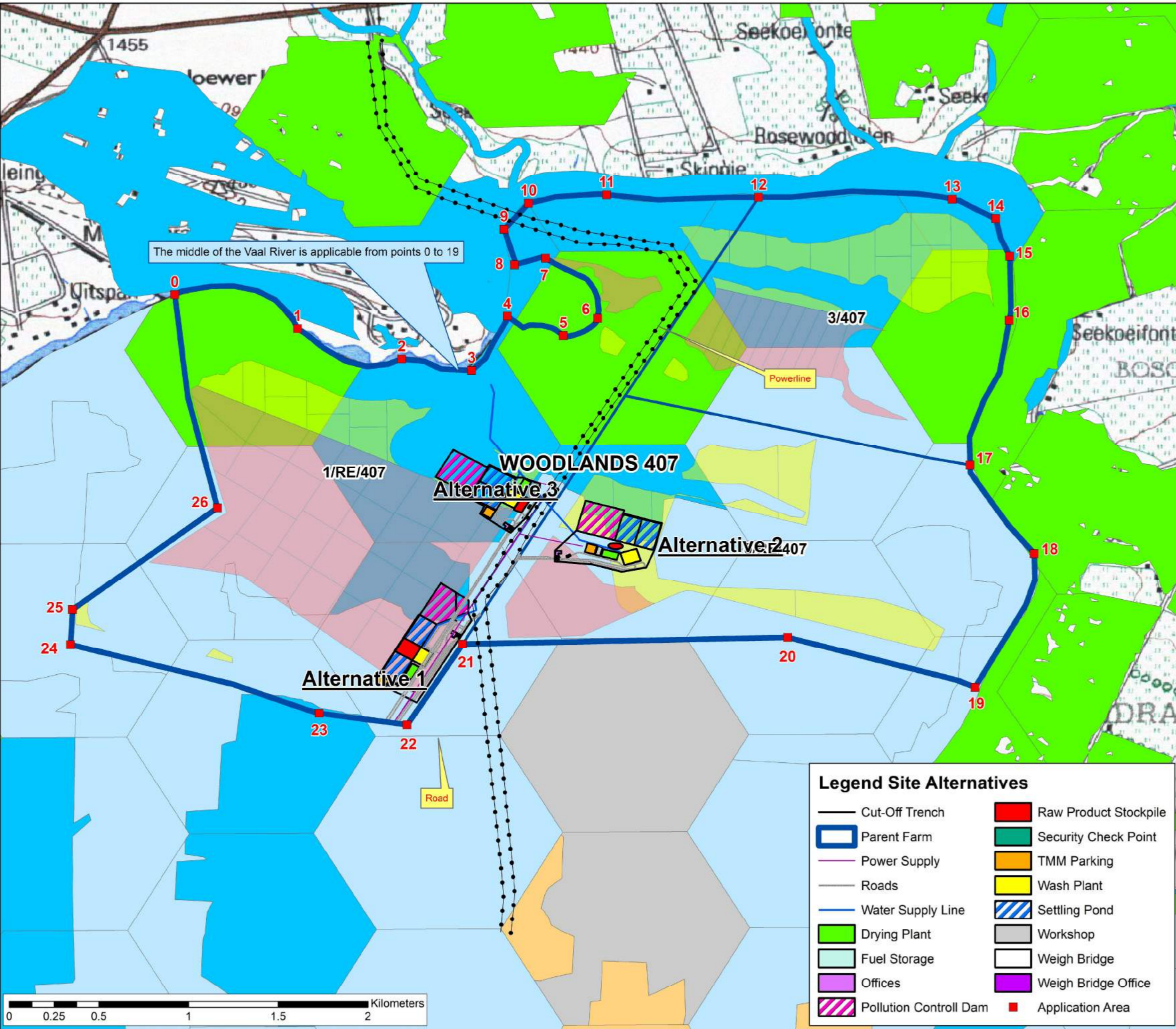
In the district of Fezile Dabi
Project Extent: 858.5825Ha

After 1:50 000 Topo Sheet
2627 DA & DC
WGS84/Hartebeeshoek



- Gauteng C Plan**
- Protected Area
 - Irreplaceable Area
 - Ecological Support Area
 - Important Area
- Critical Biodiversity**
- Protected
 - CBA1
 - CBA2
 - Degraded
 - ESA1
 - ESA2
 - Other
- Servitudes according to the Title Deeds and SG Diagrams**
- Application Area
 - Powerlines
 - Parent Farm
 - Farm Portions
 - Aggregate Resource
 - Sand Resource

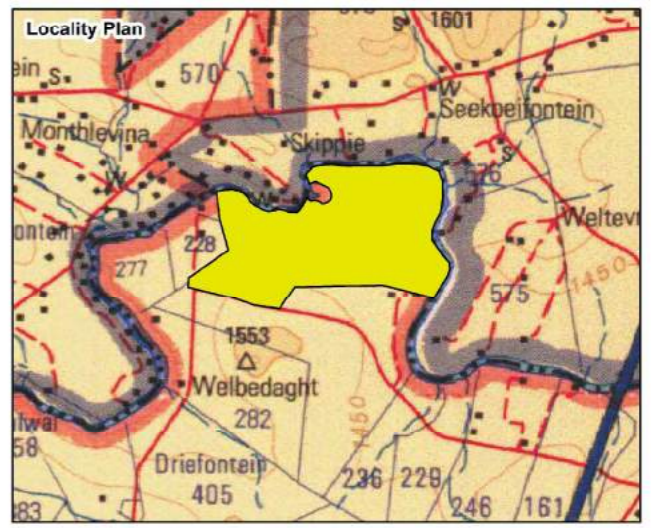
The middle of the Vaal River is applicable from points 0 to 19

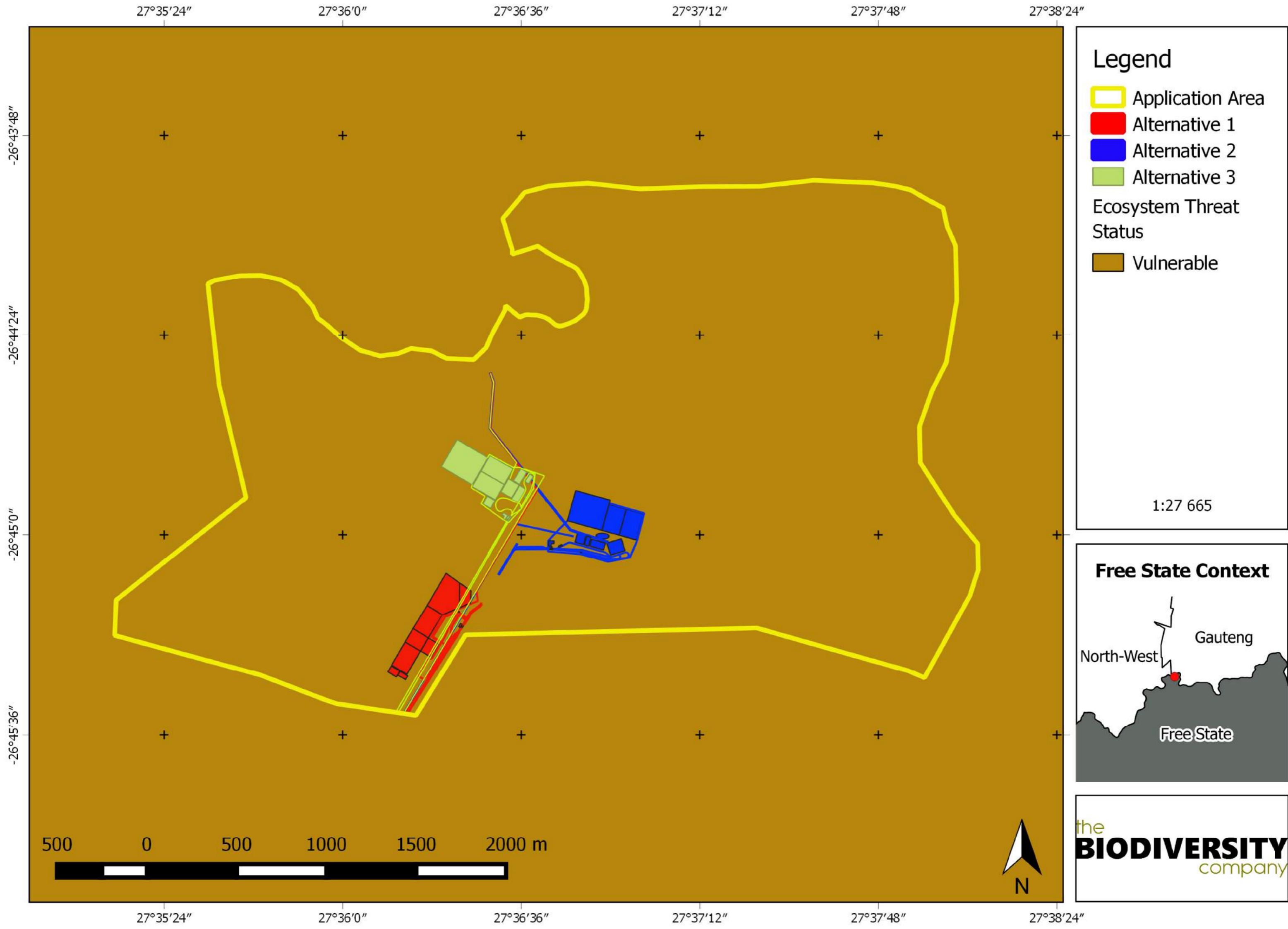


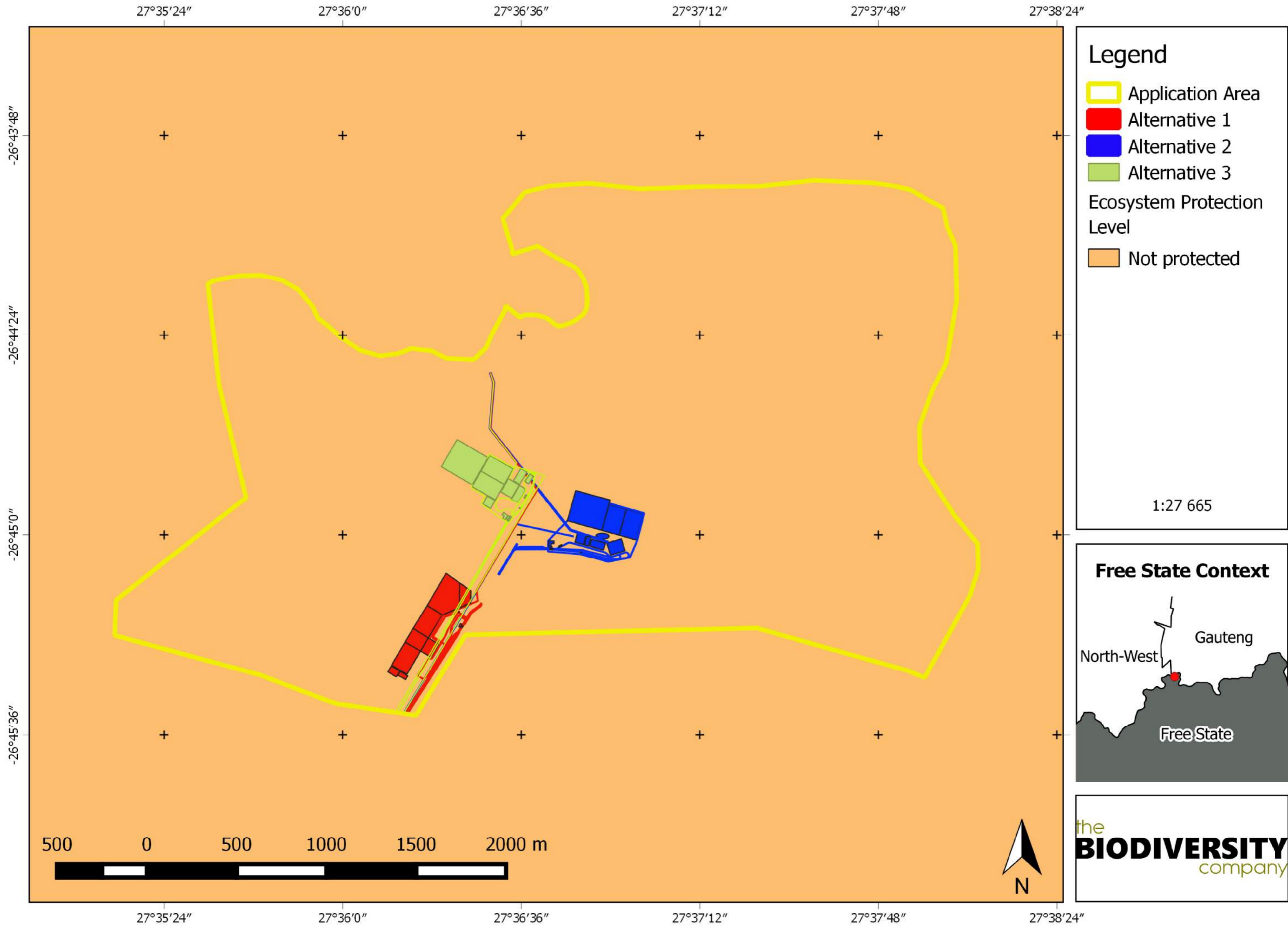
- Legend Site Alternatives**
- Cut-Off Trench
 - Parent Farm
 - Power Supply
 - Roads
 - Water Supply Line
 - Drying Plant
 - Fuel Storage
 - Offices
 - Pollution Control Dam
 - Raw Product Stockpile
 - Security Check Point
 - TMM Parking
 - Wash Plant
 - Settling Pond
 - Workshop
 - Weigh Bridge
 - Weigh Bridge Office
 - Application Area

Prepared by:
Shango Solutions
Scale and Innovation in the Resources Industry

Applicant's Signature _____
Date _____





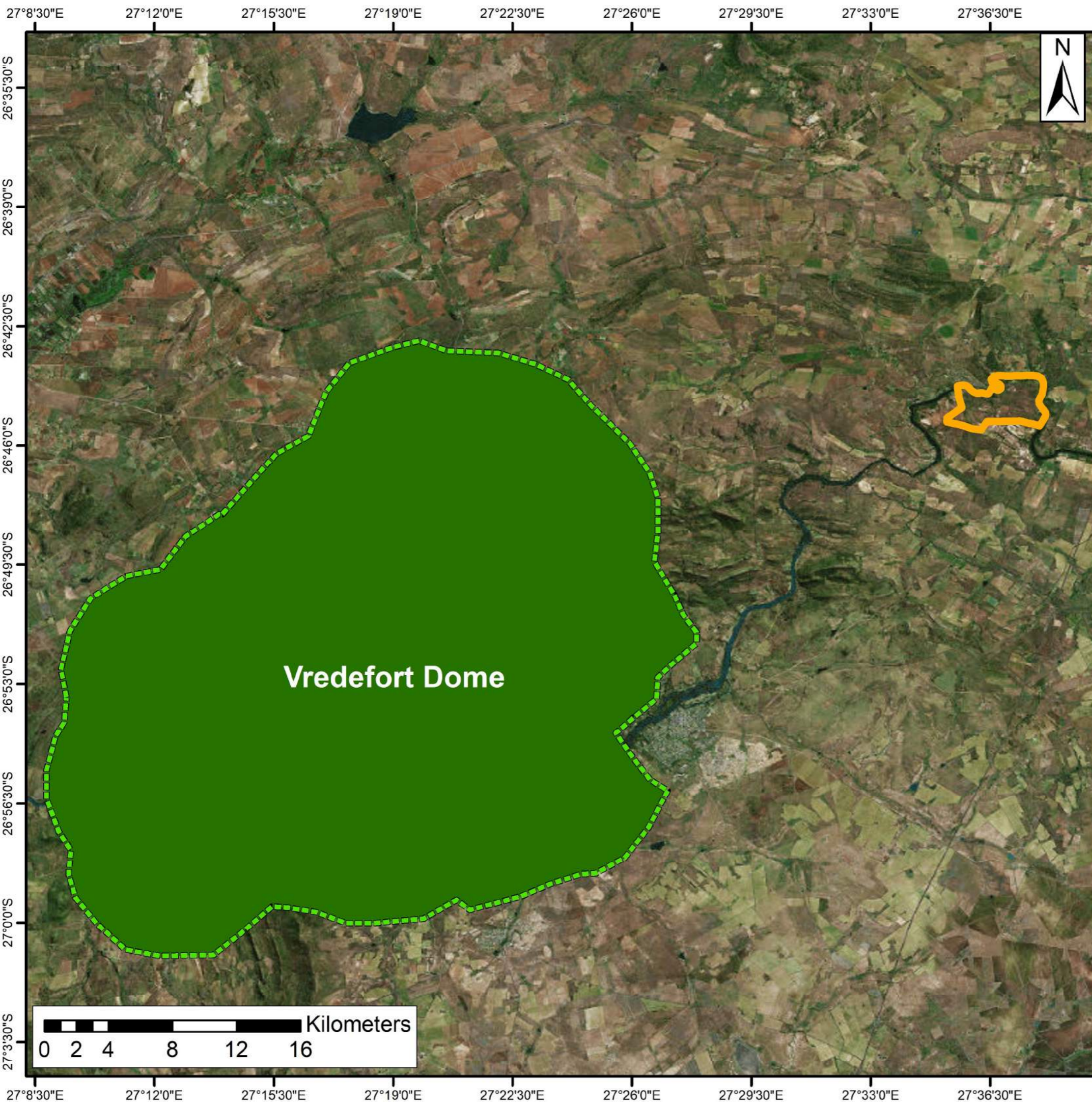


- ### Legend
- Application Area
 - Alternative 1
 - Alternative 2
 - Alternative 3
- #### Ecosystem Protection Level
- Not protected

1:27 665

Free State Context



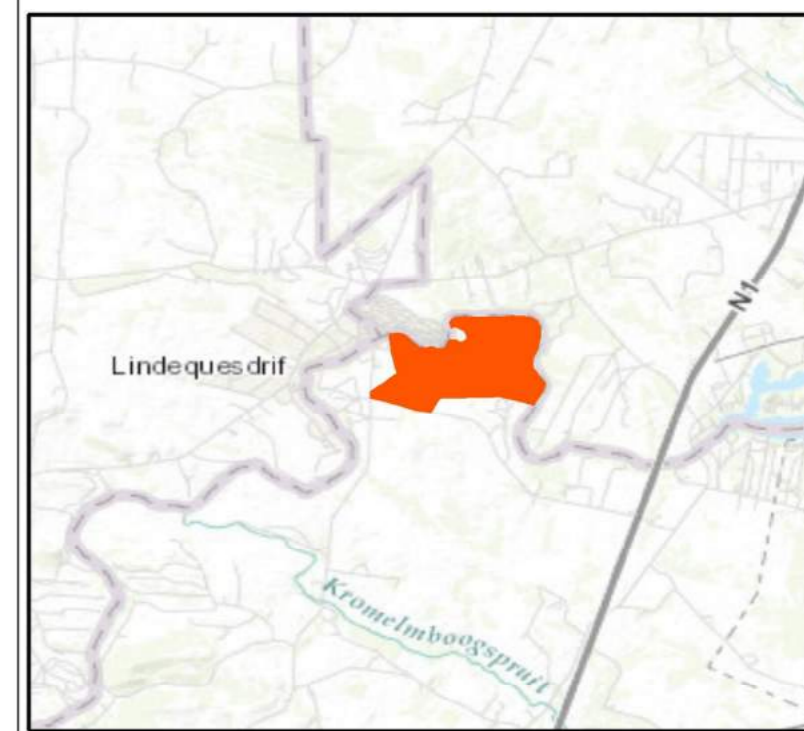


Protected Areas

Pure Source Mine

-  Parent Farm
-  World Heritage Site (With 5km Buffer)

Source:
Protected Areas NBA 2011



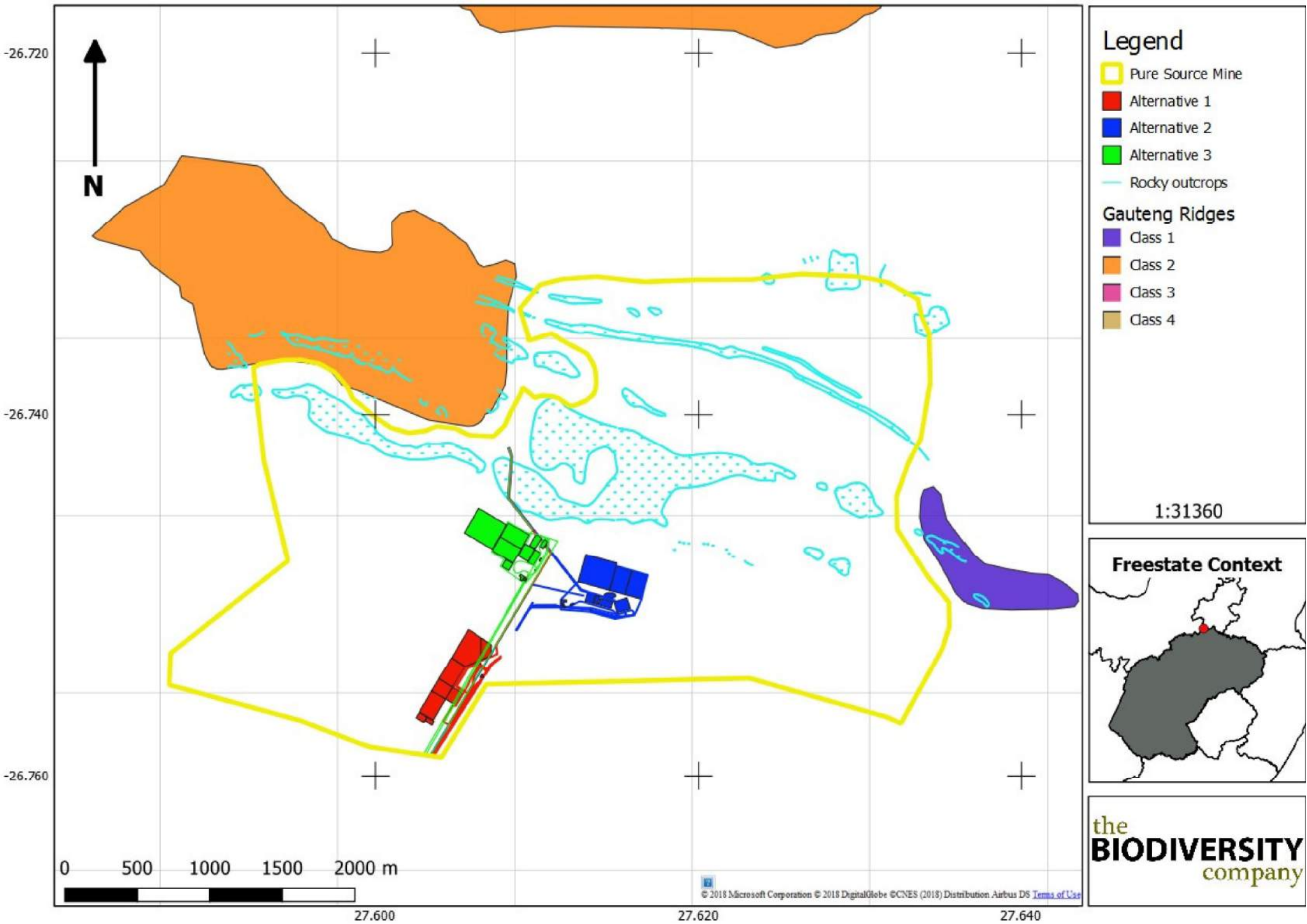
Coord System: GCS WGS 1984

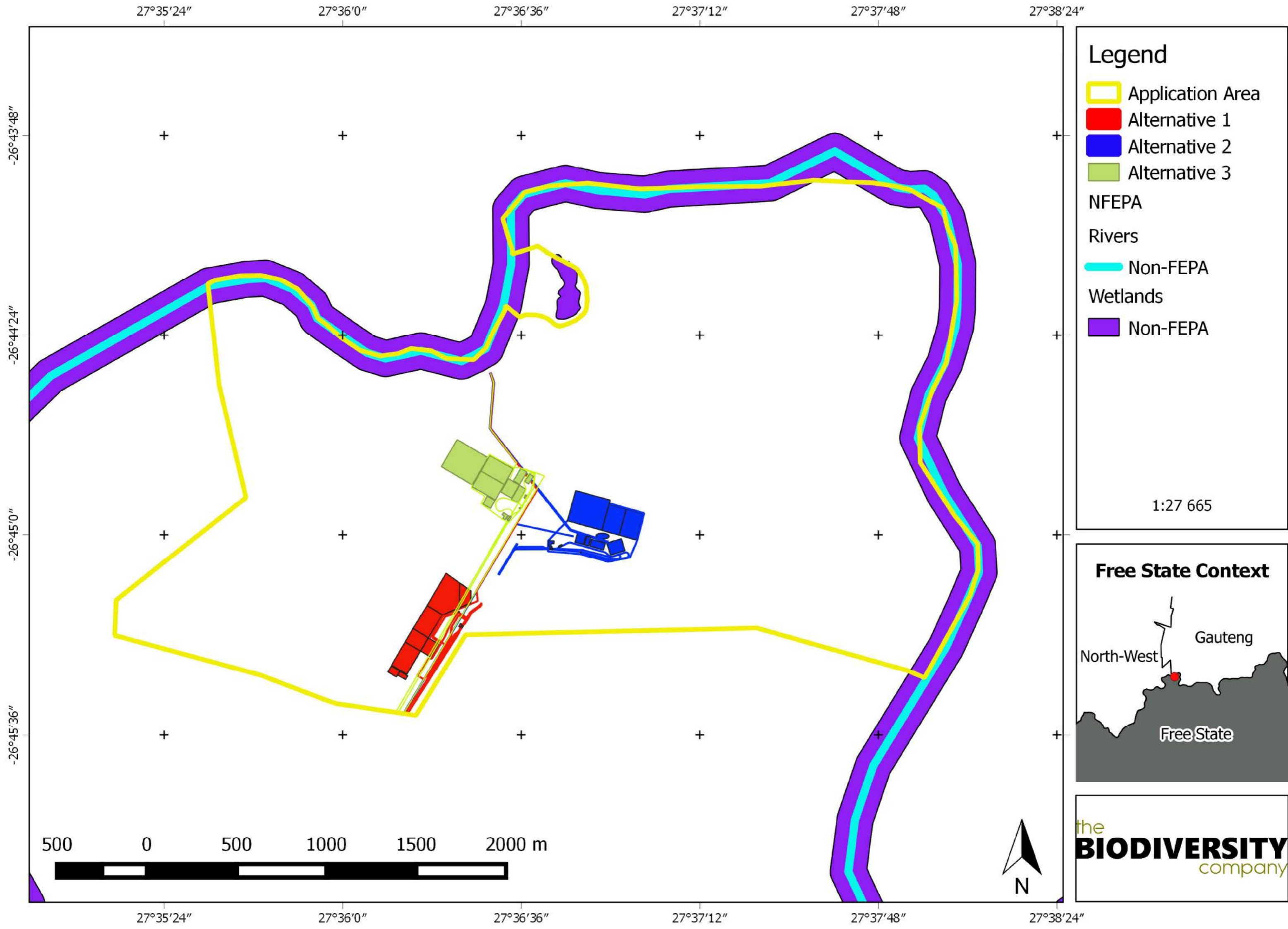
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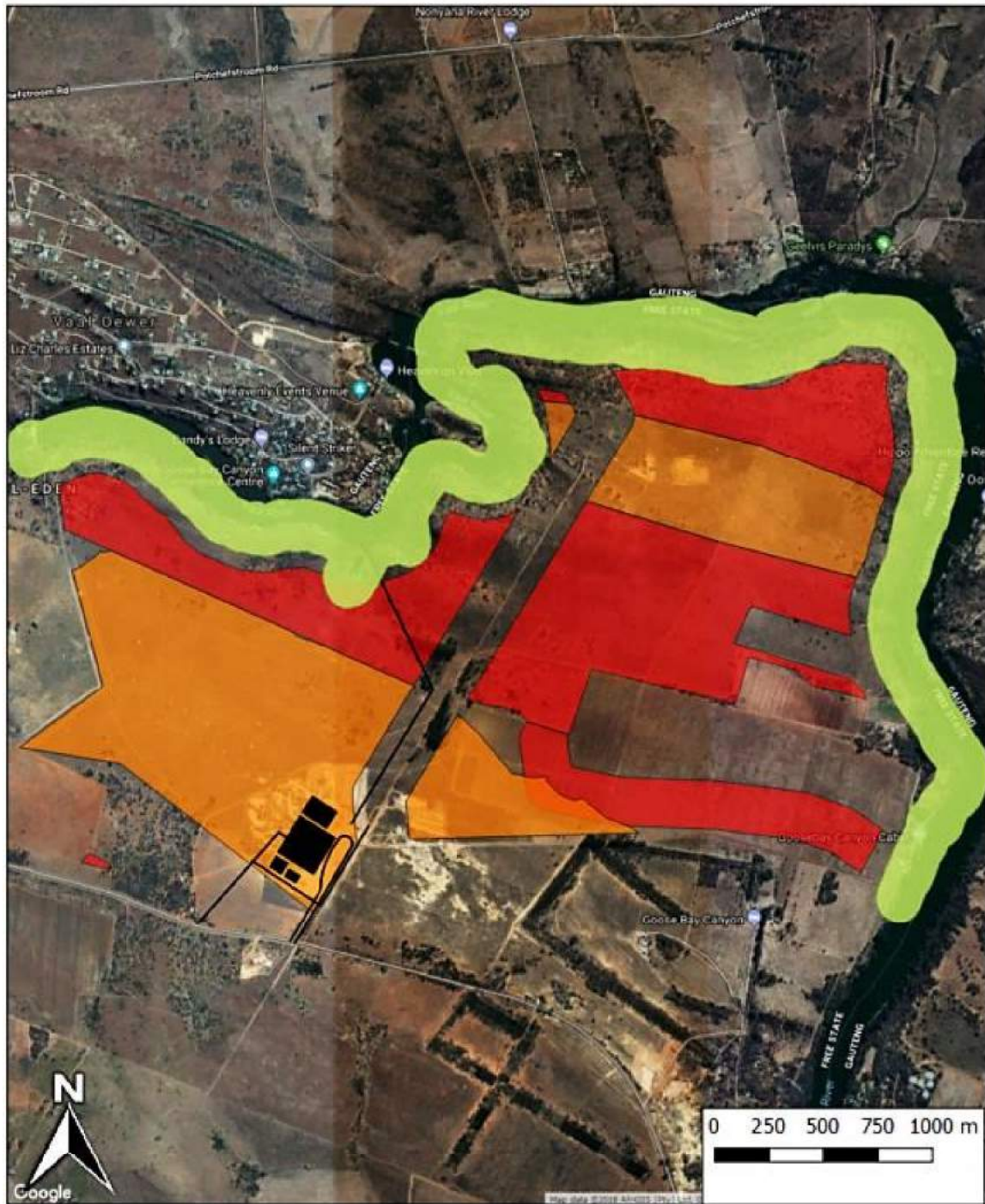
Units: Degrees

Prepared by:





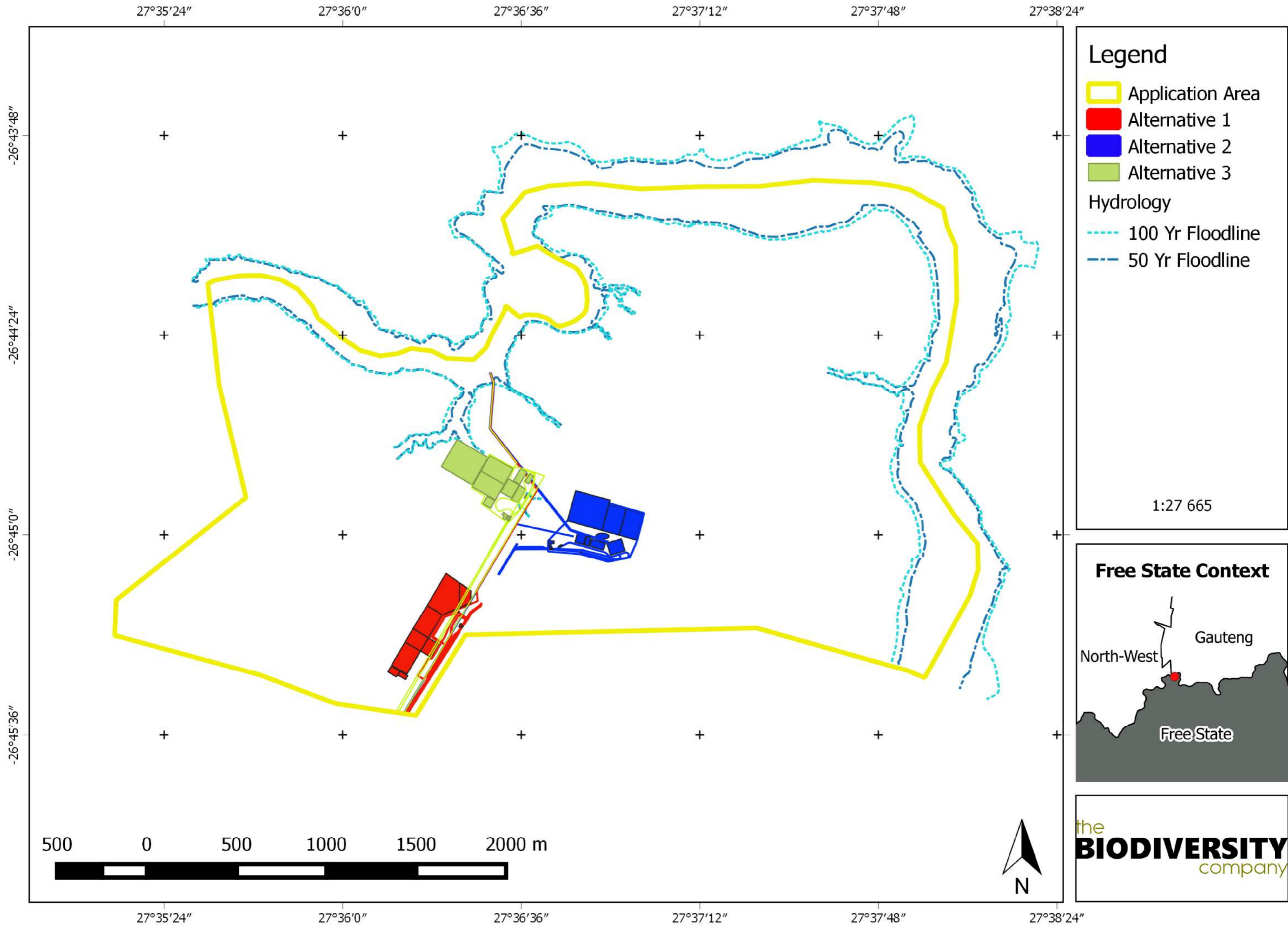


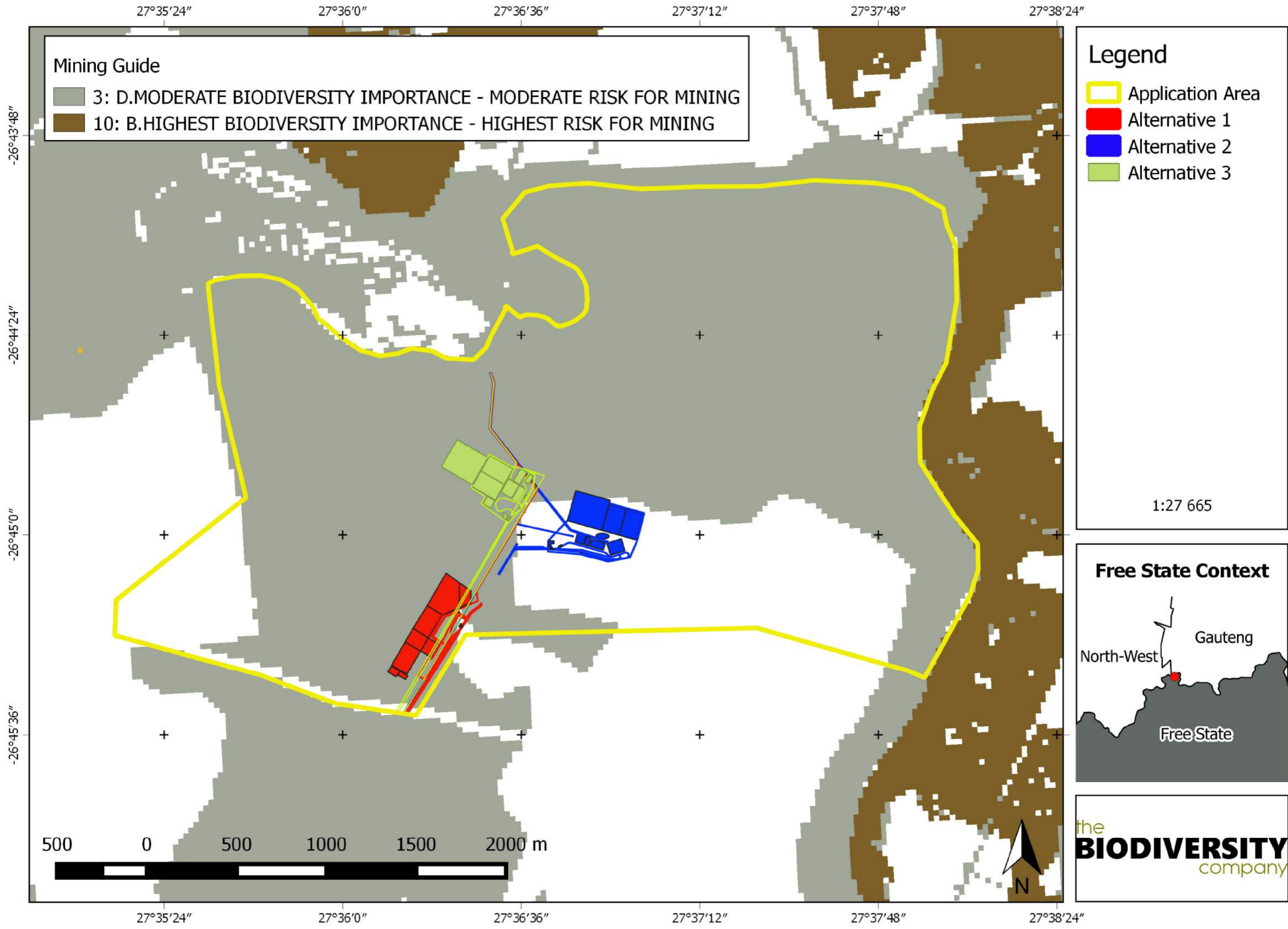


Legend

- Linear Infrastructure
- Infrastructure
- Sand Deposits
- Aggregate
- Riparian Buffer

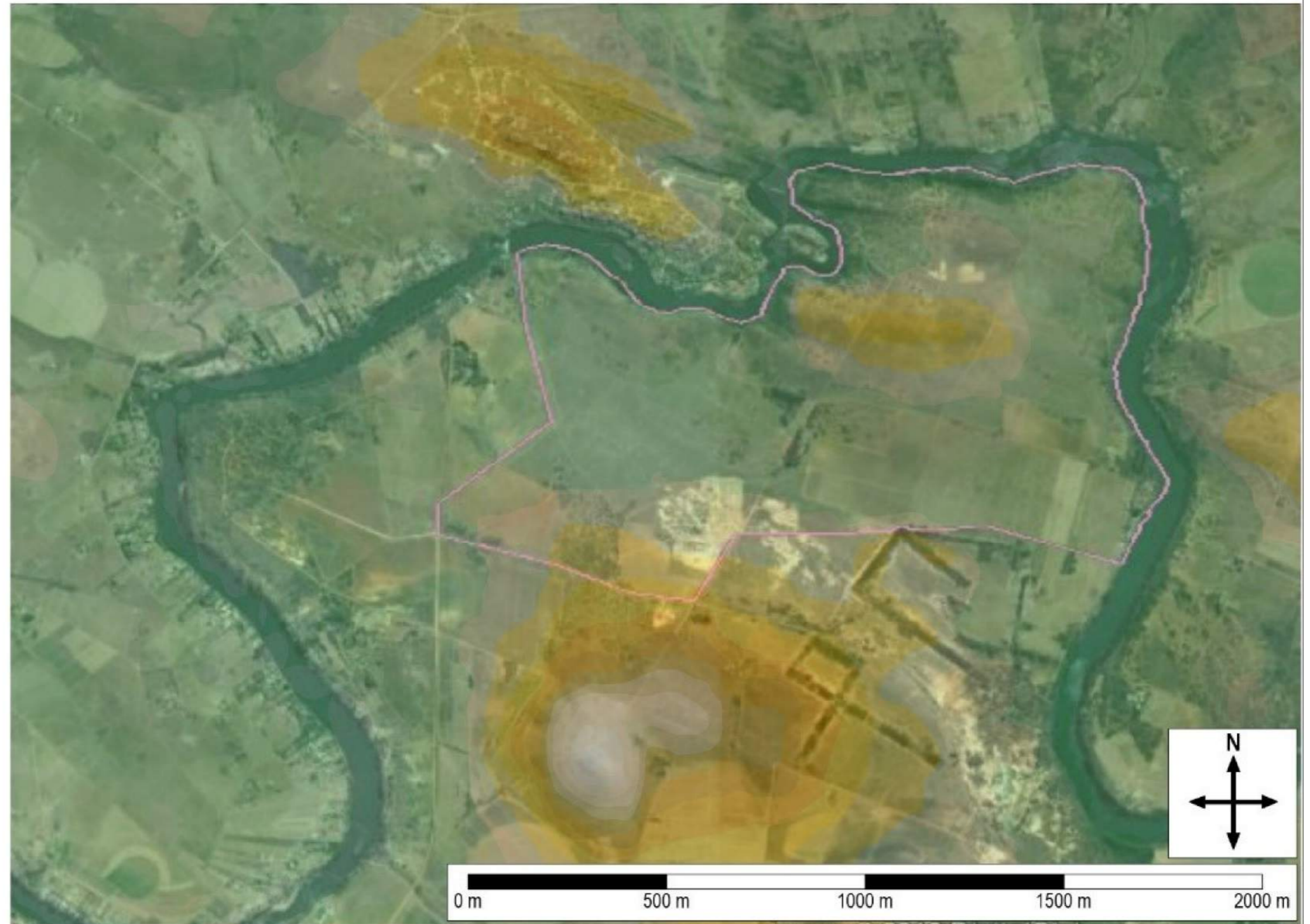
the **BIODIVERSITY** company



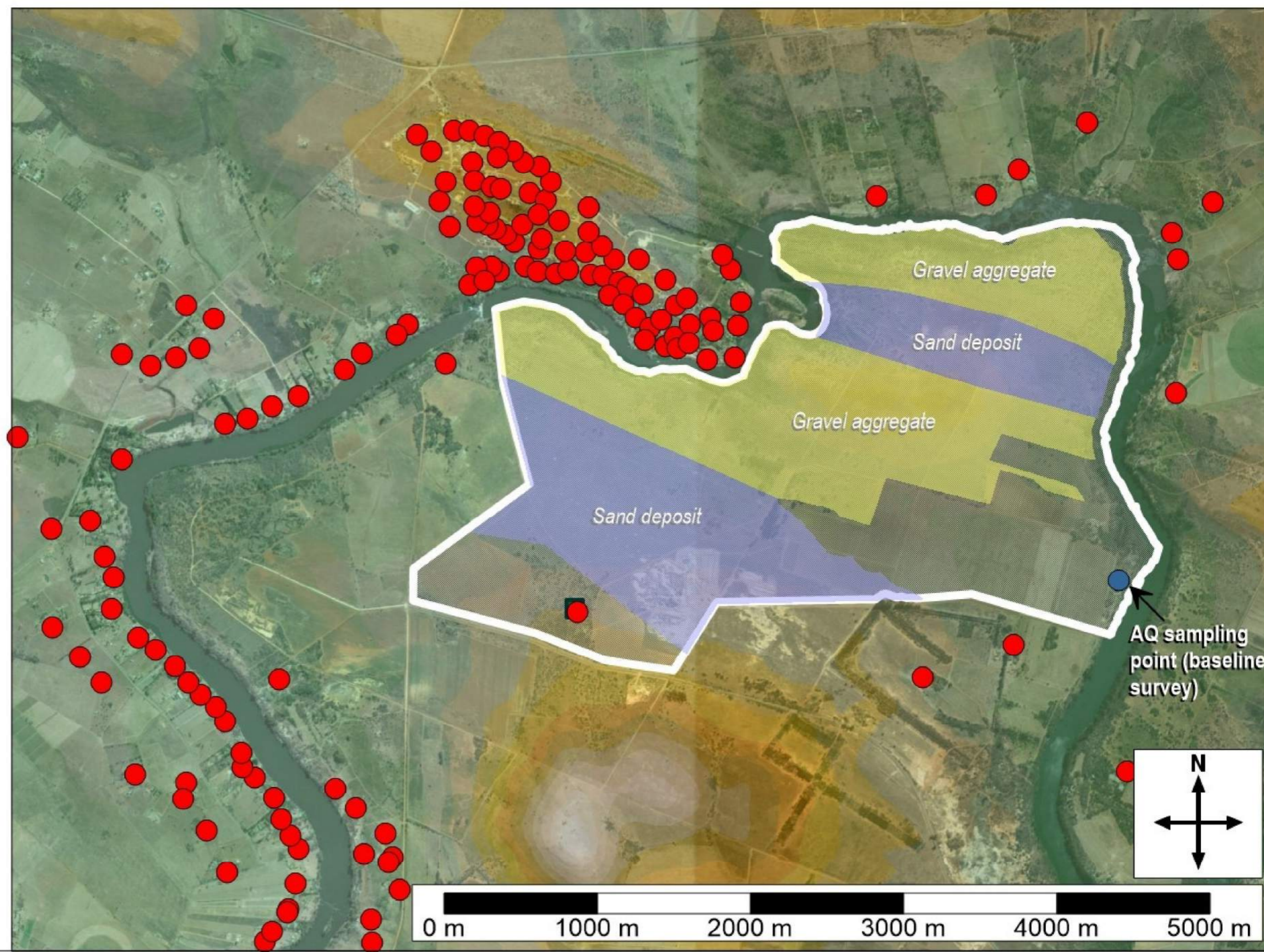


Pure Source Mine Project

Topography

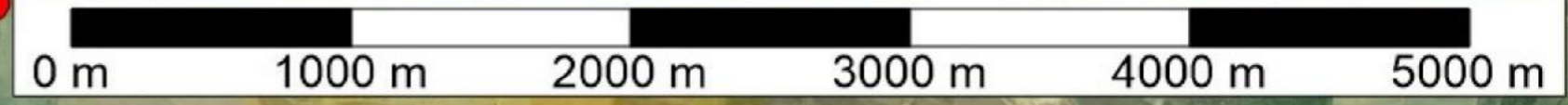
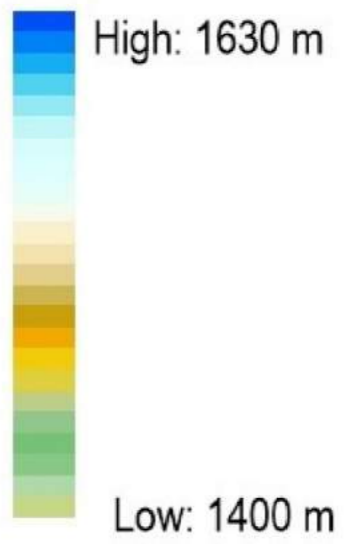


Pure Source Mine Project

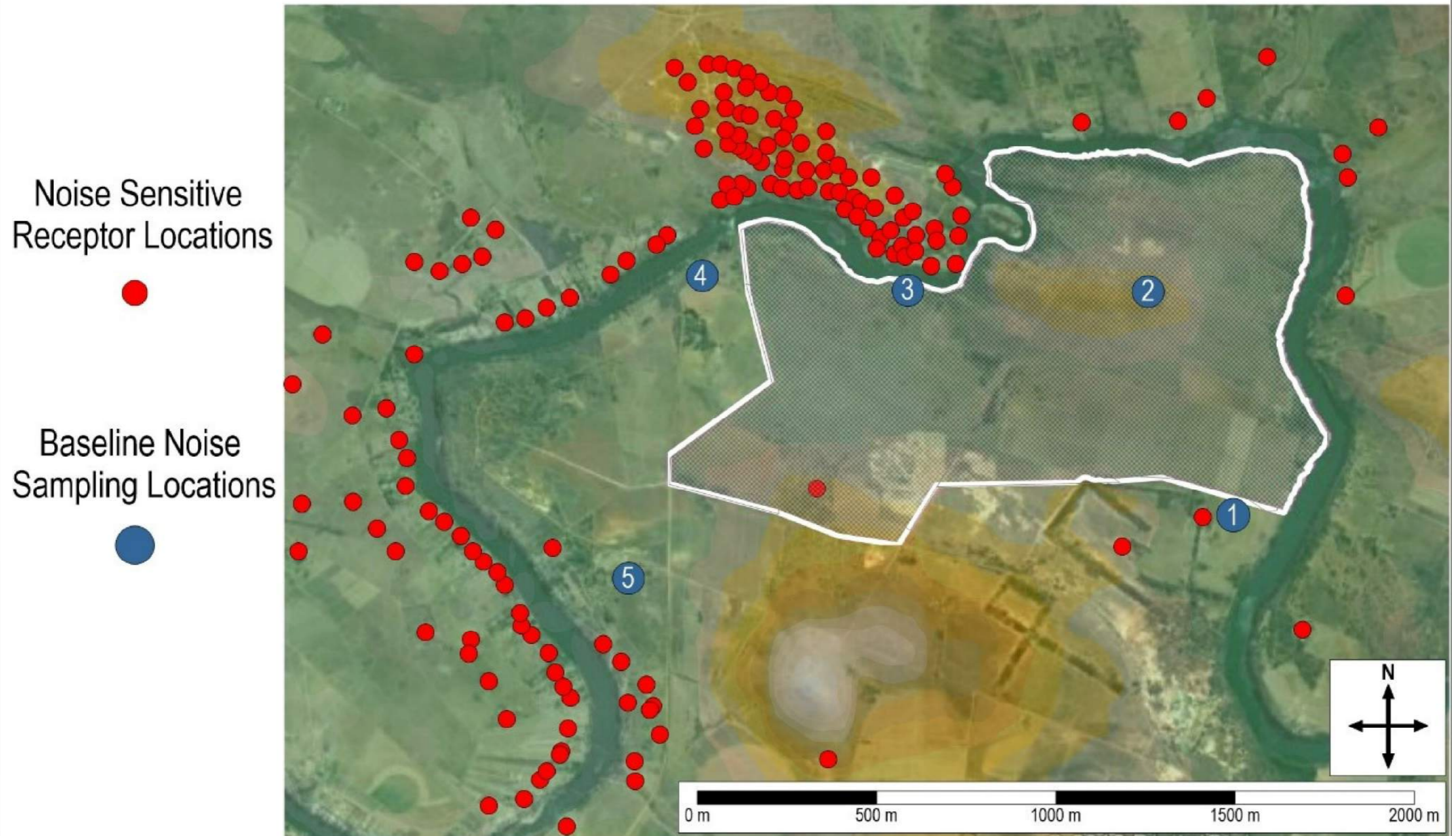


AQ Sensitive
Receptor Locations

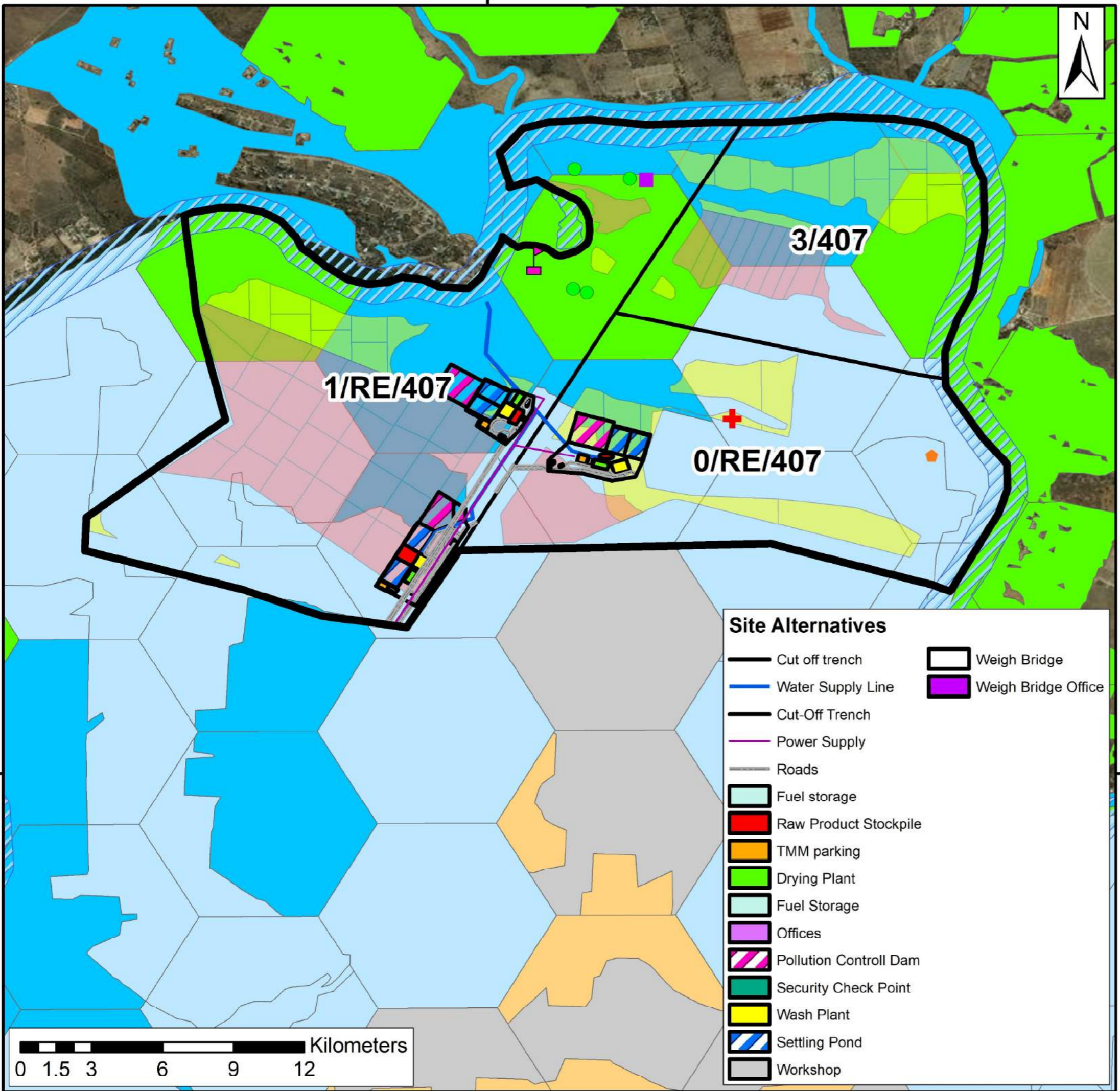
Height above MSL



Pure Source Mine Project



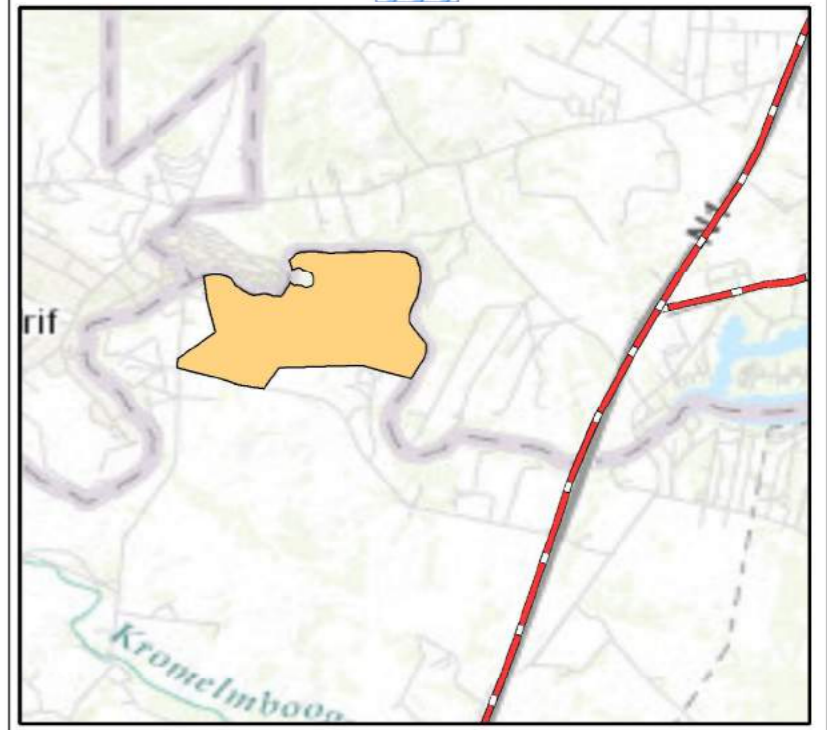
27°36'30"E



Combined Sensitivity

Pure Source Mine

- | | |
|-------------------------|----------------------|
| Square Enclosure | Modern House |
| Protected Area | Circular Enclosure |
| Irreplaceable Area | Cemetery (48 Graves) |
| Ecological Support Area | SA War Redoubt |
| Important Area | Project Area |
| | Farm Portions |
| | Aggregate Resource |
| | Sand Resource |
| | NFEPA Wetlands |



Site Alternatives

- | | |
|-----------------------|---------------------|
| Cut off trench | Weigh Bridge |
| Water Supply Line | Weigh Bridge Office |
| Cut-Off Trench | |
| Power Supply | |
| Roads | |
| Fuel storage | |
| Raw Product Stockpile | |
| TMM parking | |
| Drying Plant | |
| Fuel Storage | |
| Offices | |
| Pollution Control Dam | |
| Security Check Point | |
| Wash Plant | |
| Settling Pond | |
| Workshop | |

26°46'0"S

26°46'0"S



27°36'30"E

Coord System: GCS WGS 1984

Datum: WGS 1984

Units: Degrees

Prepared by:

