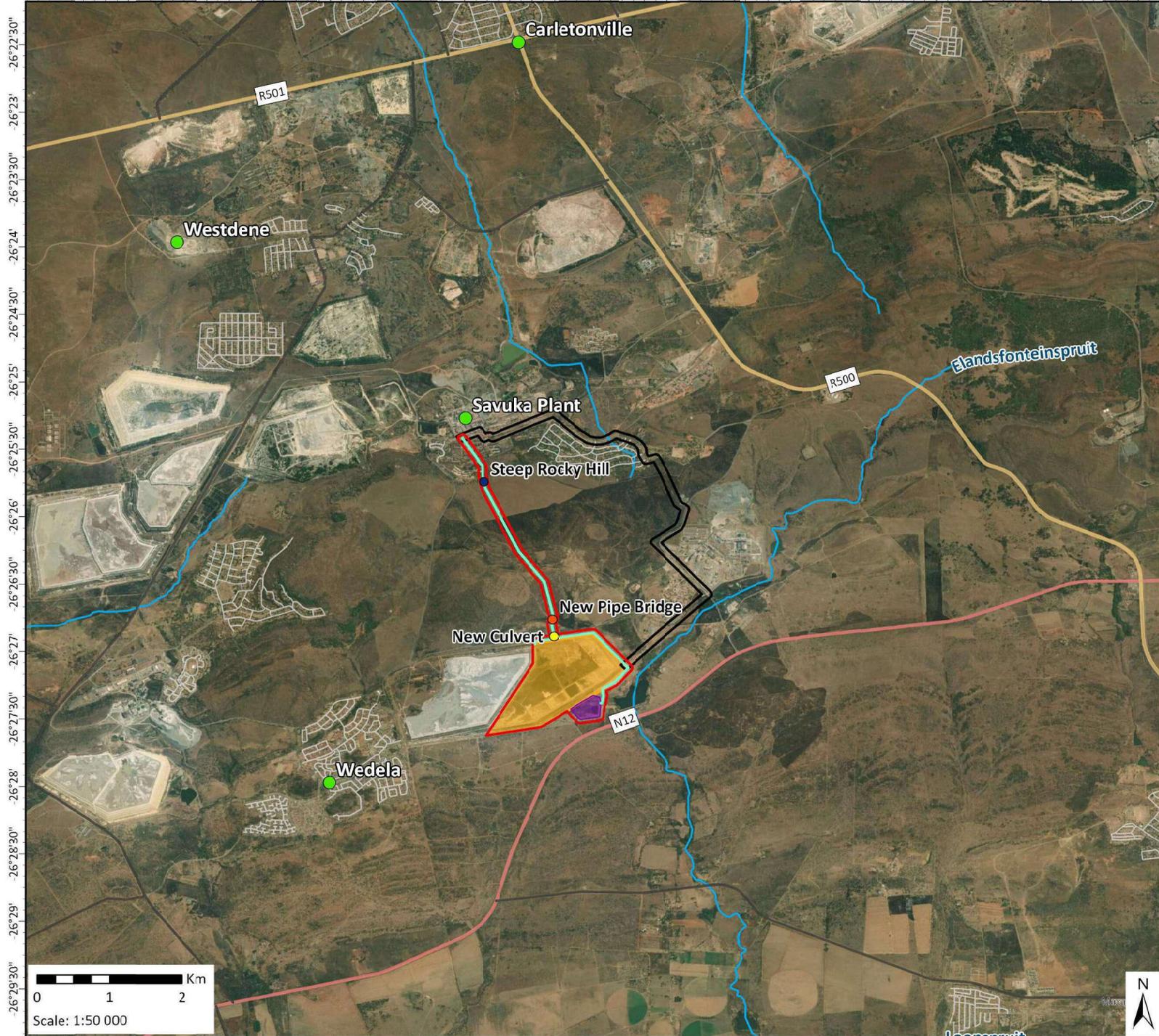


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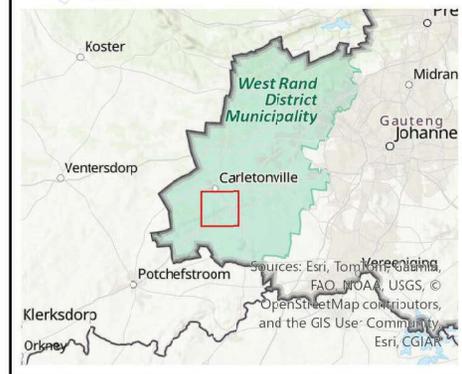


Locality Infrastructure Map

1658 Harmony Mponeng TSF EIA

Legend

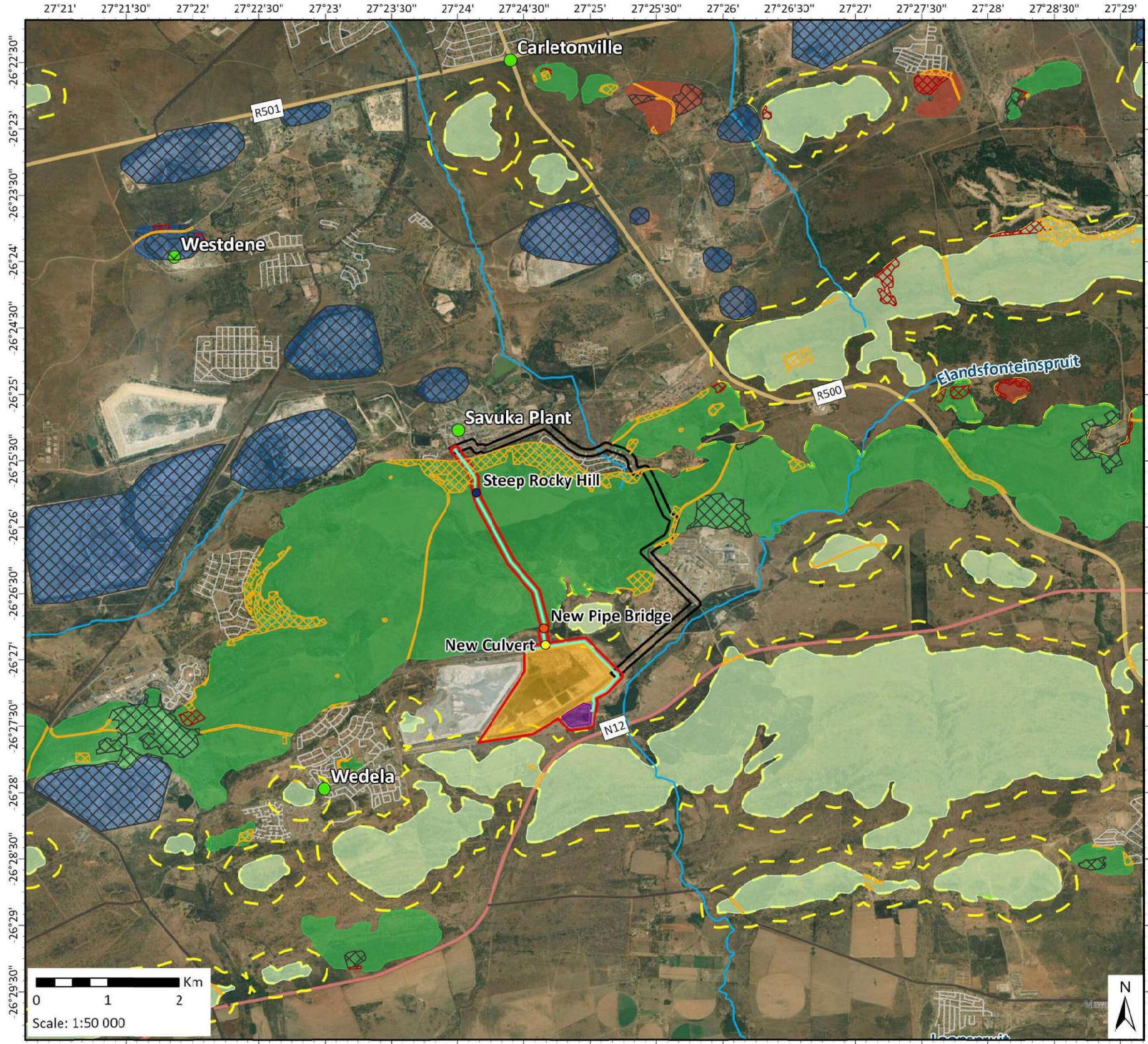
-  Mponeng Study Area
-  Mponeng Lower Compartment
-  Preferred Pipeline Alternative
-  Pipelines Alternative Route Area
-  Return Water Dam
-  New Culvert
-  New Pipe Bridge
-  Steep Rocky Hill
-  NFEPA Rivers
-  Places
-  National Route
-  Main Road
-  Secondary Road
-  Street



Data Sources:
 CSG; ESRI; CD:NGI; MDB; SANBI
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_LocalityMap

Date: 2025/07/29
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW



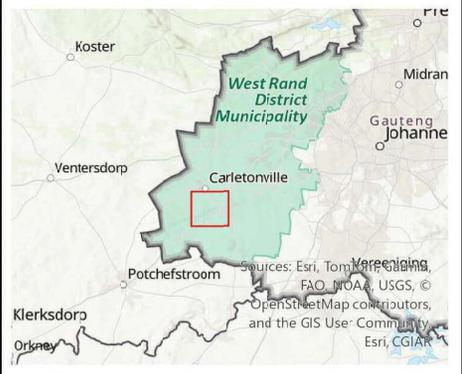


Locality Infrastructure Map

1658 Harmony Mponeng TSF EIA

Legend

Mponeng Study Area	Secondary Road
Mponeng Lower Compartment	Street
Preferred Pipeline	Gauteng Ridges
Pipeline Alternative	Buffer
Pipelines Alternative Route Area	Class 1
Return Water Dam	Class 2
New Culvert	Class 3
New Pipe Bridge	Class 4
Steep Rocky Hill	Transformed Ridges
NFEPA Rivers	Cultivated
Places	Degraded - Alien
National Route	Mine
Main Road	Urban - Transformed

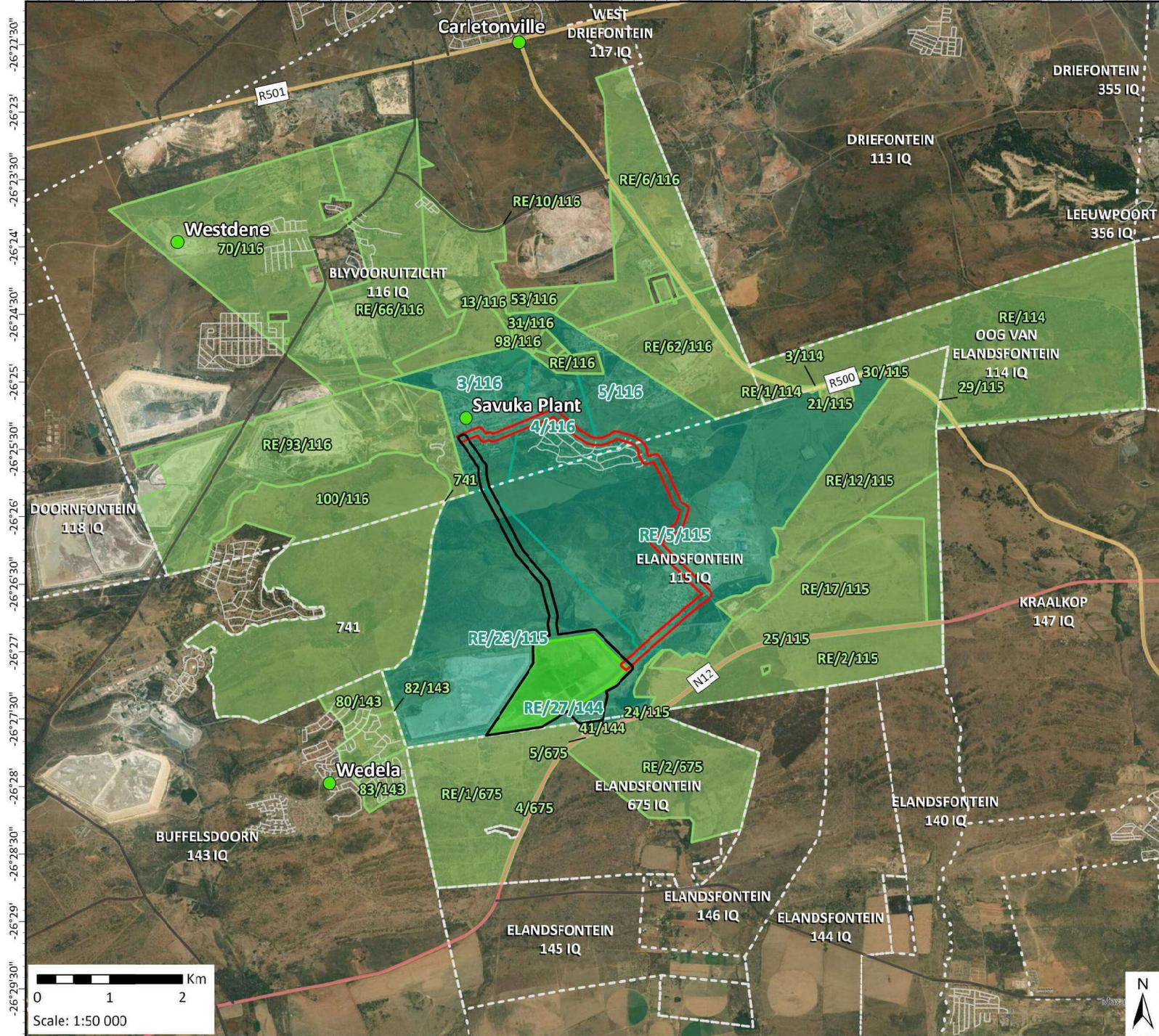


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Date: 2025/08/11
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW



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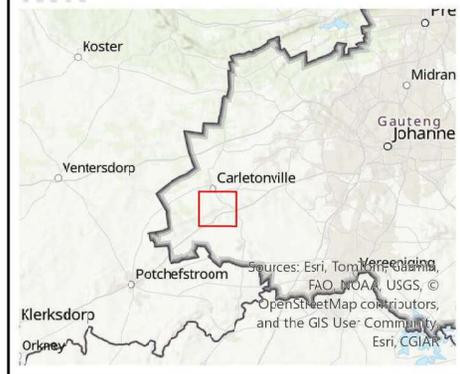


Property Map

1658 Harmony Mponeng TSF EIA

Legend

-  Mponeng Study Area
-  Pipelines Alternative Route Area
-  Mponeng Lower Compartment
-  Places
-  National Route
-  Main Road
-  Secondary Road
-  Street
-  Directly Affected Farm Portions
-  Adjacent Farm Portions
-  Parent Farms

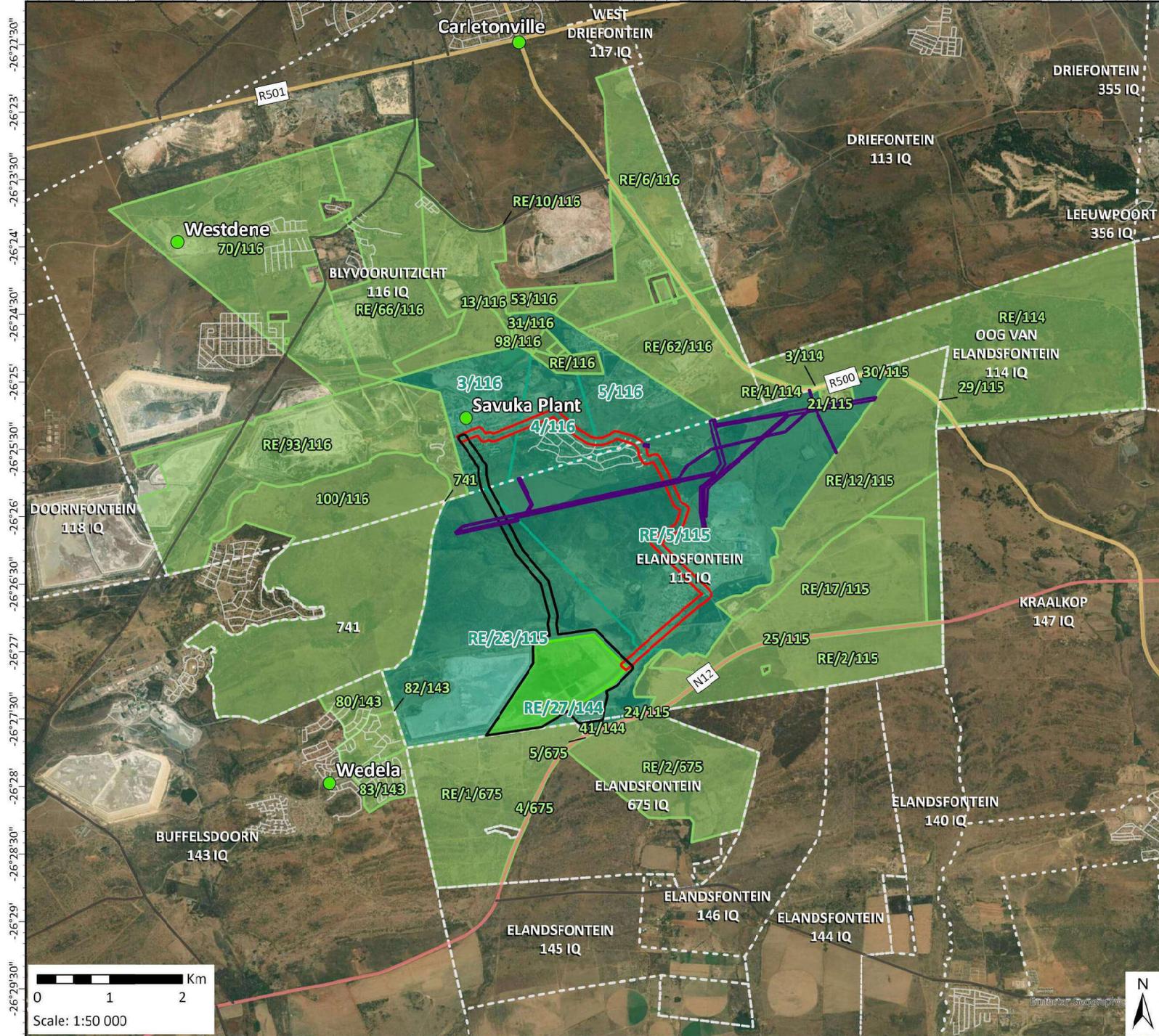


Data Sources:
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 Datum: WGS 1984
 Units: Degree
 Ref: 1658_Properties

Date: 2025/06/13
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW



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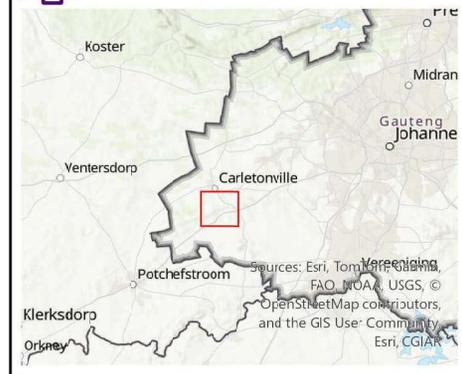


Property Map

1658 Harmony Mponeng TSF EIA

Legend

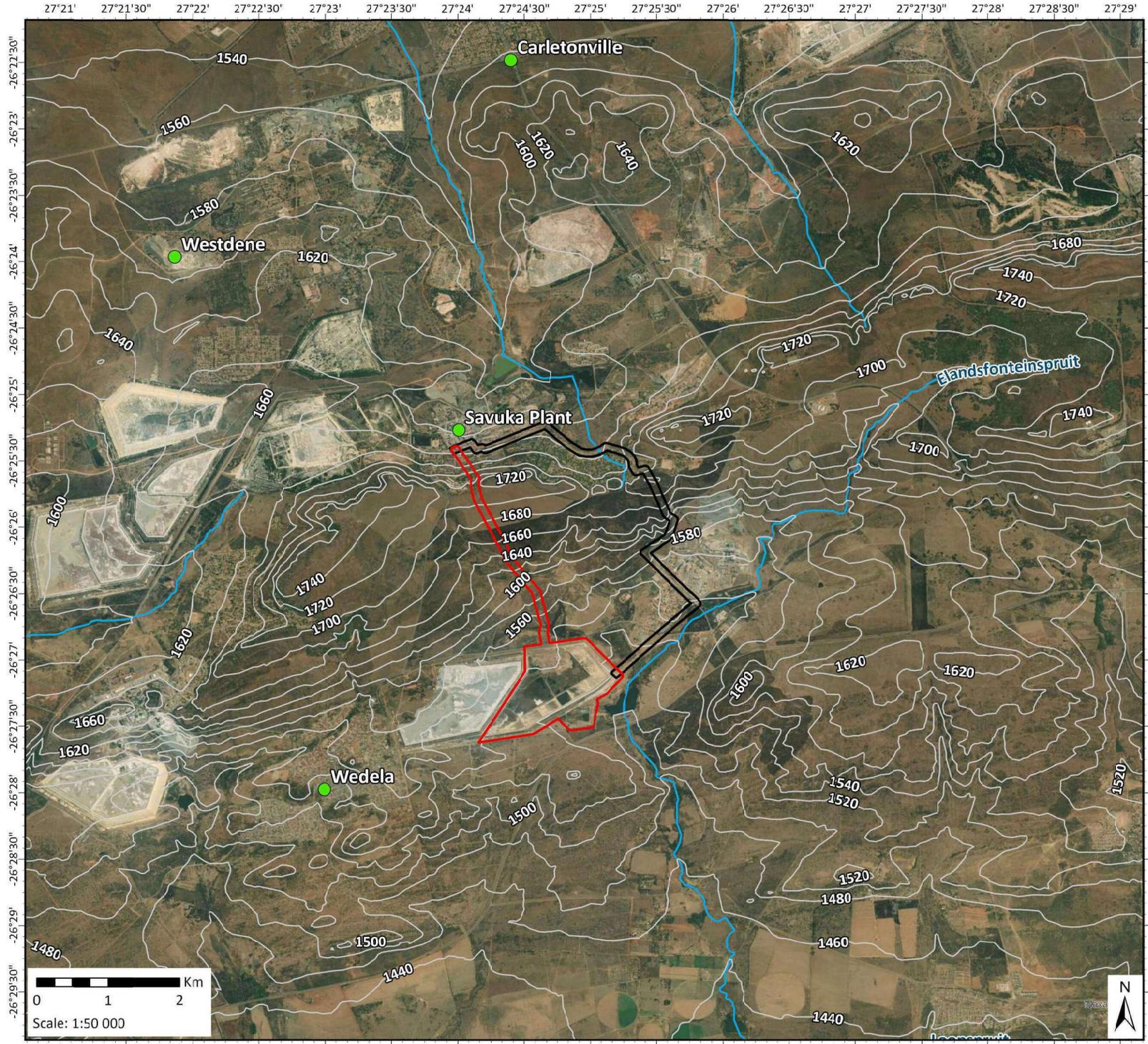
-  Mpcneng Study Area
-  Pipelines Alternative Route Area
-  Mpcneng Lower Compartment
-  Places
-  National Route
-  Main Road
-  Secondary Road
-  Street
-  Directly Affected Farm Portions
-  Adjacent Farm Portions
-  Parent Farms
-  Servitude Areas



Data Sources:
 CSG; ESRI; CD:NGI; MDB
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_Properties

Date: 2025/06/13
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW



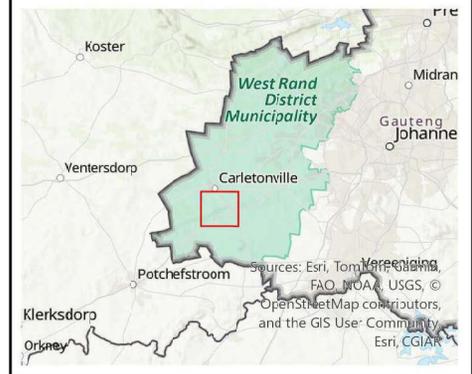


Topography Map

1658 Harmony Mponeng TSF EIA

Legend

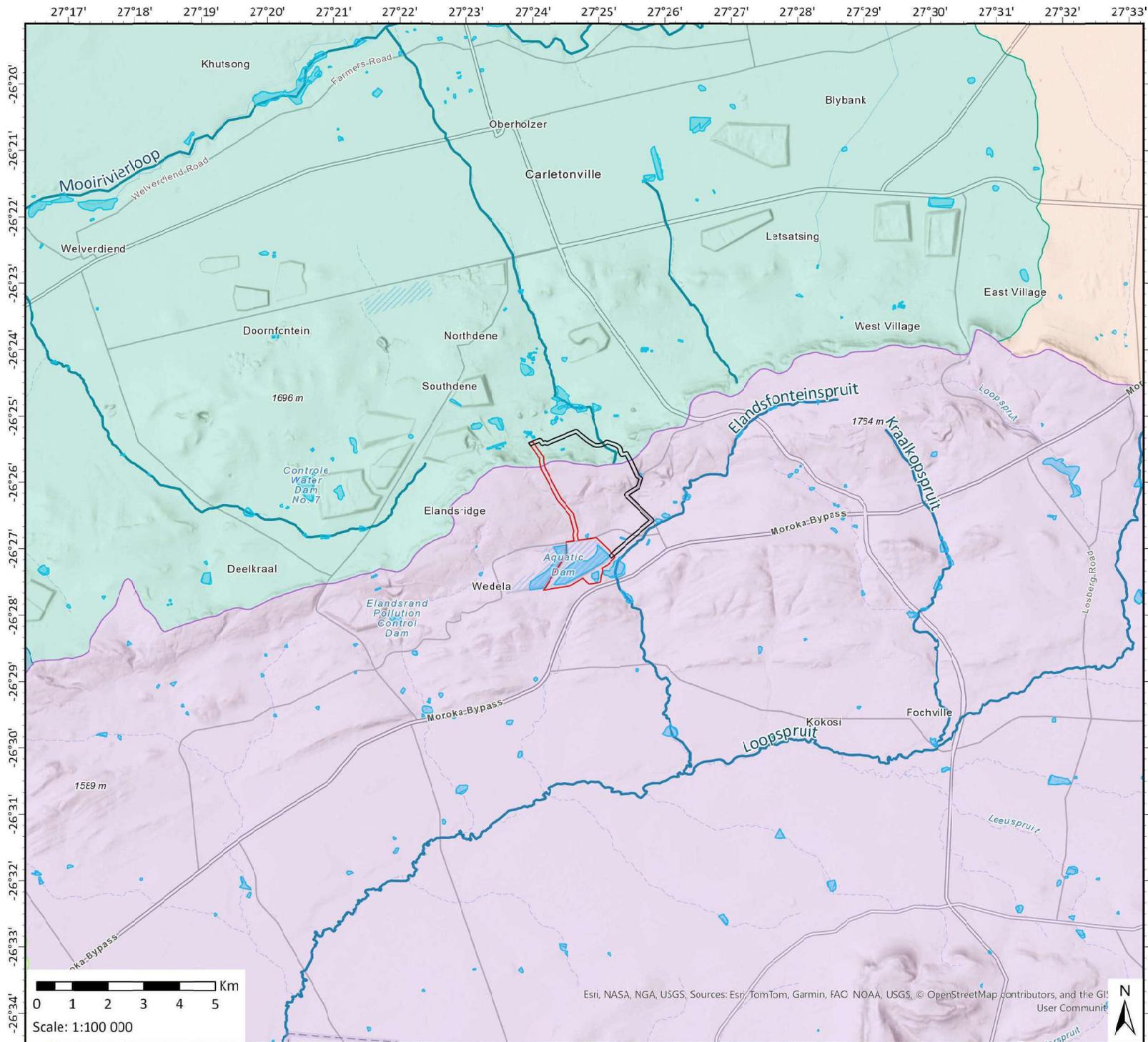
-  Mponeng Study Area
-  Pipelines Alternative Route Area
-  Places
-  NFEPA Rivers
-  Contours (20m)



Data Sources:
 CSG; ESRI; CD:NGI; MDB; SANBI
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_Topography

Date: 2025/06/17
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW

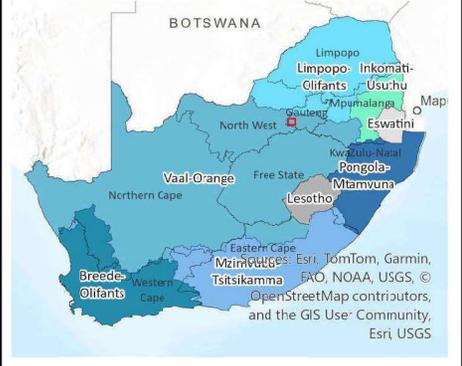




Surface Water Features Map

1658 Harmony Mponeng TSF EIA

- Legend**
- Mponeng Study Area
 - Pipelines Alternative Route Area
 - NFEPA Wetlands
 - NFEPA Rivers
- Quaternary Catchment**
- C23D
 - C23E
 - C23G
 - C23J
 - C23K

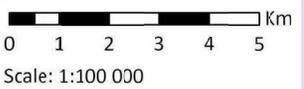


Data Sources:
 CSG; ESRI; SANBI; DWS
Coord System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
Ref: 1658_SurfaceWater

Date: 2025/06/17
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW



Esri, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAC NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



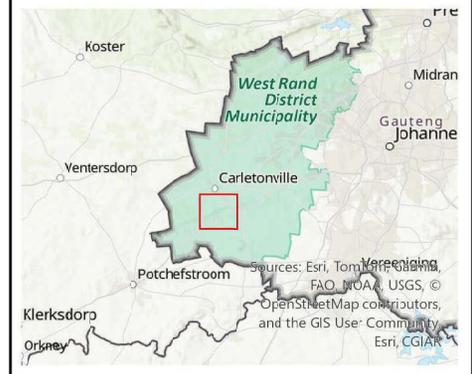
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Gauteng Provincial Environmental Management Framework
1658 Harmony Mponeng TSF EIA

Legend

-  Mponeng Study Area
-  Pipelines Alternative Route Area
- GPEMF v12**
-  Zone 1: Urban development zone
-  Zone 2: High control zone (inside Zone1)
-  Zone 3: High control zone (outside Zone1)
-  Zone 4: Normal control zone
-  Zone 5: Industrial and large commercial focus zone

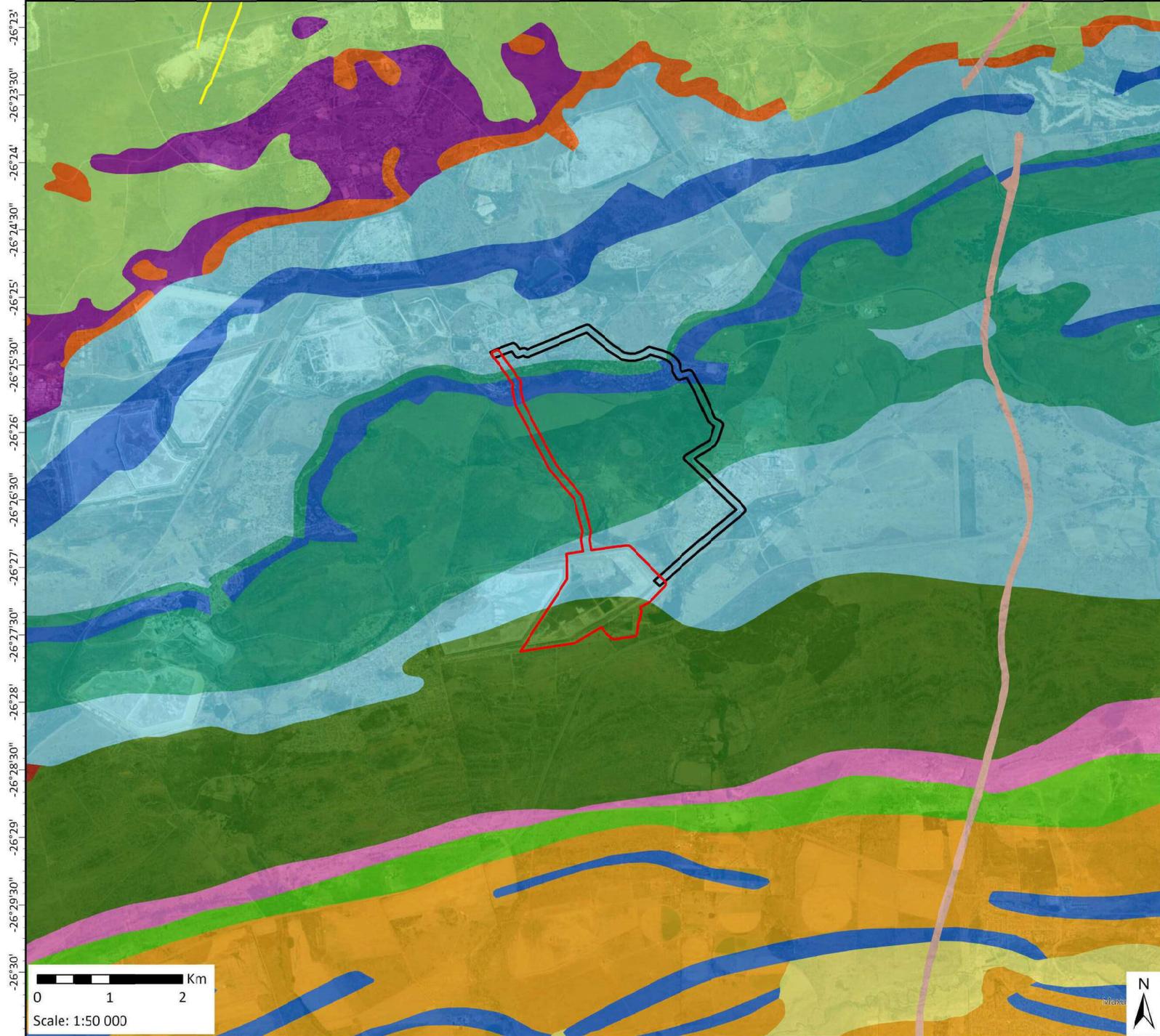


Data Sources:
CSG; ESRI; MDB; GDARD
Coord System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
Ref: 1658_GPEMF

Date: 2025/06/17
EIMS Ref: 1658
Compiled: JW
Reviewed: VM
Approved: LW



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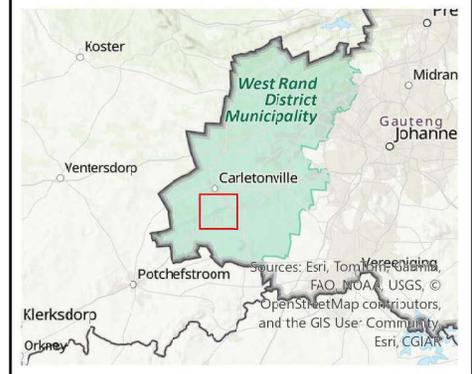


Simplified Geology Map

1658 Harmony Mponeng TSF EIA

Legend

- Mponeng Study Area
- Pipeline Alternative Route Area
- Geological Subgroup**
- Alluvium
- Diabase
- Syenite
- Boshoeck - Arkosic quartzite, subgreywacke, siltstone, shale, conglomerate (in places)
- Daspooort - Quartzite with minor shale and siltstone
- Hekpoort - Andesitic lava, subordinate pyroclastic rocks, minor quartzite, shale and conglomerate
- Klapperkop Quartzite - Quartzite (ferruginous in places), wacke, siltstone, shale, magnetic ironstone
- Malmani - Dolomite, subordinate chert, minor carbonaceous shale, limestone and quartzite
- Rooihoogte - Quartzite
- Rooihoogte - Shale
- Silverton - Shale, minor limestone/dolomite, basalt and tuff
- Strubenkop - Shale, subordinate siltstone, minor quartzite
- Timeball Hill - Mudrock, quartzite, minor diamictite
- Dyke (diabase)

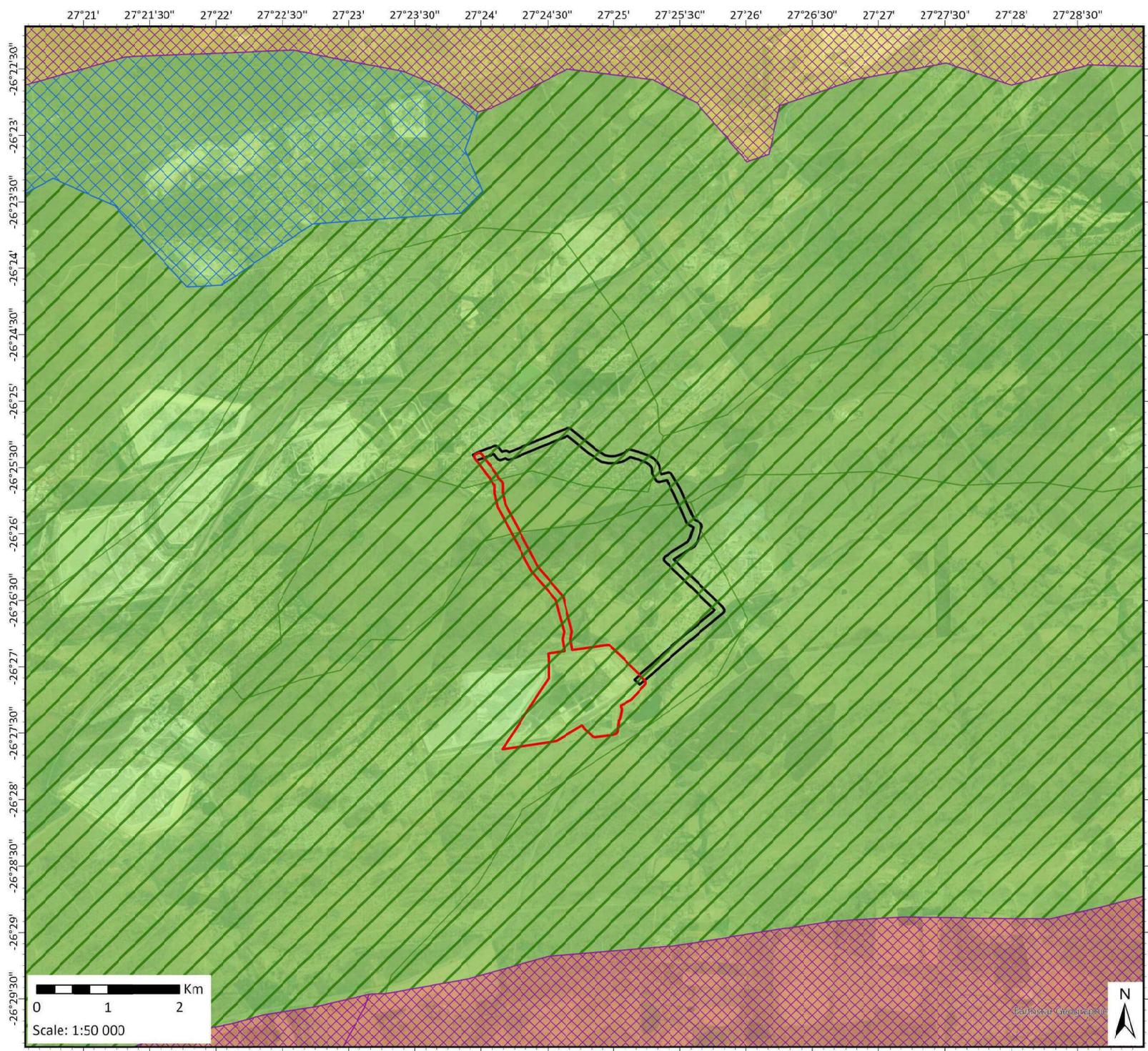


Data Sources:
 CSG; ESRI; MDB; Council for Geoscience
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_SimplifiedGeology



Date: 2025/06/17
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW





Simplified Soils Map

1658 Harmony Mponeng TSF EIA

Legend

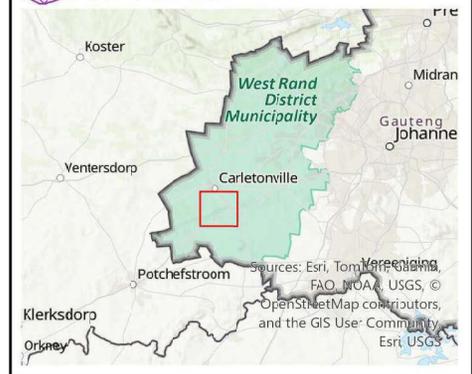
-  Mponeng Study Area
-  Pipelines Alternative Route Area

Soil Association

-  Red and yellow, massive or weakly structured soils with low to medium base status (association of well drained Ferralsols, Acrisols and Lixisols)
-  Red, massive or weakly structured soils with high base status (association of well drained Lixisols, Cambisols, Luvisols)
-  Soils with minimal development, usually shallow on hard or weathering rock, with or without intermittent diverse soils. (association of Leptosols, Regosols, Calcisols and Durisols. In addition one or more of Cambisols, Luvisols)

Dominant Soils

-  ACh - Haplic Acrisols
-  LPe - Eutric Leptosols
-  LXh - Haplic Lixisols



Data Sources:
 CSG; ESRI; ARC; MDB
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_SimplifiedSoils

Date: 2025/06/17
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW



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Vegetation Status Map

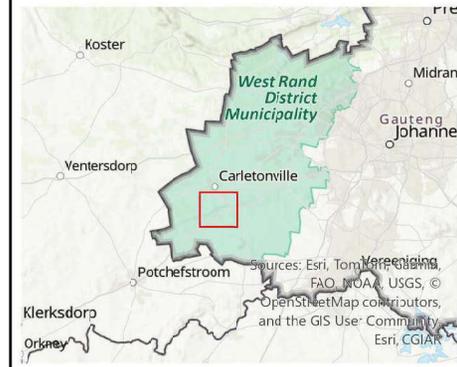
1658 Harmony Mponeng TSF EIA

Legend

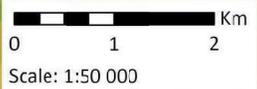
-  Mponeng Study Area
-  Pipelines Alternative Route Area

Vegetation Status

-  Carletonville Dolomite Grassland
Conservation Target: 24%
Protection Level: Poorly Protected
Ecosystem Threat Status: Least Concern
-  Gauteng Shale Mountain Bushveld
Conservation Target: 24%
Protection Level: Poorly Protected
Ecosystem Threat Status: Least Concern
-  Rand Highveld Grassland
Conservation Target: 24%
Protection Level: Poorly Protected
Ecosystem Threat Status: Vulnerable



Data Sources:
CSG; ESRI; MDB; SANBI
Coord System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
Ref: 1658_VegetationStatus



Earthstar Geographic



Date: 2025/06/17
EIMS Ref: 1658
Compiled: JW
Reviewed: VM
Approved: LW



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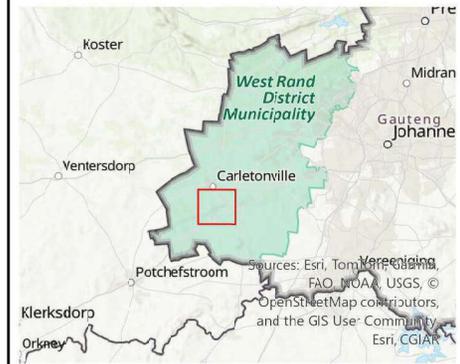


Listing Notice 3 Applicability Map

1658 Harmony Mponeng TSF EIA

Legend

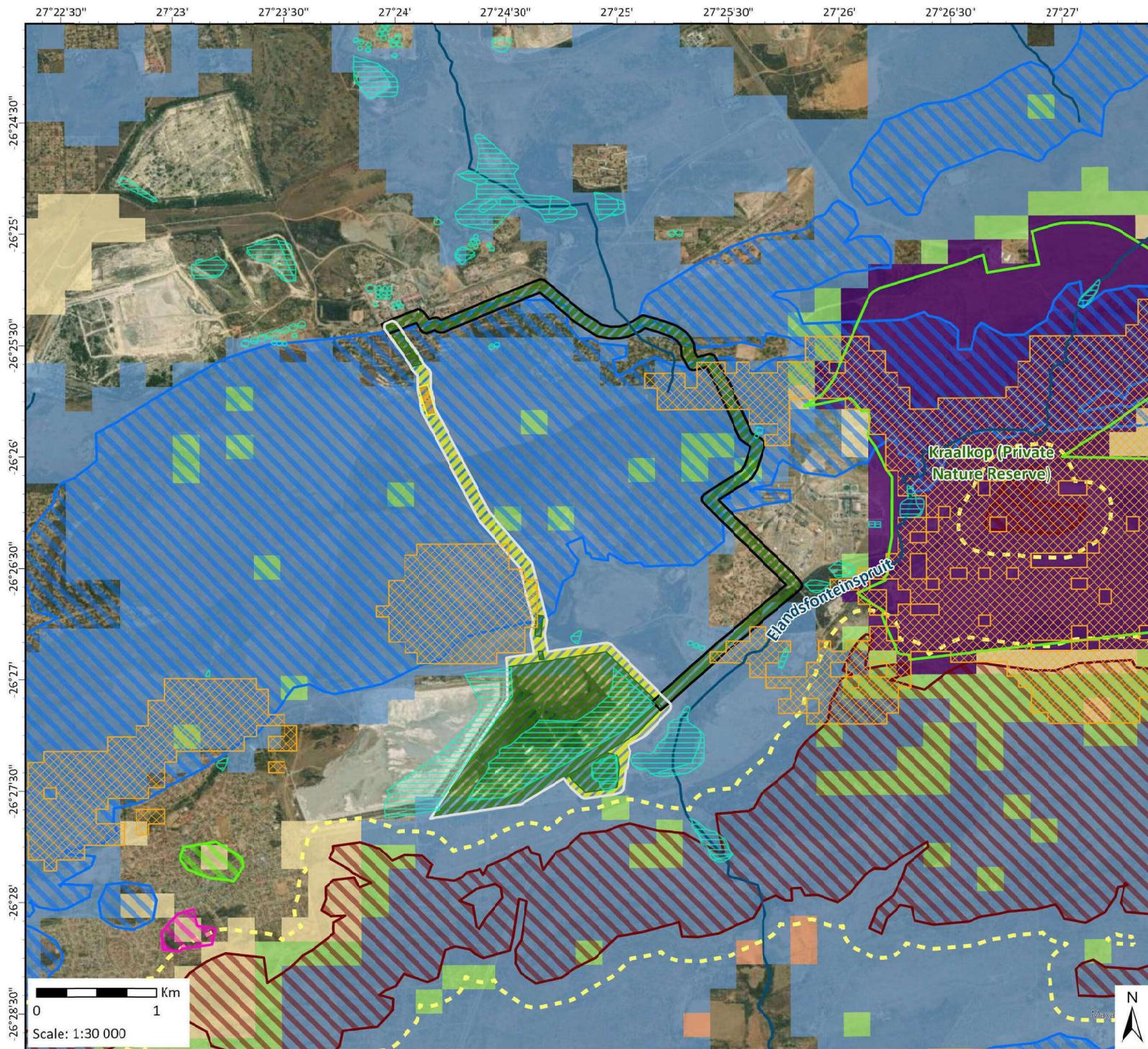
-  Mponeng Study Area
 -  Pipelines Alternative Route Area
 -  NFEPA Rivers
 -  NFEPA Wetlands
 -  Gauteng Reserves
 -  NPAES Priority Focus Areas
- Gauteng C-Plan
-  CBA1
 -  CBA2
 -  ESA1
 -  ESA2
 -  PA



Data Sources:
 CSG; ESRI; MDB; GDARD; DFFE; SANBI
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_LN3

Date: 2025/06/17
 EIMS Ref: 1658
 Compiled: JW
 Reviewed: VM
 Approved: LW

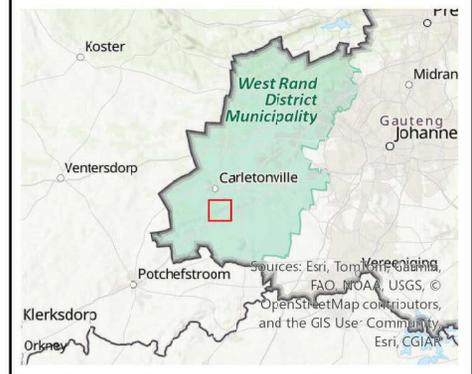




Desktop Sensitivity Map

1658 Harmony Mponeng TSF EIA

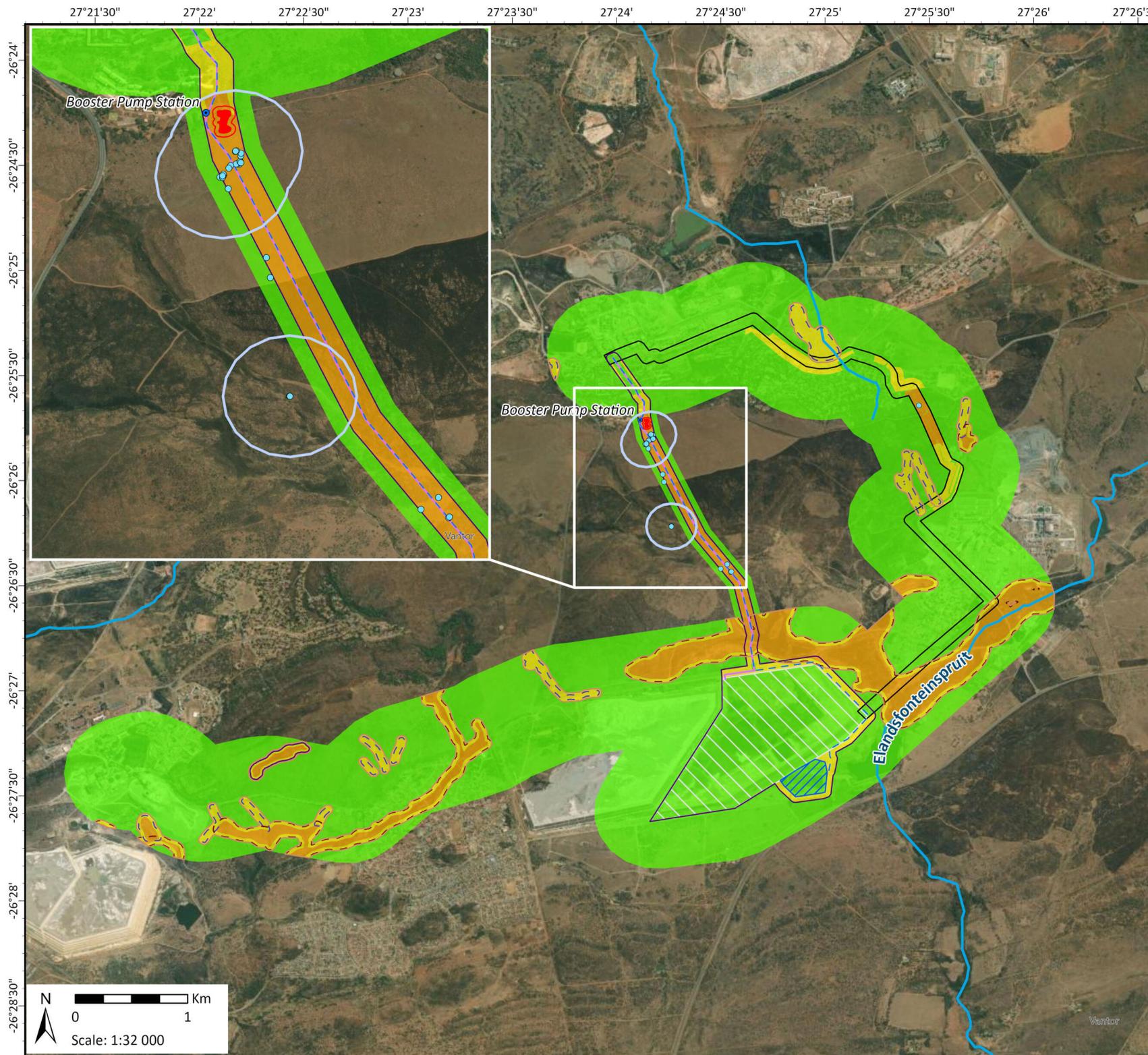
- ### Legend
- | | | | |
|--|----------------------------|--|------------------------------------|
| | Mponeng Study Area | | ESA2 |
| | Pipelines | | PA |
| | Alternative Route Area | | Heritage Sensitivity High |
| | NFEPA Rivers | | Heritage Sensitivity Medium |
| | NFEPA Wetlands | | Heritage Sensitivity Least Concern |
| | Gauteng Reserves | | Gauteng Ridges |
| | NPAES Priority Focus Areas | | 200m Buffer |
| | Gauteng C-Plan CBA1 | | Class 1 |
| | Gauteng C-Plan CBA2 | | Class 2 |
| | Gauteng C-Plan ESA1 | | Class 3 |
| | | | Class 4 |



Data Sources:
 CSG; ESRI; MDB; GDARD; DFFE; SANBI
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Date: 2025/09/03
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 Approved: LW



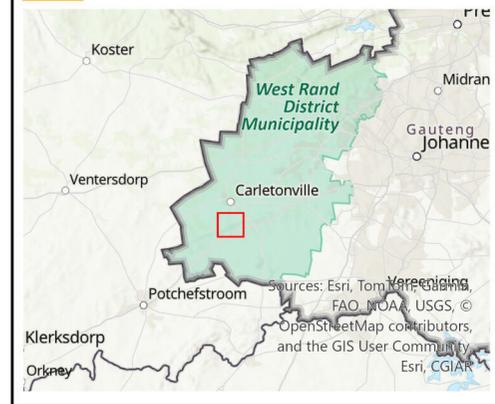


Maximum Sensitivity Map

1658 Harmony Mponeng TSF EIA

Legend

- | | |
|----------------------------------|---|
| Mponeng Study Area | Stone walling (site extent) (No-go) |
| Mponeng Lower Compartment | Stone Walling 15m Buffer (No-go) |
| Pipelines Alternative Route Area | Species of Conservation Concern (SCC) Locations |
| Return Water Dam | SCC Buffers |
| NFEPA Rivers | Wetland Buffers |
| Slurry Pipeline | 15 m Post-Mitigation Buffer |
| Return Water Pipeline | 20 m Post-Mitigation Buffer |
| Booster Pump Station | 25 m Post-Mitigation Buffer |
| Maximum Sensitivity Low | 32 m Pre-Mitigation Buffer |
| Maximum Sensitivity Medium | |
| Maximum Sensitivity High | |



Data Sources:

CSG; ESRI; MDB; SANBI
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_Sensitivity

Date: 2026/02/19

EIMS Ref: 1658

Compiled: JW

Reviewed: VM

Approved: LW





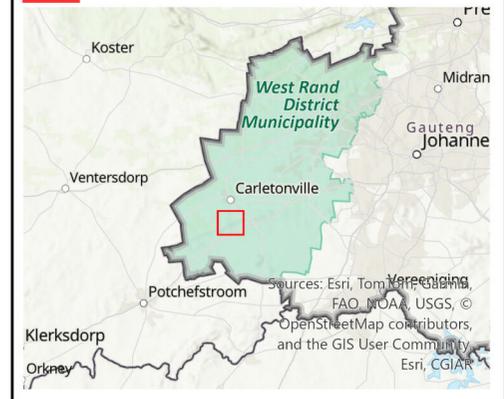
Sensitivity Intensity Map

1658 Harmony Mponeng TSF EIA

Legend

- Mponeng Study Area
- Mponeng Lower Compartment
- Pipelines Alternative Route Area
- Return Water Dam
- NFEPA Rivers
- Slurry Pipeline
- Return Water Pipeline
- Booster Pump Station
- Stone walling (site extent) (No-go)
- Stone Walling 15m Buffer (No-go)
- Species of Concern (SCC) Locations
- SCC Buffers
- Wetland Buffers
- 15 m Post-Mitigation Buffer
- 20 m Post-Mitigation Buffer
- 25 m Post-Mitigation Buffer
- 32 m Pre-Mitigation Buffer

- Sensitivity Intensity
- 1.00 - 2.00
 - 2.01 - 4.00
 - 4.01 - 6.00
 - 6.01 - 9.00



Data Sources:
 CSG; ESRI; MDB; SANBI
 Coord System: GCS WGS 1984
 Datum: WGS 1984
 Units: Degree
 Ref: 1658_Sensitivity

Date: 2026/02/19
 EIMS Ref: 1658
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 Reviewed: VM
 Approved: LW

