

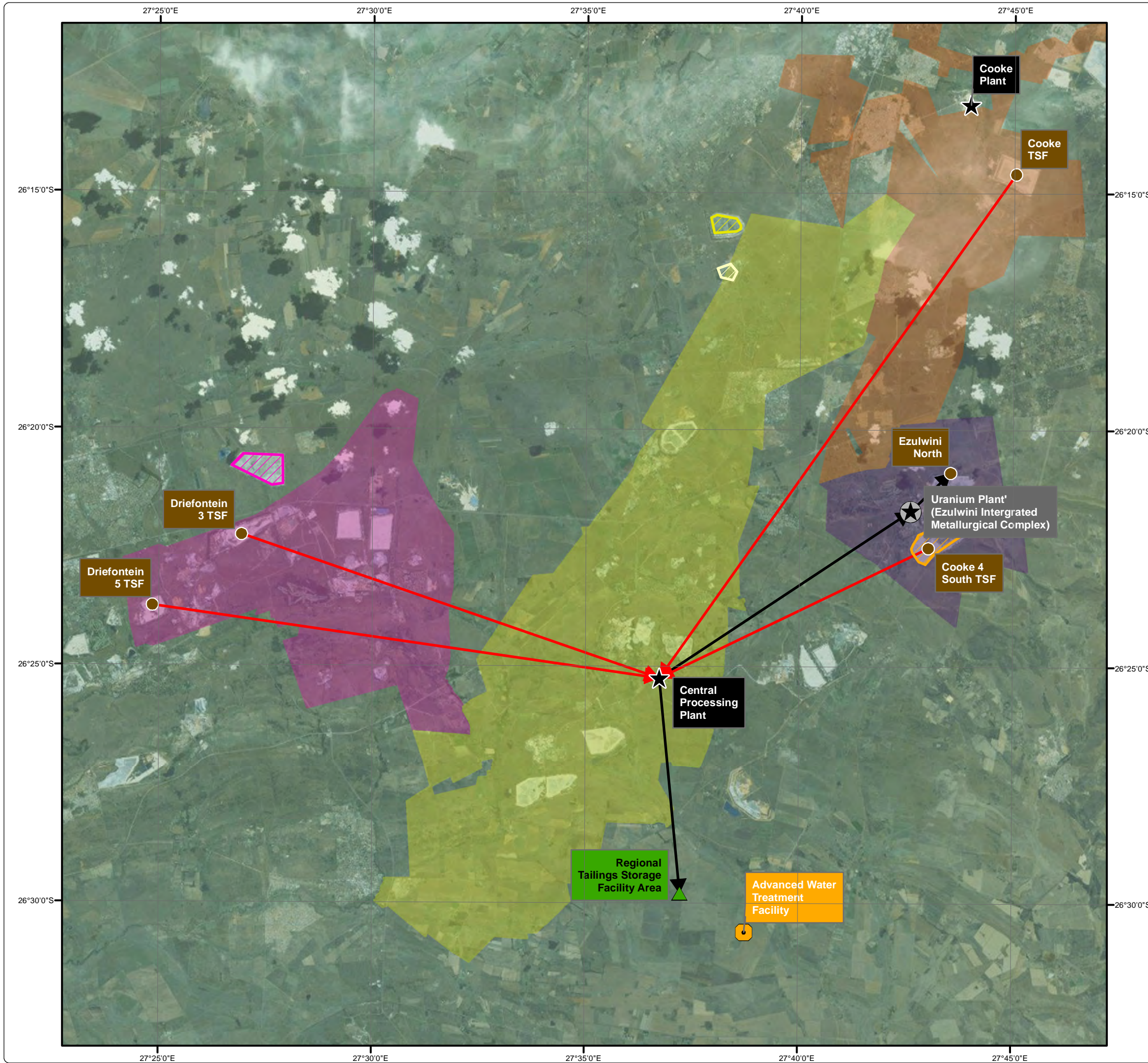
Sibanye WRTRP EIA

Initial Implementation

Legend

Infrastructure

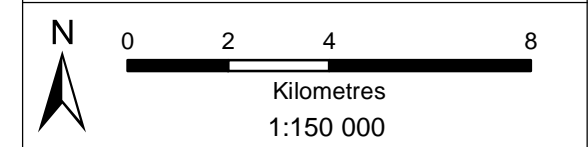
- Advanced Water Treatment Facility
- Historical Tailings
- Regional Tailings Storage Facility
- Surface Plant
- Uranium Plant
- Driefontein 4 TSF (To be included in Driefontein MRA)
- Ezulwini South TSF (To be included in the Cooke MRA)
- Venterspost North TSF (To be included in the Kloof MRA)
- Venterspost South TSF (To be included in the Kloof MRA)
- Deposition Line
- Reclamation Line
- Kloof Mining Right
- Driefontein Mining Right
- Cooke Mining Right
- Ezulwini Mining Right




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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.196
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 26/08/2015



Sibanye WRTRP EIA Kloof MRA

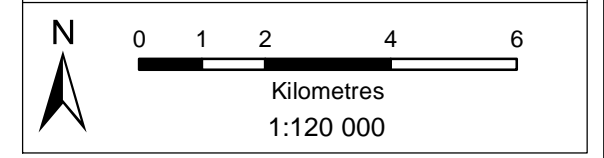
Legend

- Major Town
- Other Town
- Settlement
- Arterial / National Route
- Main Road
- Minor Road
- +— Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Infrastructure**
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- CPP and Future Uranium Plant
- Regional Tailings Storage Facility
- TSF Infrastructure
- Kloof Mining Right



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Projection: Transverse Mercator Datum: WGS 1984 Central Meridian: 27°E Ref #: sdp.GOL2376.201508.192 Revision Number: 1 Date: 26/08/2015



Sibanye WRTRP EIA

Cooke MRA

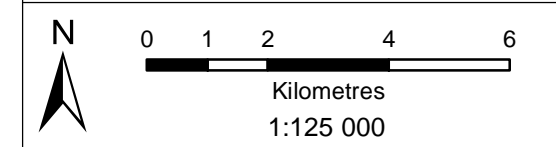
Legend

- Major Town
- ⊙ Secondary Town
- ⦿ Other Town
- Settlement
- Arterial / National Route
- Main Road
- Minor Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Infrastructure**
- Infrastructure Points
- Pipelines: Cooke Mining Right
- TSF Infrastructure
- Cooke Mining Right



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.194
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 25/08/2015

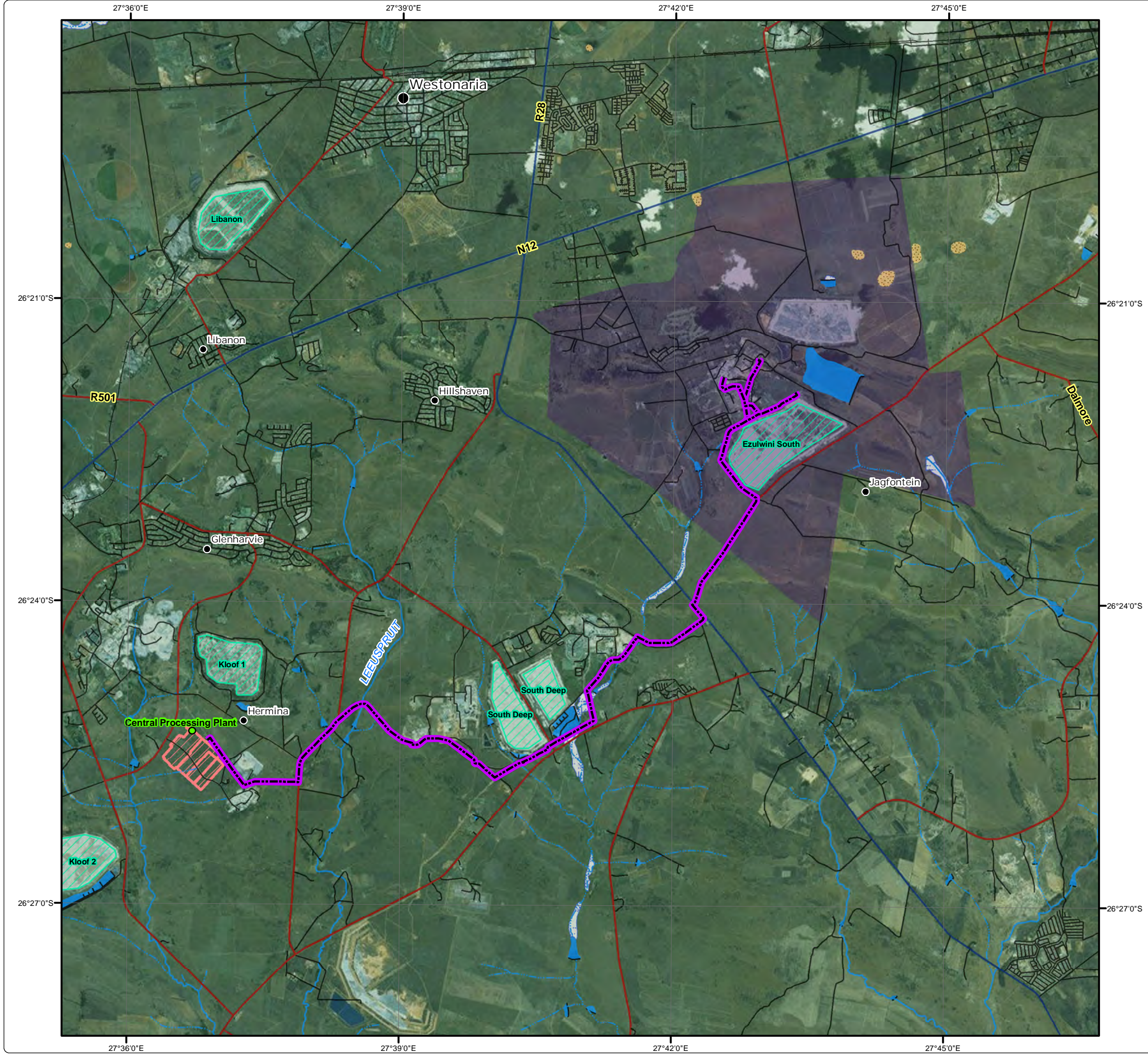


Sibanye WRTRP EIA

Ezulwini MRA

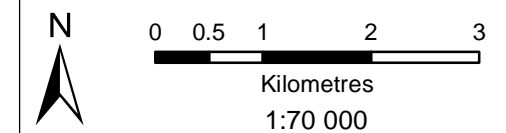
Legend

- Major Town
- Settlement
- Arterial / National Route
- Main Road
- Minor Road
- +— Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Infrastructure**
- Infrastructure Points
- Pipelines: Ezulwini Mining Right
- CPP and Future Uranium Plant
- TSF Infrastructure
- Ezulwini Mining Right



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.195
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 25/08/2015



Sibanye WRTRP EIA RTSF

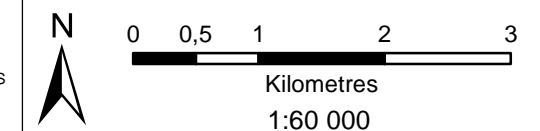
Legend

- Settlement
- Arterial / National Route
- Main Road
- Minor Road
- +— Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Infrastructure**
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- CPP and Future Uranium Plant
- Regional Tailings Storage Facility
- TSF Infrastructure
- Kloof Mining Right



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.200
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 26/08/2015



Sibanye WRTRP EIA

Driefontein Land Tenure

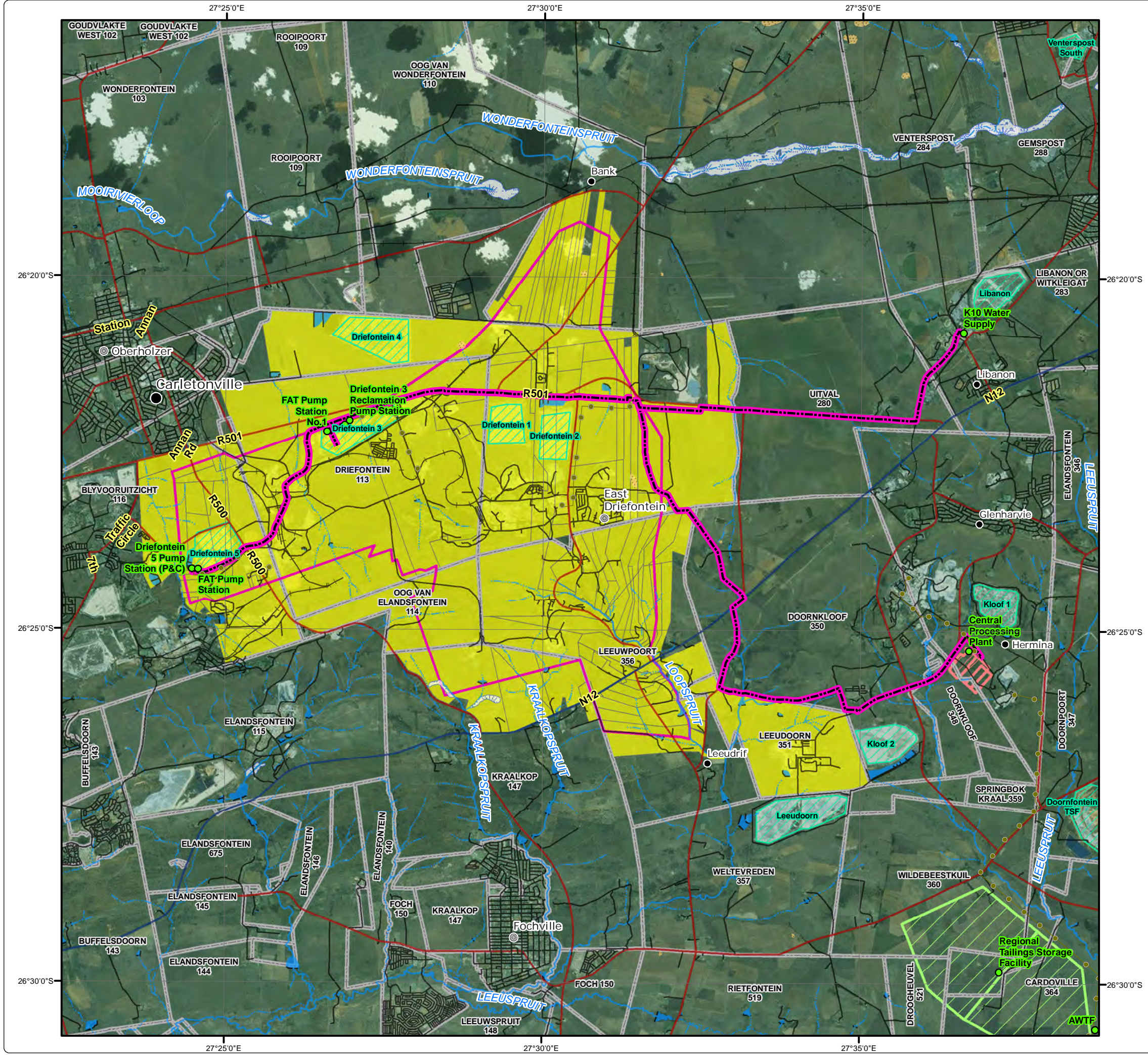
Legend

- Major Town
- ⊙ Other Town
- Settlement
- Arterial / National Route
- Main Road
- Minor Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Directly Affected Farms
- Farm Boundary
- Infrastructure Points
- Powerlines
- Pipelines: Driefontein Mining Right
- CPP and Future Uranium Plant
- Regional Tailings Storage Facility
- TSF Infrastructure
- Driefontein Mining Right

Infrastructure



Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.193
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 26/08/2015



Sibanye WRTRP EIA

Driefontein MRA

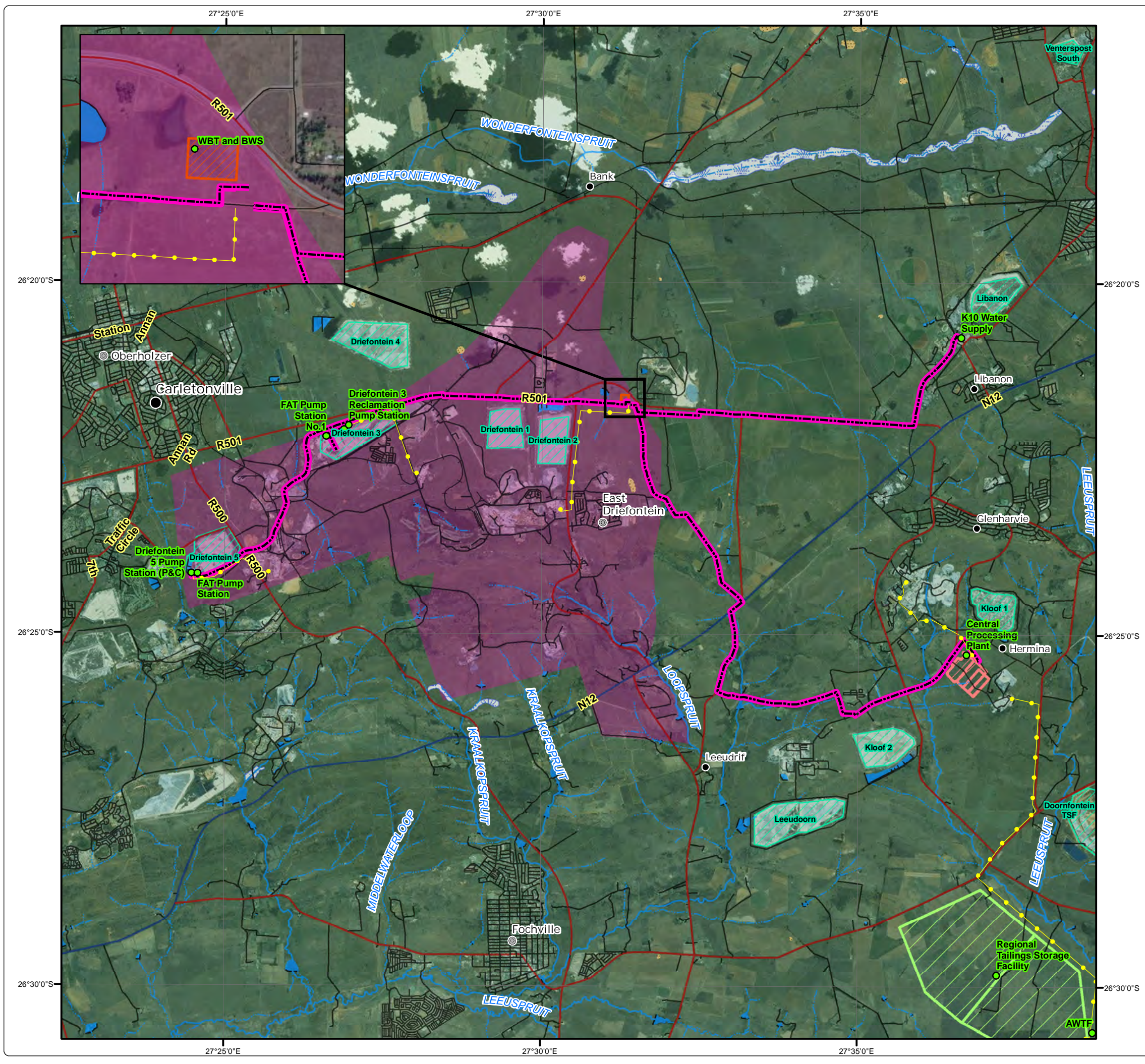
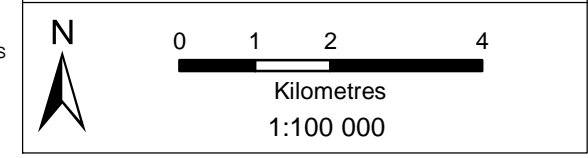
Legend

- Major Town
- ⊙ Other Town
- Settlement
- Arterial / National Route
- Main Road
- Minor Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Infrastructure**
- Infrastructure Points
- Powerlines
- Pipelines: Driefontein Mining Right
- CPP and Future Uranium Plant
- WBT
- Regional Tailings Storage Facility
- TSF Infrastructure
- Driefontein Mining Right



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.193
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 26/08/2015

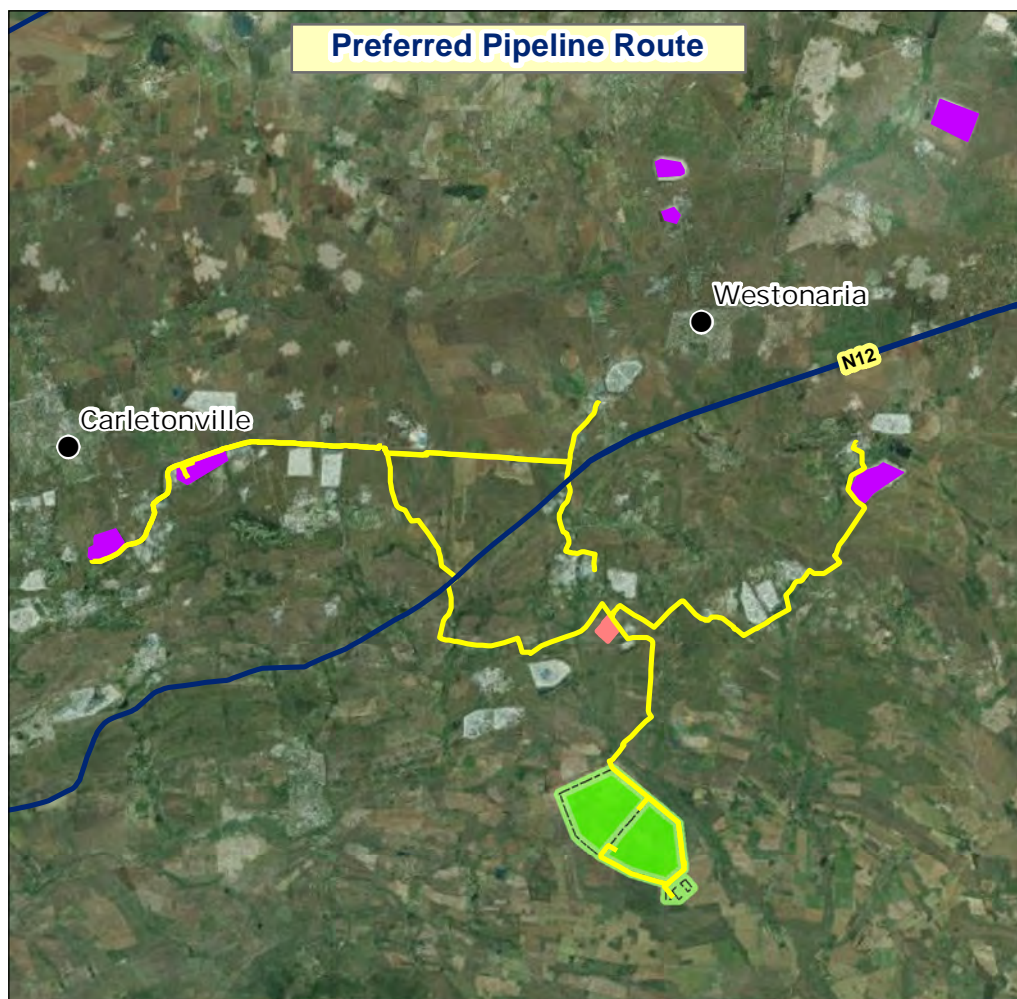
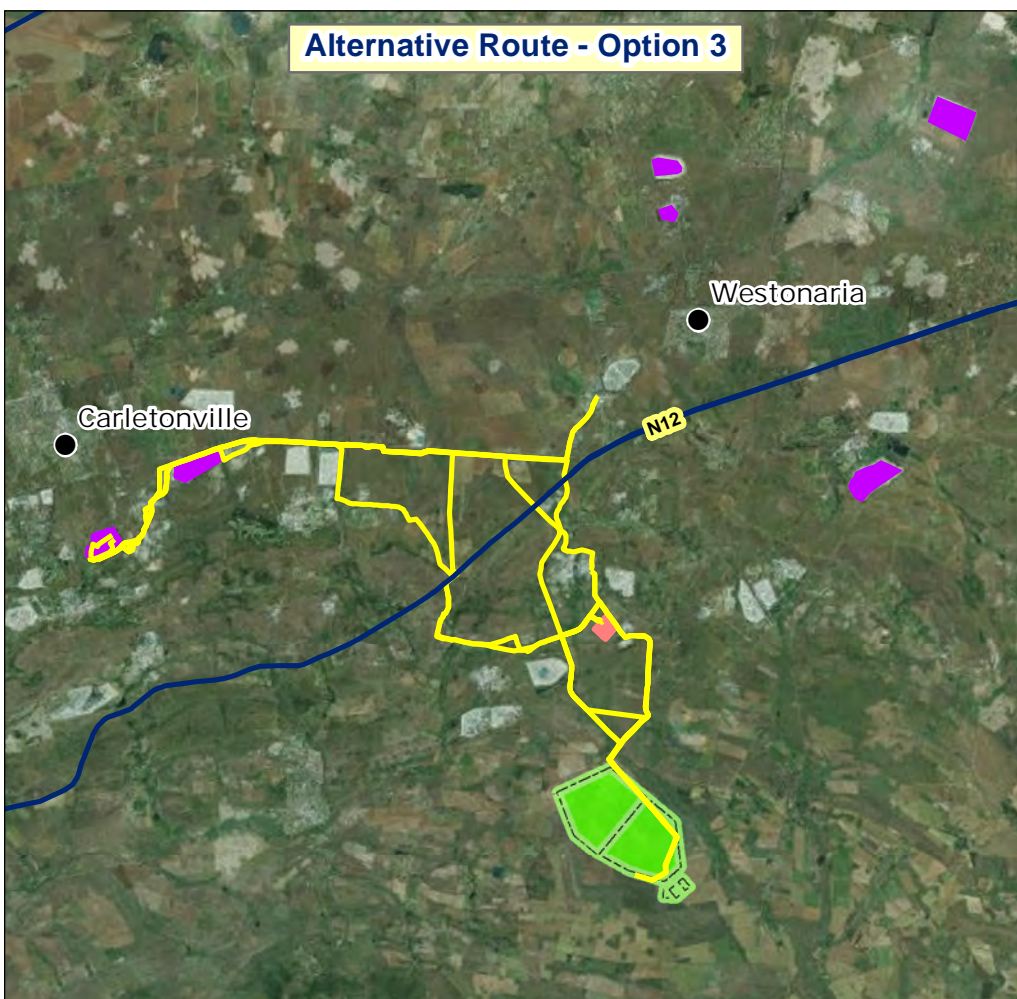
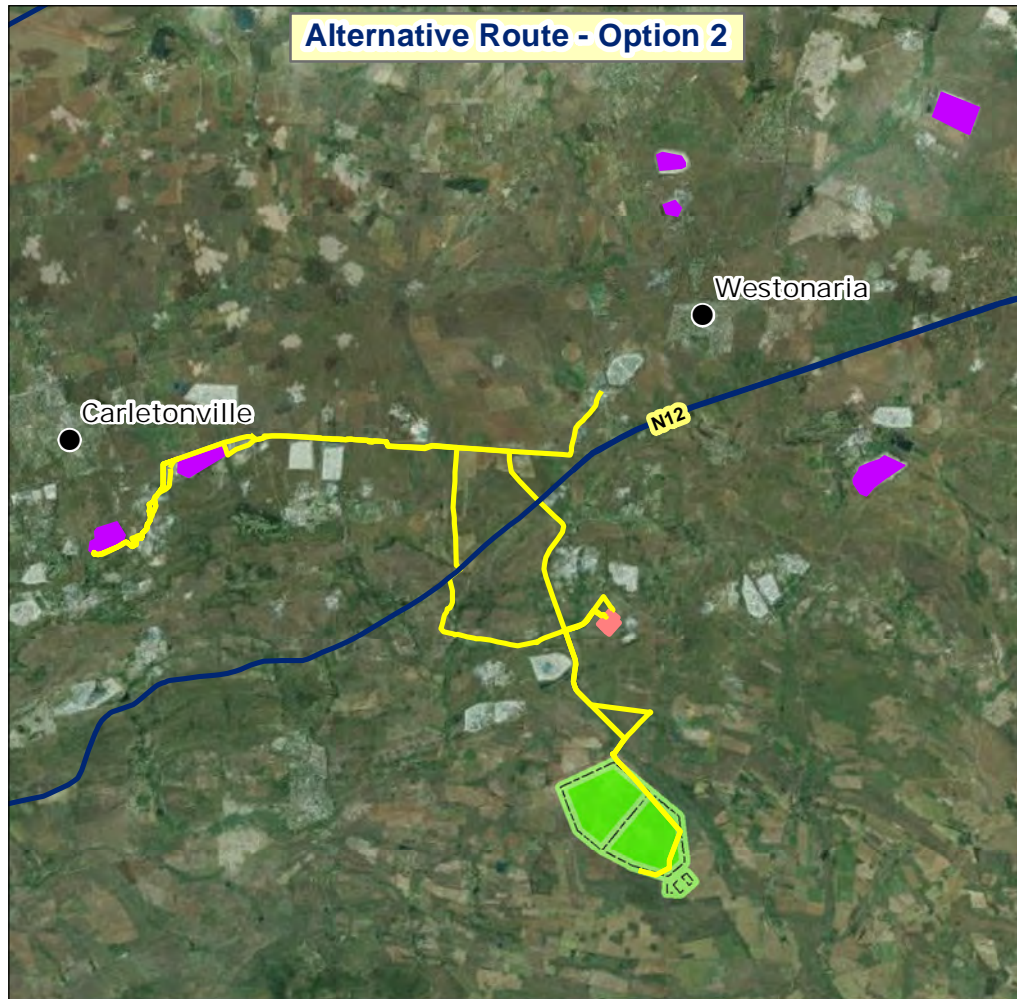
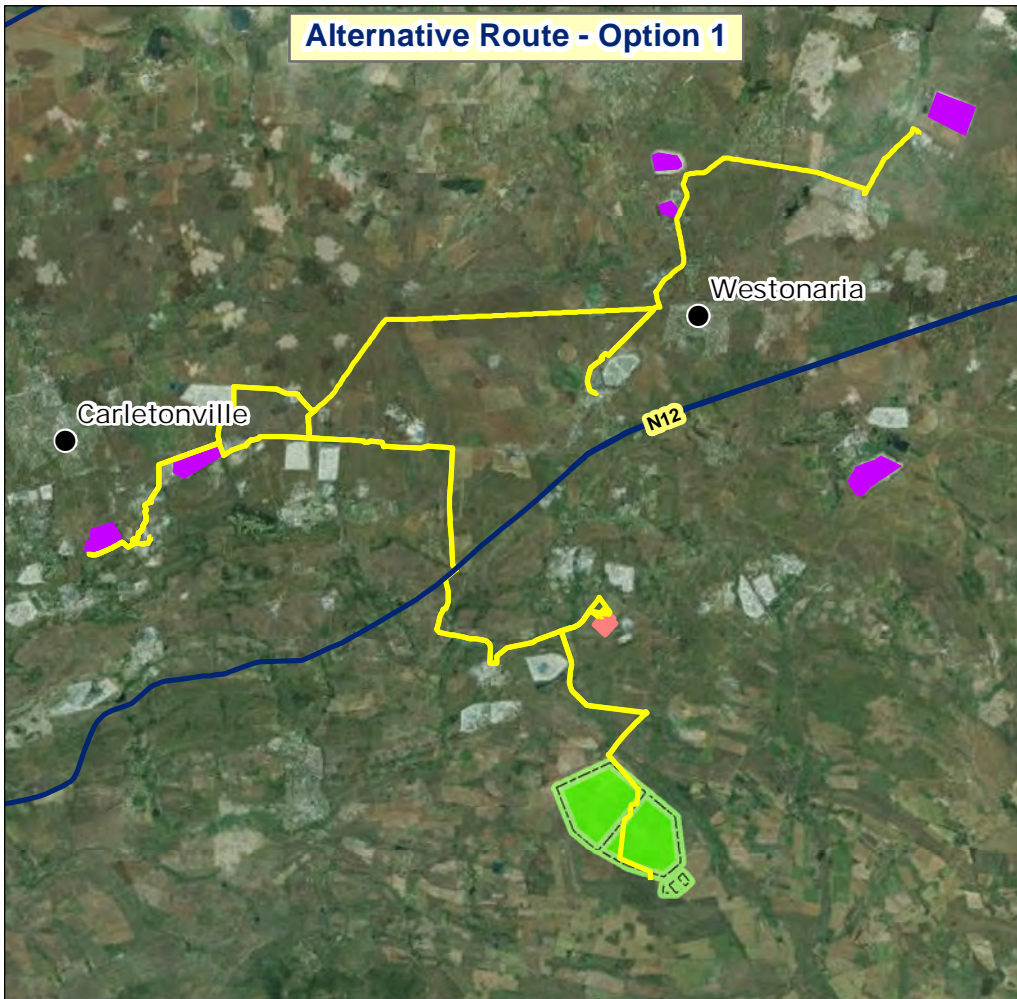


Sibanya WRTRP EIA

Pipeline Alternatives

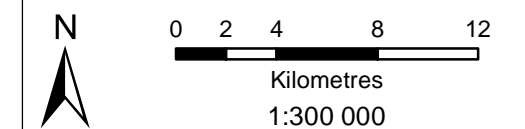
Legend

- Major Town
- Arterial / National Route
- Proposed Pipeline Infrastructure
- TSF Infrastructure
- CPP
- RTSF



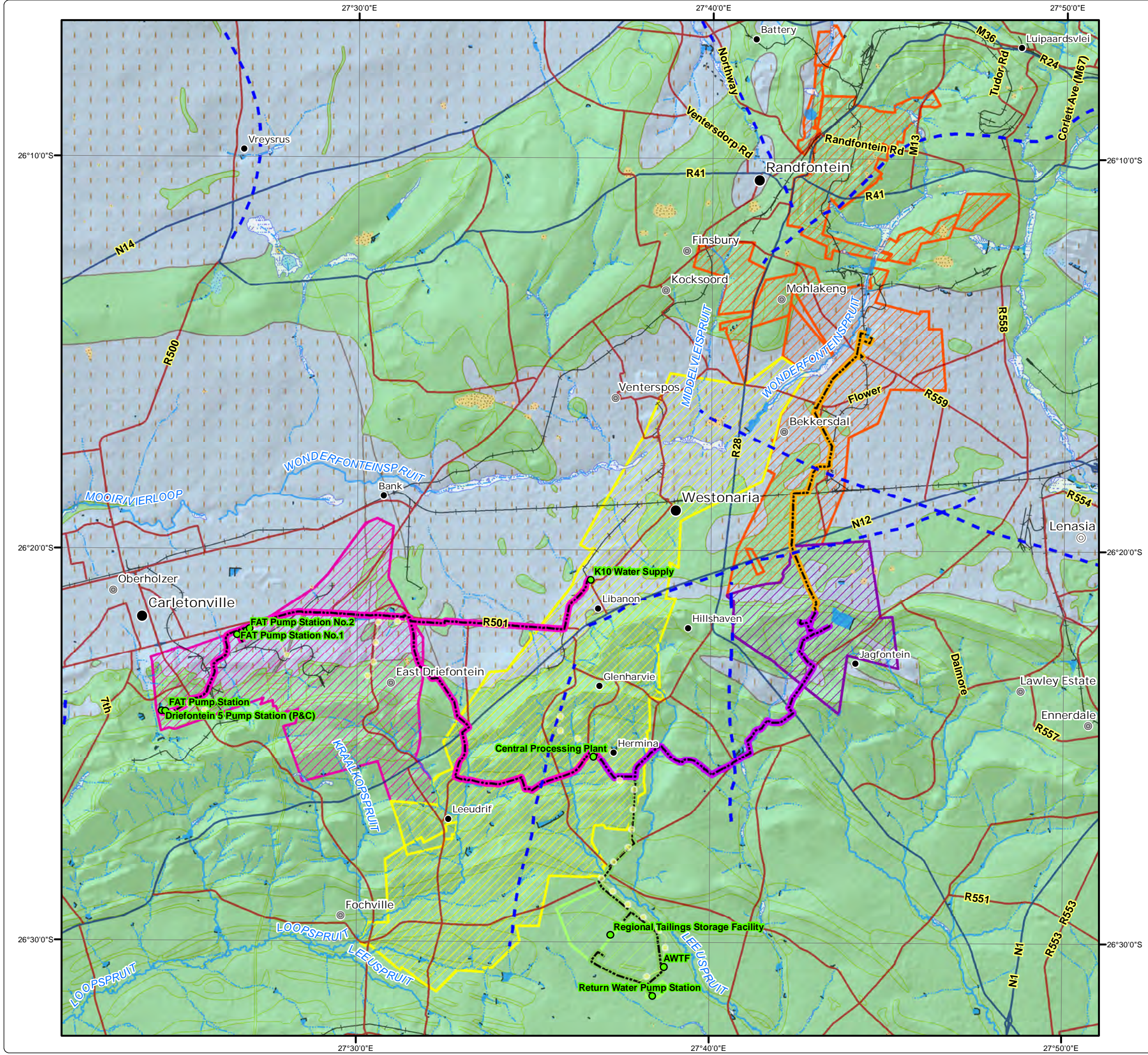
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Projection: Transverse Mercator Ref #: meg.GOL2376.201508.067
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 11/08/2015



Sibanye WRTRP EIA

Regional Geology



Legend

- Major Town
- Secondary Town
- ⊙ Other Town
- Settlement

- Arterial / National Route
- Main Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland

Infrastructure

- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- Regional Tailings Storage Facility
- Kloof Mining Right
- Driefontein Mining Right
- Cooke Mining Right
- Ezulwini Mining Right

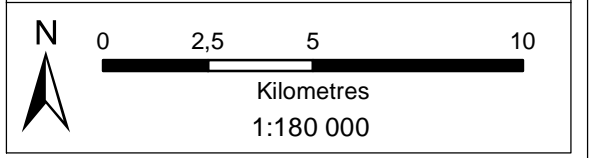
Geology

- Structures
- Dolomite
- Transvaal Rocks



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.201
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 25/08/2015

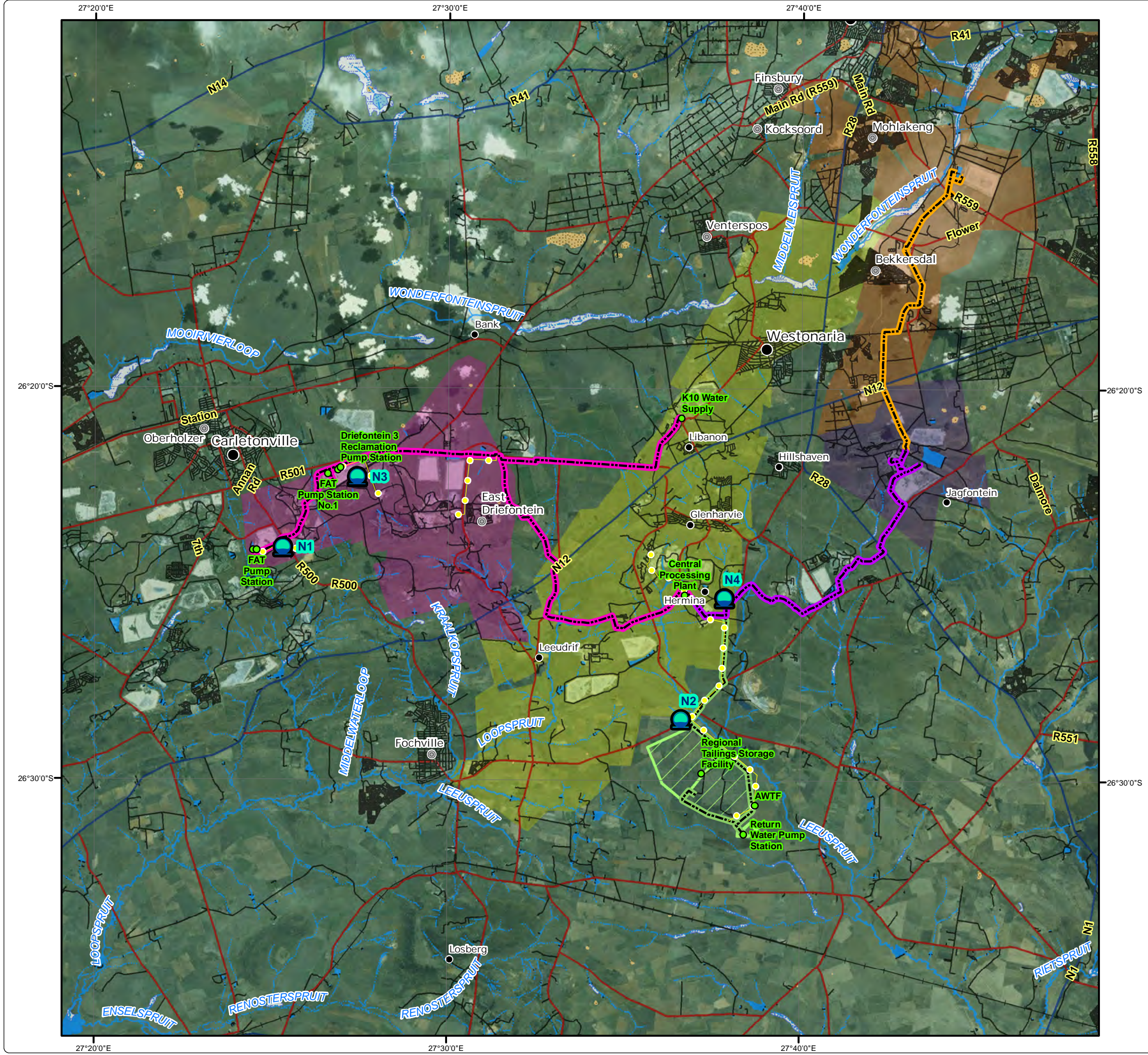



Sibanye WRTRP EIA

Noise Monitoring Locations

Legend

- Noise Monitoring Locations
- Major Town
- Secondary Town
- Other Town
- Settlement
- Arterial / National Route
- Main Road
- Minor Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Infrastructure**
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- Regional Tailings Storage Facility
- Kloof Mining Right
- Driefontein Mining Right
- Cooke Mining Right
- Ezulwini Mining Right

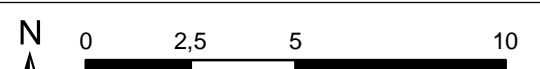




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Projection: Transverse Mercator	Ref #: sdp.GOL2376.201508.203
Datum: WGS 1984	Revision Number: 1
Central Meridian: 27°E	Date: 27/08/2015



0 2,5 5 10
Kilometres
1:180 000

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Land Use

Land Use
SANBI, 2013

- Cultivated
- Degraded
- Mines
- Natural
- Plantations
- Urban Built-Up
- Waterbodies

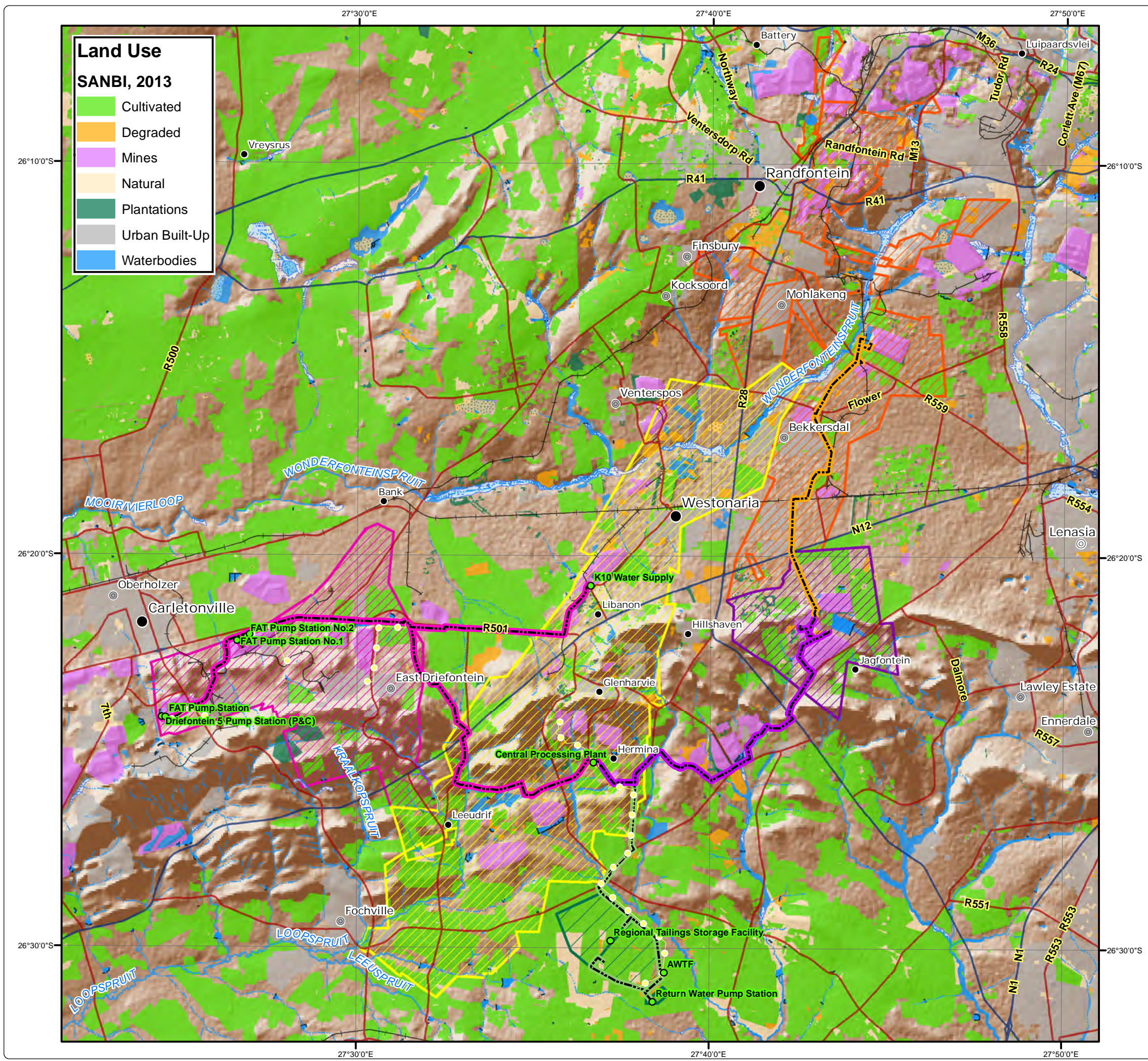
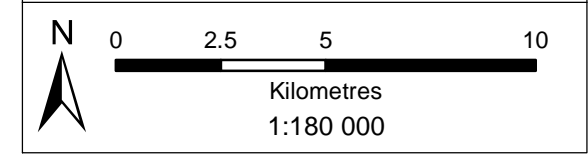
Legend

- Major Town
- Secondary Town
- Other Town
- Settlement
- Arterial / National Route
- Main Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland
- Infrastructure**
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- Regional Tailings Storage Facility
- Kloof Mining Right
- Driefontein Mining Right
- Cooke Mining Right
- Ezulwini Mining Right



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.205
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 25/08/2015



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Land Capability

Land Capability
Klingebeiel, A., & Montgomery, P. (1961)

- Class II: Intensive Cultivation
- Class III: Moderate Cultivation
- Class VI: Moderate Grazing

Legend

- Major Town
- Secondary Town
- Other Town
- Settlement
- Arterial / National Route
- Main Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Perennial Pan
- Non-Perennial Pan
- Wetland

Infrastructure

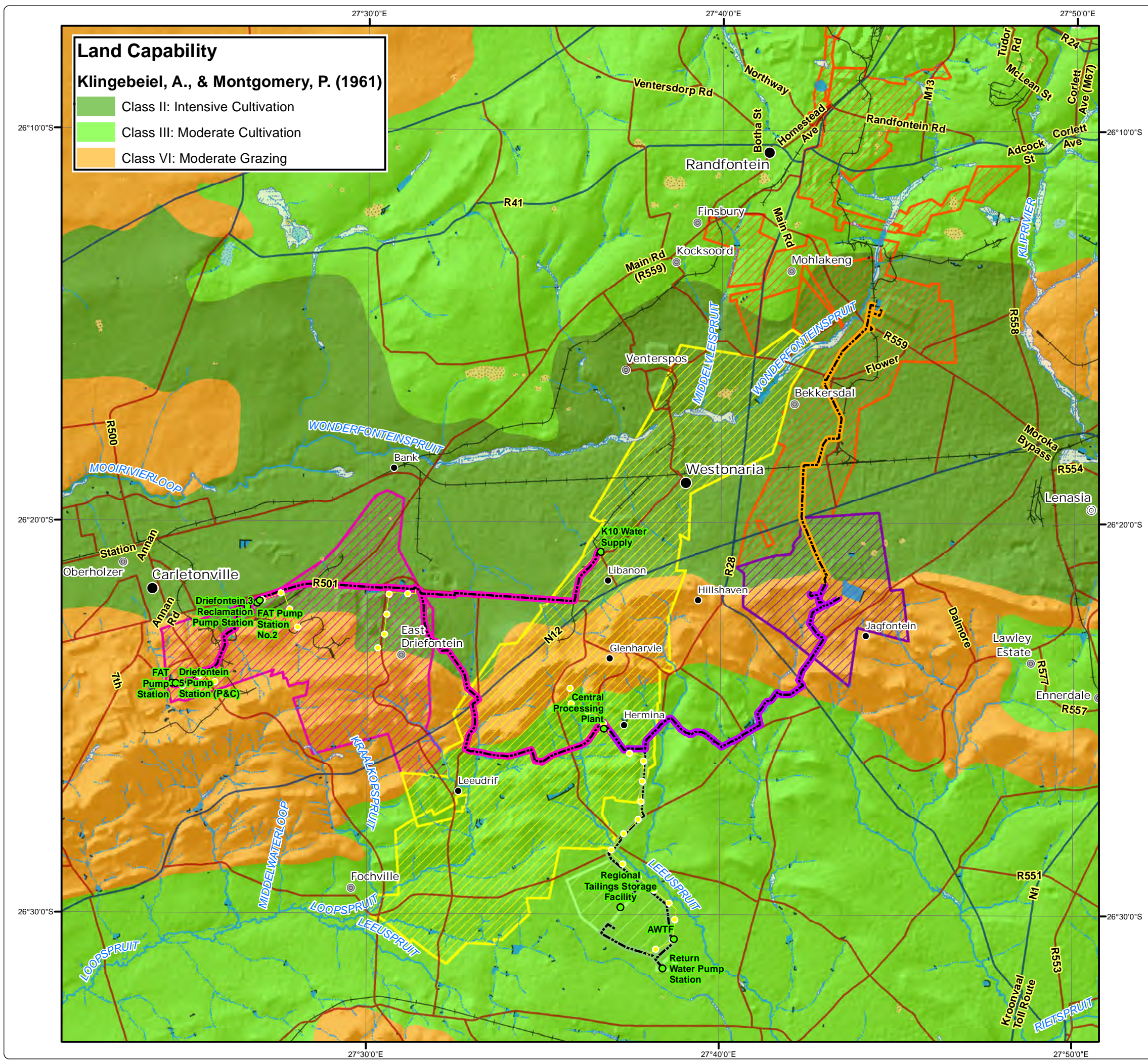
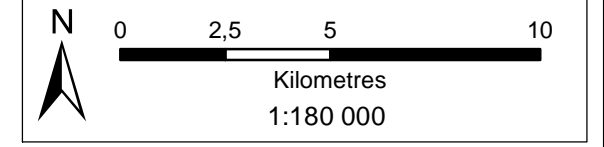
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- Regional Tailings Storage Facility
- Kloof Mining Right
- Driefontein Mining Right
- Cooke Mining Right
- Ezulwini Mining Right



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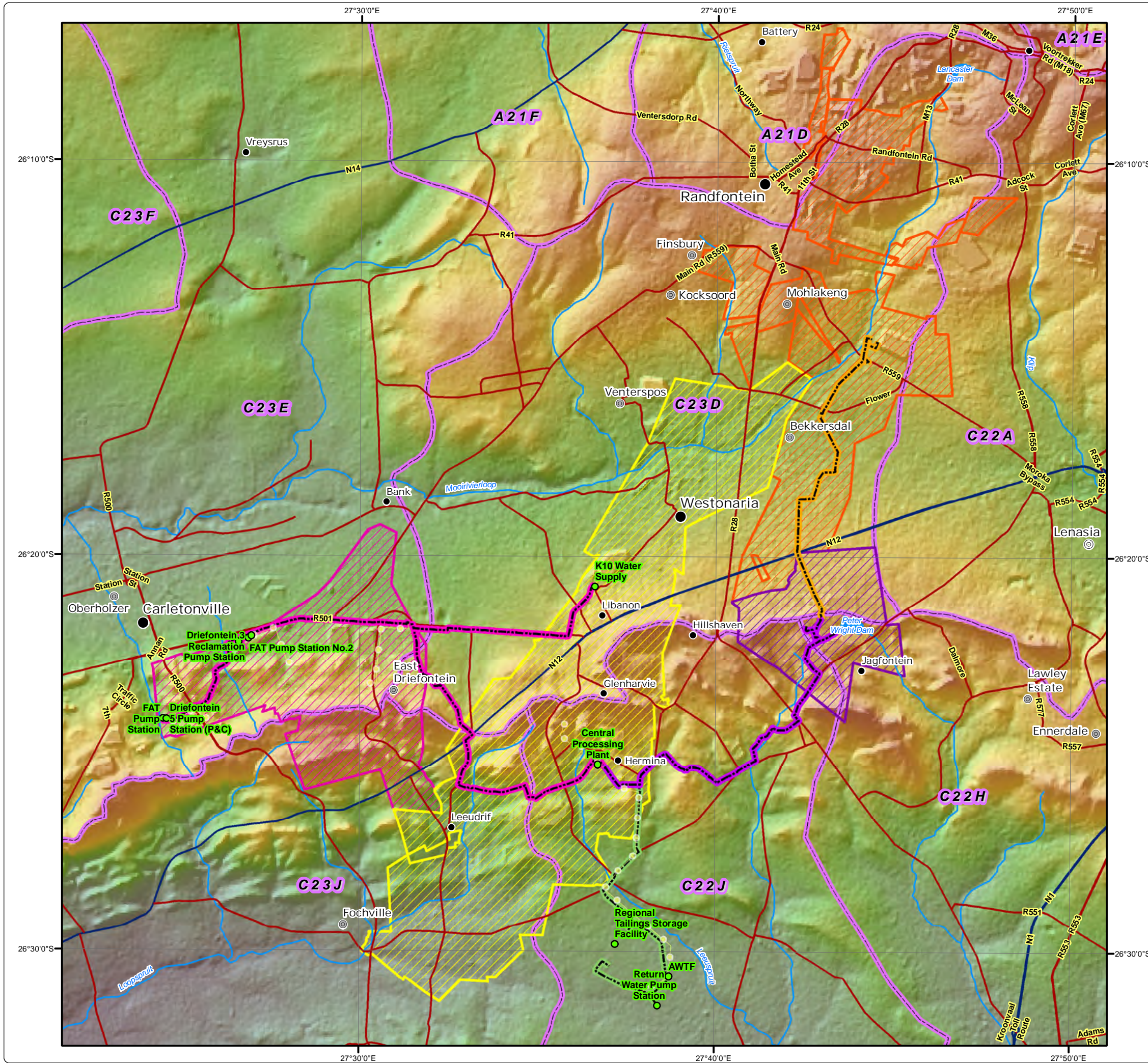
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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.206
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 25/08/2015



Sibanye WRTRP EIA

Quaternary Catchments



Legend

- Major Town
- Secondary Town
- ⊙ Other Town
- Settlement
- Main Roads
- National Roads
- River
- Dam
- Quaternary Catchment Boundary
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- ▨ Kloof Mining Right
- ▨ Driefontein Mining Right
- ▨ Cooke Mining Right
- ▨ Ezulwini Mining Right

Infrastructure

- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- ▨ Kloof Mining Right
- ▨ Driefontein Mining Right
- ▨ Cooke Mining Right
- ▨ Ezulwini Mining Right

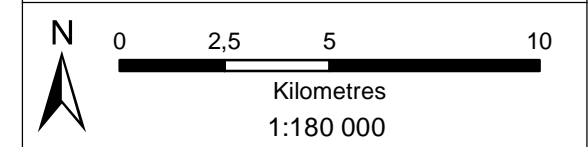
Digital Elevation Model (DEM)

Elevation (m.am.s.l.)



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.207
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 27/08/2015



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Vegetation Types

Vegetation Types
Mucina & Rutherford, 2006

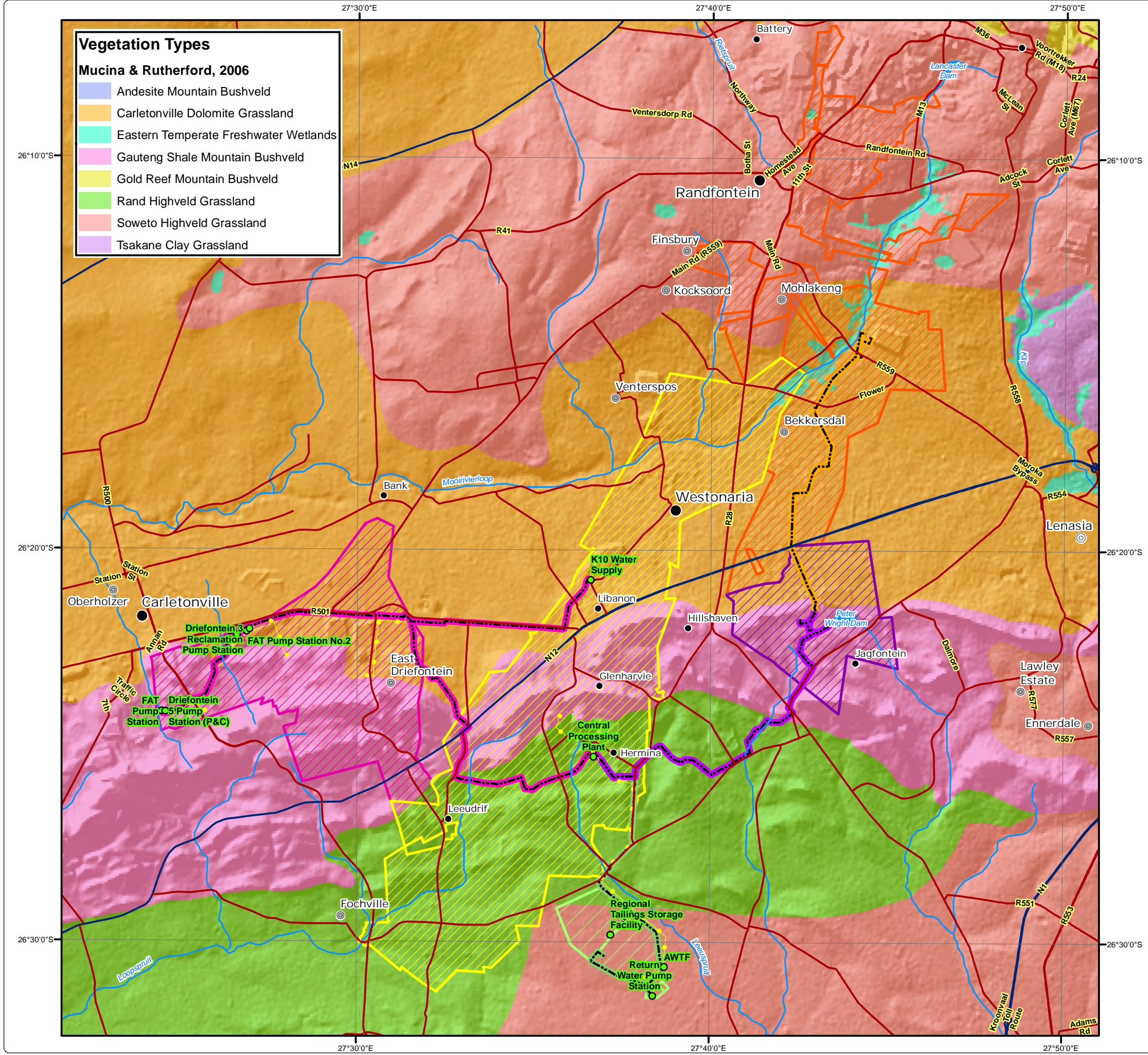
- Andesite Mountain Bushveld
- Carletonville Dolomite Grassland
- Eastern Temperate Freshwater Wetlands
- Gauteng Shale Mountain Bushveld
- Gold Reef Mountain Bushveld
- Rand Highveld Grassland
- Soweto Highveld Grassland
- Tsakane Clay Grassland

Legend

- Major Town
- Secondary Town
- Other Town
- Settlement
- Main Roads
- National Roads
- River
- Dam

Infrastructure

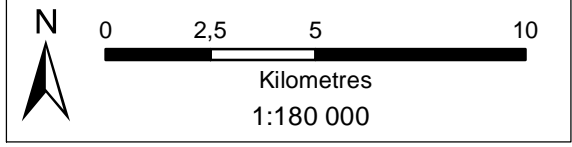
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- Regional Tailings Storage Facility
- Kloof Mining Right
- Driefontein Mining Right
- Ezulwini Mining Right
- Cooke Mining Right



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NFEPA Wetlands

Legend

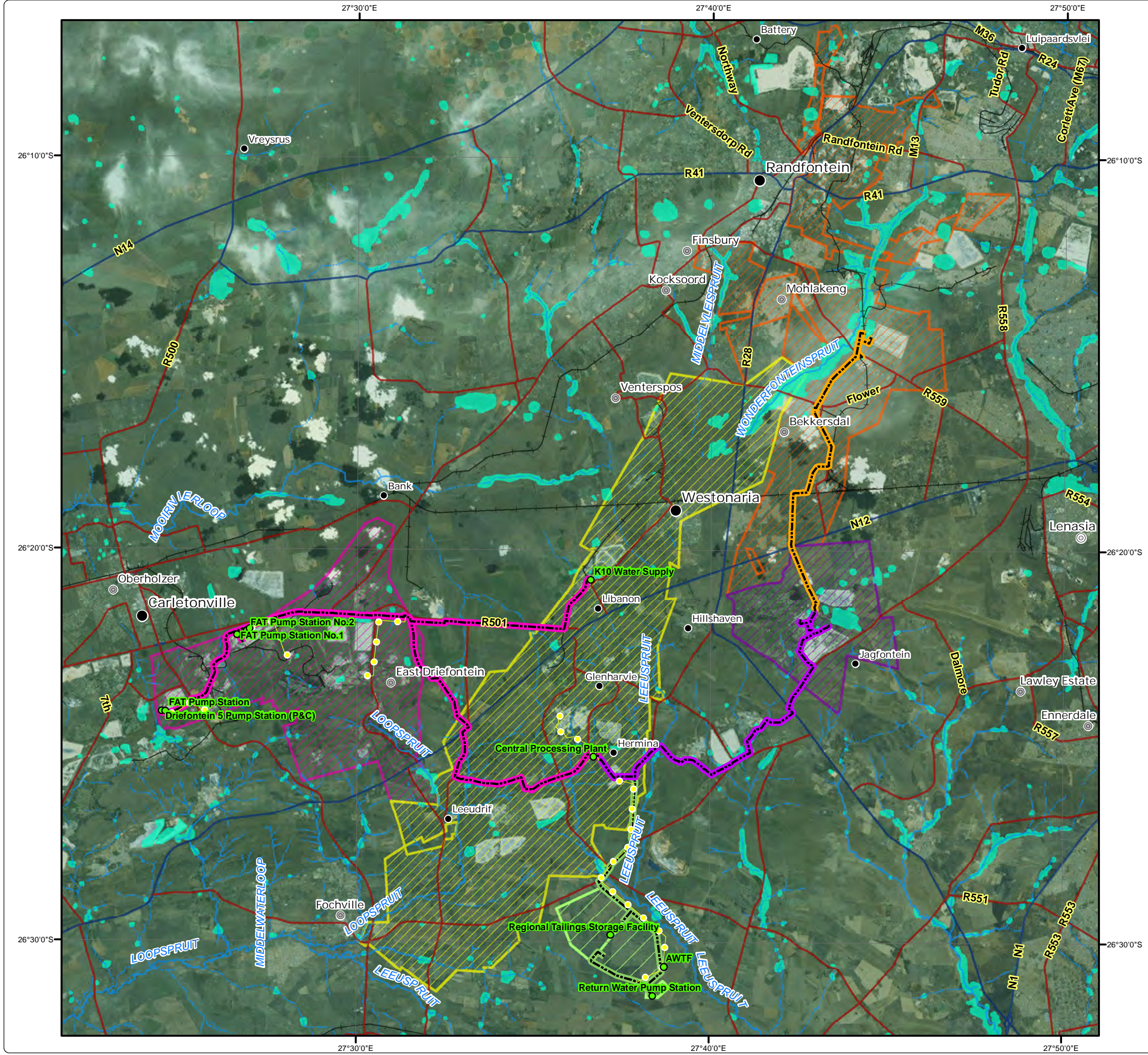
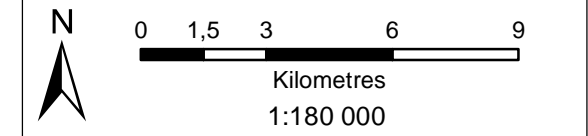
- Major Town
- Secondary Town
- ⊙ Other Town
- Settlement
- Arterial / National Route
- Main Road
- +— Railway Line
- Non-Perennial Stream
- Perennial Stream
- NFEPA Wetlands
- Infrastructure**
- Infrastructure Points
- Powerlines
- Pipelines: Kloof Mining Right
- Pipelines: Driefontein Mining Right
- Pipelines: Cooke Mining Right
- Pipelines: Ezulwini Mining Right
- Regional Tailings Storage Facility
- Kloof Mining Right
- Driefontein Mining Right
- Cooke Mining Right
- Ezulwini Mining Right



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.209
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 25/08/2015



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Heritage Sensitivity

Legend

- Infrastructure Points
- Identified Heritage Sites
- Historical Layering Points (1938)
- Historical Layering Points (1952)
- Major Town
- Other Town
- Settlement
- Pipeline Routing
- National / Arterial Route
- Main Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Non-Perennial Pan
- Wetland
- Kloof Mining Right
- Driefontein Mining Right
- Cooke Mining Right
- Ezulwini Mining Right

Heritage Sensitivity

- High
- Medium - High
- Medium

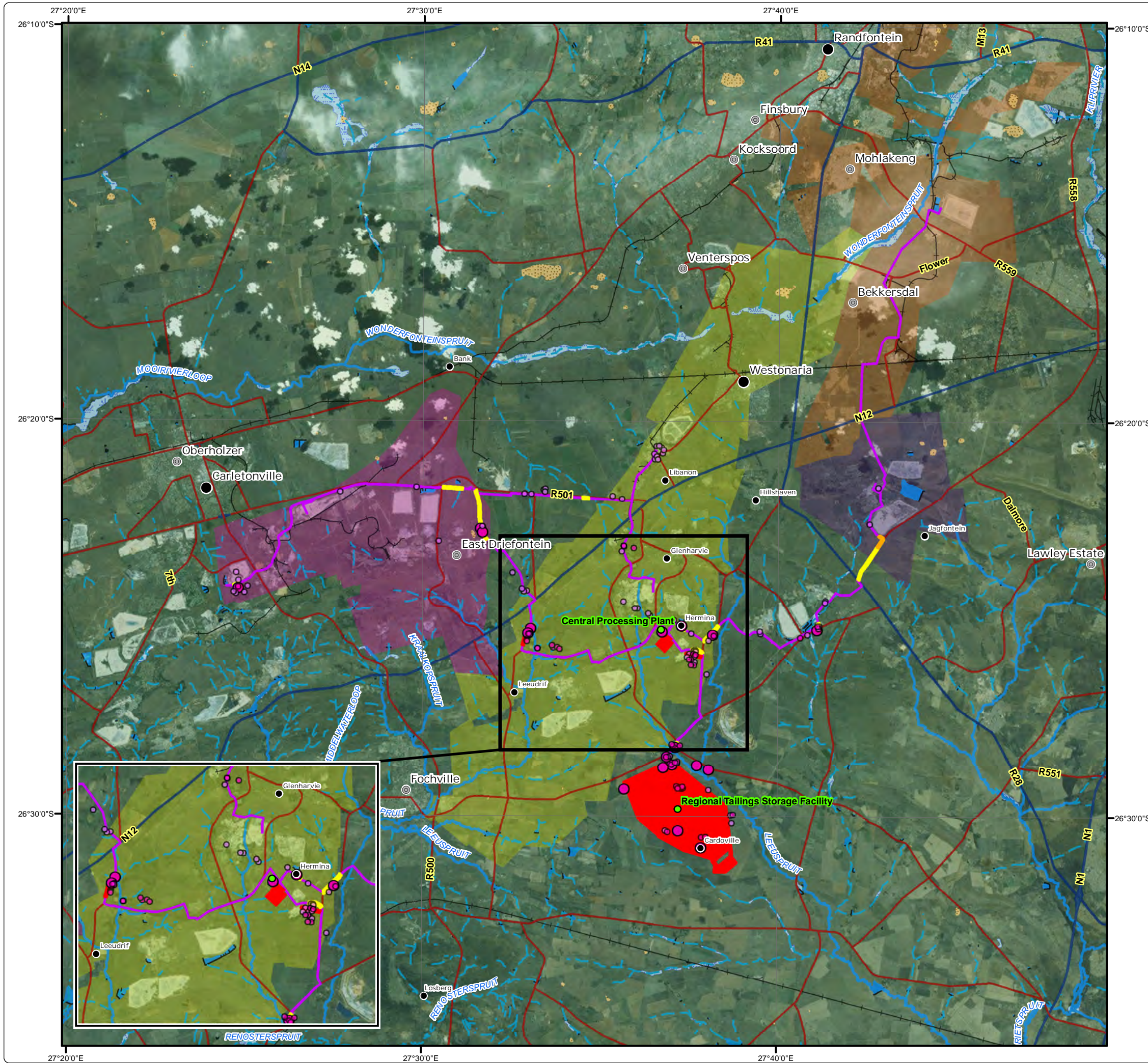
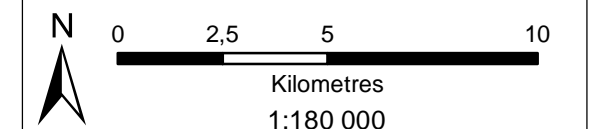


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Projection: Transverse Mercator
Datum: WGS 1984
Central Meridian: 27°E

Ref #: sdp.GOL2376.201508.211
Revision Number: 1
Date: 25/08/2015

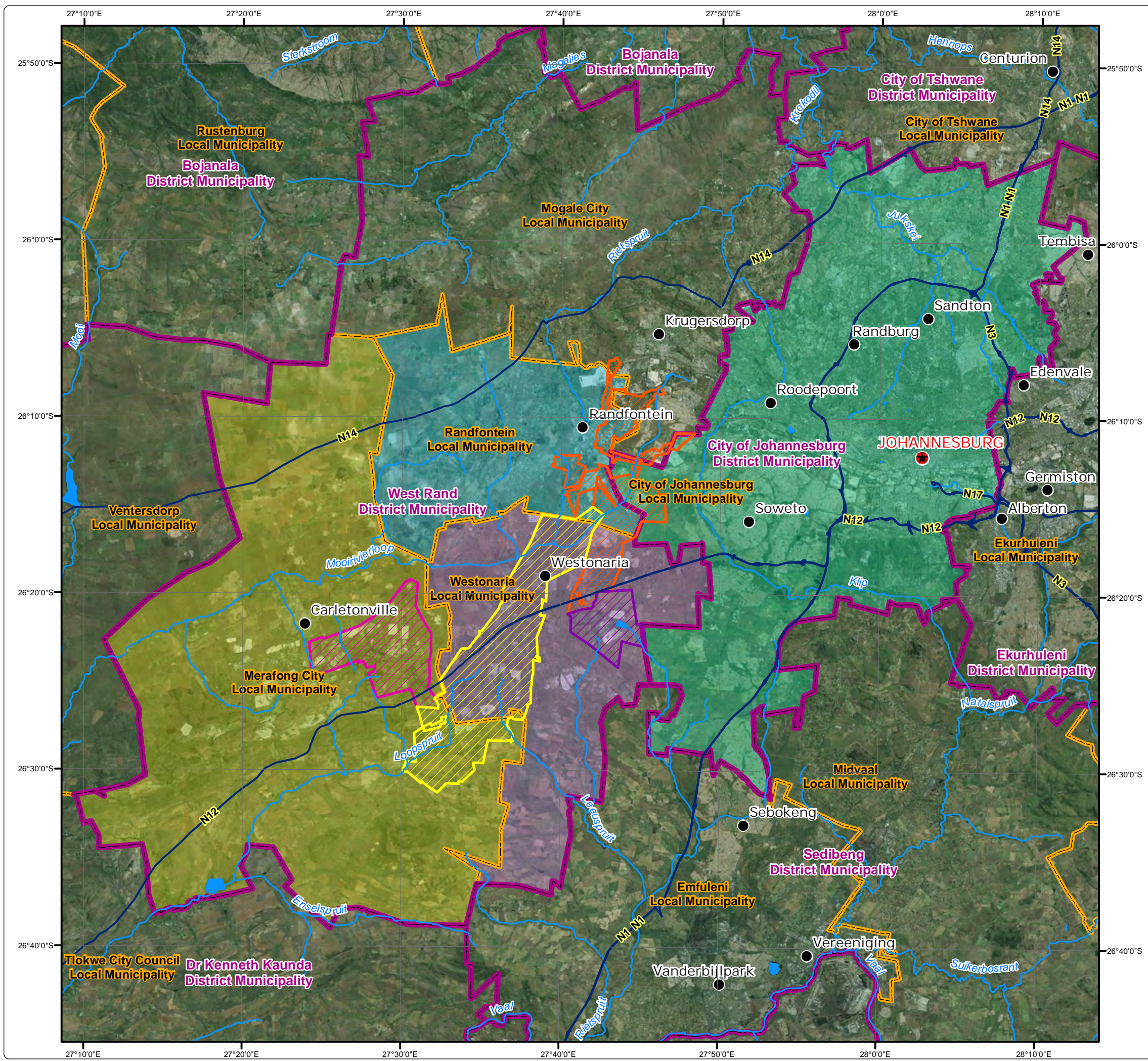


Sibanye WRTRP EIA

Municipalities

Legend

- City
 - Major Town
 - National Roads
 - River
 - Dam
 - Local Municipal Boundary
 - District Municipal Boundary
- #### Mining Right Boundaries
- Kloof Mining Right
 - Driefontein Mining Right
 - Cooke Mining Right
 - Ezulwini Mining Right
- #### Affected Municipalities
- City of Johannesburg Metropolitan Municipality
 - Merafong City Local Municipality
 - Randfontein Local Municipality
 - Westonaria Local Municipality



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Projection: Transverse Mercator Ref #: sdp.GOL2376.201508.212
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 25/08/2015

