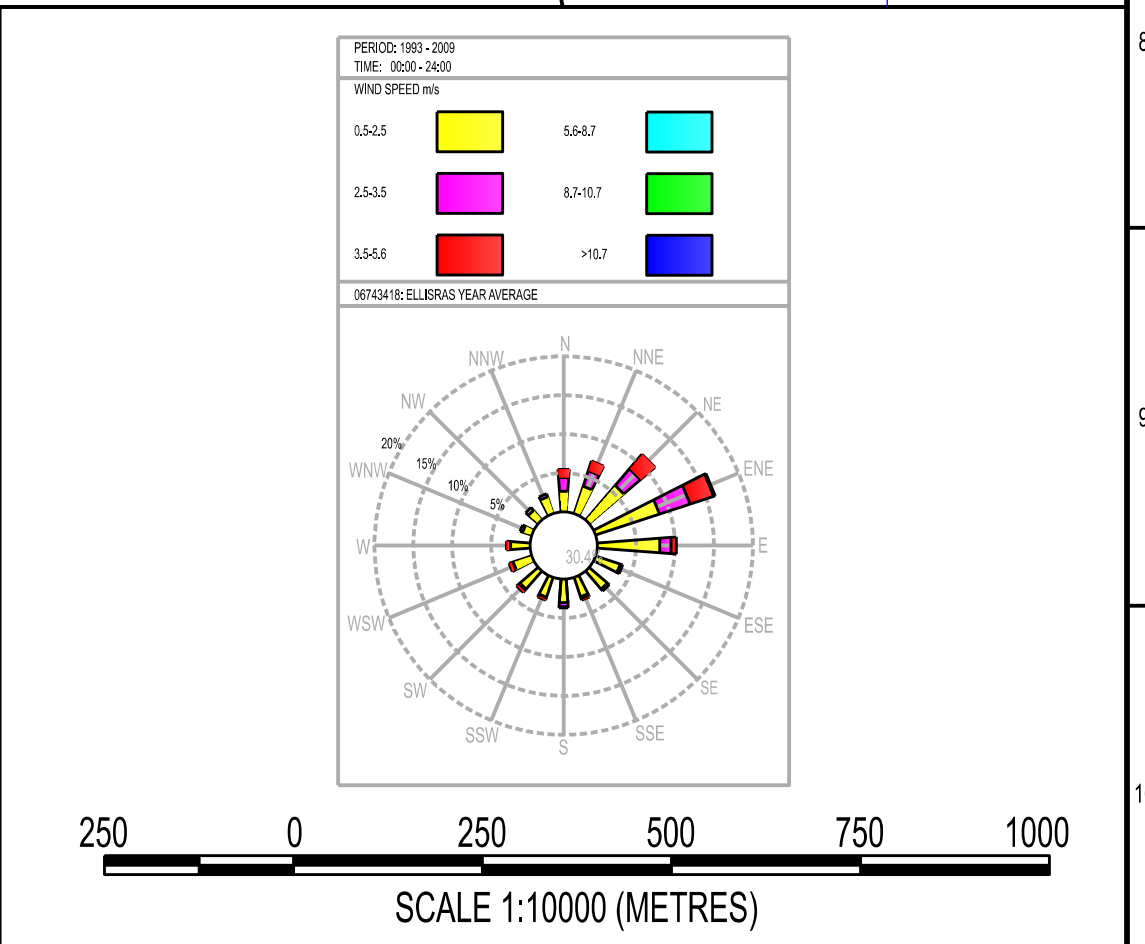




PROGRAMME AND PROJECT MANAGERS
DRAFT COPY ONLY
 DATE: 06/12/17



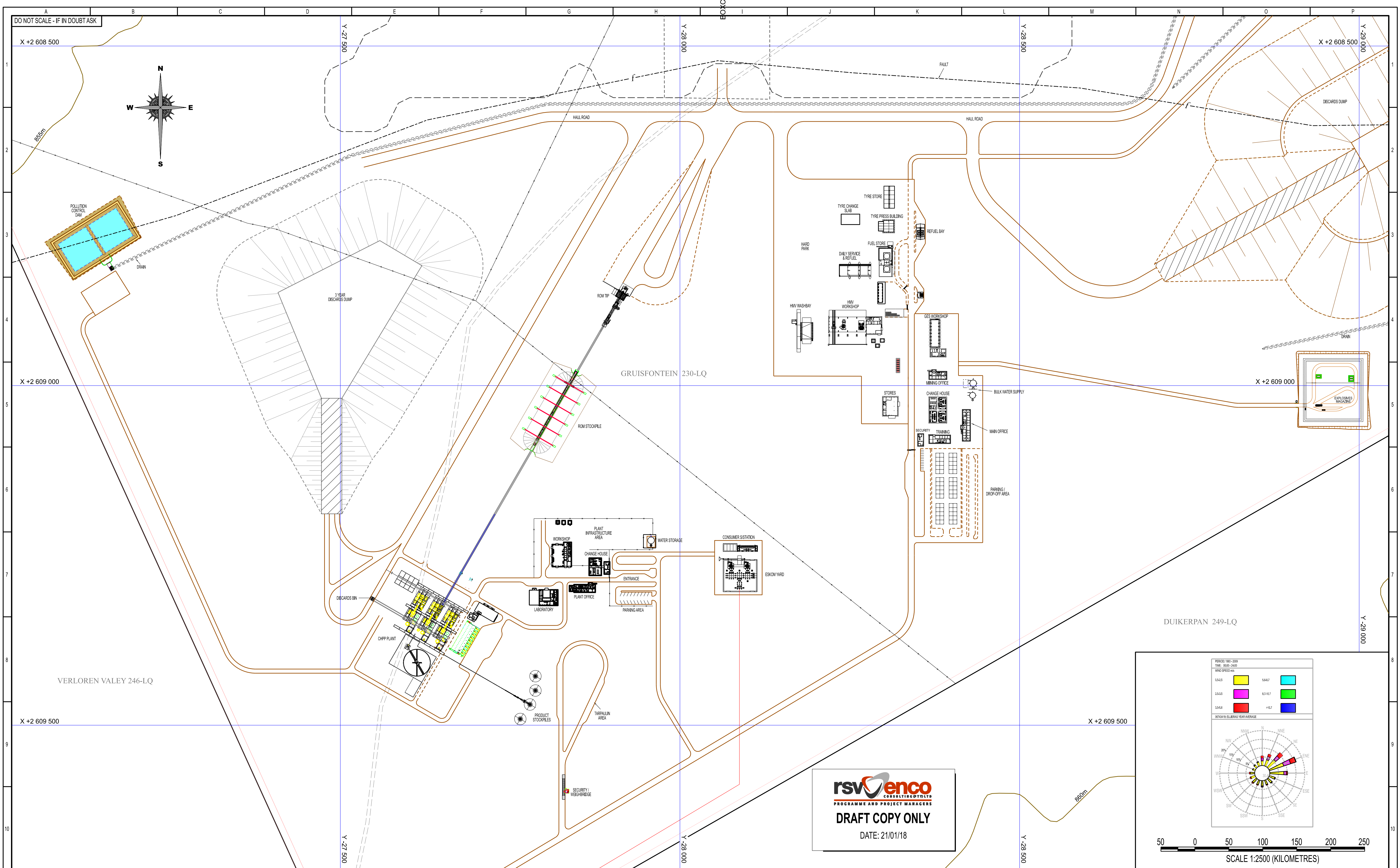
CLIENT APPROVAL			
	NAME	SIGNATURE	DATE
SECTION LEADER			
PROJECT ENGINEER			
PROJECT MANAGER			
PROJECT PRINCIPLE			
CLIENT REPRESENTATIVE			

DRAWING No.	REFERENCE DRAWINGS	REVISION	REV	DATE	REVISED BY	CHECKED BY	SECT LEADER	APPD
02520004A-00.00.01-00-002-01	INFRASTRUCTURE PLOT PLAN	ISSUED FOR COMMENTS	A	21.11.2017	DEA			

Prepared for and on behalf of Client by

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 RSV DRG NO:

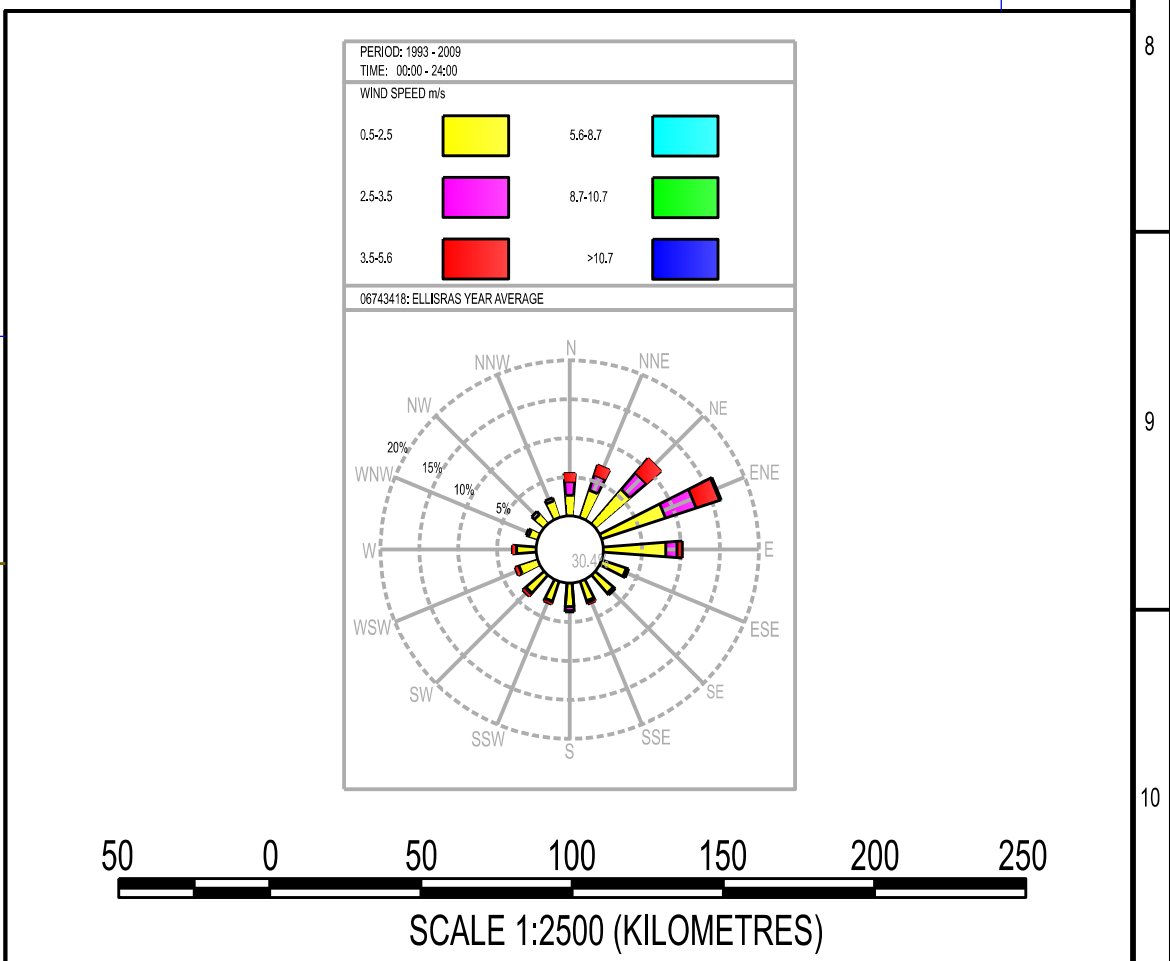


PROJECT	CRONIMET CHROME - GRUISFONTEIN SCOPING STUDY							
AREA	PROJECT GENERAL							
TITLE	SITE GENERAL OVERALL PLOT PLAN							
CLIENT NO./PROJ. NO.	TOW	AREA CODE	SUB AREA CODE	SUB SUB AREA	DISP CODE	SEQ DOC NO.	SHT NO.	REV
02520004A-00.00.01-00-001-01								



rsvenco
CONSULTING PTY LTD
PROGRAMME AND PROJECT MANAGERS

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DATE: 21/01/18



CLIENT APPROVAL			
SECTION	NAME	SIGNATURE	DATE
SECTION LEADER			
PROJECT ENGINEER			
PROJECT MANAGER			
PROJECT PRINCIPLE			
CLIENT REPRESENTATIVE			

DRAWING No.	REFERENCE DRAWINGS	REVISION	REV	DATE	REVISED BY	CHECKED BY	SECT LEADER	APPD
02520004A-00.00.01-00-001-01	OVERALL PLOT PLAN	ISSUED FOR COMMENTS	A	21.01.2018	DEA			

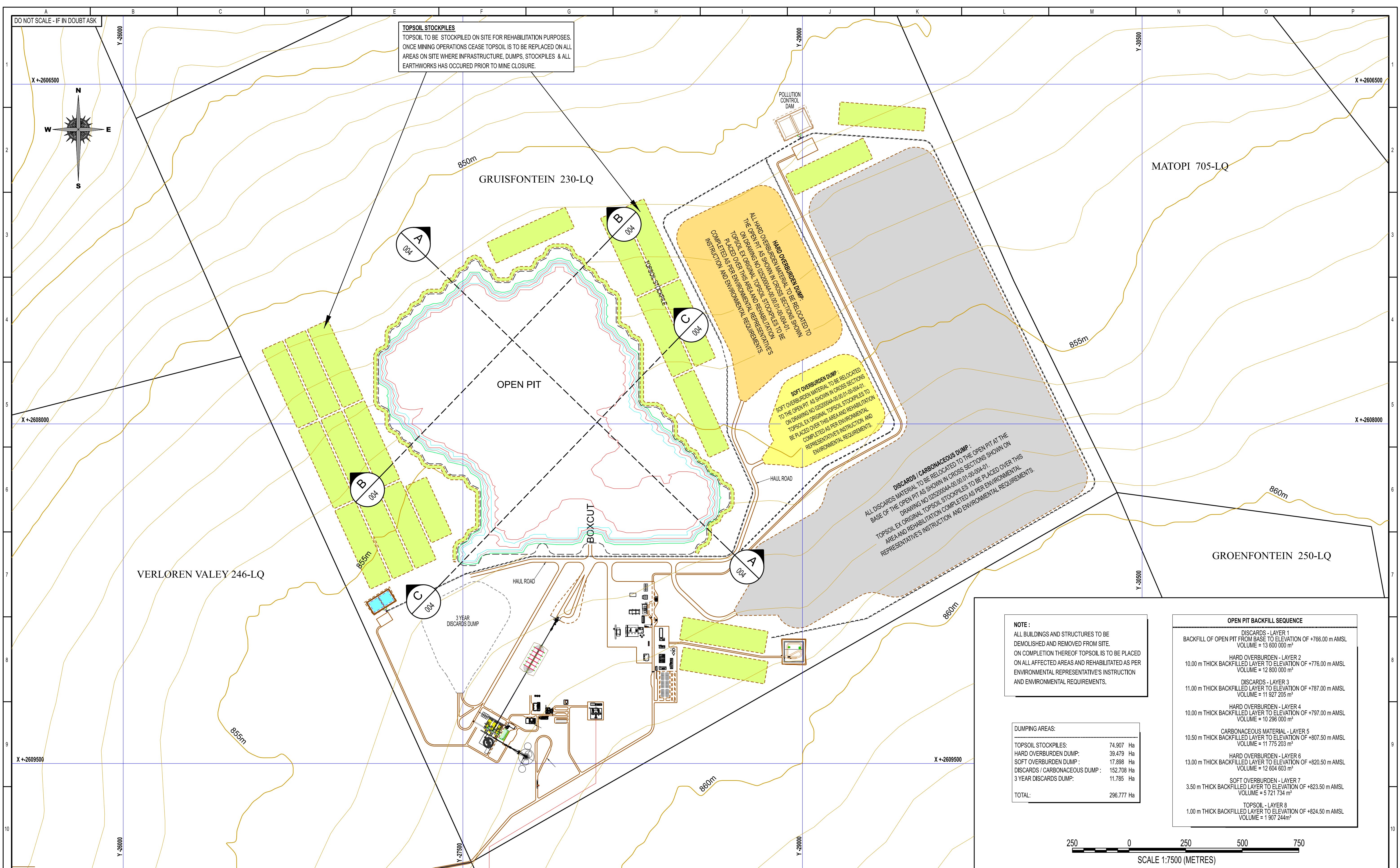
Prepared for and on behalf of Client by

rsvenco
CONSULTING PTY LTD
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PROJECT	CRONIMET CHROME - GRUISFONTEIN SCOPING STUDY							
AREA	PROJECT GENERAL							
TITLE	SITE GENERAL INFRASTRUCTURE PLOT PLAN							
CLIENT NO./PROJ. NO.	TOW	AREA CODE	SUB AREA CODE	SUB SUB AREA	DISP CODE	SEQ DOC NO.	SHT NO.	REV
02520004A-00.00.01-00-002-01								



TOPSOIL STOCKPILES
 TOPSOIL TO BE STOCKPILED ON SITE FOR REHABILITATION PURPOSES. ONCE MINING OPERATIONS CEASE TOPSOIL IS TO BE REPLACED ON ALL AREAS ON SITE WHERE INFRASTRUCTURE, DUMPS, STOCKPILES & ALL EARTHWORKS HAS OCCURED PRIOR TO MINE CLOSURE.

HARD OVERBURDEN DUMP
 ALL HARD OVERBURDEN MATERIAL TO BE RELOCATED TO THE OPEN PIT AS SHOWN IN CROSS SECTIONS SHOWN ON DRAWING NO 02520004A-00.01-00-004-01. TOPSOIL EX ORIGINAL TOPSOIL STOCKPILES TO BE PLACED OVER THIS AREA AND REHABILITATION COMPLETED AS PER ENVIRONMENTAL REPRESENTATIVE'S INSTRUCTION AND ENVIRONMENTAL REQUIREMENTS.

SOFT OVERBURDEN DUMP
 SOFT OVERBURDEN MATERIAL TO BE RELOCATED TO THE OPEN PIT AS SHOWN IN CROSS SECTIONS TO THE DRAWING NO 02520004A-00.01-00-004-01. TOPSOIL EX ORIGINAL TOPSOIL STOCKPILES TO BE PLACED OVER THIS AREA AND REHABILITATION COMPLETED AS PER ENVIRONMENTAL REPRESENTATIVE'S INSTRUCTION AND ENVIRONMENTAL REQUIREMENTS.

DISCARDS / CARBONACEOUS DUMP
 ALL DISCARDS MATERIAL TO BE RELOCATED TO THE OPEN PIT AT THE BASE OF THE OPEN PIT AS SHOWN IN CROSS SECTIONS SHOWN ON DRAWING NO 02520004A-00.01-00-004-01. TOPSOIL EX ORIGINAL TOPSOIL STOCKPILES TO BE PLACED OVER THIS AREA AND REHABILITATION COMPLETED AS PER ENVIRONMENTAL REPRESENTATIVE'S INSTRUCTION AND ENVIRONMENTAL REQUIREMENTS.

NOTE:
 ALL BUILDINGS AND STRUCTURES TO BE DEMOLISHED AND REMOVED FROM SITE. ON COMPLETION THEREOF TOPSOIL IS TO BE PLACED ON ALL AFFECTED AREAS AND REHABILITATED AS PER ENVIRONMENTAL REPRESENTATIVE'S INSTRUCTION AND ENVIRONMENTAL REQUIREMENTS.

DUMPING AREAS:	
TOPSOIL STOCKPILES:	74.907 Ha
HARD OVERBURDEN DUMP:	39.479 Ha
SOFT OVERBURDEN DUMP:	17.898 Ha
DISCARDS / CARBONACEOUS DUMP:	152.708 Ha
3 YEAR DISCARDS DUMP:	11.785 Ha
TOTAL:	296.777 Ha

OPEN PIT BACKFILL SEQUENCE	
DISCARDS - LAYER 1	BACKFILL OF OPEN PIT FROM BASE TO ELEVATION OF +766.00 m AMSL VOLUME = 13 600 000 m ³
HARD OVERBURDEN - LAYER 2	10.00 m THICK BACKFILLED LAYER TO ELEVATION OF +776.00 m AMSL VOLUME = 12 800 000 m ³
DISCARDS - LAYER 3	11.00 m THICK BACKFILLED LAYER TO ELEVATION OF +787.00 m AMSL VOLUME = 11 927 205 m ³
HARD OVERBURDEN - LAYER 4	10.00 m THICK BACKFILLED LAYER TO ELEVATION OF +797.00 m AMSL VOLUME = 10 296 000 m ³
CARBONACEOUS MATERIAL - LAYER 5	10.50 m THICK BACKFILLED LAYER TO ELEVATION OF +807.50 m AMSL VOLUME = 11 775 203 m ³
HARD OVERBURDEN - LAYER 6	13.00 m THICK BACKFILLED LAYER TO ELEVATION OF +820.50 m AMSL VOLUME = 12 604 603 m ³
SOFT OVERBURDEN - LAYER 7	3.50 m THICK BACKFILLED LAYER TO ELEVATION OF +823.50 m AMSL VOLUME = 5 721 734 m ³
TOPSOIL - LAYER 8	1.00 m THICK BACKFILLED LAYER TO ELEVATION OF +824.50 m AMSL VOLUME = 1 907 244 m ³



CLIENT APPROVAL			
SECTION LEADER	NAME	SIGNATURE	DATE
PROJECT ENGINEER			
PROJECT MANAGER			
PROJECT PRINCIPLE			
CLIENT REPRESENTATIVE			

DRAWING No.	REFERENCE DRAWINGS	REVISION	REV	DATE	REVISED BY	CHECKED BY	SECT LEADER	APPD
02520004A-00.00.01-00-002-01	INFRASTRUCTURE PLOT PLAN	ISSUED FOR COMMENTS	A	21.11.2017	DEA			

Prepared for and on behalf of Client by

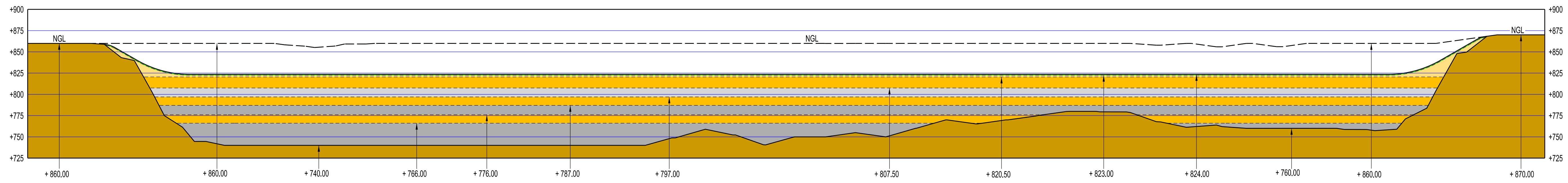
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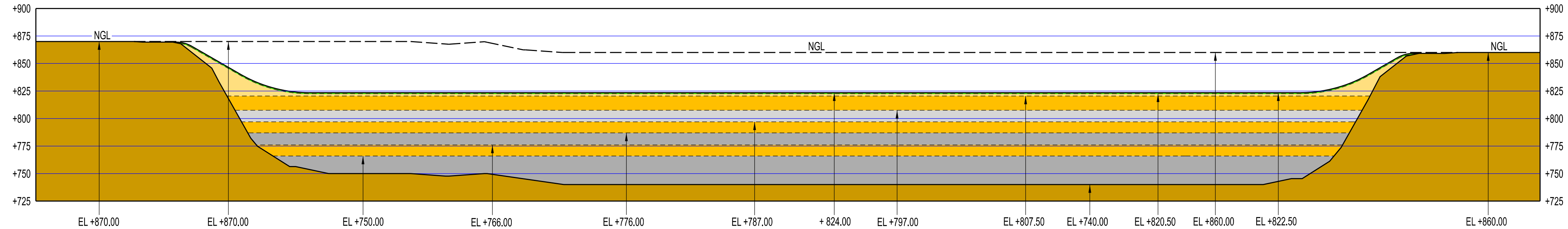
CLIENT NO./PROJ. NO.	TOW	AREA CODE	SUB AREA CODE	SUB SUB AREA	DISP CODE	SEQ DOC NO.	SHT NO.	REV

PROJECT	NOZALA COAL - GRUISFONTEIN SCOPING STUDY																		
AREA	PROJECT GENERAL																		
TITLE	SITE GENERAL REHABILITATION PLAN																		
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CLIENT NO./PROJ. NO.	TOW	AREA CODE	SUB AREA CODE	SUB SUB AREA	DISP CODE	SEQ DOC NO.	SHT NO.	REV											
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SCALE	1:7500																		

DO NOT SCALE - IF IN DOUBT ASK



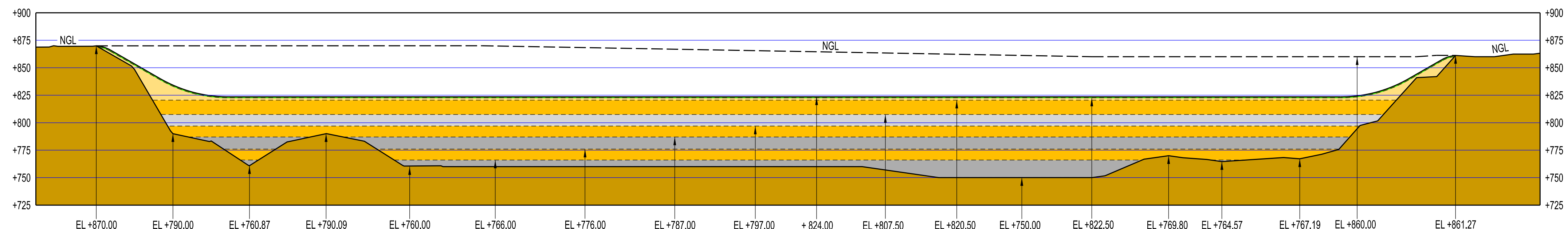
SECTION A-A
SCALE 1:2500



SECTION B-B
SCALE 1:2500

TYPICAL SECTION THROUGH OPEN PIT

- TOPSOIL - 1.0m THICK LAYER (1 907 244m³)
- SOFT OVERBURDEN - 2.5m THICK LAYER (5 721 734 m³)
- HARD OVERBURDEN - 13m THICK LAYER (12 604 603 m³ OF 35 700 603 m³)
- CARBONACEOUS MATERIAL - 10.5m THICK LAYER (11 775 203 m³)
- HARD OVERBURDEN - 10.0m THICK LAYER (10 296 000 m³ OF 35 700 603 m³)
- DISCARDS - 11.0M THICK LAYER (11 927 205 m³ OF 40 843 527 m³)
- HARD OVERBURDEN - 10.0m THICK LAYER (12 800 000 m³ OF 35 700 603 m³)
- DISCARDS - FILLED TO ELEVATION OF +766.0m AMSL (13 600 000 m³ OF 40 843 527 m³)
- IN SITU ROCK

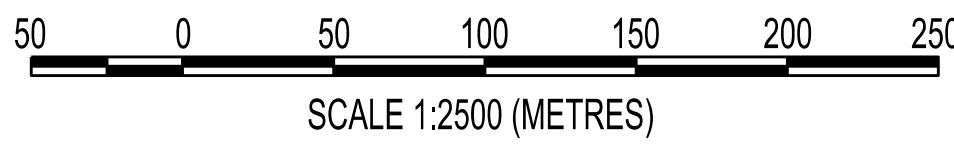


SECTION C-C
SCALE 1:2500

LEGEND

- TOPSOIL
- SOFT OVERBURDEN
- CARBONACEOUS MATERIAL
- HARD OVERBURDEN
- DISCARDS

NOTE:
1) ALL ELEVATIONS GIVEN AS A.M.S.L.
2) ALL CO-ORDINATES AND ELEVATIONS TO BE VERIFIED ON SITE.



<p>Prepared for and on behalf of Client by</p>										<p>PROJECT NOZALA COAL - GRUISFONTEIN SCOPING STUDY</p>	
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<p>DRAWING No. 02520004A-00.00.01-00-002-01</p>										<p>TITLE REHABILITATION PLAN - SECTIONS</p>	
<p>REFERENCE DRAWINGS</p>										<p>CLIENT NO./PROJ. NO. 02520004A-00.00.01-00-004-01</p>	
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<p>ISSUED FOR COMMENTS</p>										<p>DATE 21.11.2017</p>	
<p>REV A</p>										<p>BY DE A</p>	
<p>DATE 21.11.2017</p>										<p>BY DE A</p>	
<p>REVISOR</p>										<p>CHECKED BY</p>	
<p>DATE</p>										<p>SECT LEADER</p>	
<p>BY</p>										<p>APPD</p>	
<p>REVISION</p>										<p>RSV DRG NO.</p>	


LEGEND:

CONCEPT

Rev	Date	Description of changes	By
a	##-##-2018	ISSUED FOR APPROVAL	PDW

REVISIONS

Client



NOZALA COAL
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2021
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FAX: +27-11-463-7590

Consultant



P O BOX 35703
MENLO PARK
0102
TEL: +27-12-368-1850
FAX: +27-12-348-4738

APPROVED

THE MASTER HELD AT DELTA BUILT ENVIRONMENT CONSULTANTS BEARS THE ORIGINAL SIGNATURE OF APPROVAL.

SIGNATURE: _____ NAME: _____ DATE: _____

Project

GRUISFONTEIN COAL MINE PROJECT

Project Description

GRUISFONTEIN PFS DESIGN

Drawing Title

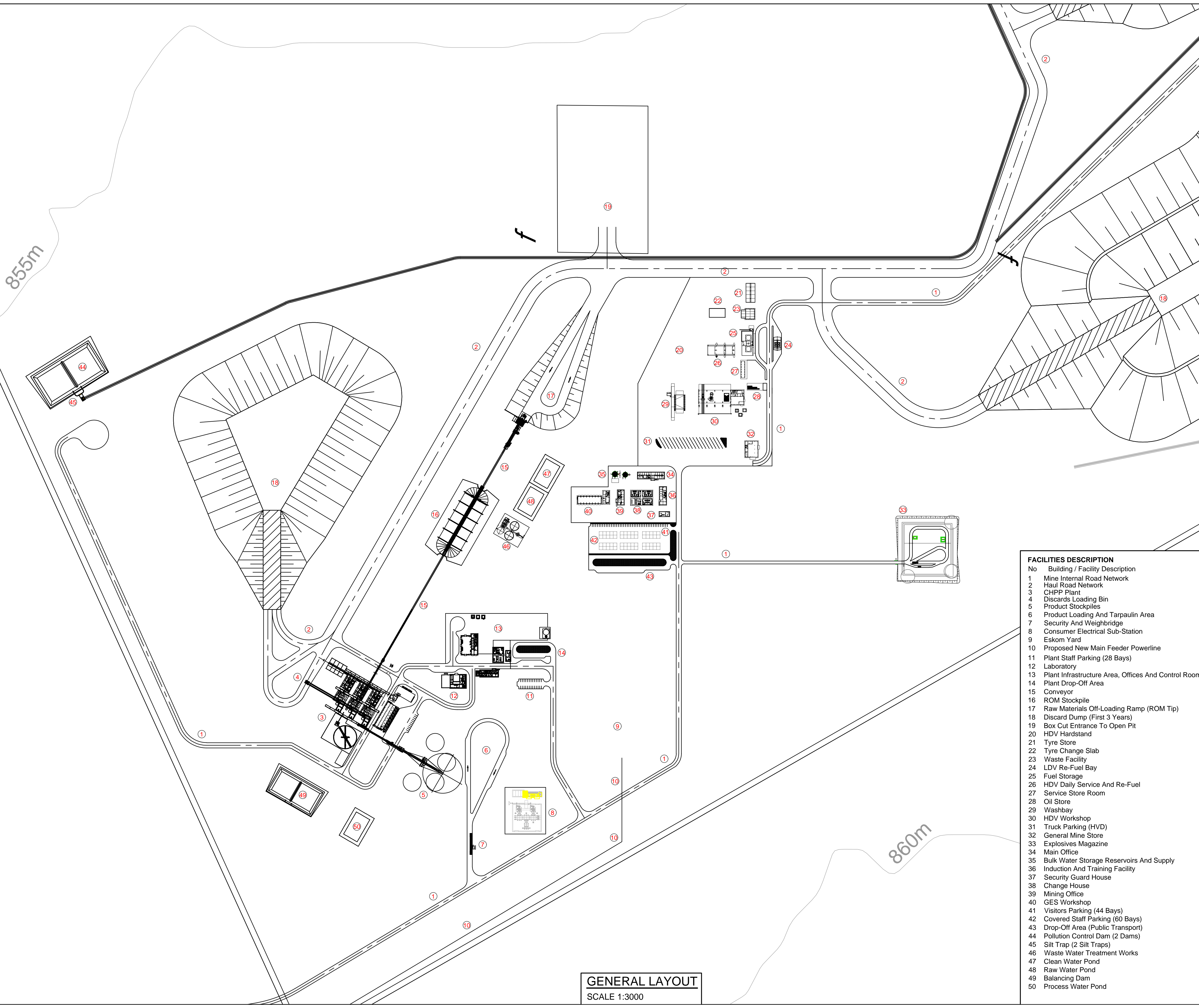
MINE INFRASTRUCTURE LAYOUT

Drawing Units	METERS	Drawing Size	A1
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Date	AUGUST 2018	Scale	AS SHOWN	Designed By	G GREYLING
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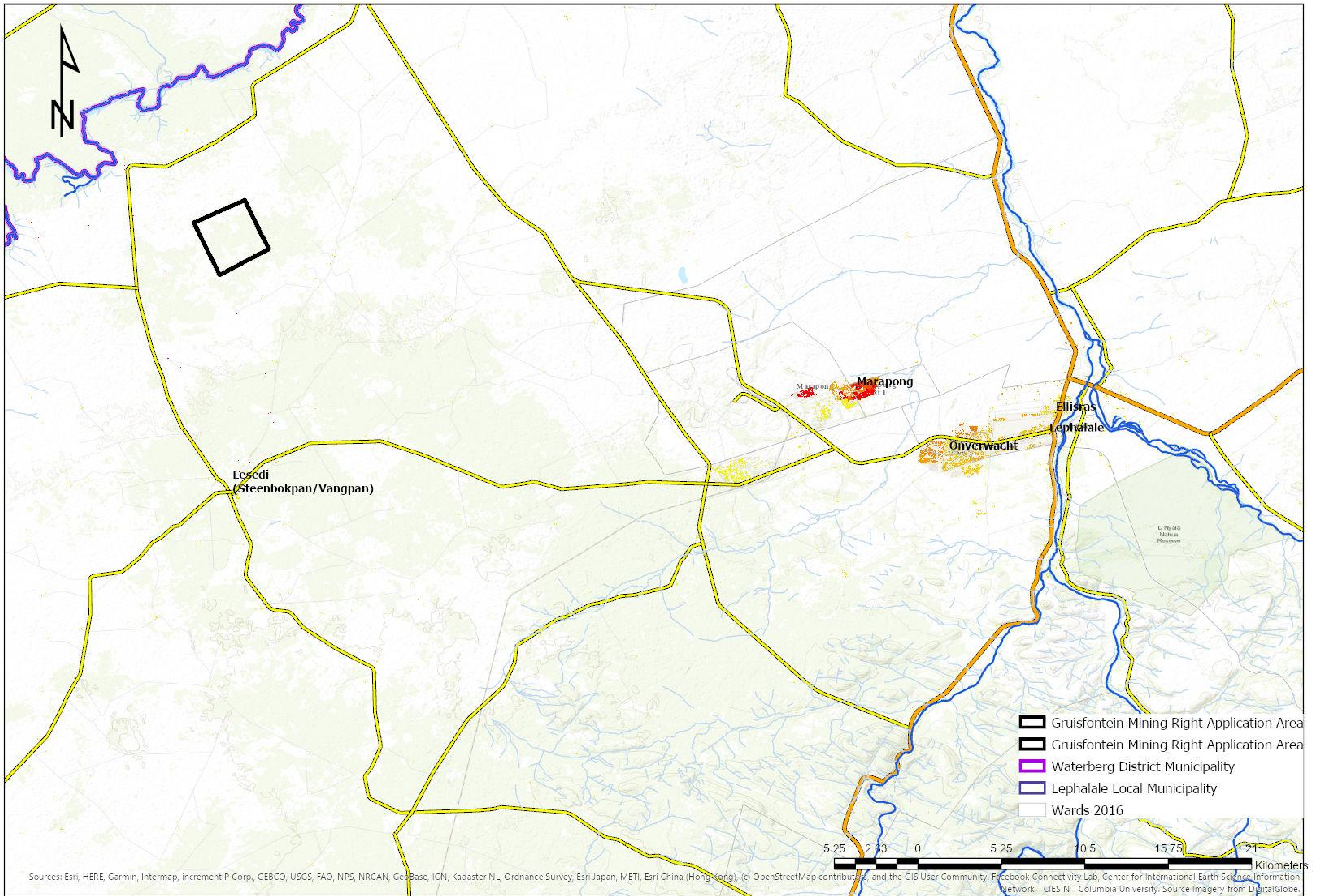
Checked By	B NDHLOVU	Drawn By	I SMIT	Approved By	P DE WET
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Drawing No.	P18054-CC-01-GN-002	Rev	a
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GENERAL LAYOUT
SCALE 1:3000

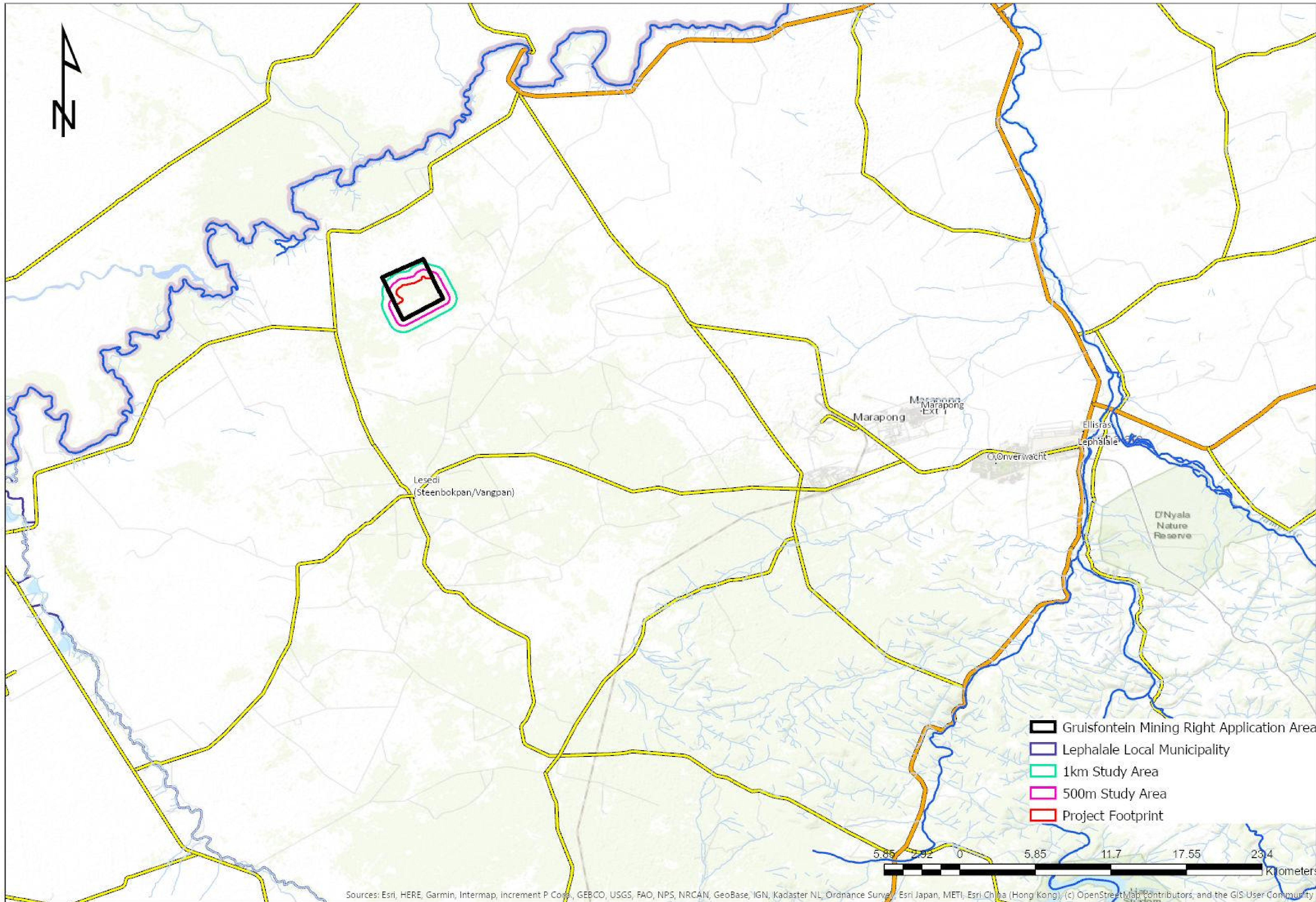
- FACILITIES DESCRIPTION**
- | No | Building / Facility Description |
|----|---|
| 1 | Mine Internal Road Network |
| 2 | Haul Road Network |
| 3 | CHPP Plant |
| 4 | Discards Loading Bin |
| 5 | Product Stockpiles |
| 6 | Product Loading And Tarpaulin Area |
| 7 | Security And Weighbridge |
| 8 | Consumer Electrical Sub-Station |
| 9 | Eskom Yard |
| 10 | Proposed New Main Feeder Powerline |
| 11 | Plant Staff Parking (28 Bays) |
| 12 | Laboratory |
| 13 | Plant Infrastructure Area, Offices And Control Room |
| 14 | Plant Drop-Off Area |
| 15 | Conveyor |
| 16 | ROM Stockpile |
| 17 | Raw Materials Off-Loading Ramp (ROM Tip) |
| 18 | Discard Dump (First 3 Years) |
| 19 | Box Out Entrance To Open Pit |
| 20 | HDV Hardstand |
| 21 | Tyre Store |
| 22 | Tyre Change Slab |
| 23 | Waste Facility |
| 24 | LDV Re-Fuel Bay |
| 25 | Fuel Storage |
| 26 | HDV Daily Service And Re-Fuel |
| 27 | Service Store Room |
| 28 | Oil Store |
| 29 | Washbay |
| 30 | HDV Workshop |
| 31 | Truck Parking (HVD) |
| 32 | General Mine Store |
| 33 | Explosives Magazine |
| 34 | Main Office |
| 35 | Bulk Water Storage Reservoirs And Supply |
| 36 | Induction And Training Facility |
| 37 | Security Guard House |
| 38 | Change House |
| 39 | Mining Office |
| 40 | GES Workshop |
| 41 | Visitors Parking (44 Bays) |
| 42 | Covered Staff Parking (60 Bays) |
| 43 | Drop-Off Area (Public Transport) |
| 44 | Pollution Control Dam (2 Dams) |
| 45 | Silt Trap (2 Silt Traps) |
| 46 | Waste Water Treatment Works |
| 47 | Clean Water Pond |
| 48 | Raw Water Pond |
| 49 | Balancing Dam |
| 50 | Process Water Pond |

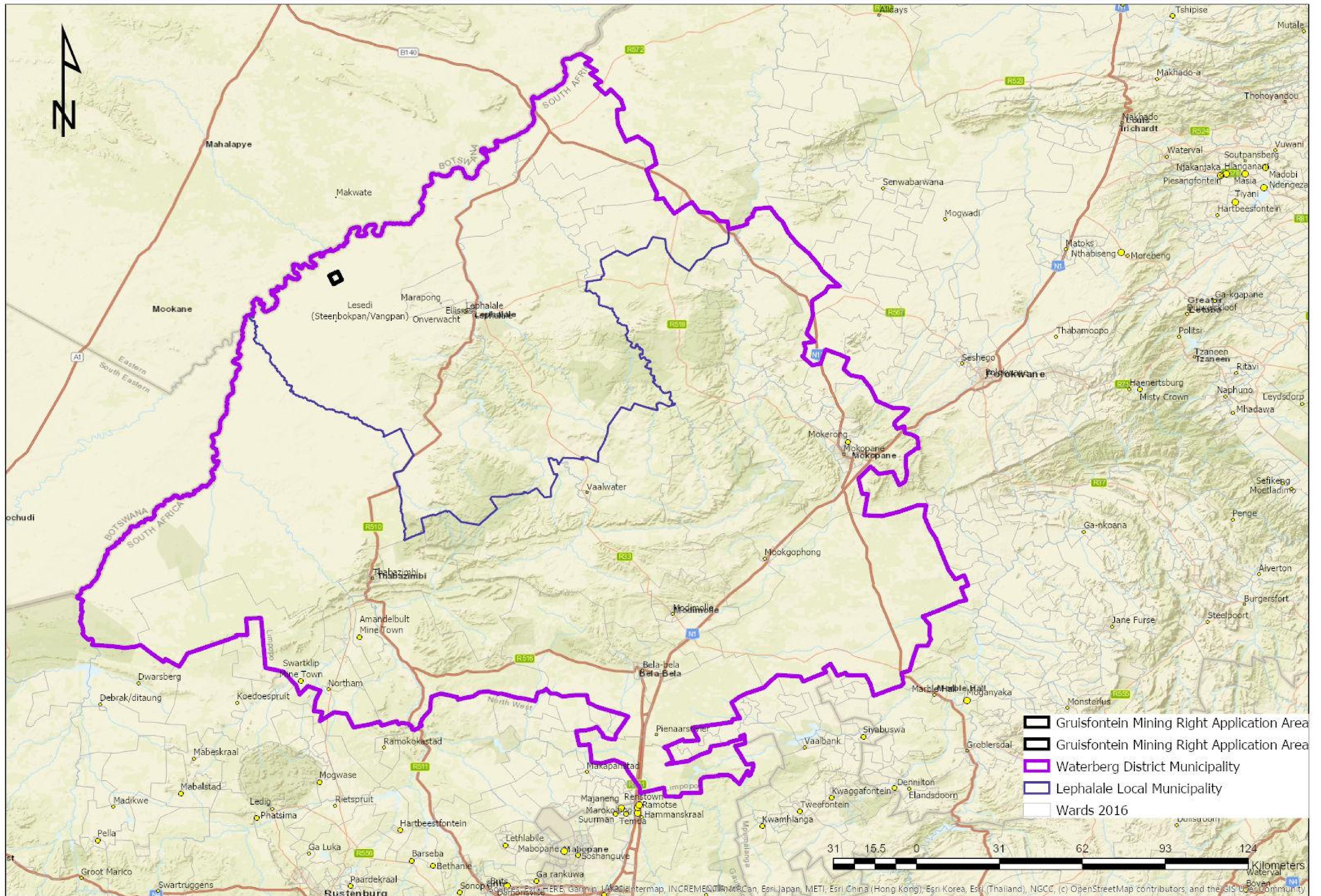


-  GUISFONTEIN Mining Right Application Area
-  GUISFONTEIN Mining Right Application Area
-  Waterberg District Municipality
-  Lephalele Local Municipality
-  Wards 2016

5.25 2.03 0 5.25 10.5 15.75 21 Kilometers

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, Facebook Connectivity Lab, Center for International Earth Science Information Network - CIESIN - Columbia University. Source Imagery from DigitalGlobe.

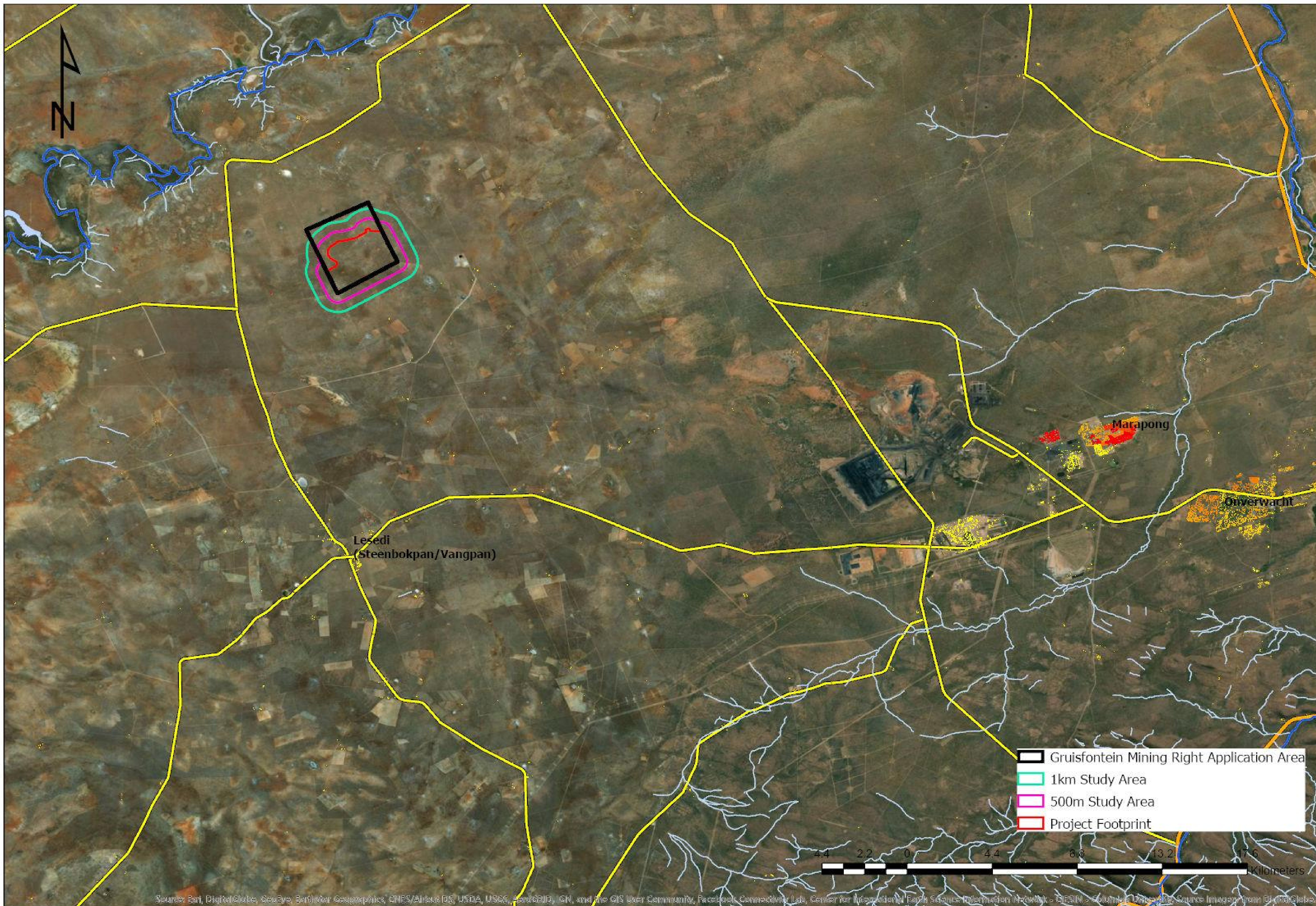




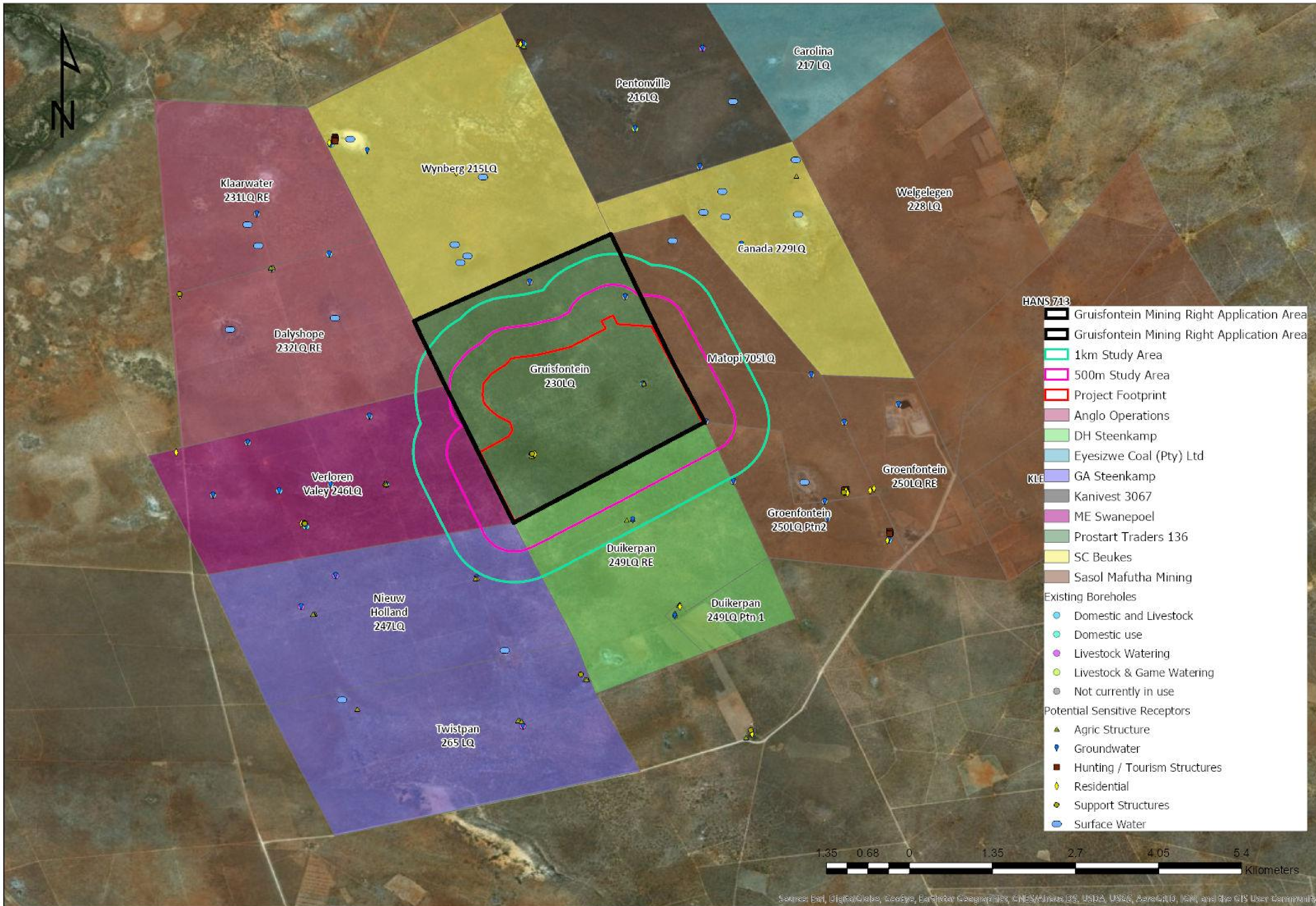
-  GUISfontein Mining Right Application Area
-  GUISfontein Mining Right Application Area
-  Waterberg District Municipality
-  Lephalale Local Municipality
-  Wards 2016

31 15.5 0 31 62 93 124 Kilometers

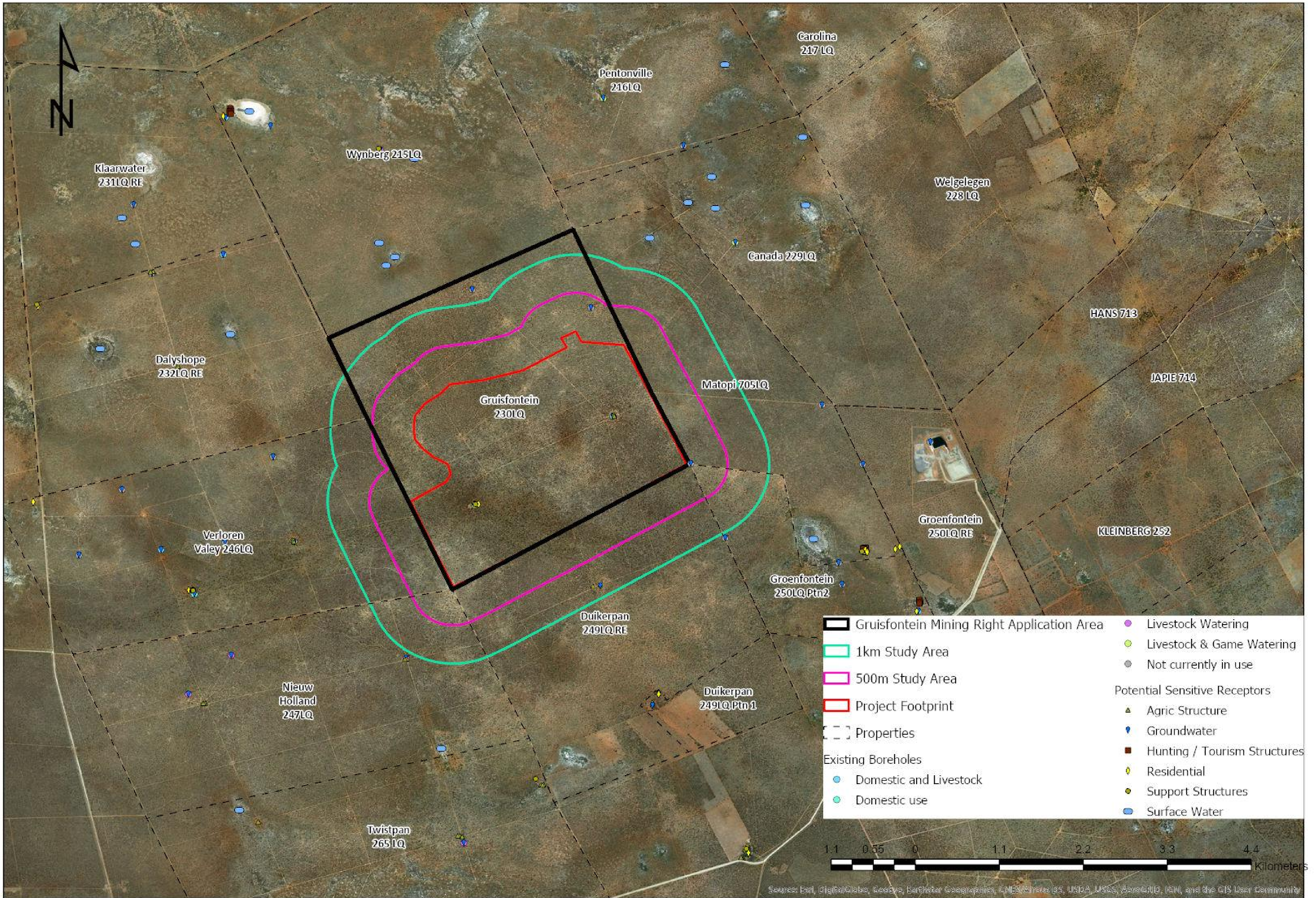
HERE, Garmin, Mapbox, OpenStreetMap contributors, and the GIS User Community

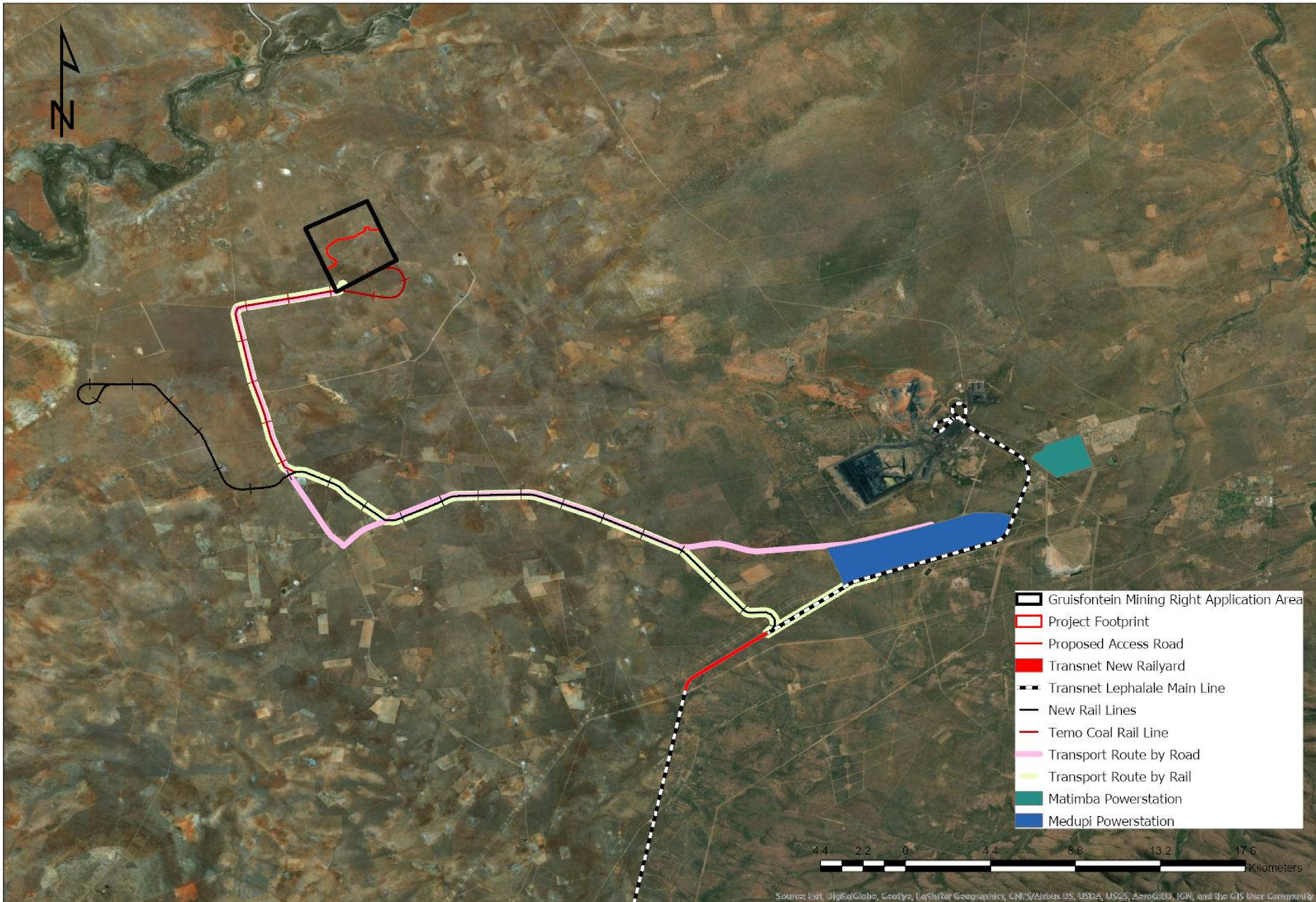


Source: Bart, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Facebook Connectivity Lab, Center for Integrated Earth Science Information Network - CIESIN - Columbia University, Source Images from DigitalGlobe

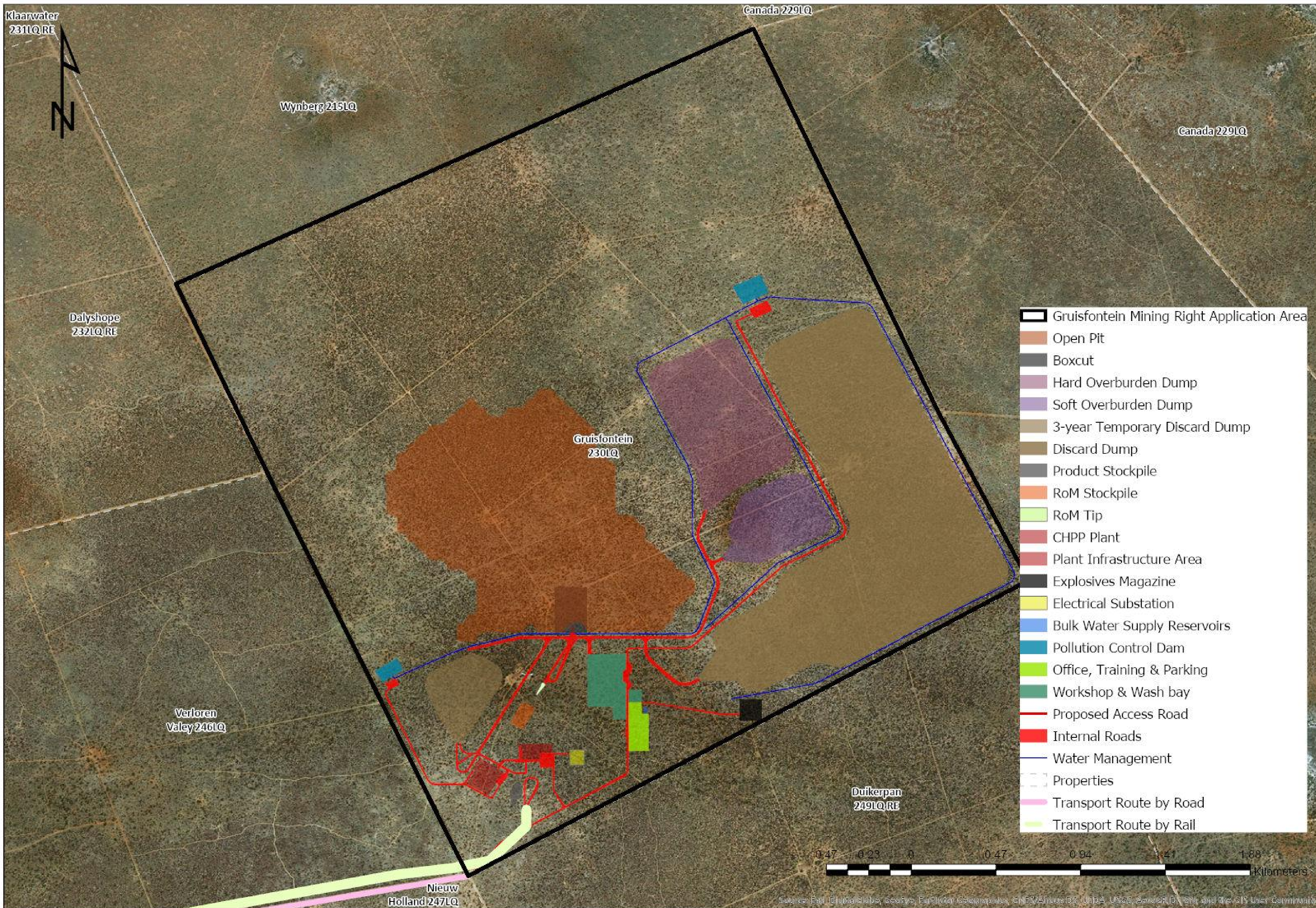


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

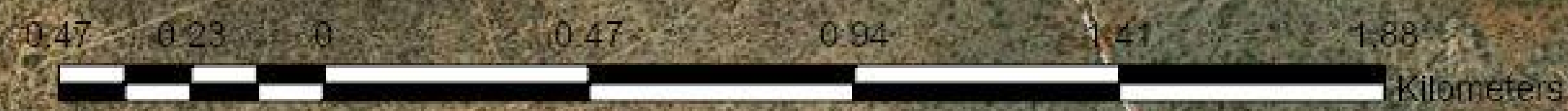




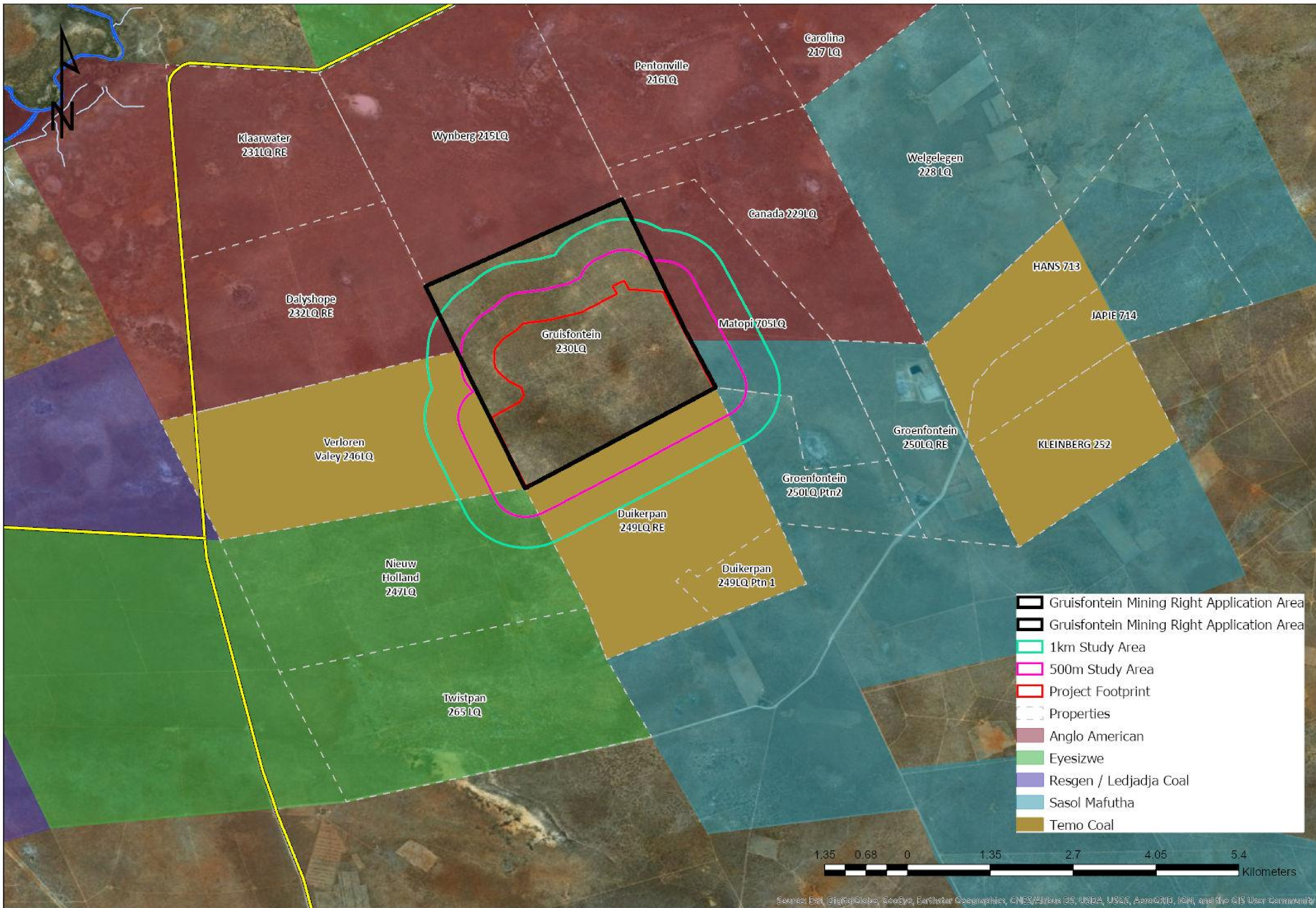
Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- Gruitfontein Mining Right Application Area
- Open Pit
- Boxcut
- Hard Overburden Dump
- Soft Overburden Dump
- 3-year Temporary Discard Dump
- Discard Dump
- Product Stockpile
- RoM Stockpile
- RoM Tip
- CHPP Plant
- Plant Infrastructure Area
- Explosives Magazine
- Electrical Substation
- Bulk Water Supply Reservoirs
- Pollution Control Dam
- Office, Training & Parking
- Workshop & Wash bay
- Proposed Access Road
- Internal Roads
- Water Management
- Properties
- Transport Route by Road
- Transport Route by Rail



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

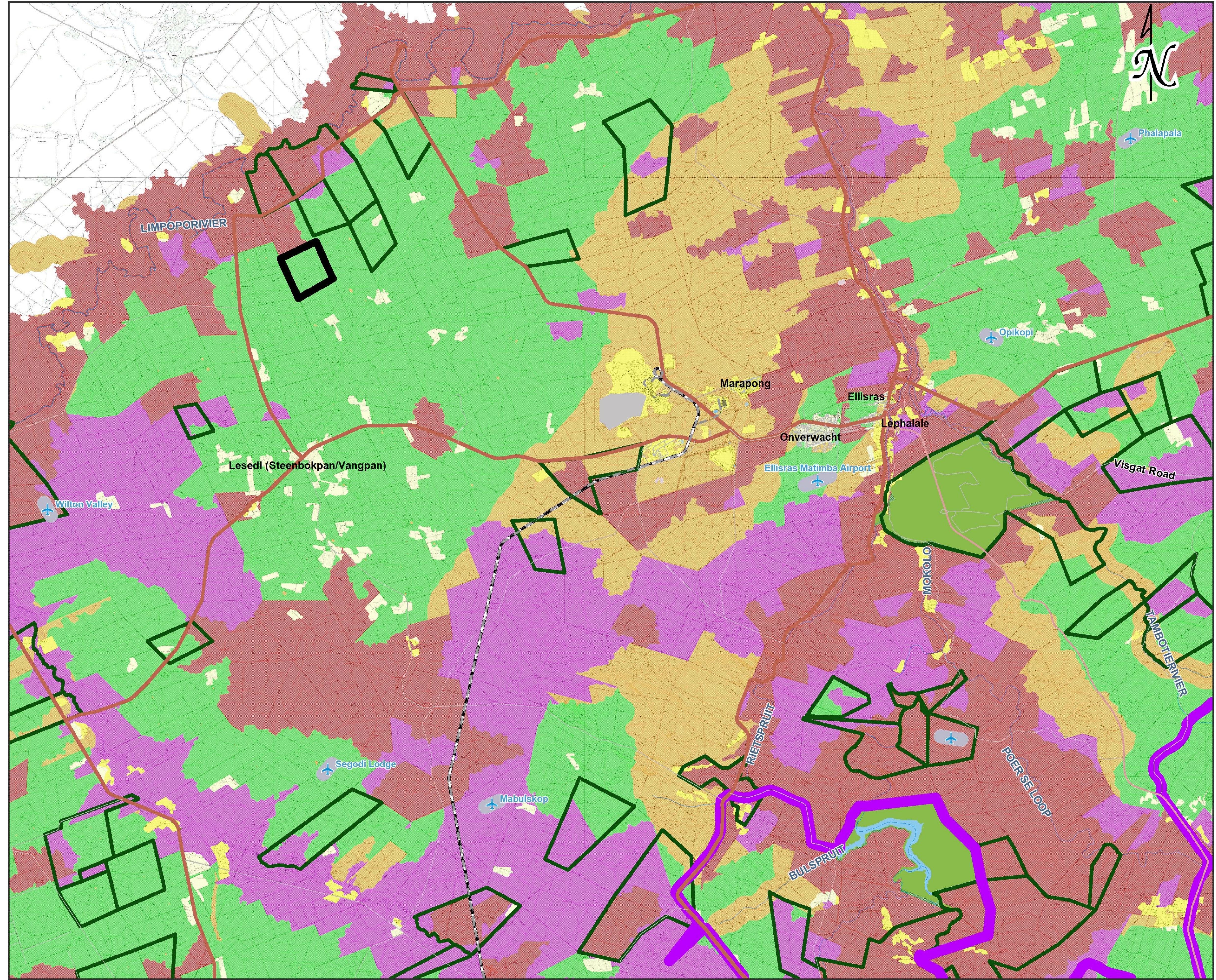


- Gruitfontein Mining Right Application Area
- Gruitfontein Mining Right Application Area
- 1km Study Area
- 500m Study Area
- Project Footprint
- Properties
- Anglo American
- Eyesizwe
- Resgen / Ledjadja Coal
- Sasol Mafutha
- Temo Coal

1.35 0.68 0 1.35 2.7 4.05 5.4 Kilometers

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GRUISFONTEIN MINING RIGHT APPLICATION



Legend

Environmental data Limpopo Conservation Plan 2013

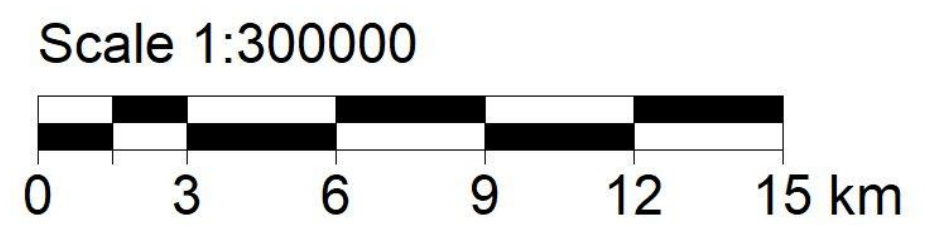
- Critical Biodiversity Area 1
- Critical Biodiversity Area 2
- Ecological Support Area 1
- Ecological Support Area 2
- No Natural Remaining
- Other Natural Area
- Protected Area

Protected Areas - NBA2011 (Updated April 2012), SANBI

- Provincial Nature Reserve
- Private Nature Reserve
- Biosphere Reserve

Project Information

- Proposed Nozala Coal MRA (Gruisfontein 230 LQ)



Date: April 2019
 Mapping done from existing databases
 Lizinda Dickson - lizinda@diphororo.com