

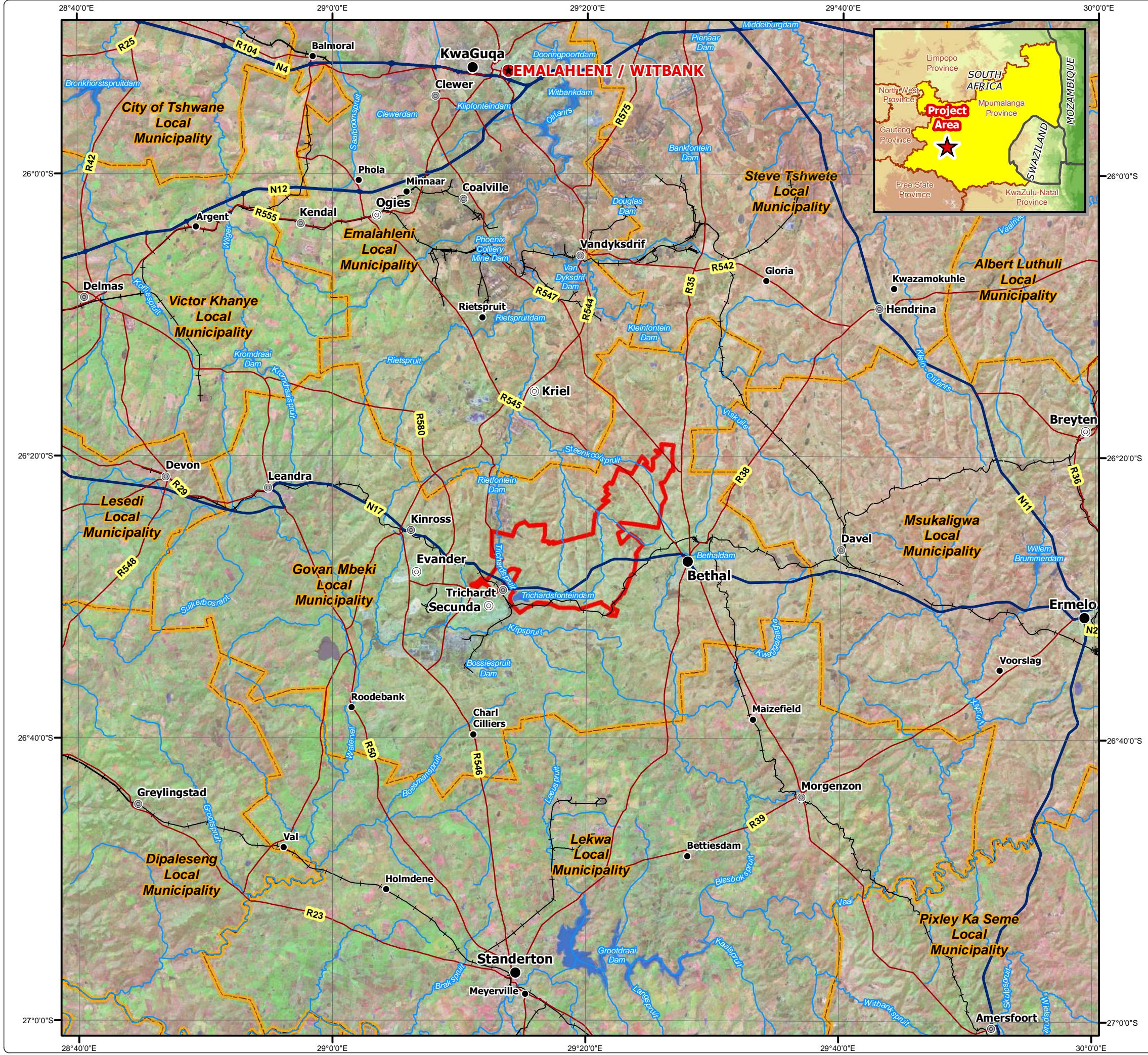
Thubelisha Consolidated EMPR

Regional Setting



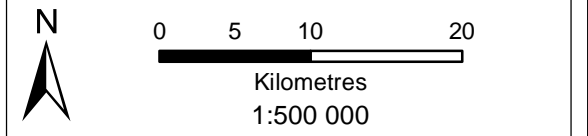
Legend

- Project Area
- ★ City
- Major Town
- Secondary Town
- Other Town
- Settlement
- Main Road
- National Road
- Railway Line
- River
- Dam
- Local Municipal Boundary



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Projection: Transverse Mercator Ref #: kwt.LCE3990.201607.082
Datum: WGS 1984 Revision Number: 1
Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR Infrastructure Layout

Linear Infrastructure

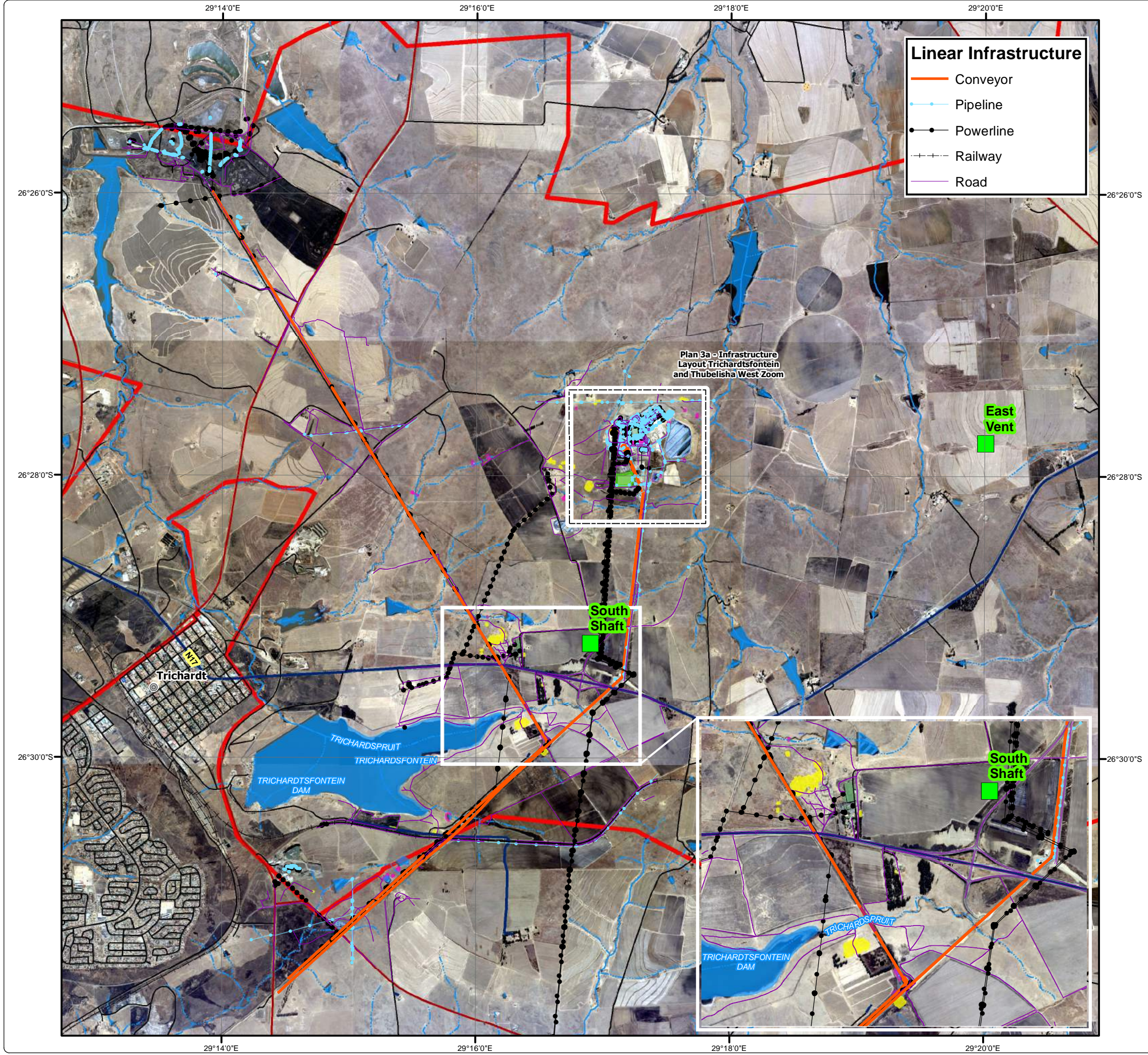
- Conveyor
- Pipeline
- Powerline
- Railway
- Road

Legend

- Project Area
- Shaft Location
- Other Town
- National / Arterial Route
- Main Road
- Minor Route
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Non-Perennial Pan
- Perennial Pan

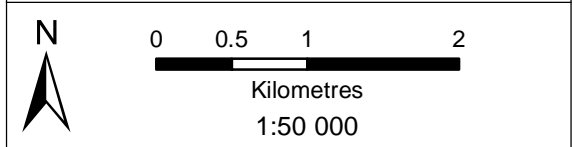
Existing Infrastructure

- Dams
- 3rd Fan
- Buildings
- Explosives Magazine
- Quarry
- Surface Structures
- Stock Yard
- Substation



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.006
 Datum: Cape Revision Number: 2
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR

Infrastructure Layout - Trichardtsfontein and Thubelisha West Zoom

Legend

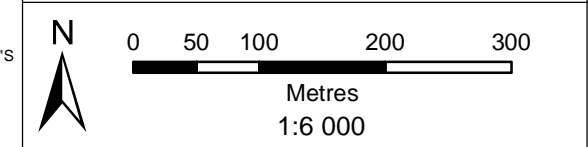
-  Non-Perennial Stream
-  Perennial Stream
- Linear Infrastructure**
-  Conveyor
-  Pipeline
-  Powerline
-  Road
- Existing Infrastructure**
-  Dams
-  3rd Fan
-  Buildings
-  Explosives Magazine
-  Quarry
-  Surface Structures
-  Stock Yard
-  Substation



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Projection: Transverse Mercator	Ref #: kwt.SAS3869.201708.006
Datum: Cape	Revision Number: 2
Central Meridian: 29°E	Date: 06/10/2017

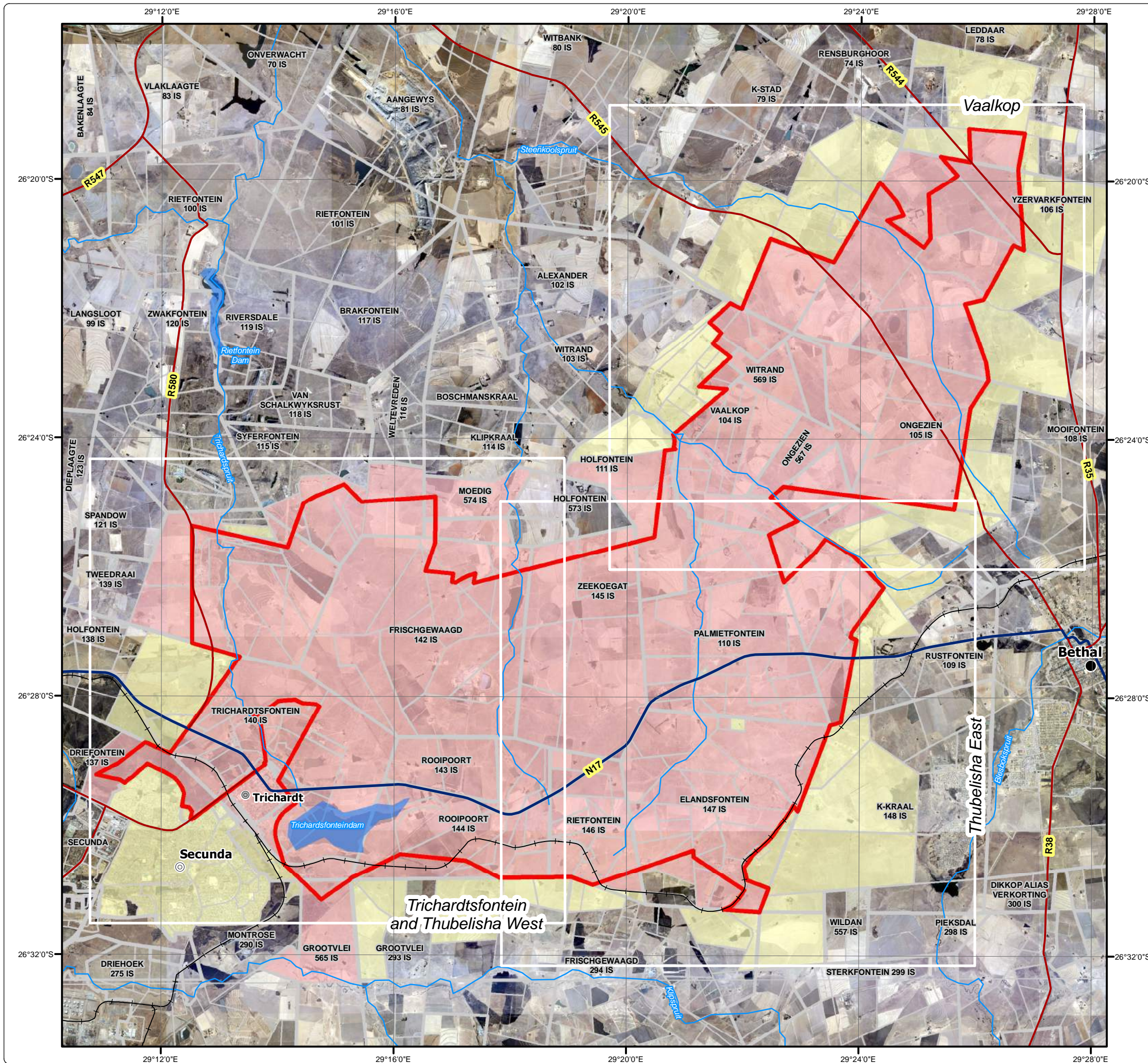


Thubelisha Consolidated EMPR

Land Tenure

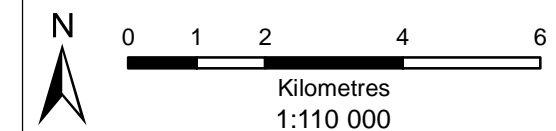
Legend

- Project Area
 - Major Town
 - Secondary Town
 - Other Town
 - Main Road
 - National Road
 - Railway Line
 - River
 - Dam
 - Farm Boundary
 - Farm Portion
- Affected Portions**
- Directly Affected
 - Indirectly Affected



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







Projection: Transverse Mercator Ref #: kwt.SAS3869.201608.107
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR









Life of Mine

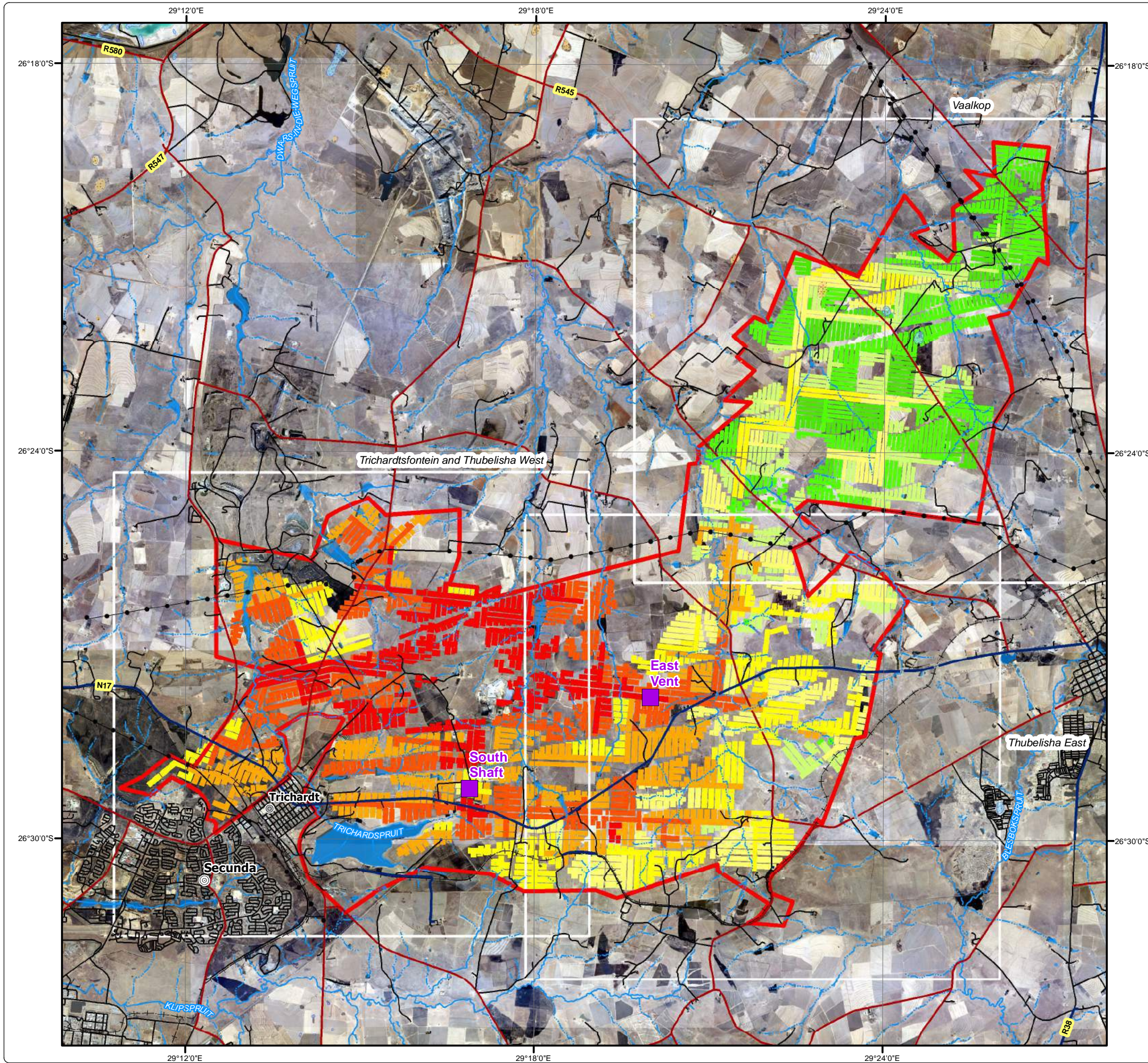
Legend

-  Project Area
-  Shaft Location
-  Secondary Town
-  Other Town
-  Power Line
-  National / Arterial Route
-  Main Road
-  Minor Route
-  Railway Line
-  Non-Perennial Stream
-  Perennial Stream
-  Dam Wall
-  Dam / Lake
-  Non-Perennial Pan
-  Perennial Pan

Life Of Mine

Year

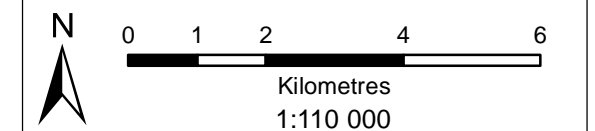
-  2016 - 2020
-  2021 - 2025
-  2026 - 2030
-  2031 - 2035
-  2036 - 2040
-  2041 - 2045
-  2046 - 2050
-  2051 - 2054



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











Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.003
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017









Thubelisha Consolidated EMPR

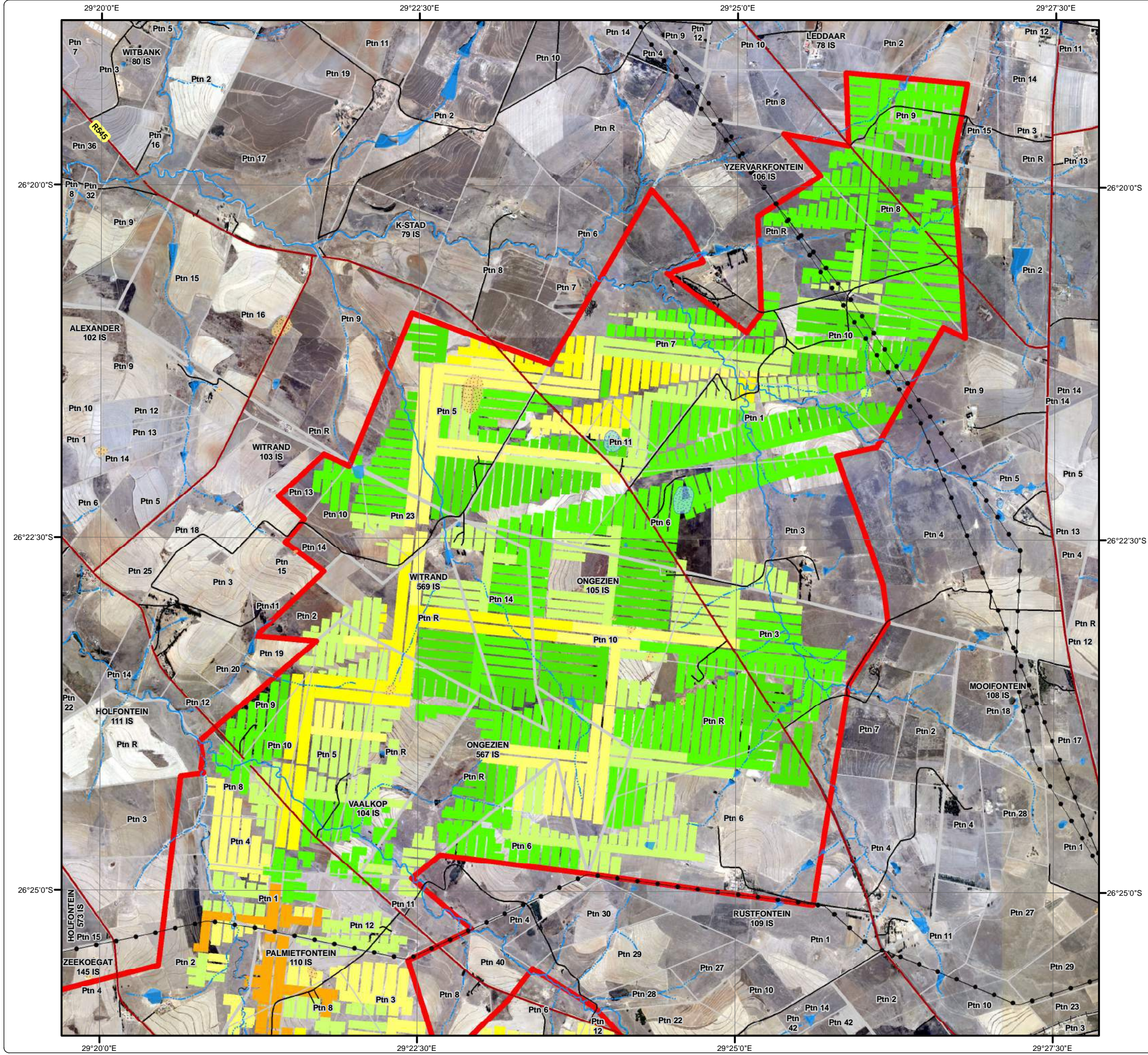
Life of Mine - Vaalkop Zoom

Legend

-  Project Area
-  Power Line
-  National / Arterial Route
-  Main Road
-  Minor Route
-  Railway Line
-  Non-Perennial Stream
-  Perennial Stream
-  Dam / Lake
-  Non-Perennial Pan
-  Perennial Pan
-  Farm Boundary
-  Farm Portion

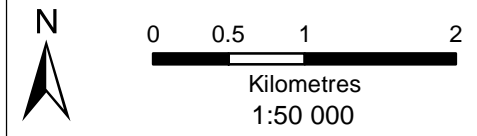
Life Of Mine

- Year**
-  2026 - 2030
 -  2031 - 2035
 -  2036 - 2040
 -  2041 - 2045
 -  2046 - 2050
 -  2051 - 2054



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.003
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR

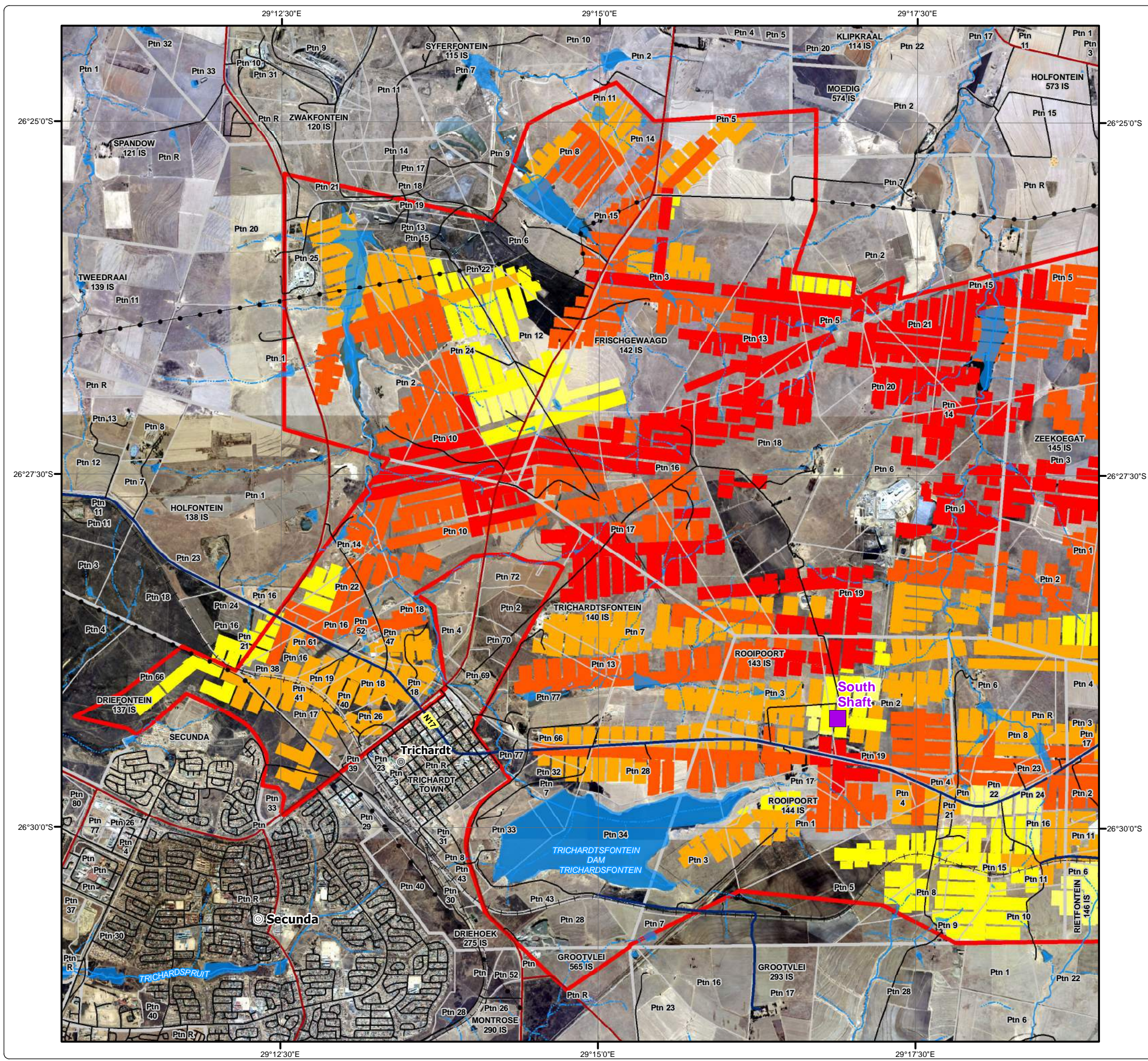
Life of Mine - Trichardtsfontein and Thubelisha West Zoom

Legend

- Project Area
- Shaft Location
- Secondary Town
- Other Town
- Power Line
- National / Arterial Route
- Main Road
- Minor Route
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam / Lake
- Non-Perennial Pan
- Perennial Pan
- Farm Boundary
- Farm Portion

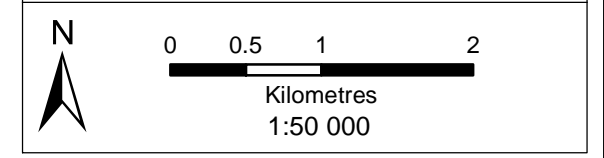
Life Of Mine

- Year**
- 2016 - 2020
 - 2021 - 2025
 - 2026 - 2030
 - 2031 - 2035
 - 2036 - 2040



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.003
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR








Life of Mine - Thubelisha East Zoom

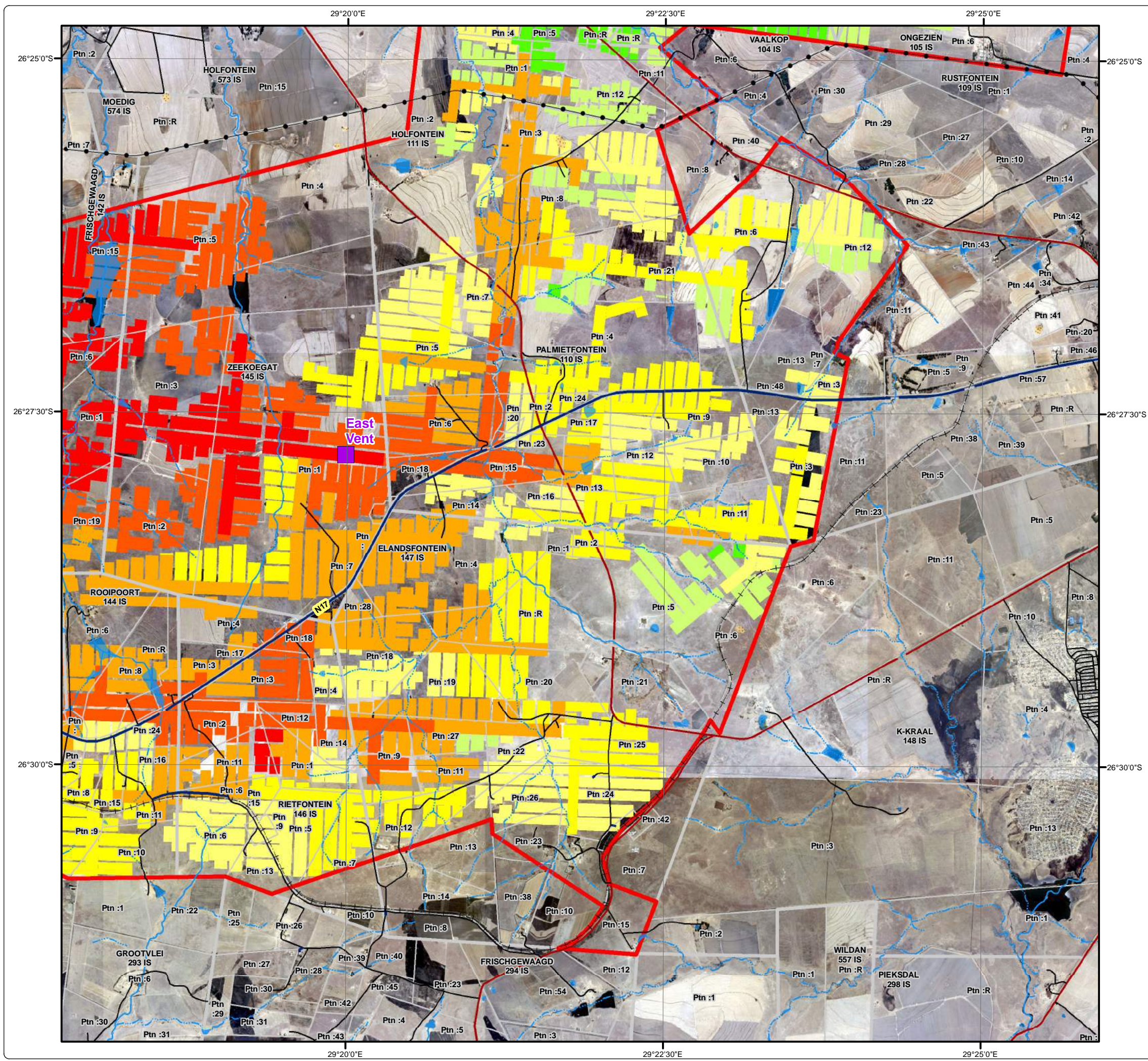
Legend

-  Project Area
-  Shaft Location
-  Power Line
-  National / Arterial Route
-  Main Road
-  Minor Route
-  Railway Line
-  Non-Perennial Stream
-  Perennial Stream
-  Dam / Lake
-  Non-Perennial Pan
-  Perennial Pan
-  Farm Boundary
-  Farm Portion

Life Of Mine

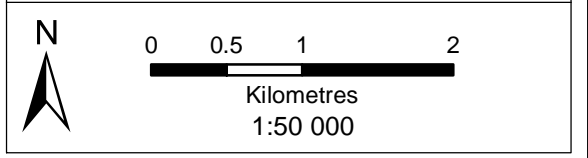
Year

-  2016 - 2020
-  2021 - 2025
-  2026 - 2030
-  2031 - 2035
-  2036 - 2040
-  2041 - 2045
-  2046 - 2050



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.003
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



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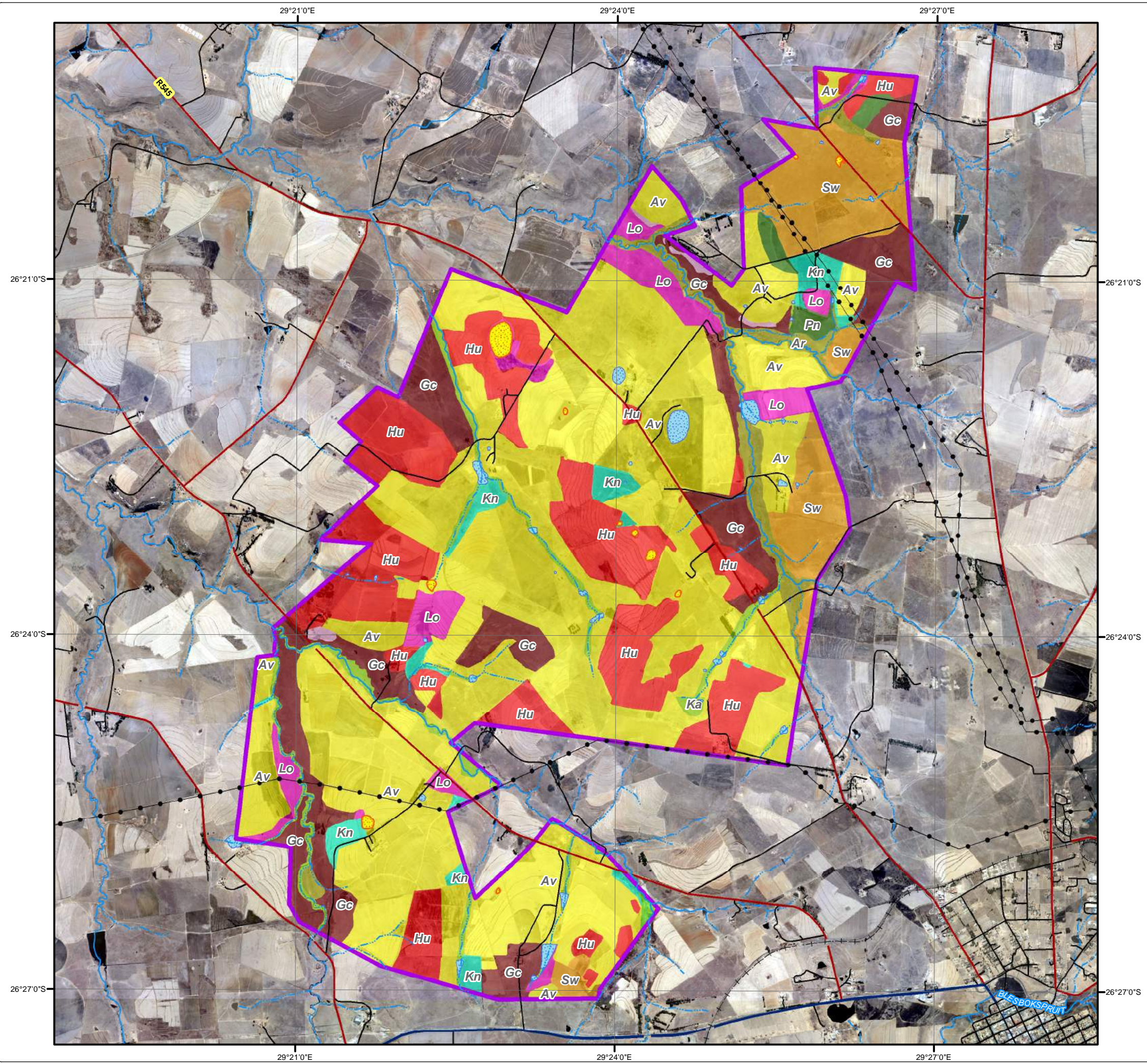
Soil Delineation - Vaalkop

Legend

- Vaalkop Boundary
- Power Line
- National / Arterial Route
- Main Road
- Minor Route
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Delineated Dam
- Delineated Pan

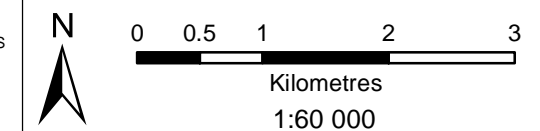
Soil Delineation

- Arcadia (Ar)
- Avalon (Av)
- Glencore (Gc)
- Hutton (Hu)
- Katspruit (Ka)
- Kroonstad (Kn)
- Longlands (Lo)
- Mispah (Ms)
- Pinedene (Pn)
- Rensburg (Rg)
- Swartland (Sw)
- Westleigh (Ws)



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.032
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR

Monitoring Locations

Legend

- Project Area
- Shaft Location
- Secondary Town
- Other Town
- Power Line
- National / Arterial Route
- Main Road
- Minor Route
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Non-Perennial Pan
- Perennial Pan

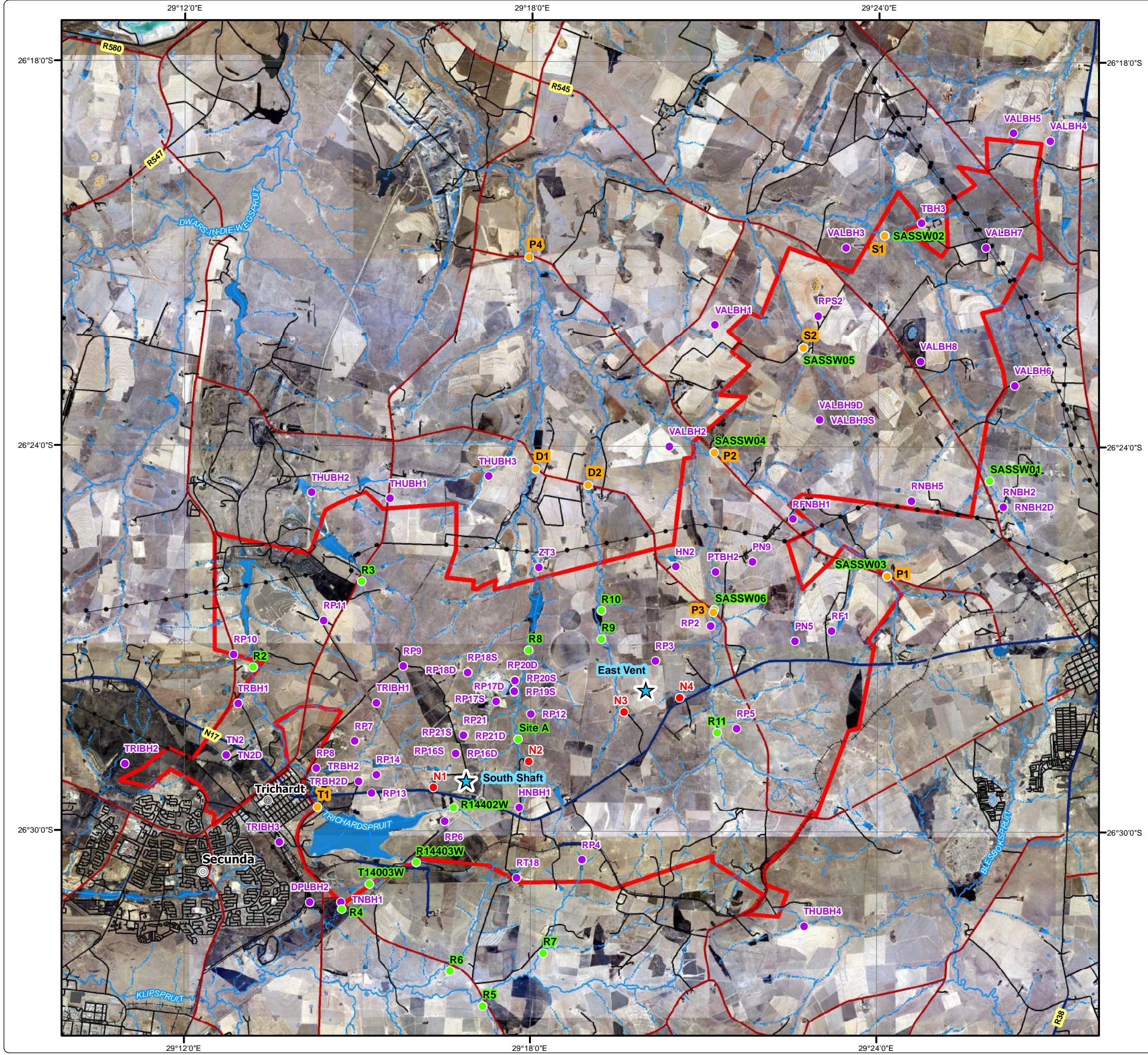
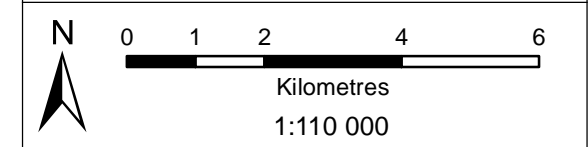
Monitoring Locations

- Surface Water Monitoring Location
- Aquatic Monitoring Location
- Noise Monitoring Location
- Groundwater Monitoring Location



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201710.010
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017

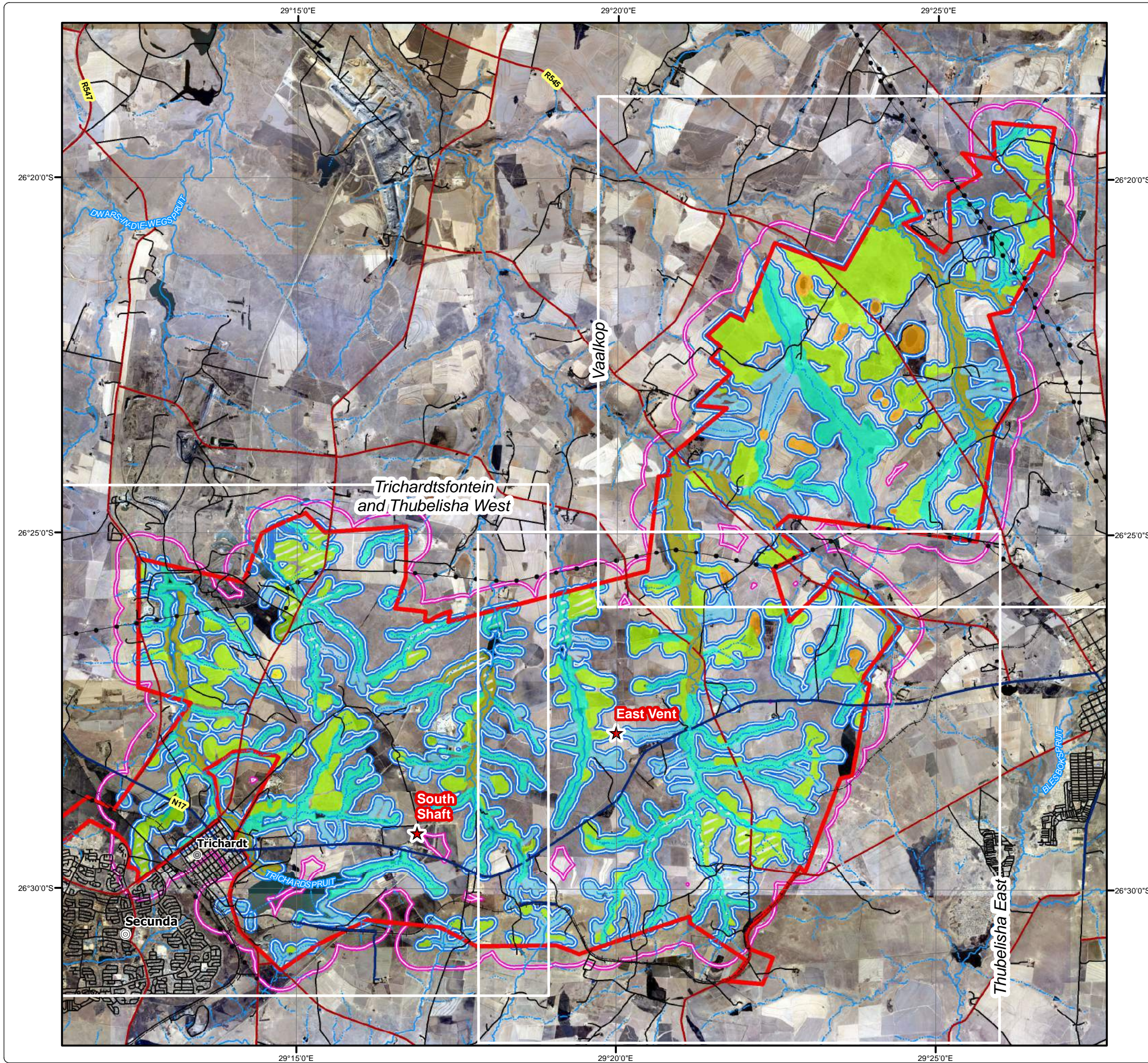


Thubelisha Consolidated EMPR

Wetland Delineation

Legend

- Project Area
 - Shaft Location
 - Secondary Town
 - Other Town
 - Power Line
 - National / Arterial Route
 - Main Road
 - Minor Route
 - Railway Line
 - Non-Perennial Stream
 - Perennial Stream
- Wetland Delineation**
- Artificial
 - Channelled Valley Bottom
 - Depression
 - Flood Plain
 - Hillslope Seep
 - Unchannelled Valley Bottom
- Delineated Wetland (Desktop Study)**
- Canal
 - Channelled Valley Bottom
 - Flood Plain
 - Hillslope Seep
 - Unchannelled Valley Bottom
 - 100m Buffer of Wetland Delineation
 - 500m Buffer of Wetland Delineation



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201706.024
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR Present Ecological State

Legend

- Project Area
- ★ Shaft Location
- Major Town
- Secondary Town
- Other Town
- Power Line
- National / Arterial Route
- Main Road
- Minor Route
- Railway Line
- Non-Perennial Stream
- Perennial Stream

Wetland Present Ecological State

- PES B
- PES C
- PES C/D
- PES D
- PES E
- Artificial

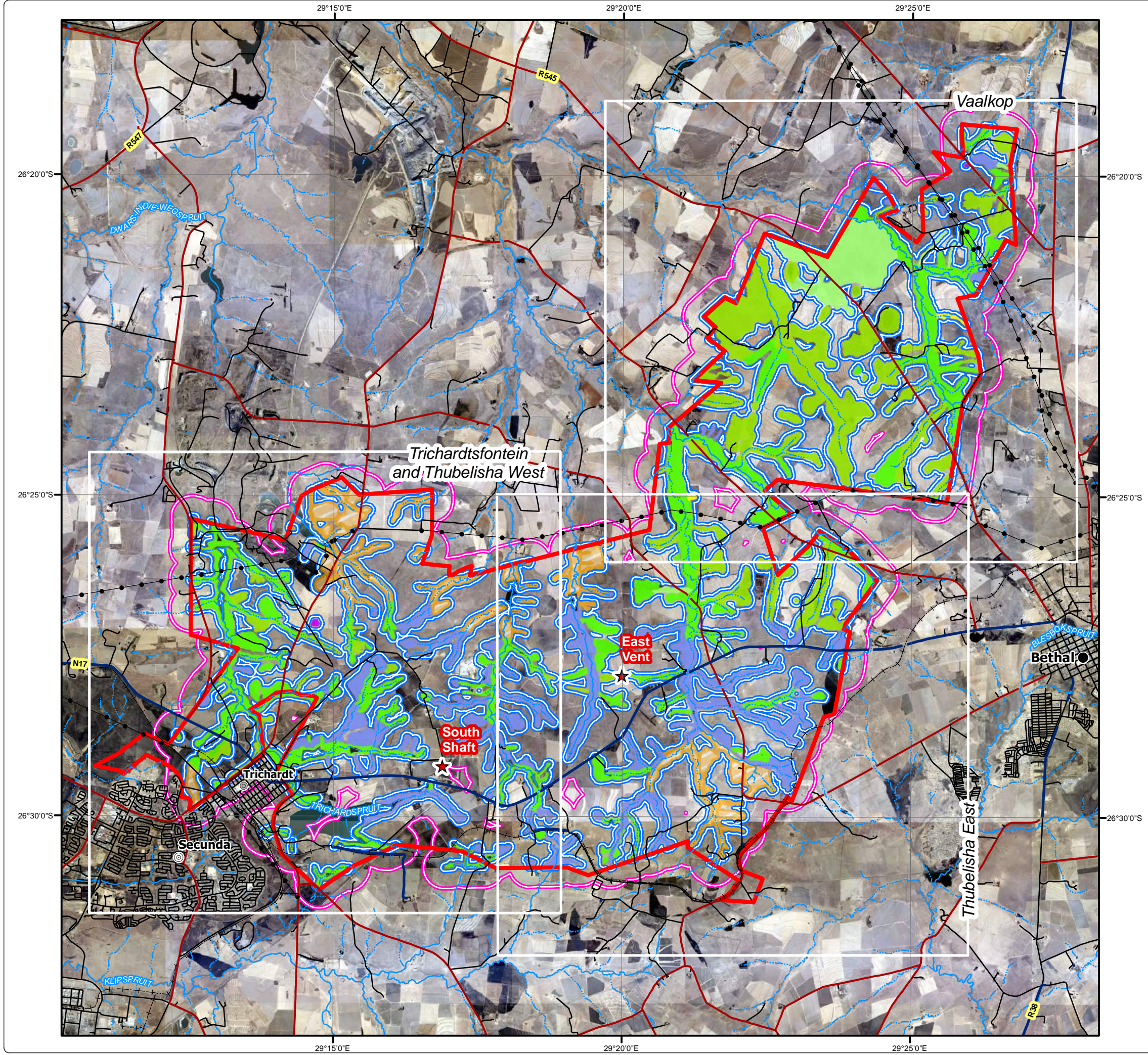
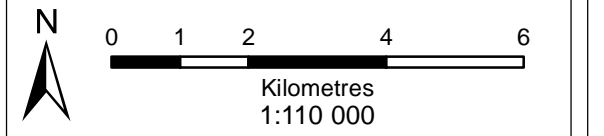
Wetland Present Ecological State (Desktop Study)

- Desktop Study
- 100m Buffer of Wetland Delineation
- 500m Buffer of Wetland Delineation



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Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.037
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR

Ecological Importance and Sensitivity

Legend

- Project Area
- ★ Shaft Location
- Major Town
- Secondary Town
- Other Town
- Power Line
- National / Arterial Route
- Main Road
- Minor Route
- Railway Line
- Non-Perennial Stream
- Perennial Stream

Ecological Importance & Sensitivity

- Artificial
- EIS B
- EIS C
- EIS D

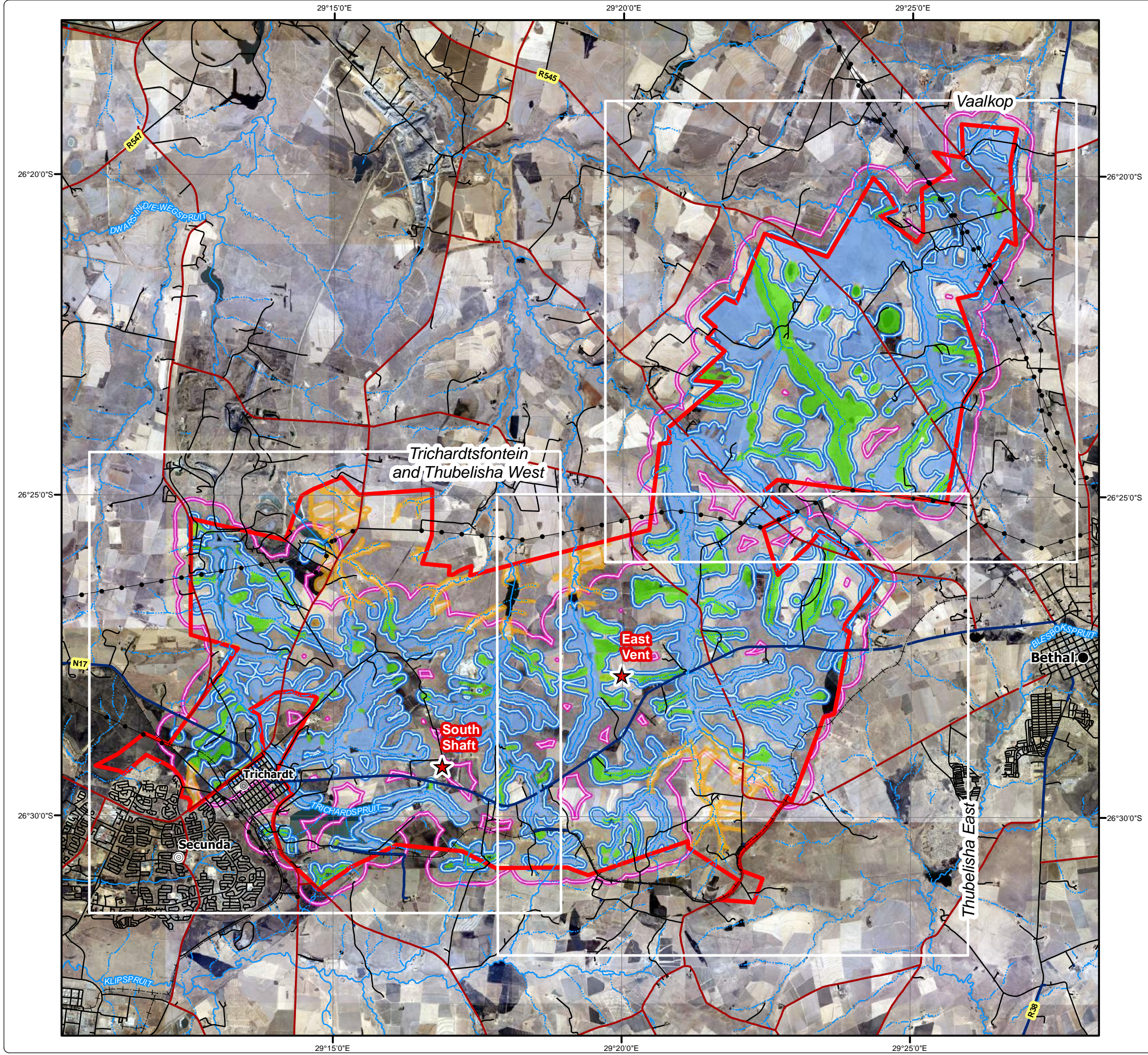
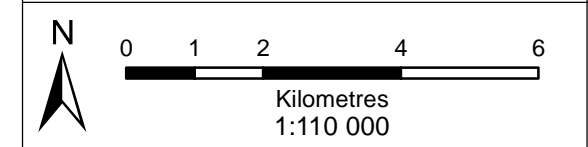
Ecological Importance & Sensitivity (Desktop Study)

- Desktop Study
- 100m Buffer of Wetland Delineation
- 500m Buffer of Wetland Delineation



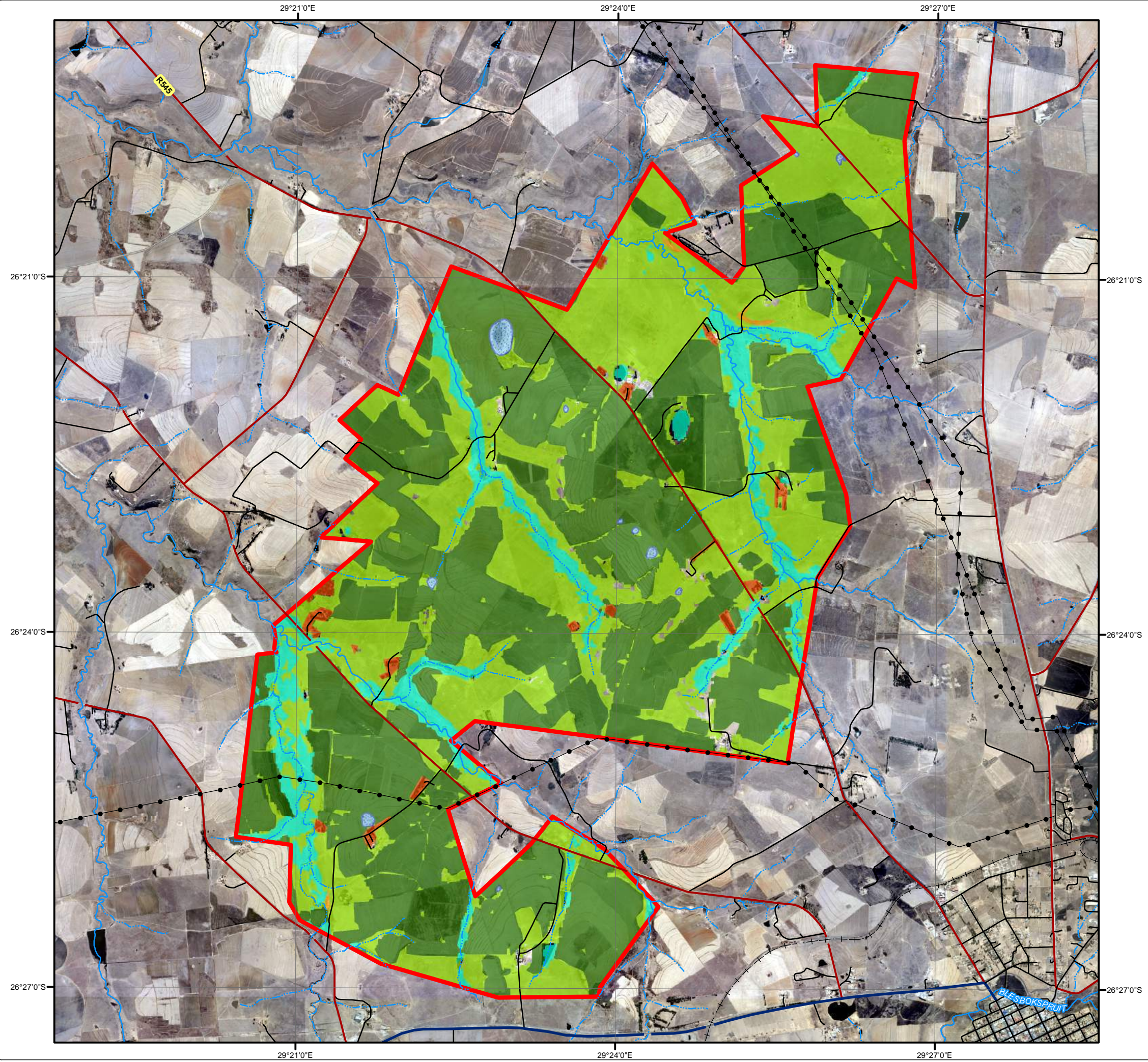
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Projection: Transverse Mercator Ref #: kwt.SAS3869.201708.104
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 29°E Date: 06/10/2017



Thubelisha Consolidated EMPR

Vegetation Types - Vaalkop



Legend

- Vaalkop Mining Right
- Power Line
- National / Arterial Route
- Main Road
- Minor Route
- Railway Line
- Non-Perennial Stream
- Perennial Stream

Vegetation Types (Geoterra Image, 2013-2014)

- Alien Vegetation
- Agriculture
- Grassland
- Pan
- Rocky Ridge
- Wetland



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Projection: Transverse Mercator	Ref #: kwt.SAS3869.201708.075
Datum: WGS 1984	Revision Number: 1
Central Meridian: 29°E	Date: 06/10/2017

