

Sun City Complex EIA

Regional Setting

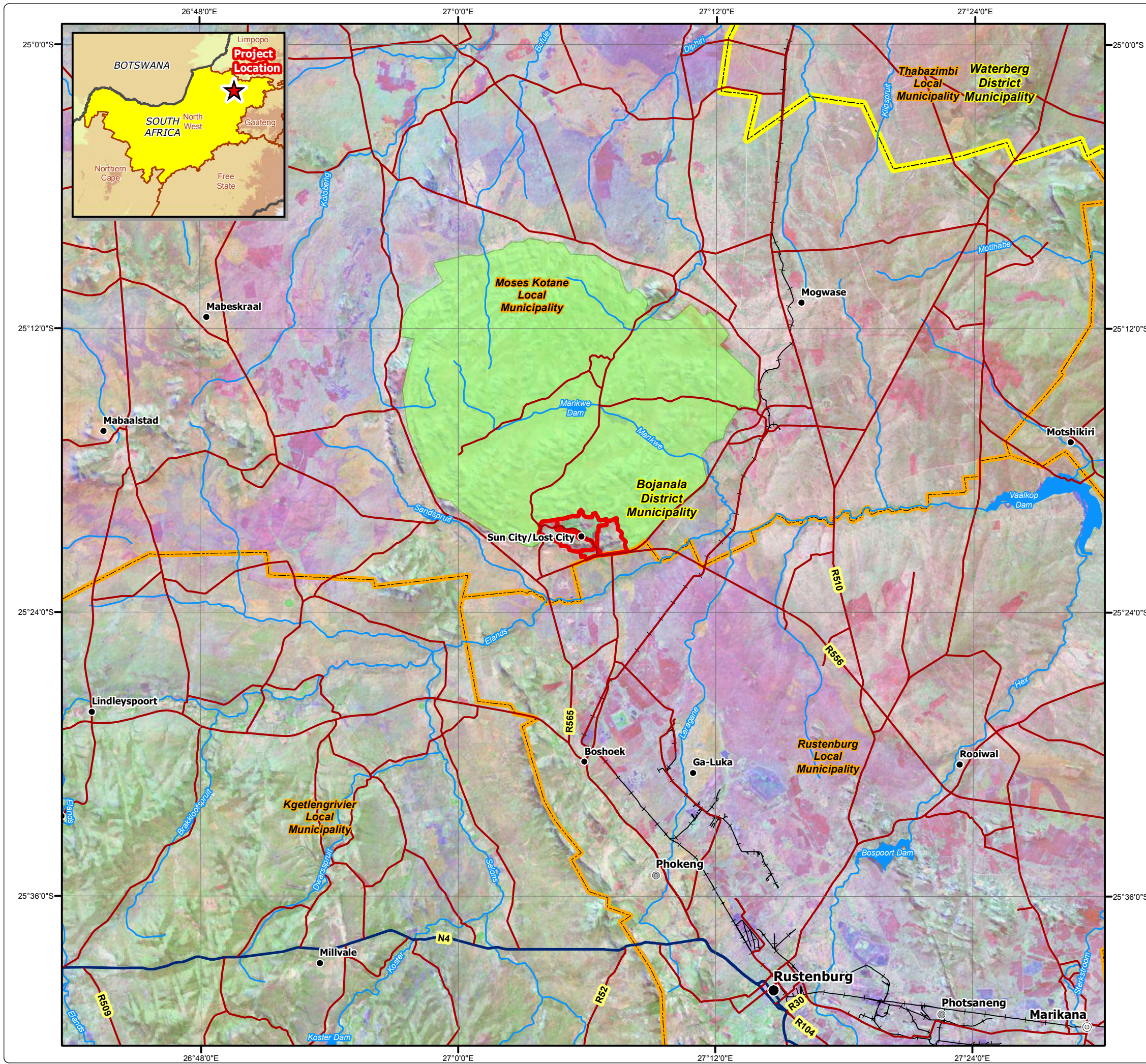
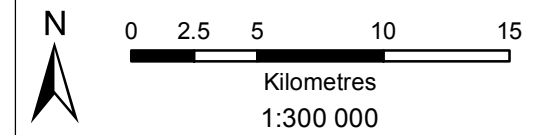
Legend

- Development Area
- Major Town
- Secondary Town
- Other Town
- Settlement
- Main Road
- Arterial / National Route
- Railway Line
- Perennial Stream
- Dam
- District Municipality (2016)
- Local Municipality (2016)
- Protected Area



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Projection: Transverse Mercator Ref #: meg.SUN4642.201801.043
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/01/2018

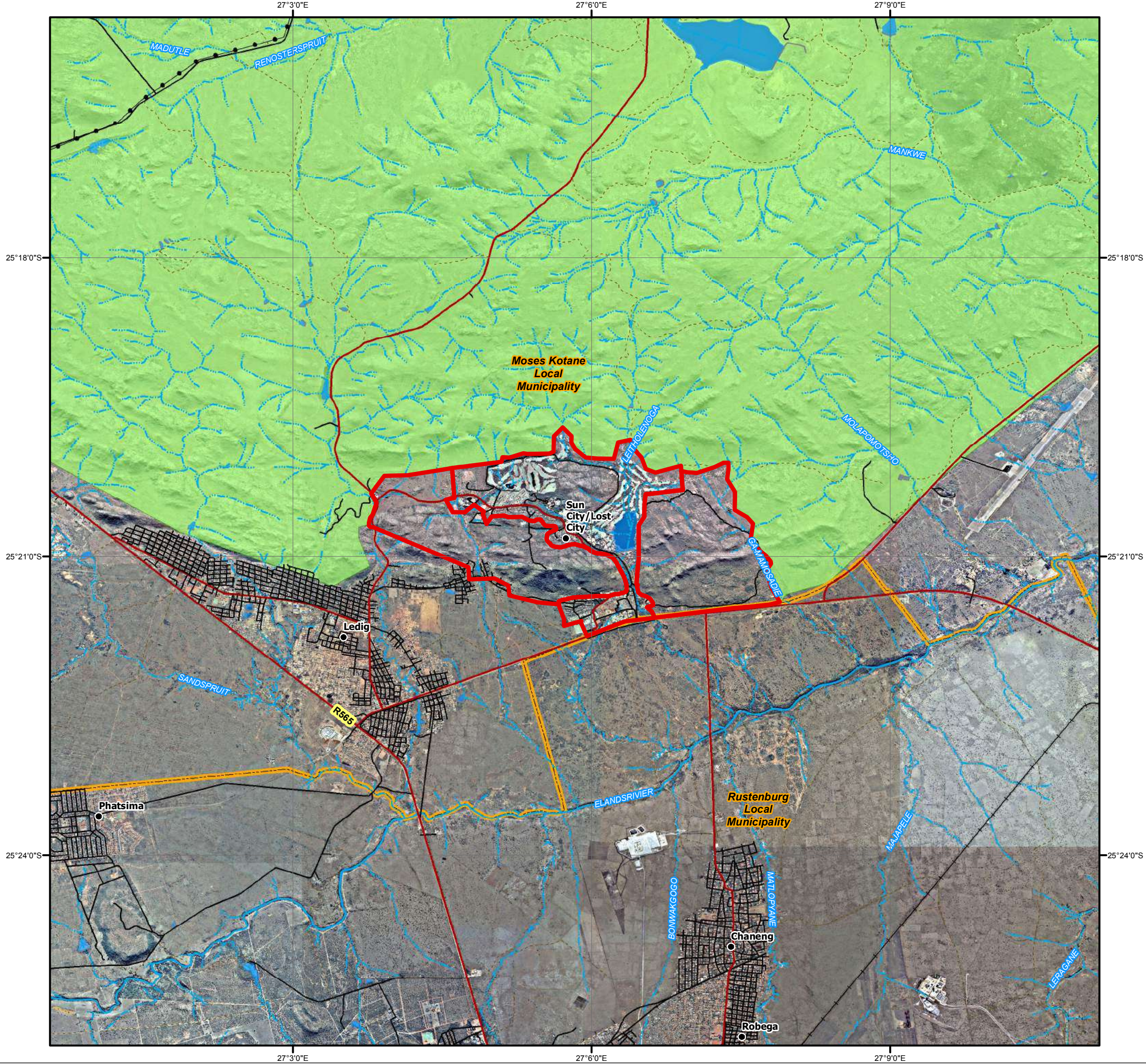


Sun City Complex EIA

Local Setting

Legend

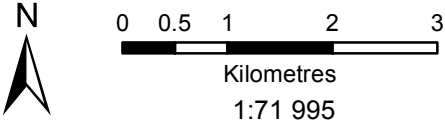
- Development Area
- Settlement
- Power Line
- Main Road
- Minor Road
- Track
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Non-Perennial Pan / Stream
- Local Municipality (2016)
- Nature Reserve



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












Projection: Transverse Mercator Ref #: meg.SUN4642.201711.064
 Datum: WGS 1984 Revision Number: 2
 Central Meridian: 27°E Date: 23/01/2018



Sun City Complex EIA

Land Tenure

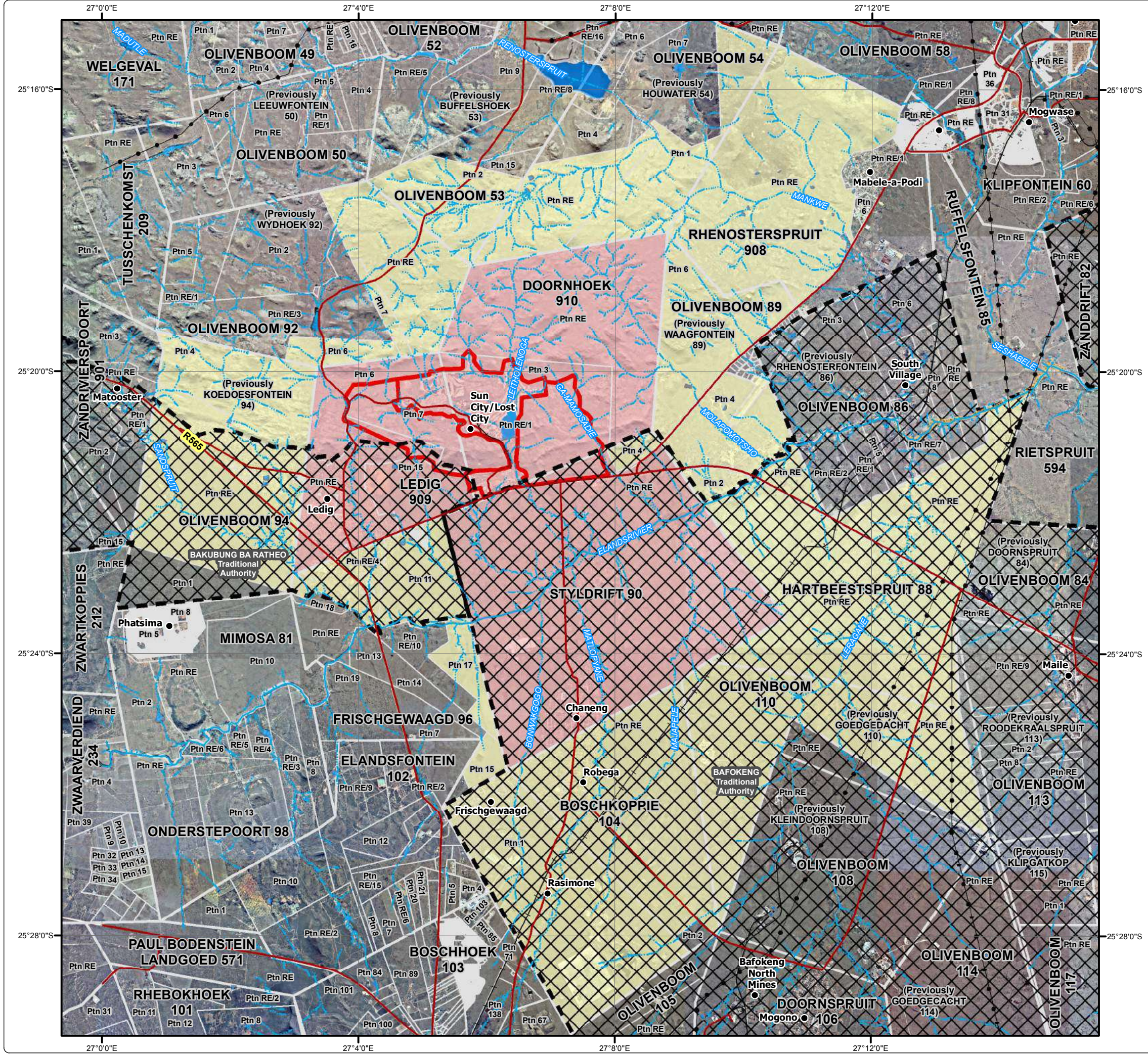
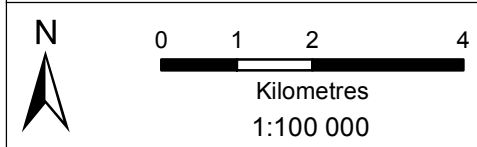
Legend

-  Development Area
-  Settlement
-  Power Line
-  Main Road
-  Railway Line
-  Non-Perennial Stream
-  Perennial Stream
-  Dam Wall
-  Dam / Lake
-  Non-Perennial Pan / Stream
- Land Tenure**
-  Traditional Authority
-  Farm Boundary
-  Portion
- Affected Portions**
-  Directly Affected
-  Indirectly Affected



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Projection: Transverse Mercator Ref #: meg.SUN4642.201801.026
 Datum: WGS 1984 Revision Number: 2
 Central Meridian: 27°E Date: 22/02/2018



Sun City Complex EIA Expansion & Maintenance Projects

Map Reference	Project Name
REP1	Eco-Lodge
REP2	Driving Range Road
REP3	Kwena Gardens Expansion
REP4.1	Vacation Club (VC) Phase 3
REP4.2	Vacation Club (VC) Phase 4
REP5	Recreational Lake Beach Expansion
REP6	Helipad Relocation and Expansion
REP7	Additional Parking Garage, Convention Centre and Hotel
REP8	Soccer Fields
USP1	Stormwater Culverts at Golf Course Roads
USP2	Additional Reservoirs to Supplement Existing Water Storage Capacity
USP3	Effluent Transfer Line Replacement
USP4	Sunset-Sky-Train Fresh Water Line
USP5	Ledig Sewer Line Replacement
USP6	South Village Pipeline
USP7	Generator Park
MP1	Clearance of Fence Roads
MP2	Sun Park Culverts

Legend

- Developed Footprint
- Undeveloped Footprint
- Main Road
- Minor Road
- Track
- Railway Line
- Non-Perennial Stream
- Dam Wall
- Dam / Lake

Expansion & Maintenance Projects

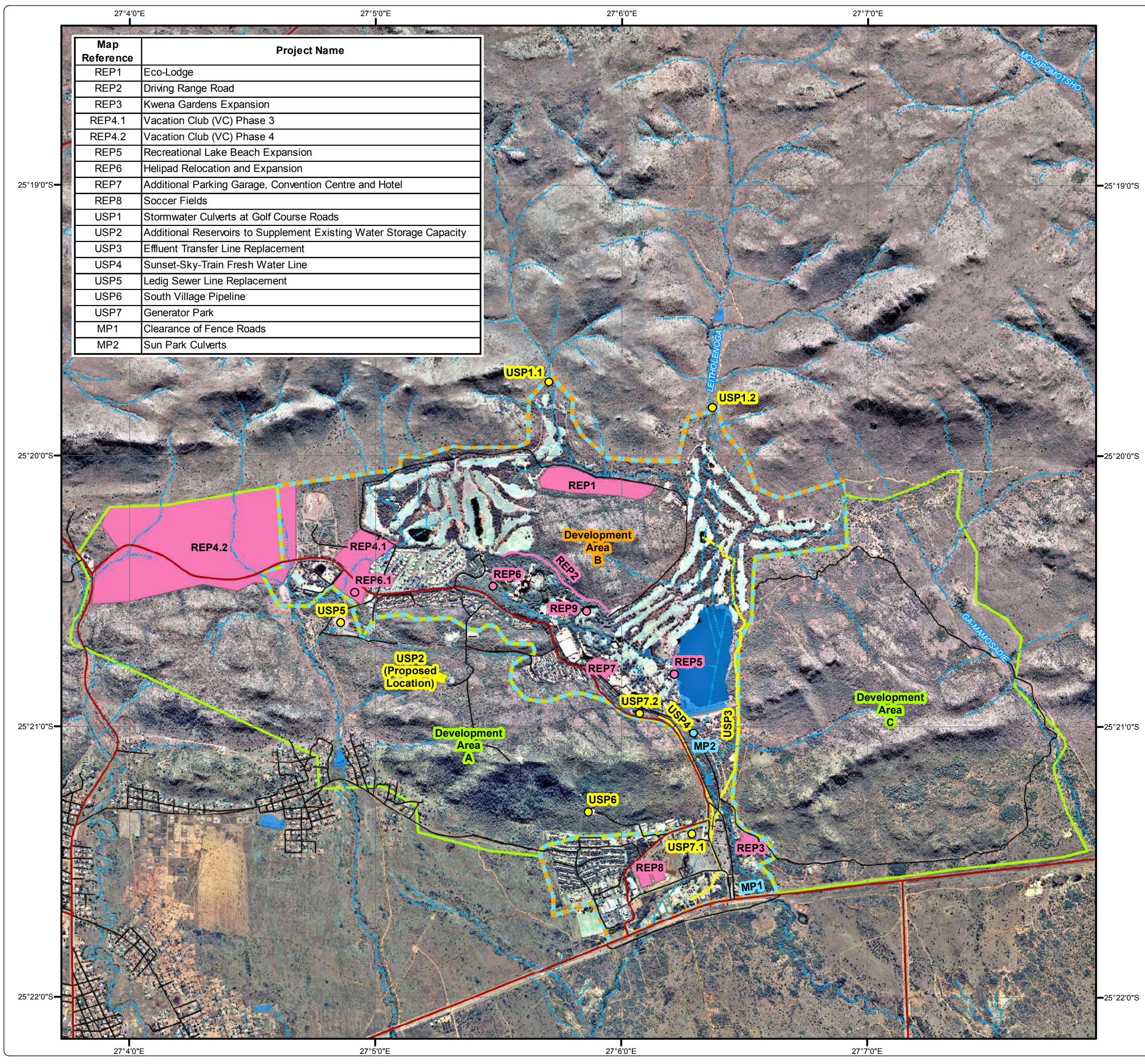
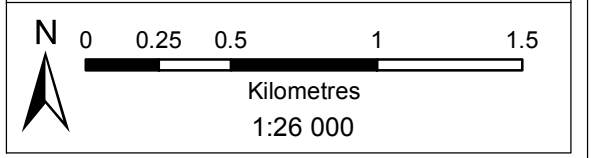
- Maintenance Project
- Resort Expansion Project
- Utilities and Services Project
- Resort Expansion Project
- Utilities and Services Project
- Maintenance Project
- Resort Expansion Project
- Utilities and Services Project



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







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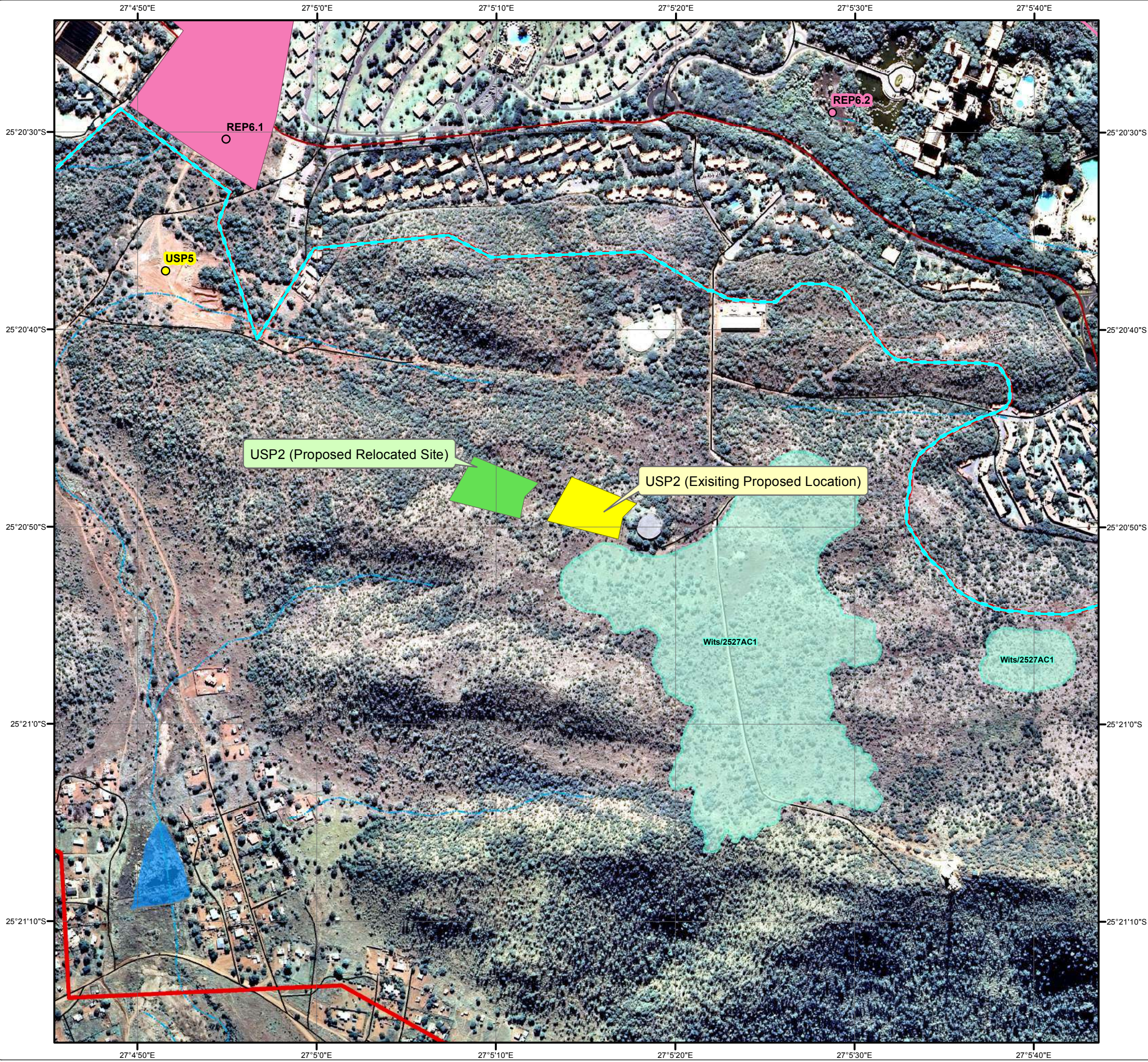
Projection: Transverse Mercator Ref #: meg.SUN4642.201801.019
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 19/04/2018



Sun City Complex EIA Proposed USP2 Relocation

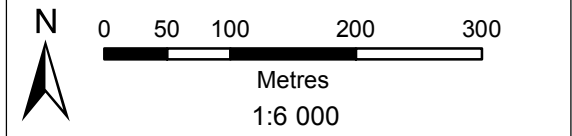
Legend

-  Development Area
-  Main Road
-  Minor Road
-  Track
-  Non-Perennial Stream
-  Dam Wall
-  Dam / Lake
- Expansion & Maintenance Projects**
-  Resort Expansion Project
-  Utilities and Services Project
-  Maintenance Project
-  Resort Expansion Project
-  Utilities and Services Project
-  USP2 (Proposed Location)
- Identified Heritage Resources**
-  Site Extent



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Projection: Transverse Mercator Ref #: ajm.SUN4642.201810.334
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 21/10/2018



Sun City Complex EIA

Regional Geology

Legend

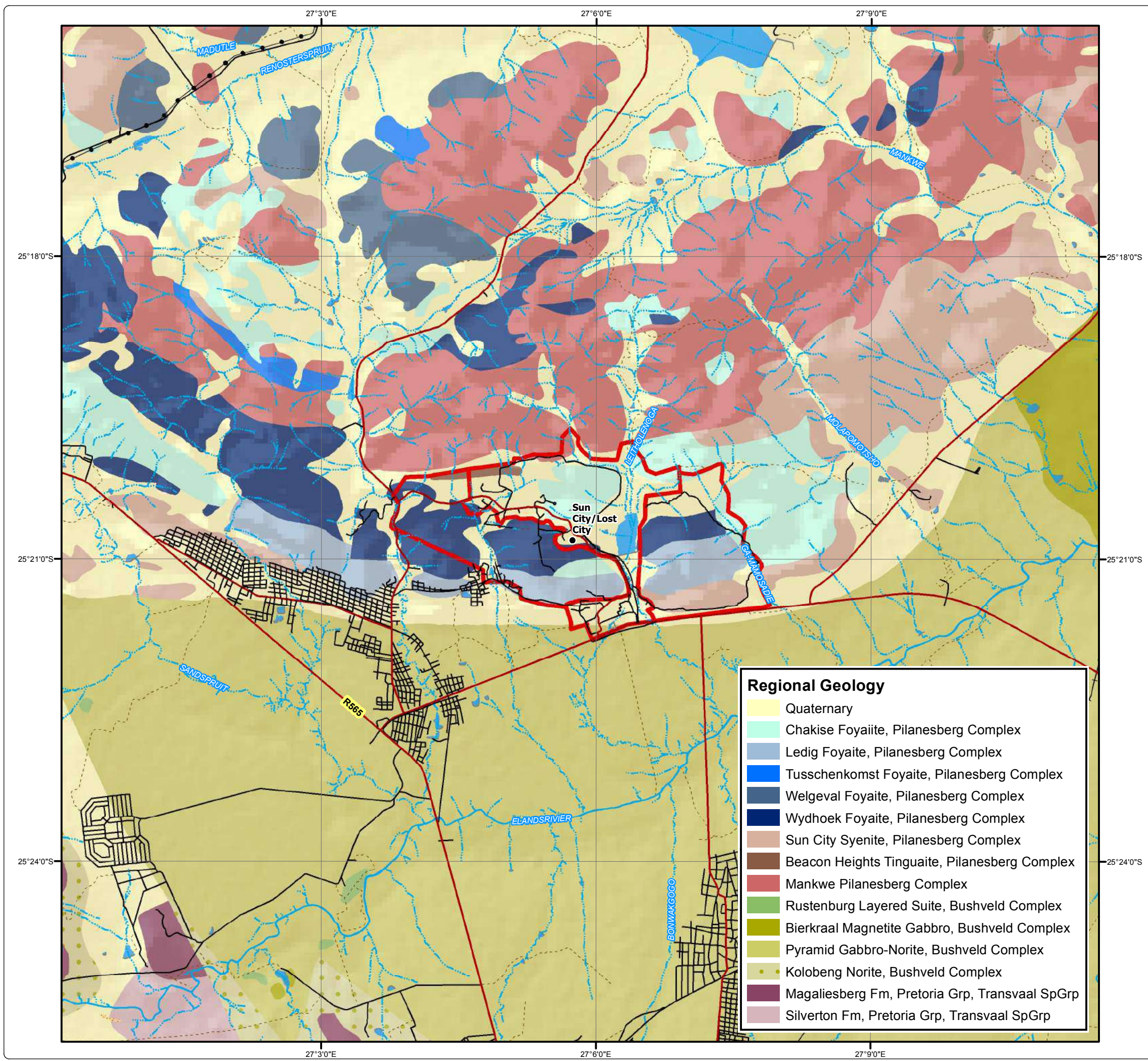
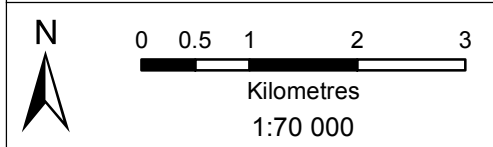
- Development Area
- Settlement
- Power Line
- Main Road
- Minor Road
- Track
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Non-Perennial Pan / Stream

- ### Regional Geology
- Quaternary
 - Chakise Foyaite, Pilanesberg Complex
 - Ledig Foyaite, Pilanesberg Complex
 - Tusschenkomst Foyaite, Pilanesberg Complex
 - Welgeval Foyaite, Pilanesberg Complex
 - Wydhoek Foyaite, Pilanesberg Complex
 - Sun City Syenite, Pilanesberg Complex
 - Beacon Heights Tinguaitite, Pilanesberg Complex
 - Mankwe Pilanesberg Complex
 - Rustenburg Layered Suite, Bushveld Complex
 - Bierkraal Magnetite Gabbro, Bushveld Complex
 - Pyramid Gabbro-Norite, Bushveld Complex
 - Kolobeng Norite, Bushveld Complex
 - Magaliesberg Fm, Pretoria Grp, Transvaal SpGrp
 - Silverton Fm, Pretoria Grp, Transvaal SpGrp



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Projection: Transverse Mercator Ref #: meg.SUN4642.201801.058
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 24/01/2018



Sun City Complex EIA

Topographical Model

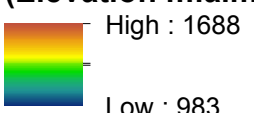
Legend

- Development Area
- Settlement
- Trig. Beacon
- Power Line
- Main Road
- Minor Road
- Track
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Contour (100 m)
- Dam / Lake
- Non-Perennial Pan / Stream

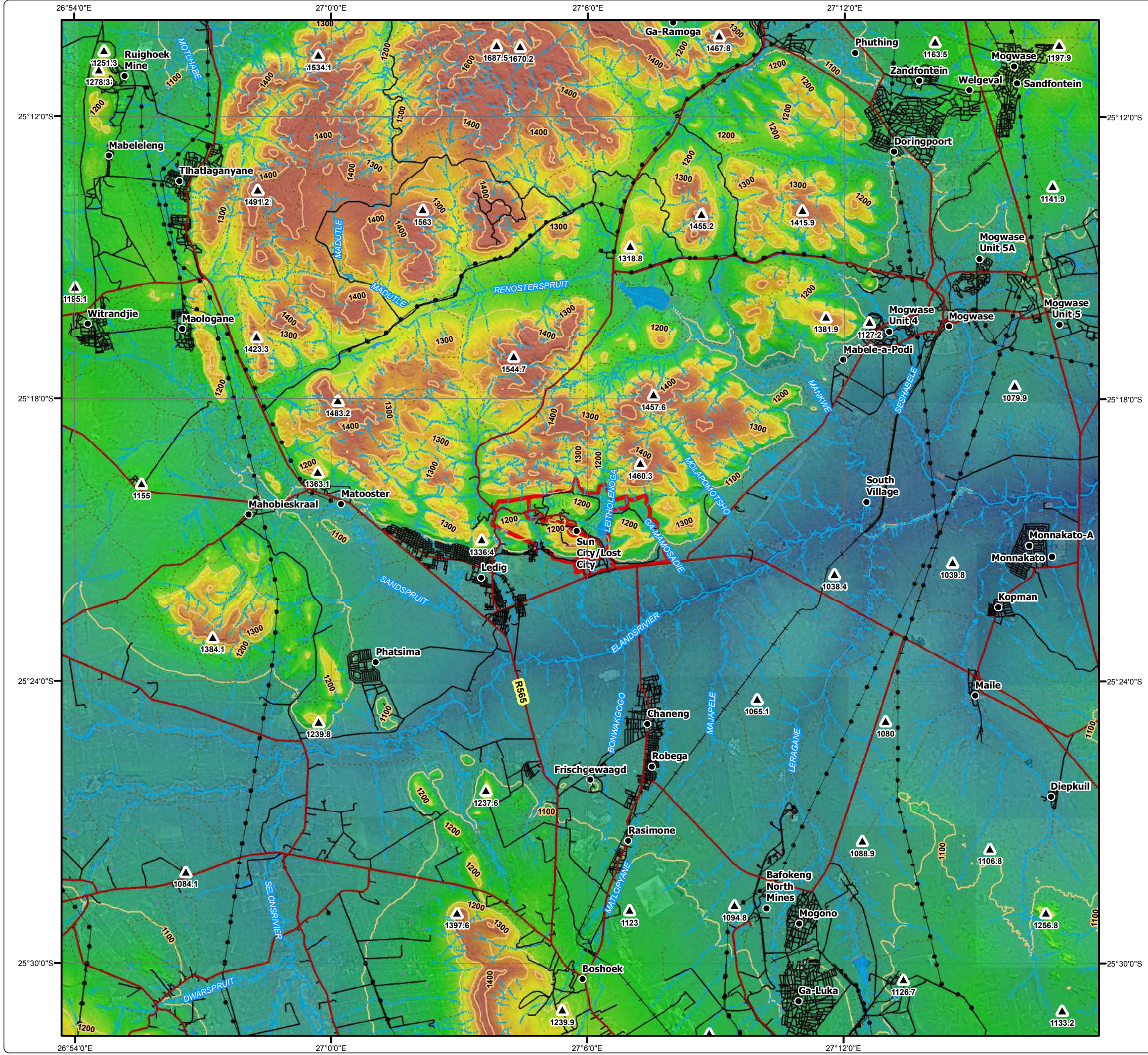
Topographical Model

(Elevation m.a.m.s.l.)

High : 1688

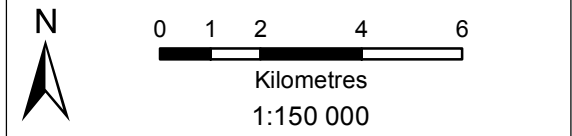


Low : 983



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Projection: Transverse Mercator Ref #: meg.SUN4642.201801.048
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 23/01/2018



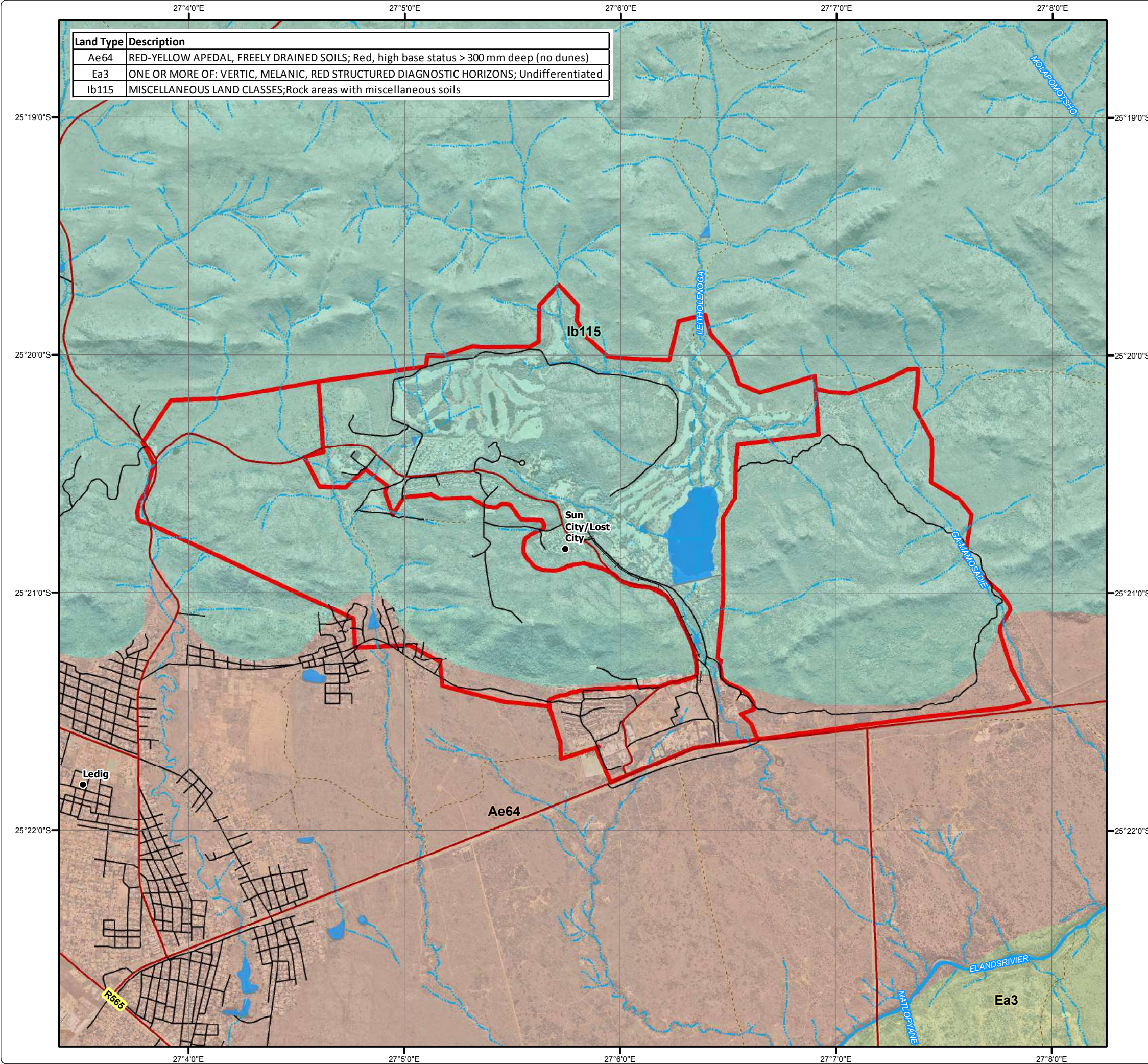
Sun City Complex EIA

Land Type

Legend

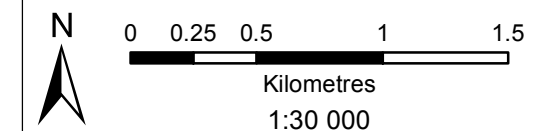
-  Development Area
 -  Settlement
 -  Main Road
 -  Minor Road
 -  Track
 -  Railway Line
 -  Non-Perennial Stream
 -  Perennial Stream
 -  Dam Wall
 -  Dam / Lake
- ### Land Type
-  Ae64
 -  Ea3
 -  Ib115

Land Type	Description
Ae64	RED-YELLOW APEDAL, FREELY DRAINED SOILS; Red, high base status > 300 mm deep (no dunes)
Ea3	ONE OR MORE OF: VERTIC, MELANIC, RED STRUCTURED DIAGNOSTIC HORIZONS; Undifferentiated
Ib115	MISCELLANEOUS LAND CLASSES; Rock areas with miscellaneous soils



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Projection: Transverse Mercator Ref #: meg.SUN4642.201711.061
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/02/2018



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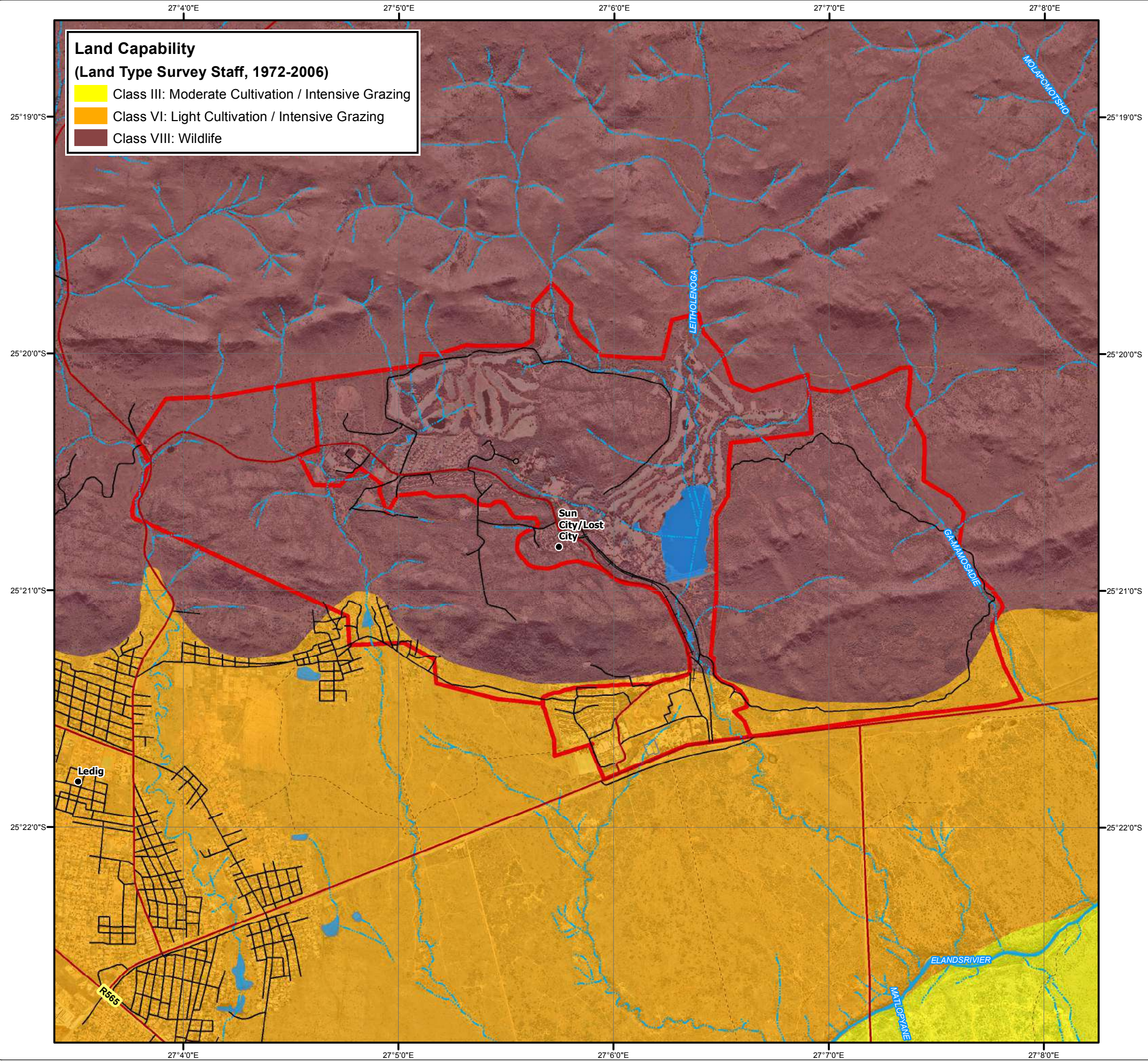
Land Capability

Land Capability
(Land Type Survey Staff, 1972-2006)

- Class III: Moderate Cultivation / Intensive Grazing
- Class VI: Light Cultivation / Intensive Grazing
- Class VIII: Wildlife

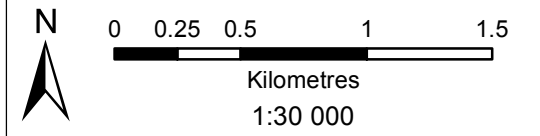
Legend

- Development Area
- Settlement
- Main Road
- Minor Road
- Track
- || Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake



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Projection: Transverse Mercator Ref #: meg.SUN4642.201711.062
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/02/2018



Sun City Complex EIA

Land Use

Legend

- Development Area
- Settlement
- Main Road
- Minor Road
- Track
- ++ Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake

Land Use (GeoTerra Image, 2013 - 2014)

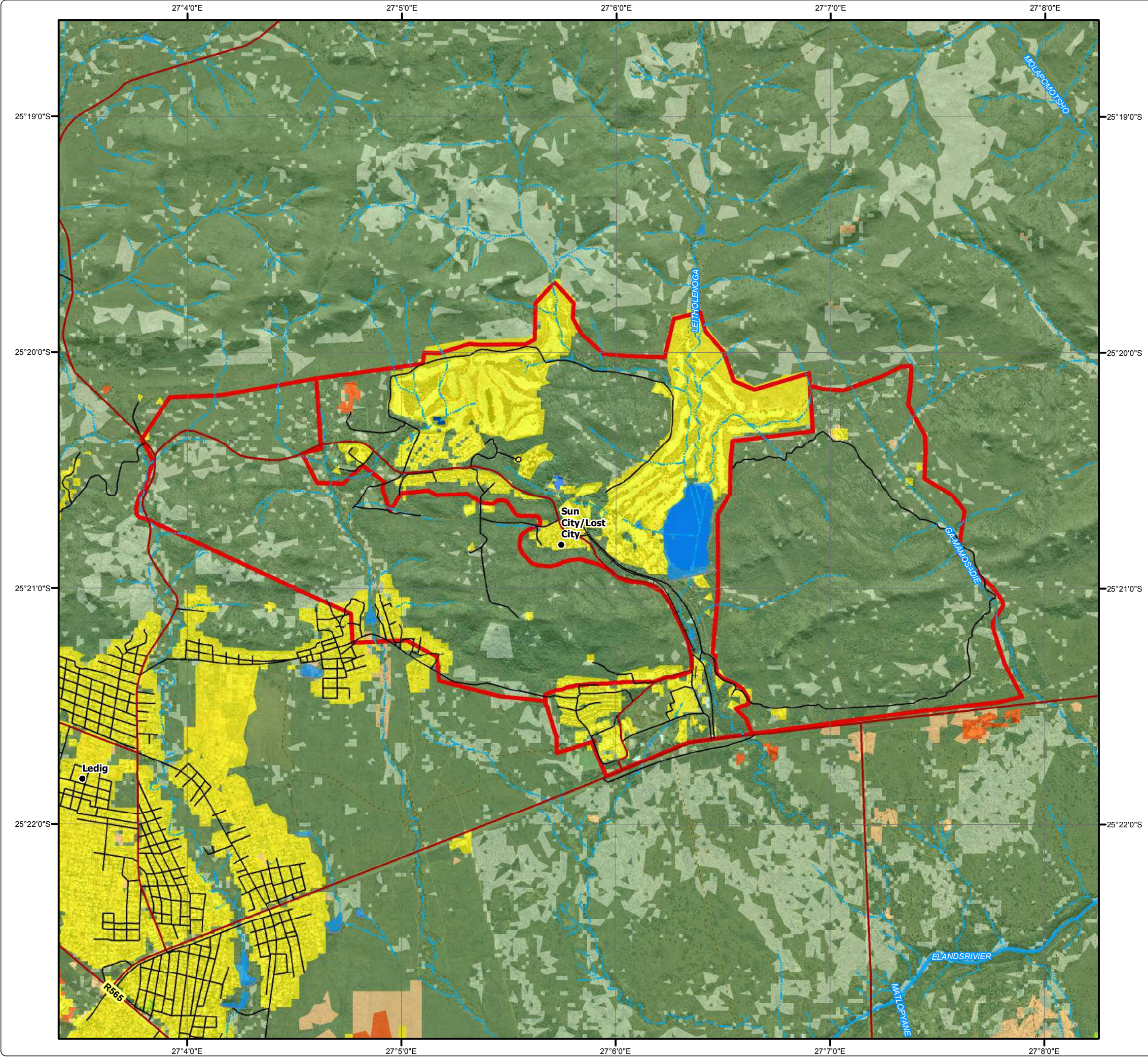
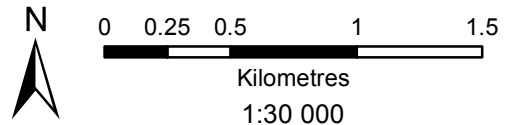
- Urban Development
- Mine Infrastructure
- Cultivated Field / Plantation
- Grassland
- Shrubland / Thicket / Woodland
- Waterbody
- Wetland
- Bare (Not Vegetated)



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Projection: Transverse Mercator Ref #: meg.SUN4642.201711.063
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/02/2018



Sun City Complex EIA

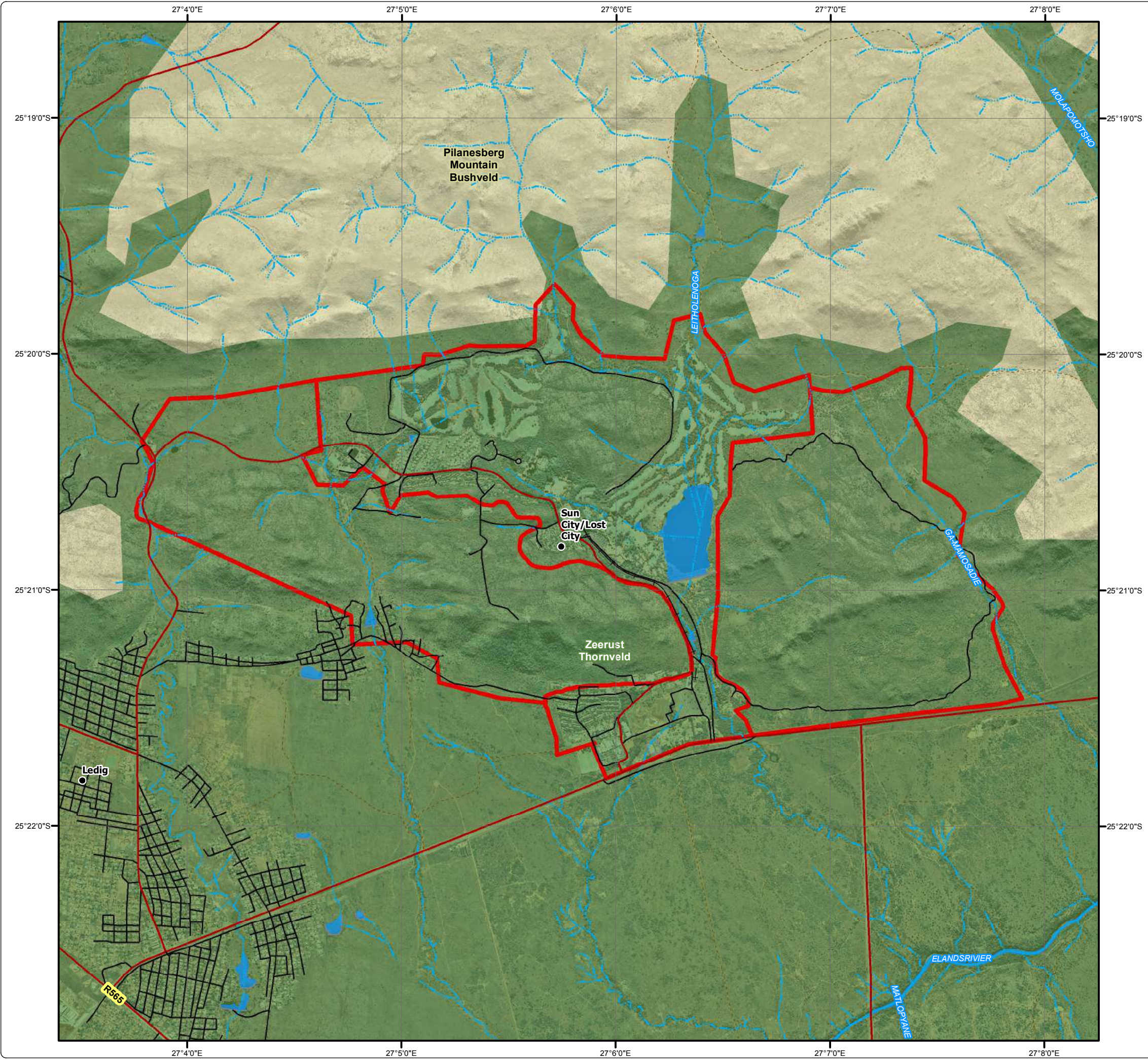
Regional Vegetation

Legend

- Development Area
- Settlement
- Main Road
- Minor Road
- Track
- || Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake

Regional Vegetation (Mucina & Rutherford, 2012)

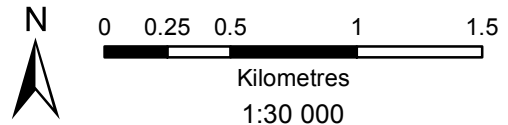
- Pilanesberg Mountain Bushveld
- Zeerust Thornveld



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Projection: Transverse Mercator Ref #: meg.SUN4642.201712.005
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/02/2018



Sun City Complex EIA

Biodiversity Sensitivity

South African Protected Areas Database
(Department of Environmental Affairs, 2017 3rd Quarter)

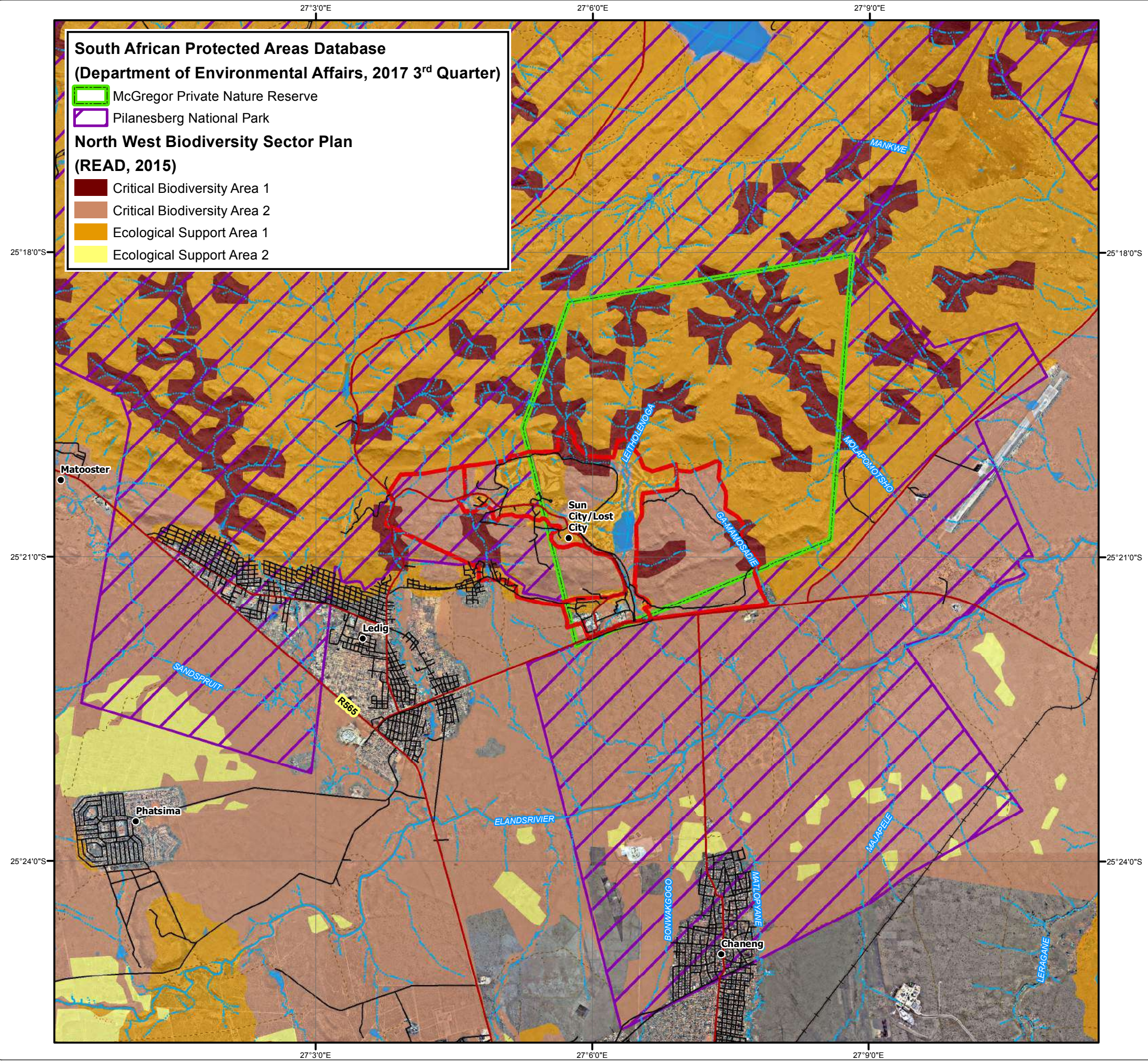
- McGregor Private Nature Reserve
- Pilanesberg National Park

North West Biodiversity Sector Plan
(READ, 2015)

- Critical Biodiversity Area 1
- Critical Biodiversity Area 2
- Ecological Support Area 1
- Ecological Support Area 2

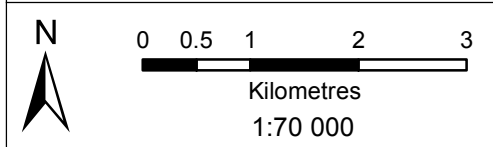
Legend

- Development Area
- Settlement
- Power Line
- Main Road
- Minor Road
- Track
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Non-Perennial Pan / Stream



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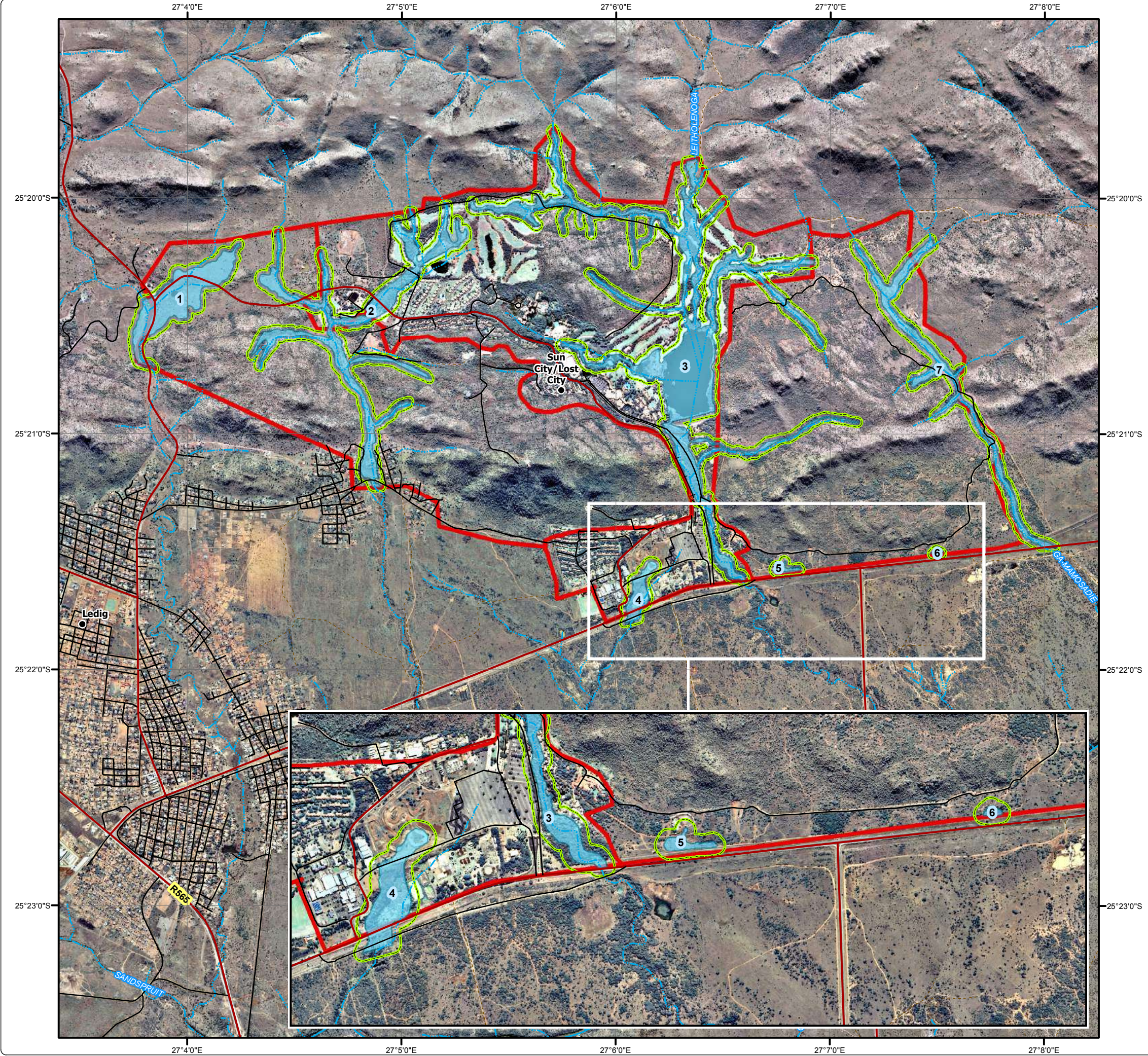
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Sun City Complex EIA Wetland Delineation and Buffer Zones

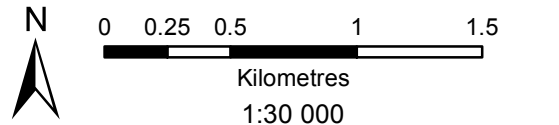
Legend

- Development Area
- Settlement
- Main Road
- Minor Road
- Track
- ++ Railway Line
- Non-Perennial Stream
- Perennial Stream
- Wetland Delineation
- 32 m Wetland Buffer



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Projection: Transverse Mercator Ref #: meg.SUN4642.201801.068
 Datum: WGS 1984 Revision Number: 2
 Central Meridian: 27°E Date: 28/02/2018



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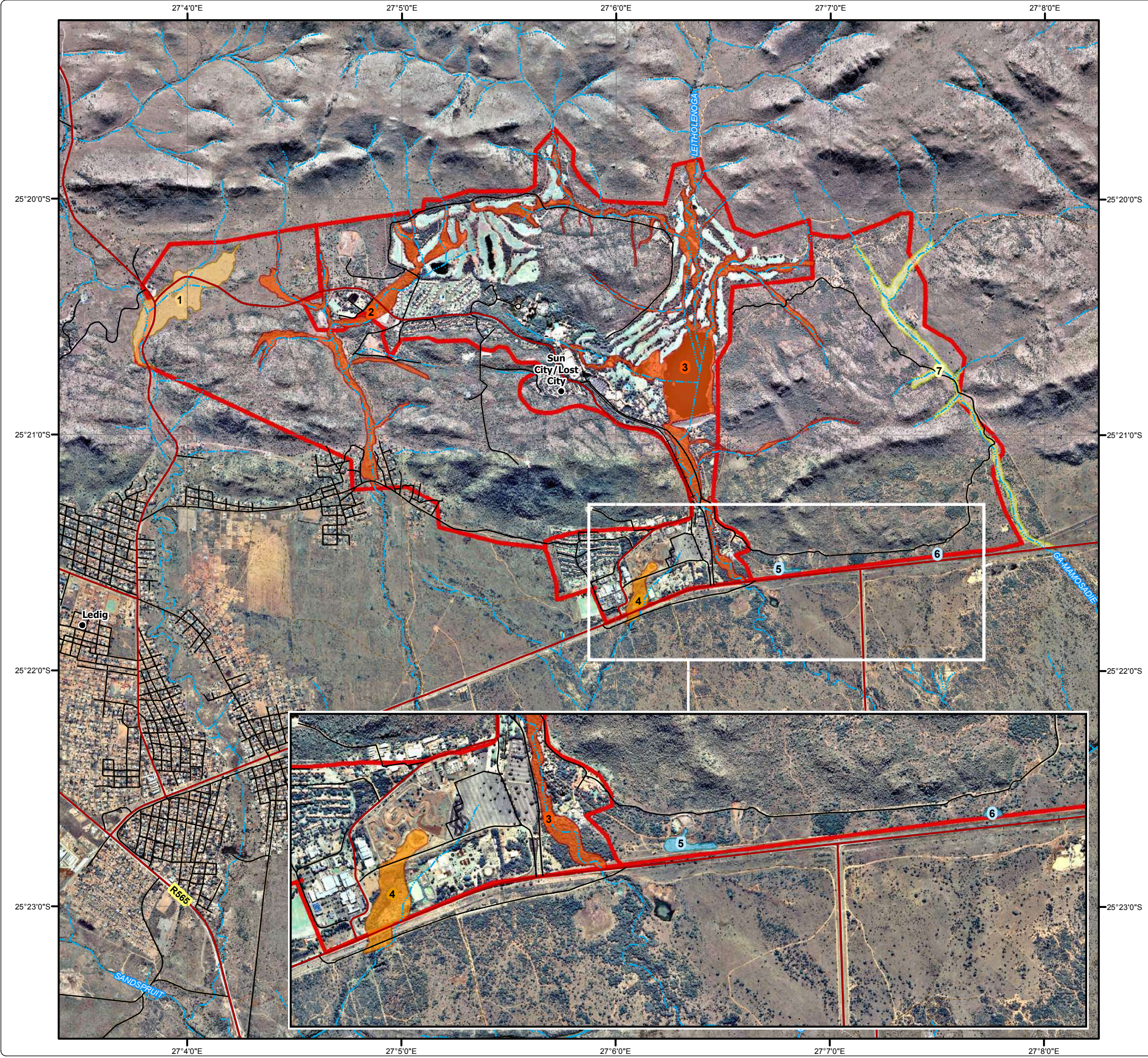
Wetland Sensitivity

Legend

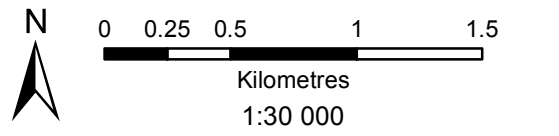
- Development Area
- Settlement
- Main Road
- Minor Road
- Track
- Railway Line
- Non-Perennial Stream
- Perennial Stream

Wetland Sensitivity

- Artificial PES & EIS C
- PES B & EIS B
- PES C & EIS B
- PES C & EIS C
- PES D & EIS B

















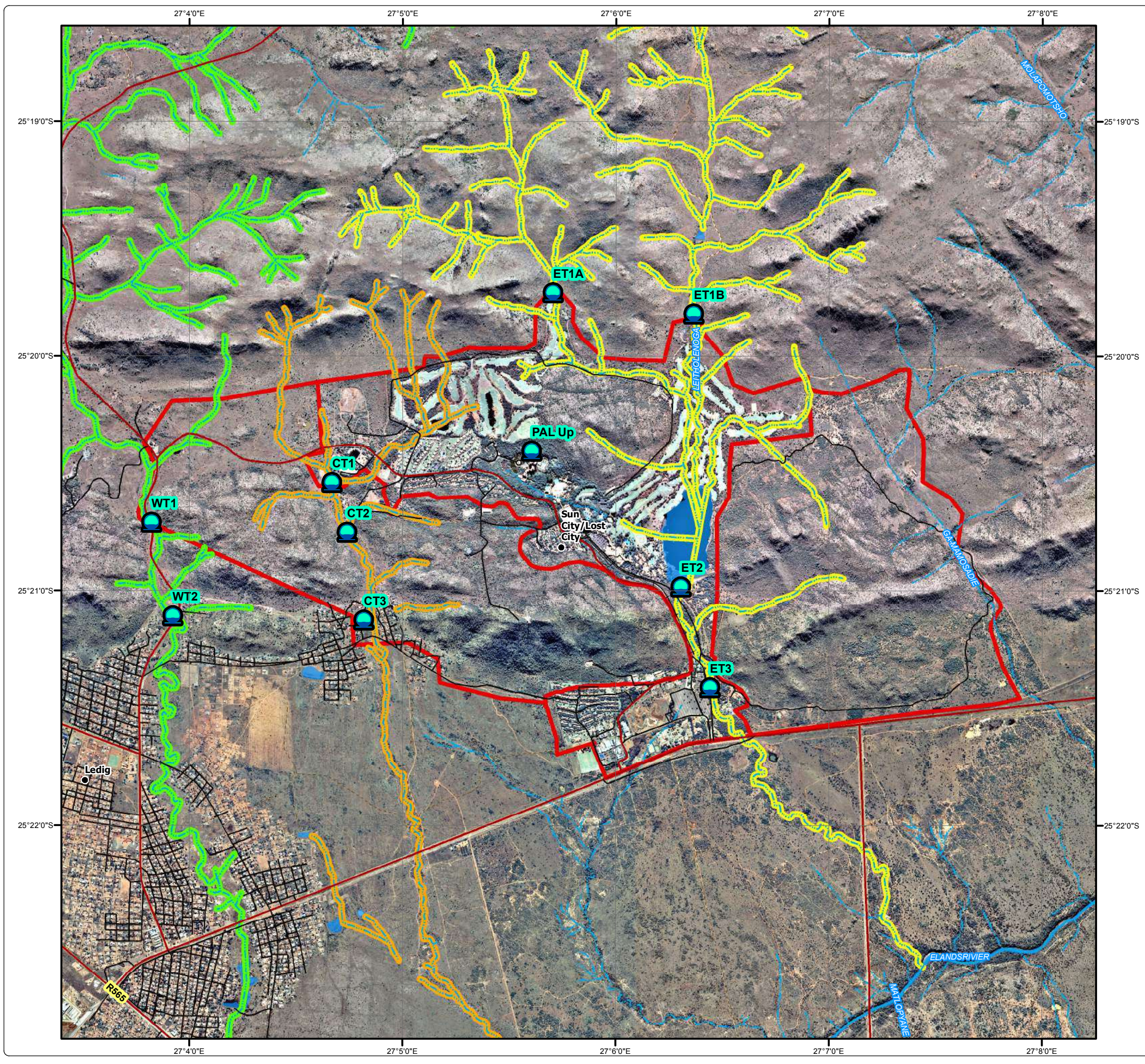
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 Datum: WGS 1984 Revision Number: 2
 Central Meridian: 27°E Date: 28/02/2018




Sun City Complex EIA Aquatic Sampling Locations

Legend

-  Development Area
 -  Aquatic Sampling Location
 -  Settlement
 -  Main Road
 -  Minor Road
 -  Track
 -  Railway Line
 -  Non-Perennial Stream
 -  Perennial Stream
 -  Dam Wall
 -  Dam / Lake
- Stream Tributary**
-  Central Tributary
 -  Eastern Tributary
 -  Western Tributary

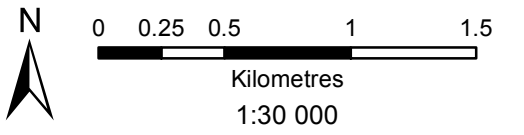




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 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/02/2018



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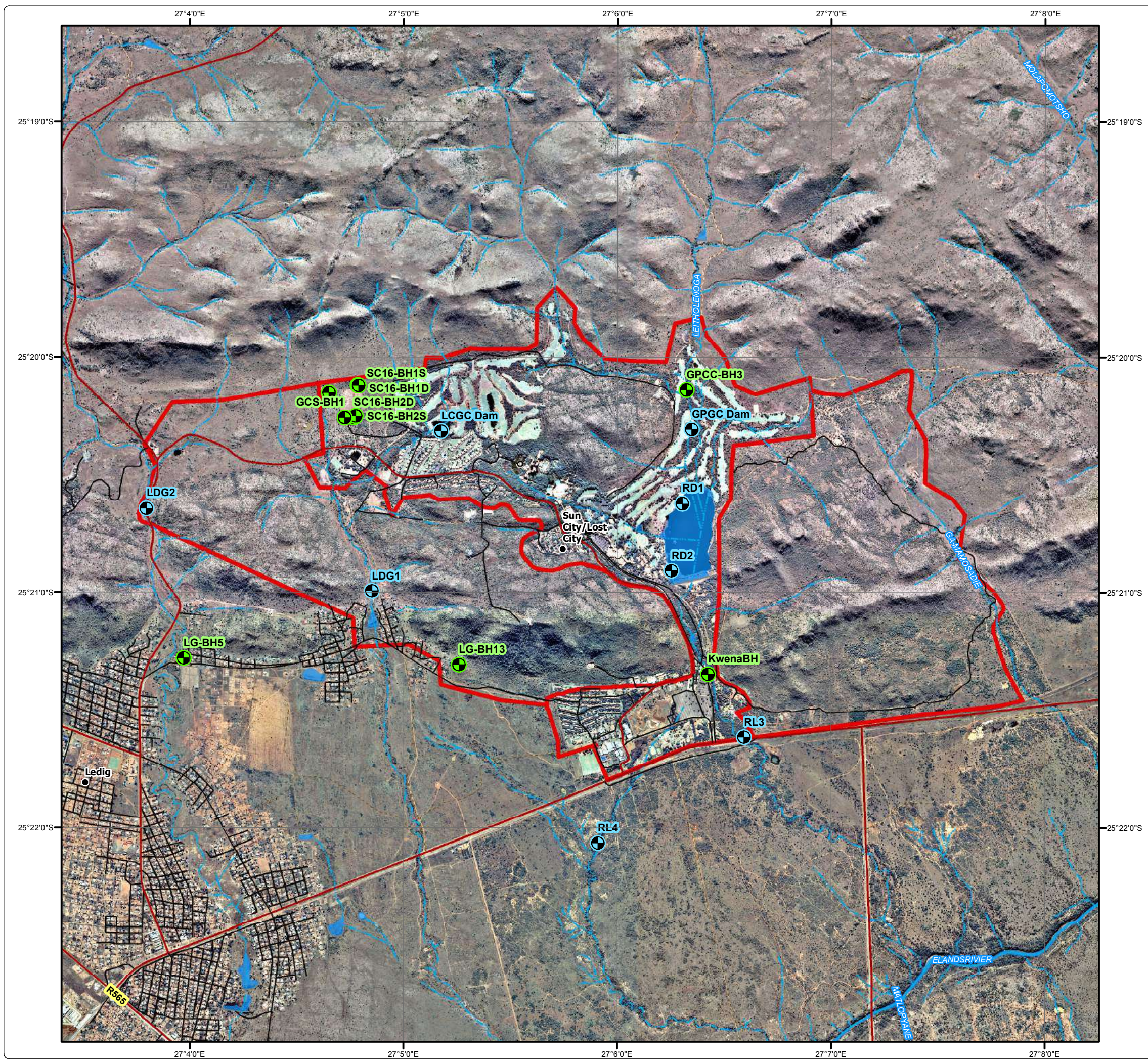
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Kilometres
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Sun City Complex EIA Groundwater and Surface Water Monitoring Locations

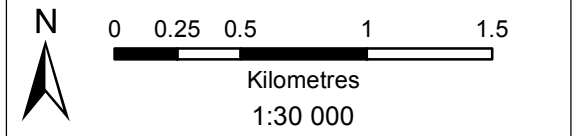
Legend

- Development Area
- Monitoring Points**
- Groundwater Monitoring Point
- Surface Water Monitoring Point
- Settlement
- Main Road
- Minor Road
- Track
- ++ Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake



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Projection: Transverse Mercator Ref #: meg.SUN4642.201802.004
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/02/2018

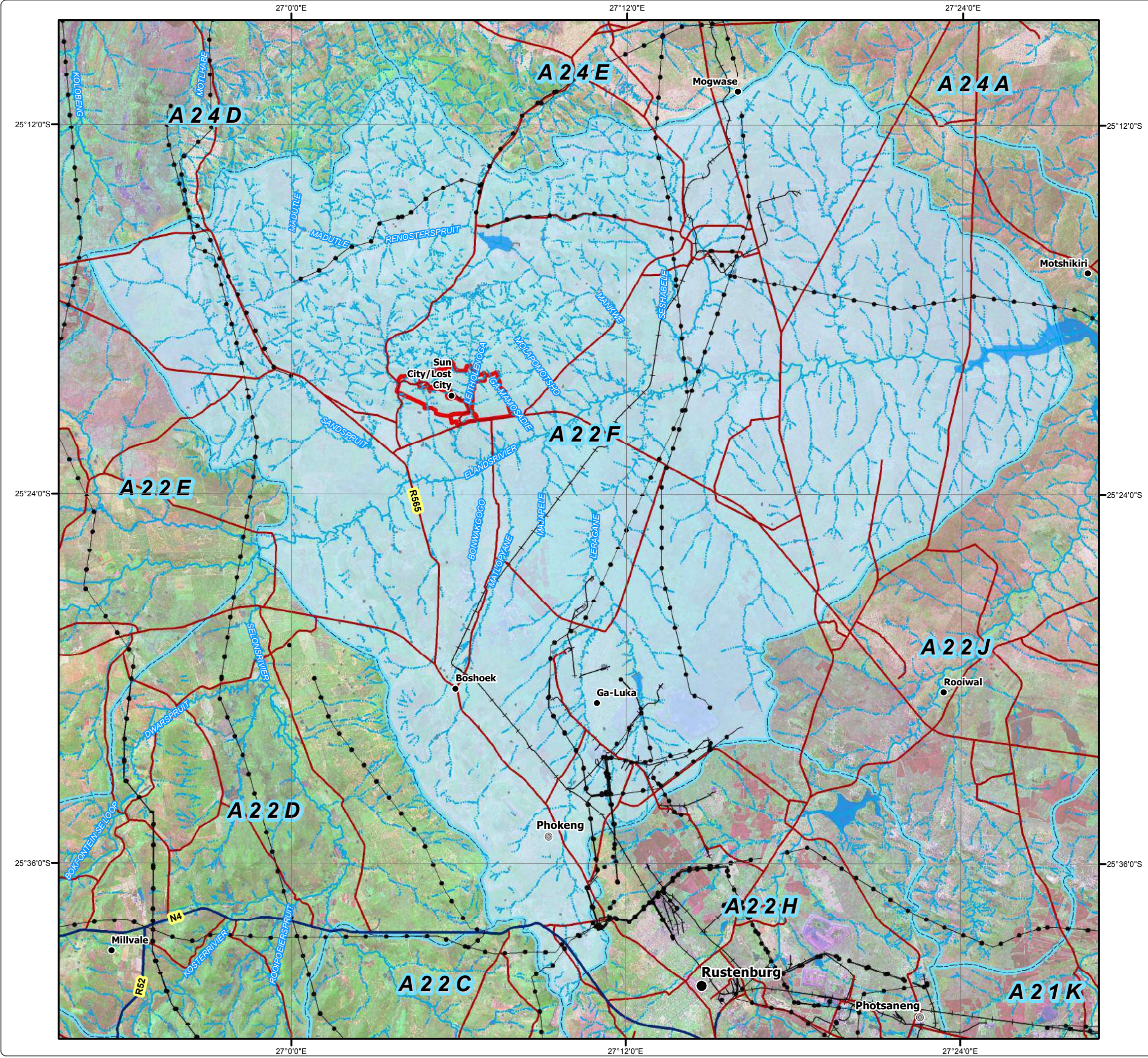


Sun City Complex EIA

Hydrological Setting

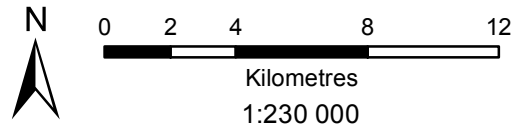
Legend

- Development Area
- Major Town
- Other Town
- Settlement
- Power Line
- Arterial / National Route
- Main Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- Non-Perennial Pan / Stream
- Perennial Pan
- Quaternary Catchment
- Affected Catchment



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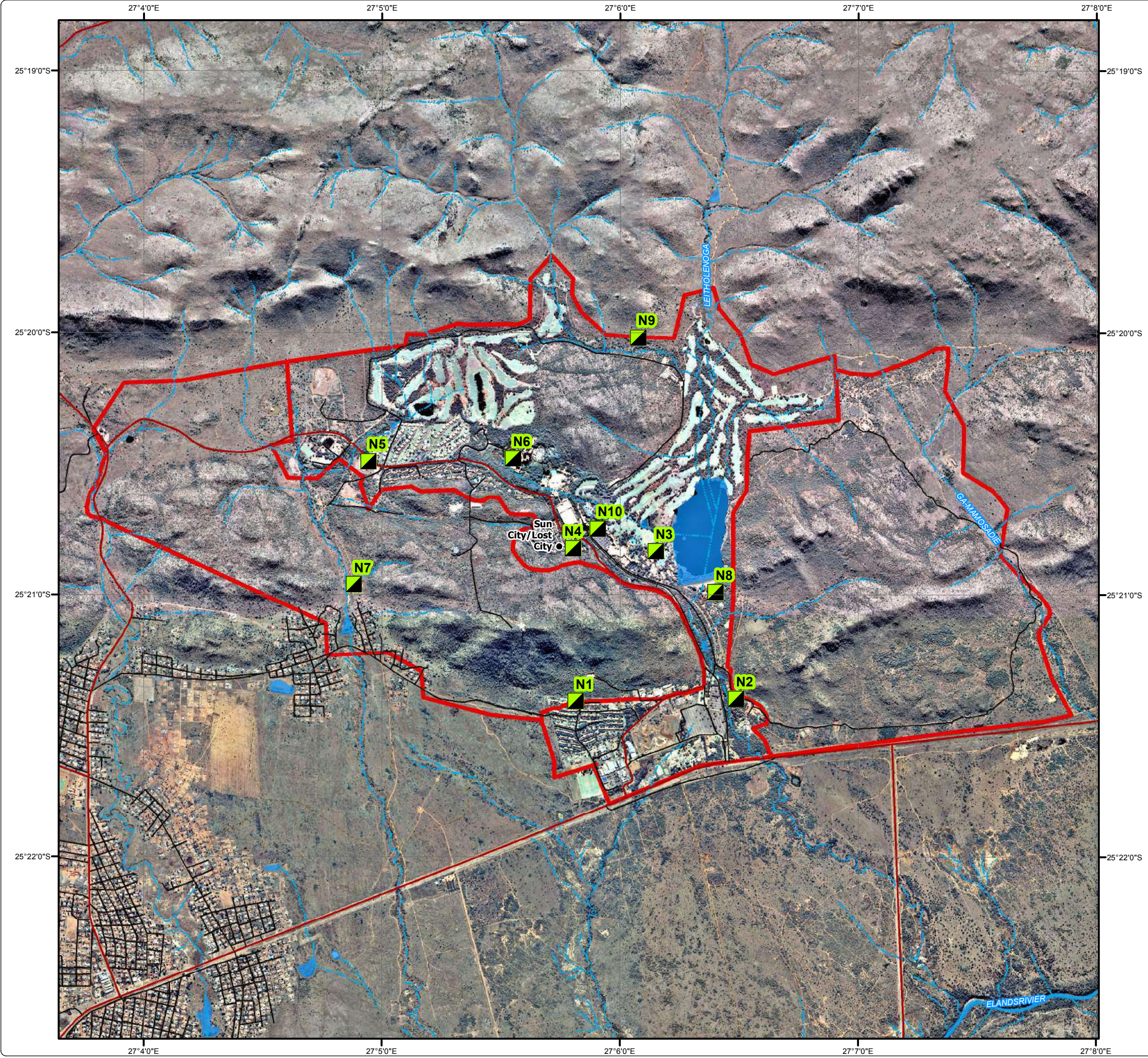
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 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 22/02/2018



Sun City Complex EIA Noise Monitoring Locations

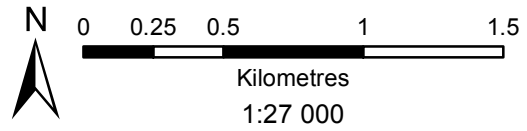
Legend

- Development Area
- Noise Monitoring Location
- Settlement
- Main Road
- Minor Road
- Track
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake



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Projection: Transverse Mercator Ref #: meg.SUN4642.201801.020
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 11/01/2018



Sun City Complex EIA Ferris Wheel Viewshed

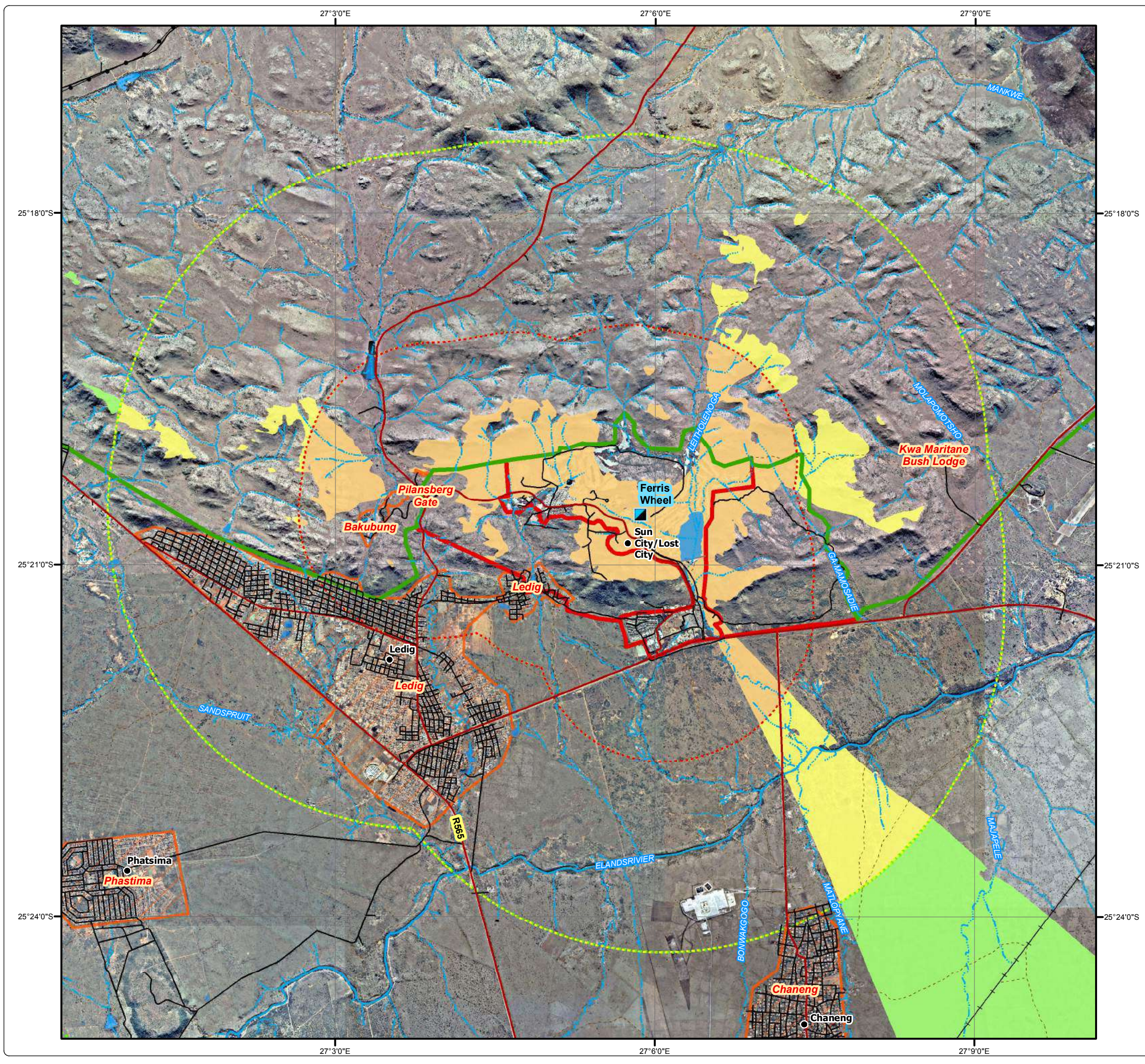
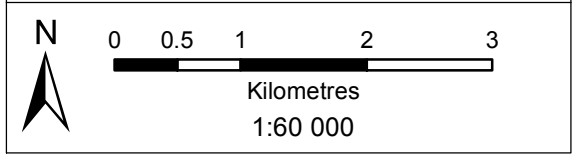
Legend

- Development Area
- Ferris Wheel
- Settlement
- Power Line
- Main Road
- Minor Road
- - - Track
- + + + Railway Line
- - - Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake
- National Park
- Viewshed Model**
- High (0 - 2 km)
- Medium (2 - 5 km)
- Low (5 - 10 km)
- 2 km Visual Buffer
- 5 km Visual Buffer
- 10 km Visual Buffer
- Sensitive Visual Receptor



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Projection: Transverse Mercator Ref #: ajm.SUN4642.201810.335
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 21/10/2018



Sun City Complex EIA Vacation Club 4 Viewshed

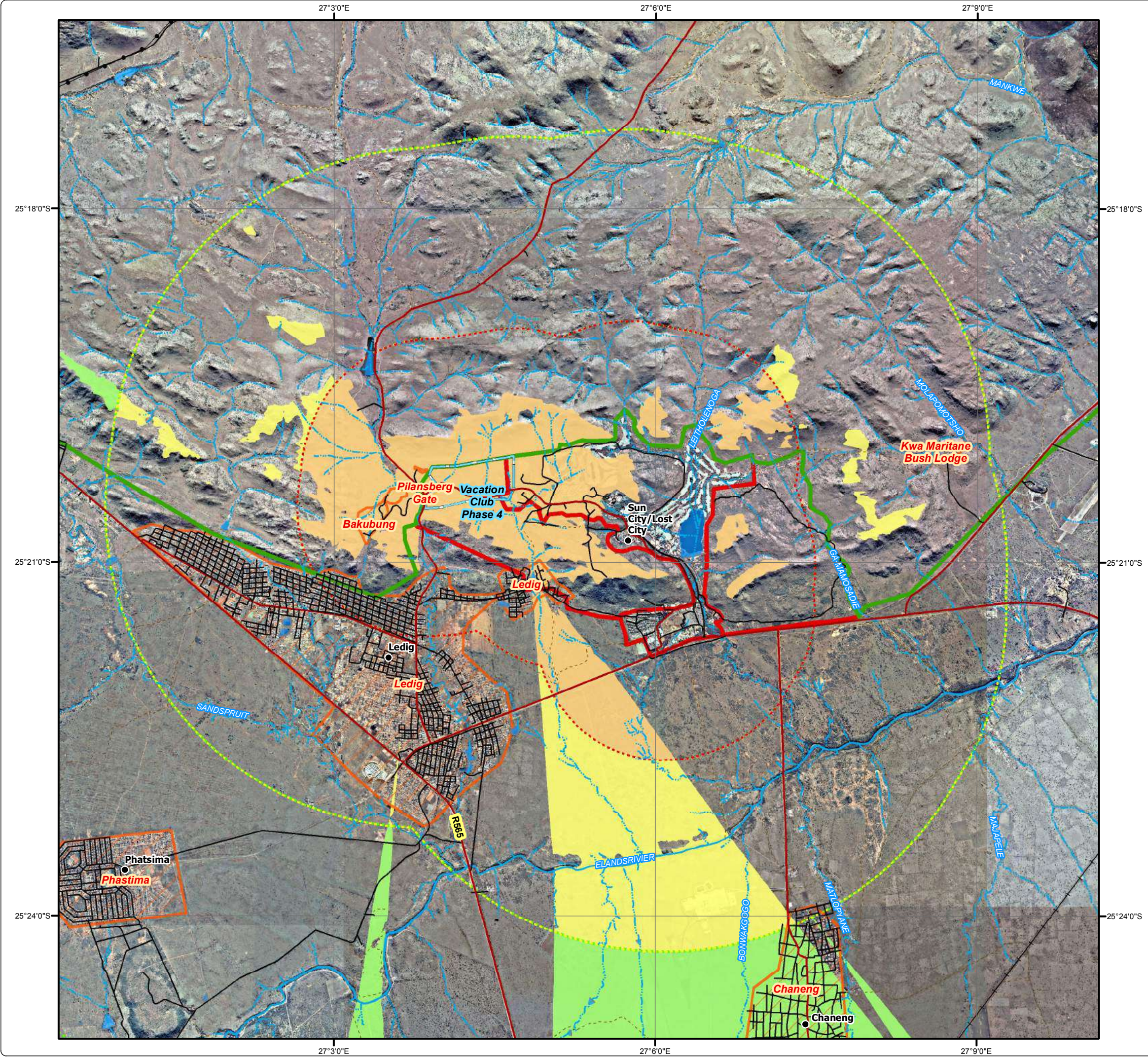
Legend

- Development Area
 - Settlement
 - Power Line
 - Main Road
 - Minor Road
 - Track
 - Railway Line
 - Non-Perennial Stream
 - Perennial Stream
 - Vacation Club Phase 4
 - Dam Wall
 - Dam / Lake
 - National Park
- Viewshed Model**
- High (0 - 2 km)
 - Medium (2 - 5 km)
 - Low (5 - 10 km)
 - 2 km Visual Buffer
 - 5 km Visual Buffer
 - 10 km Visual Buffer
 - Sensitive Visual Receptor



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Projection: Transverse Mercator Ref #: ajm.SUN4642.201810.336
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 21/10/2018



Sun City Complex EIA Vacation Club 3 Viewshed

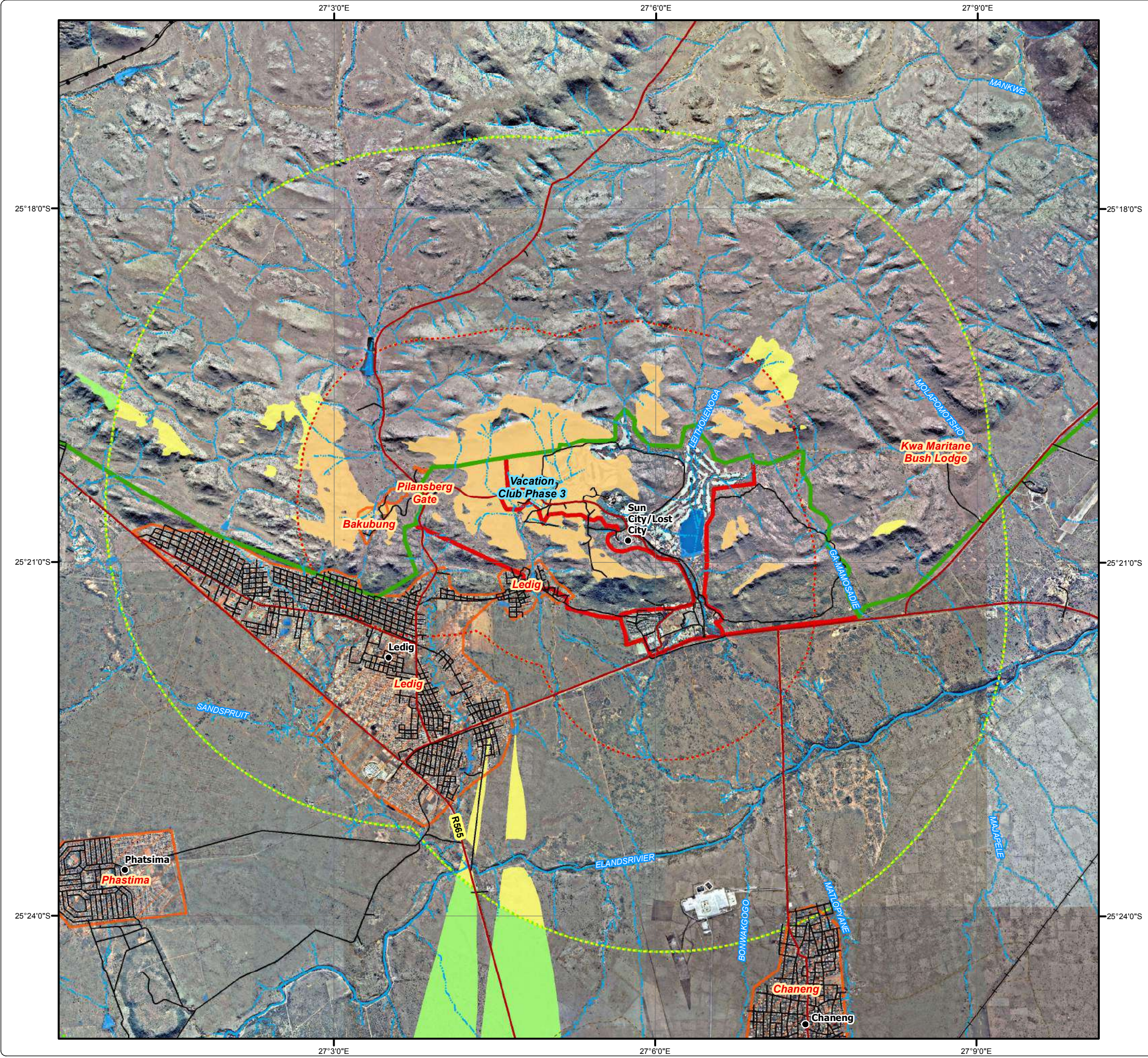
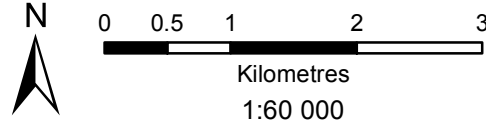
Legend

- Development Area
 - Settlement
 - Power Line
 - Main Road
 - Minor Road
 - Track
 - Railway Line
 - Non-Perennial Stream
 - Perennial Stream
 - Vacation Club Phase 3
 - Dam Wall
 - Dam / Lake
 - National Park
- Viewshed Model**
- High (0 - 2 km)
 - Medium (2 - 5 km)
 - Low (5 - 10 km)
 - 2 km Visual Buffer
 - 5 km Visual Buffer
 - 10 km Visual Buffer
 - Sensitive Visual Receptor



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Projection: Transverse Mercator Ref #: ajm.SUN4642.201810.337
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 21/10/2018



Sun City Complex EIA Vacation Club 3 Viewshed

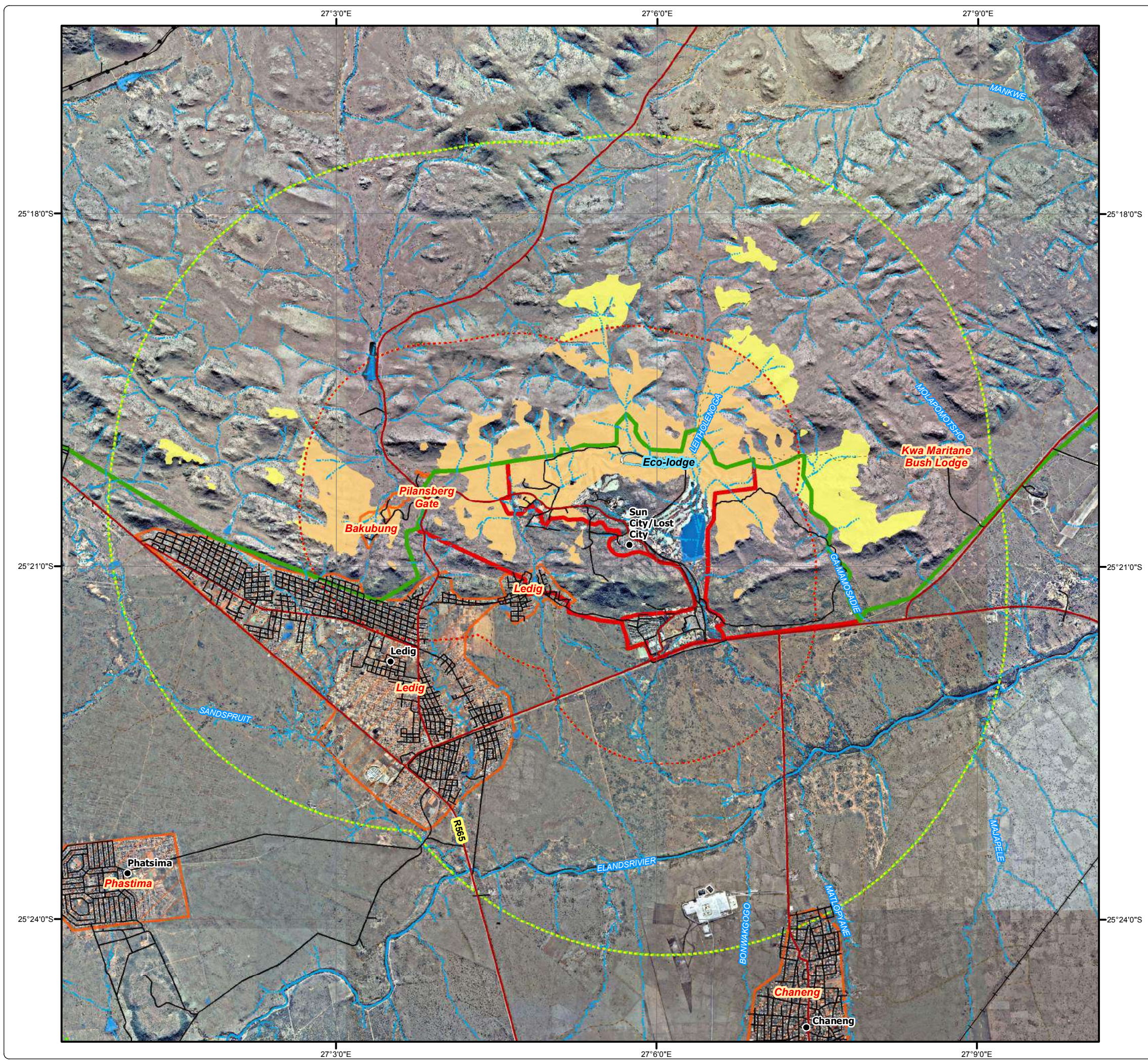
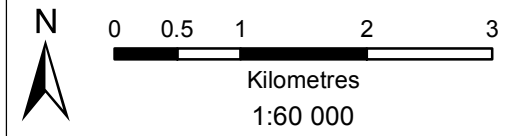
Legend

- Development Area
 - Settlement
 - Power Line
 - Main Road
 - Minor Road
 - Track
 - Railway Line
 - Non-Perennial Stream
 - Perennial Stream
 - Eco-lodge
 - Dam Wall
 - Dam / Lake
 - National Park
- Viewshed Model**
- High (0 - 2 km)
 - Medium (2 - 5 km)
 - 2 km Visual Buffer
 - 5 km Visual Buffer
 - 10 km Visual Buffer
 - Sensitive Visual Receptor



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Projection: Transverse Mercator Ref #: ajm.SUN4642.201810.338
Datum: WGS 1984 Revision Number: 1
Central Meridian: 27°E Date: 21/10/2018



Sun City Complex EIA

Hotel Viewshed

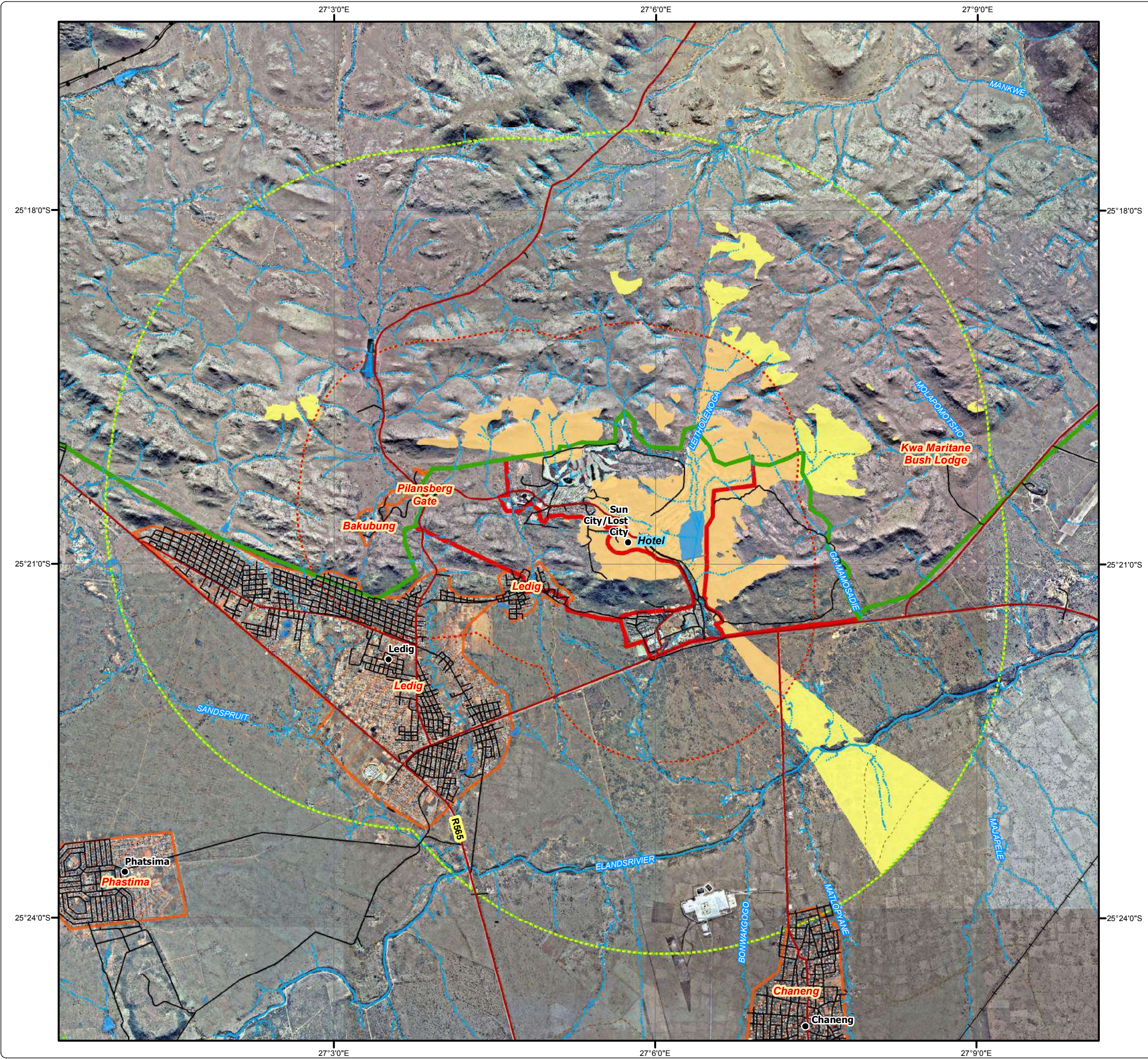
Legend

- Development Area
 - Settlement
 - Power Line
 - Main Road
 - Minor Road
 - Track
 - Railway Line
 - Non-Perennial Stream
 - Perennial Stream
 - Hotel
 - Dam Wall
 - Dam / Lake
 - National Park
- Viewshed Model**
- High (0 - 2 km)
 - Medium (2 - 5 km)
 - 2 km Visual Buffer
 - 5 km Visual Buffer
 - 10 km Visual Buffer
 - Sensitive Visual Receptor



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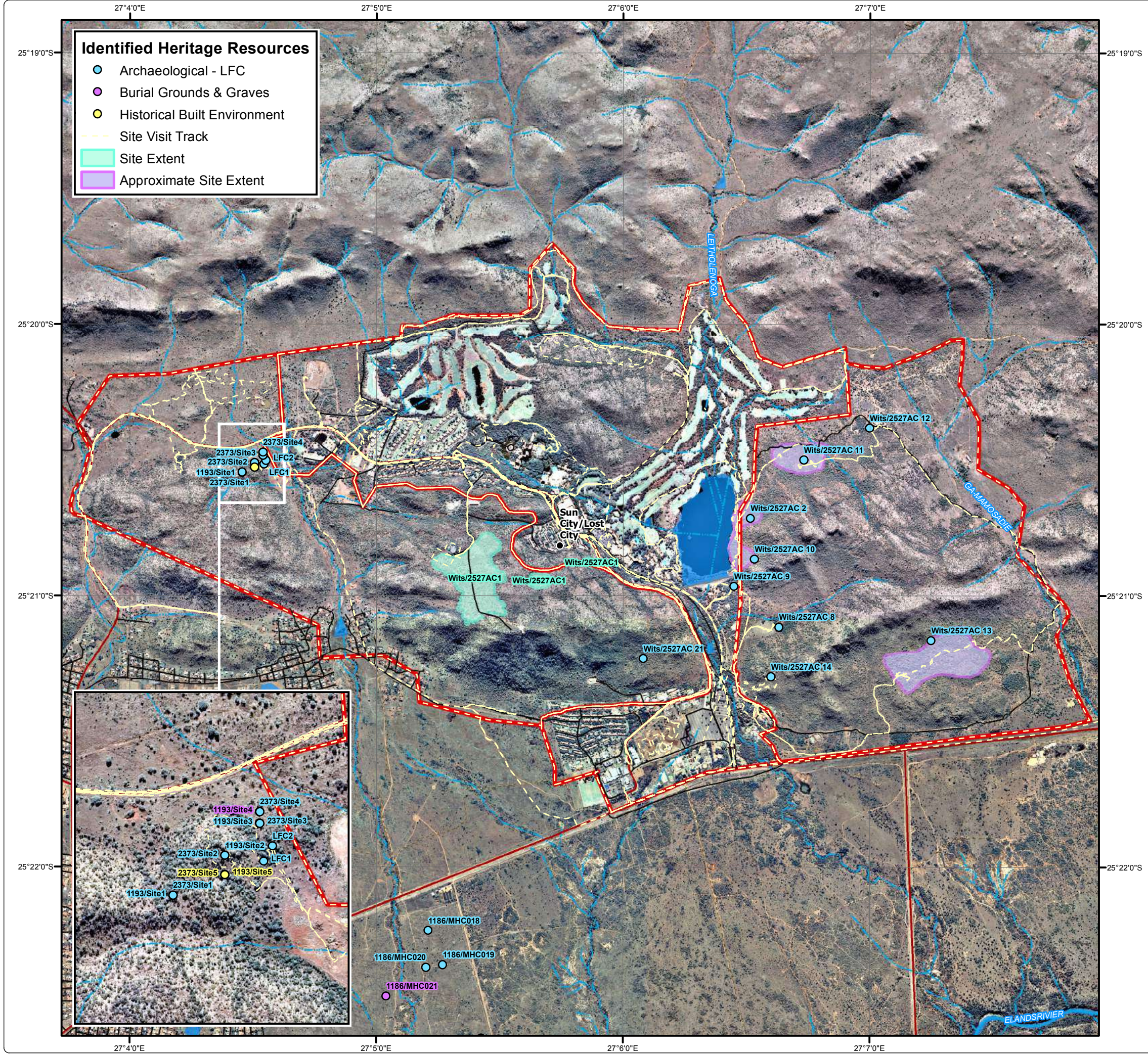
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 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 21/10/2018



Sun City Complex EIA Identified Heritage Resources

- Identified Heritage Resources**
- Archaeological - LFC
 - Burial Grounds & Graves
 - Historical Built Environment
 - - - Site Visit Track
 - Site Extent
 - Approximate Site Extent

- Legend**
- Development Area
 - Settlement
 - Main Road
 - Minor Road
 - - - Track
 - +— Railway Line
 - Non-Perennial Stream
 - Perennial Stream
 - Dam Wall
 - Dam / Lake



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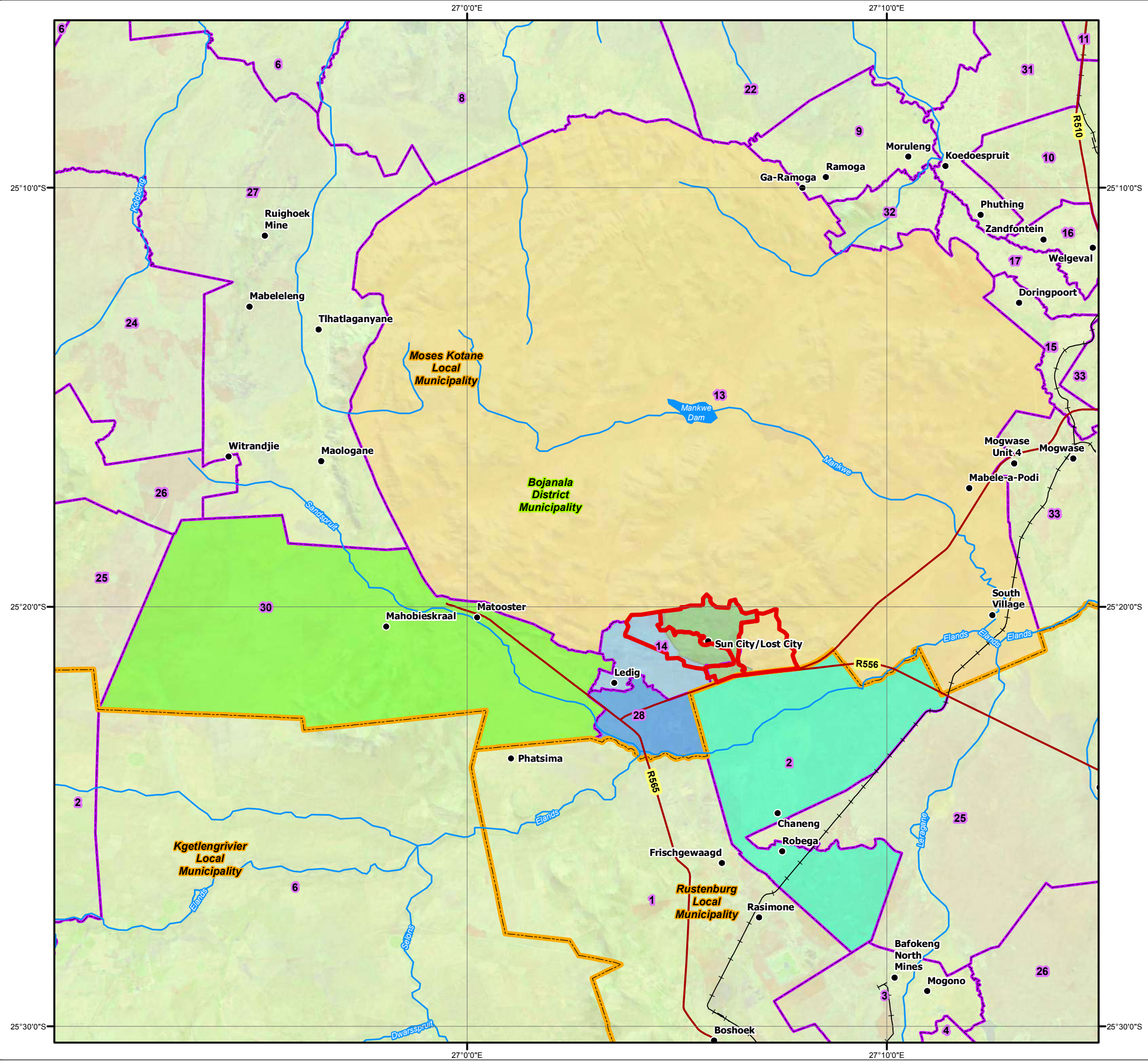
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Projection: Transverse Mercator Ref #: meg.SUN4642.201801.059
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 24/01/2018

N
 0 0.25 0.5 1 1.5
 Kilometres
 1:26 000

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Sun City Complex EIA Primary and Secondary Social Study Area



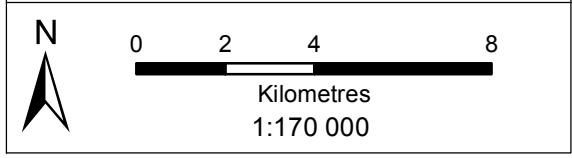
Legend

- Development Area
- Settlement
- RSA roads**
- Main Road
- Railway Line
- Perennial Stream
- Dam
- District Municipality (2016)
- Local Municipality (2016)
- Ward (2016)
- Secondary Study Area**
- Moses Kotane Ward 28
- Moses Kotane Ward 30
- Rustenburg Ward 2
- Site Specific Study Area**
- Moses Kotane Ward 13
- Moses Kotane Ward 14
- Sun City complex
- Affected District Municipality (Secondary Study Area)



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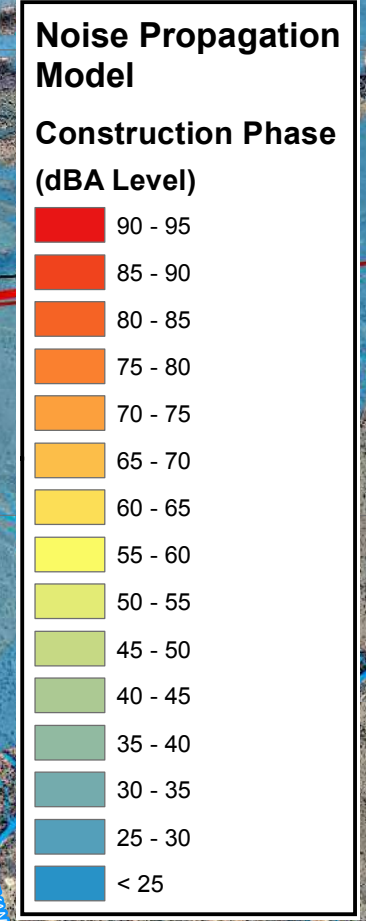
Projection: Transverse Mercator Ref #: ajm.SUN4642.201810.340
 Datum: WGS 1984 Revision Number: 2
 Central Meridian: 27°E Date: 23/01/2018



Sun City Complex EIA Noise Propagation Model for the Construction Phase


Legend

- Development Area
- Settlement
- Main Road
- Minor Road
- Railway Line
- Non-Perennial Stream
- Perennial Stream
- Dam Wall
- Dam / Lake



Expansion & Maintenance Projects

- Infrastructure Location
- Linear Infrastructure
- Infrastructure Footprint

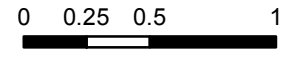


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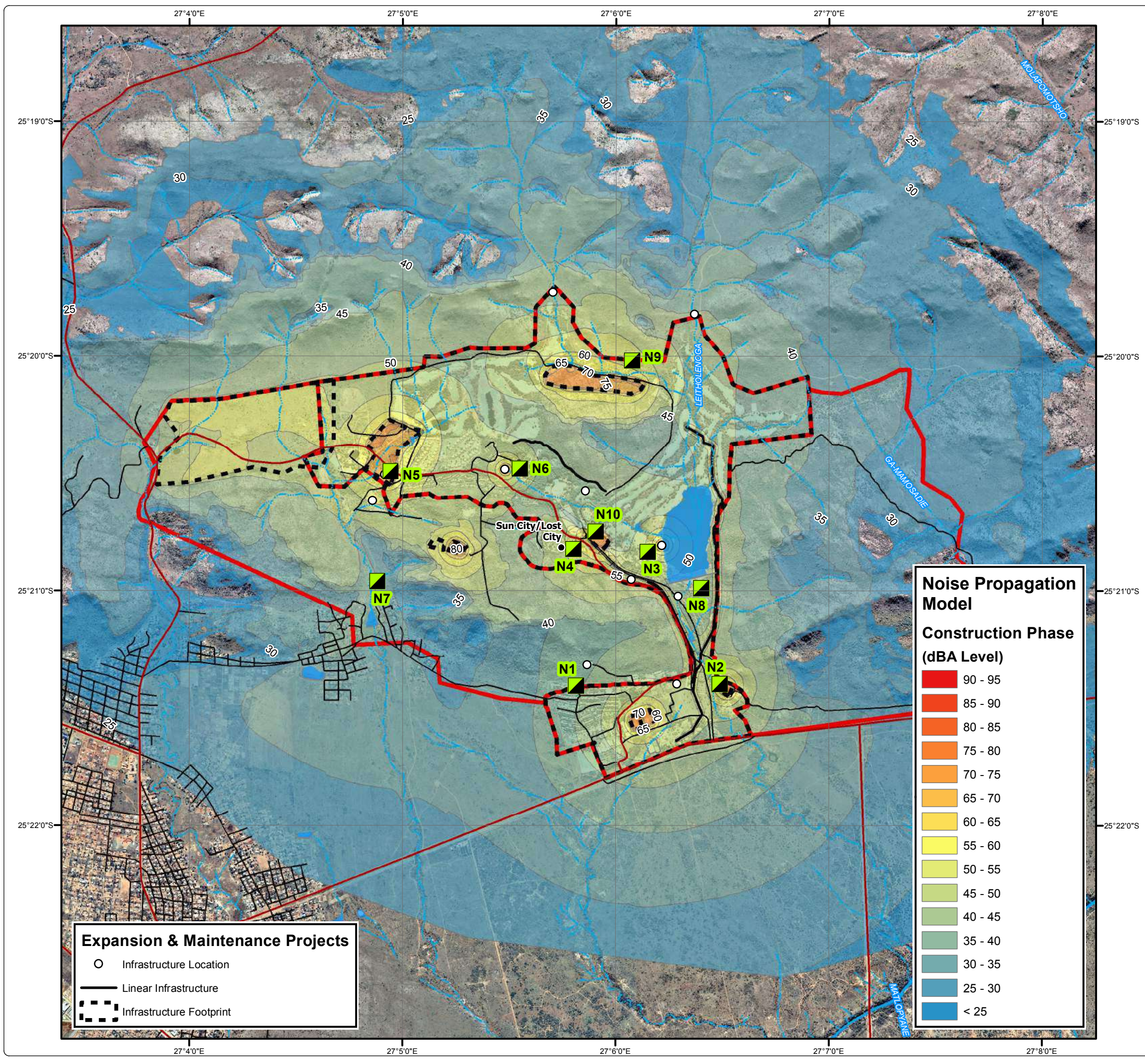
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Kilometre
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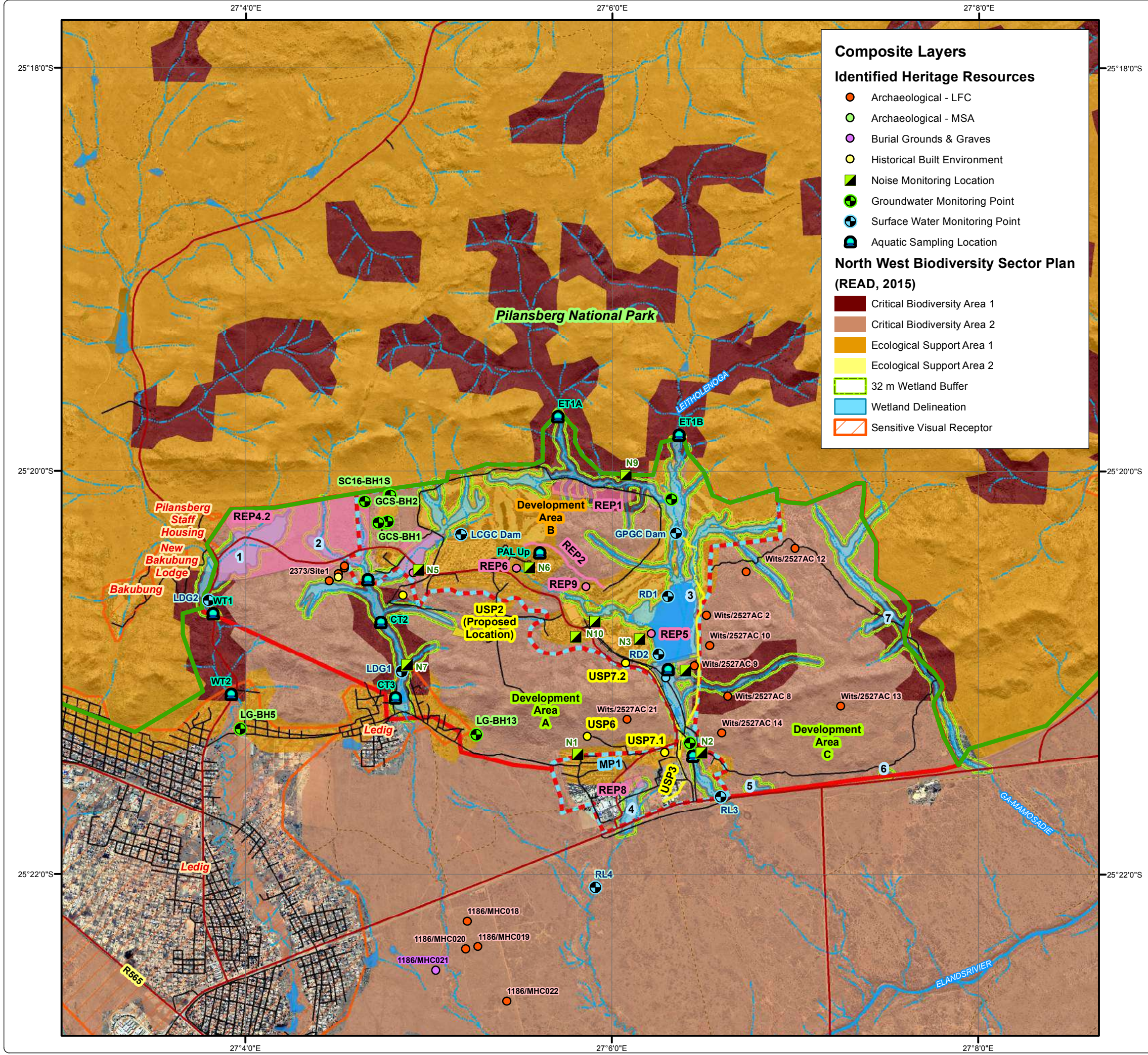


Sun City Complex EIA Composite Plan

- Composite Layers**
- Identified Heritage Resources**
- Archaeological - LFC
 - Archaeological - MSA
 - Burial Grounds & Graves
 - Historical Built Environment
 - Noise Monitoring Location
 - Groundwater Monitoring Point
 - Surface Water Monitoring Point
 - Aquatic Sampling Location
- North West Biodiversity Sector Plan (READ, 2015)**
- Critical Biodiversity Area 1
 - Critical Biodiversity Area 2
 - Ecological Support Area 1
 - Ecological Support Area 2
 - 32 m Wetland Buffer
 - Wetland Delineation
 - Sensitive Visual Receptor

- Legend**
- Development Area
 - Main Road
 - Minor Road
 - Track
 - Railway Line
 - Non-Perennial Stream
 - Perennial Stream
 - Dam Wall
 - Dam / Lake

- Expansion & Maintenance Projects**
- Maintenance Project
 - Resort Expansion Project
 - Utilities and Services Project
 - Resort Expansion Project
 - Utilities and Services Project
 - Maintenance Project
 - Resort Expansion Project
 - Utilities and Services Project
 - National Park



Projection: Transverse Mercator Ref #: ajm.SUN4642.201810.341
 Datum: WGS 1984 Revision Number: 1
 Central Meridian: 27°E Date: 21/10/2018

