



# PROPOSED TETRA4 CLUSTER 2 GAS PRODUCTION PROJECT SCOPING REPORT PRESENTATION



# Meeting Agenda

- Welcome and Introductions
- Project and Application Description
  - Applicant details, EAP and specialist team, Legal framework, EIA & Public participation process, Project location and description, Baseline studies, Alternatives, Preliminary impacts, Plan of study for EIA.
- Way forward
- Discussion



# Applicant and EIA Team Details

- **Applicant:** Tetra4 (Pty) Ltd – wholly owned subsidiary of Renergen.
- **EAP:** Environmental Impact Management Services (Pty) Ltd (EIMS) – Brian Whitfield (EAPASA Ref: 2022/4496)
- **Specialists:** Specialist Studies as follows:

Specialist Discipline	Company/Organisation
Agriculture and Hydropedology	The Biodiversity Company
Air Quality & Health Risk & GHG / Climate Change	Airshed Planning Professionals
Economic	Strategy4Good
Geohydrology	Gradient Groundwater Consulting
Heritage and Palaeontology	PGS Heritage
Hydrology	SMEC South Africa
Noise	Airshed Planning Professionals
Social	Equispectives Research and Consulting Services
Terrestrial Biodiversity	The Biodiversity Company
Visual	Environmental Planning and Design
Wetland and Aquatic	The Biodiversity Company

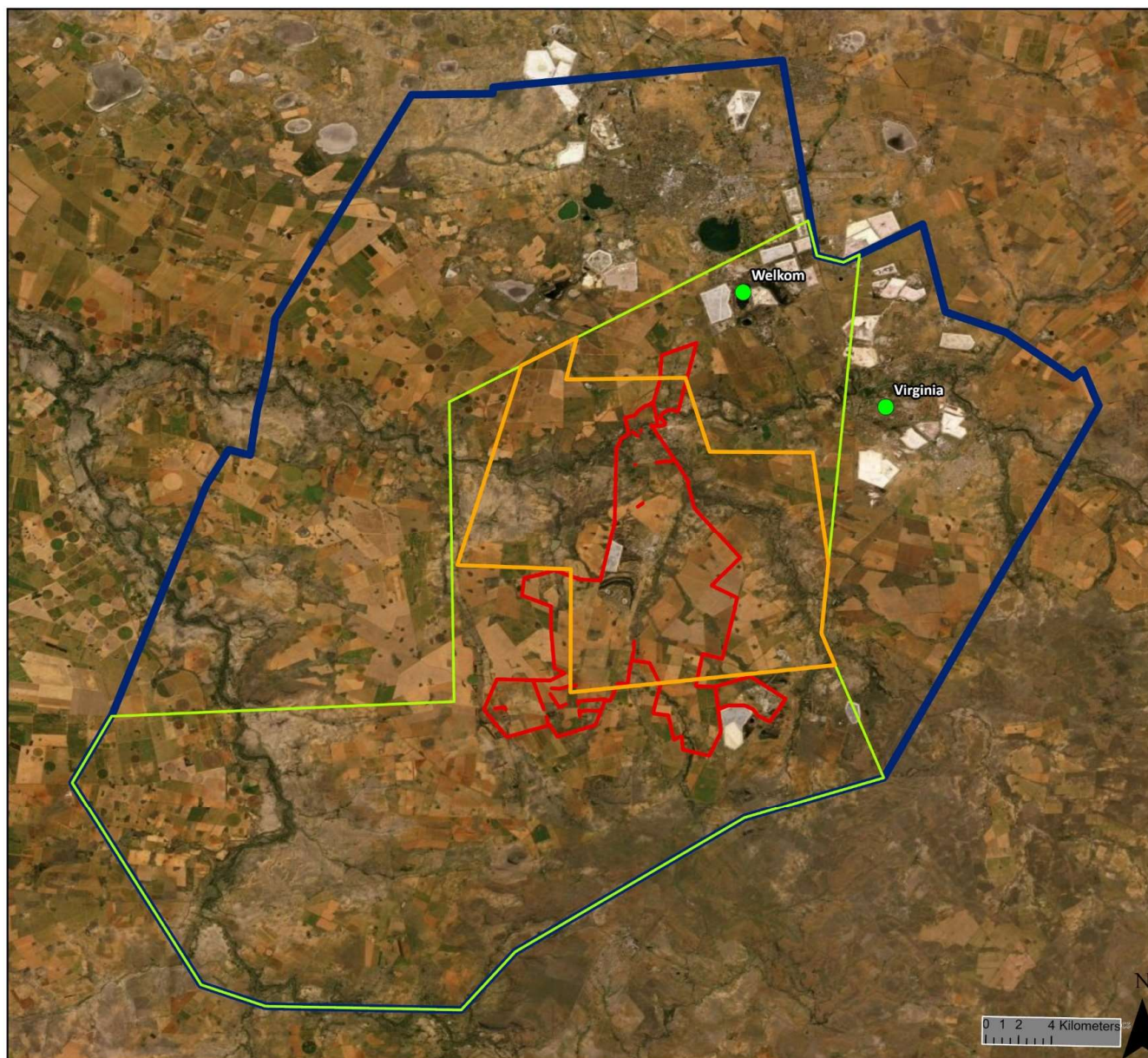


# Legal Framework

- Gas Production Right (Ref: 12/4/1/07/2/2) granted in 2011 covering ~187 000 hectares.
- Cluster 1 Environmental Authorisation (Ref: 12/04/07) granted in 2017 for production wells, pipelines, CNG/LNG Plant and associated infrastructure within the PR.
- Cluster 2 Environmental Authorisation is being applied for to increase the gas production within the Production Right. This application will include a MPRDA Section 102 revision of the Cluster 1 EMPr to include Cluster 2 specific infrastructure as well as amendments or additions of mitigation measures as and where required.





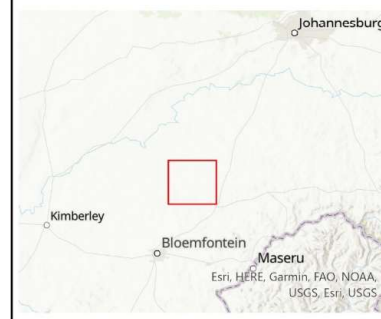


## Project History and Mineral Tenure

1473 Tetra4 Cluster 2

### Legend

-  Production Right Boundary (2010 EMPr) ... 1
-  Approved 2011 Study Area
-  Cluster 1 Approved Area (2017)
-  Cluster 2 Application Area (2022)
-  Places



### Data Sources:

CSG; ESRI  
 Coord System: GCS WGS 1984  
 Datum: WGS 1984  
 Units: Degree  
 Ref: Project History and Mineral Tenure

Date: 2022/06/29  
 EIMS Ref: Project History  
 Compiled: CM  
 Reviewed: BW  
 Approved: LW



# EIA Process and Public Participation

- According to the NEMA EIA Regulations 2014 the following listed activities are potentially triggered by the Cluster 2 gas production activities:
  - NEMA GNR 983: Activity 12, 16, 19, 21D, 24, 27, 28, 34, 48, 51, 56, 59, 60, 67
  - NEMA GNR 984: Activity 4, 5, 7, 15
  - NEMA GNR 985: Activity 4, 10, 12, 14, 18, 22, 23
- Additional triggers:
  - NEMWA Category A1, A6, A7, A12, A13, A14 / B1, B10, B11 / C1, C2, C6
  - NEMAQA: Section 21 Subcategory 2.4 (handling and storage of petroleum products)
  - NWA: Section 21 (c), (g) and (i)



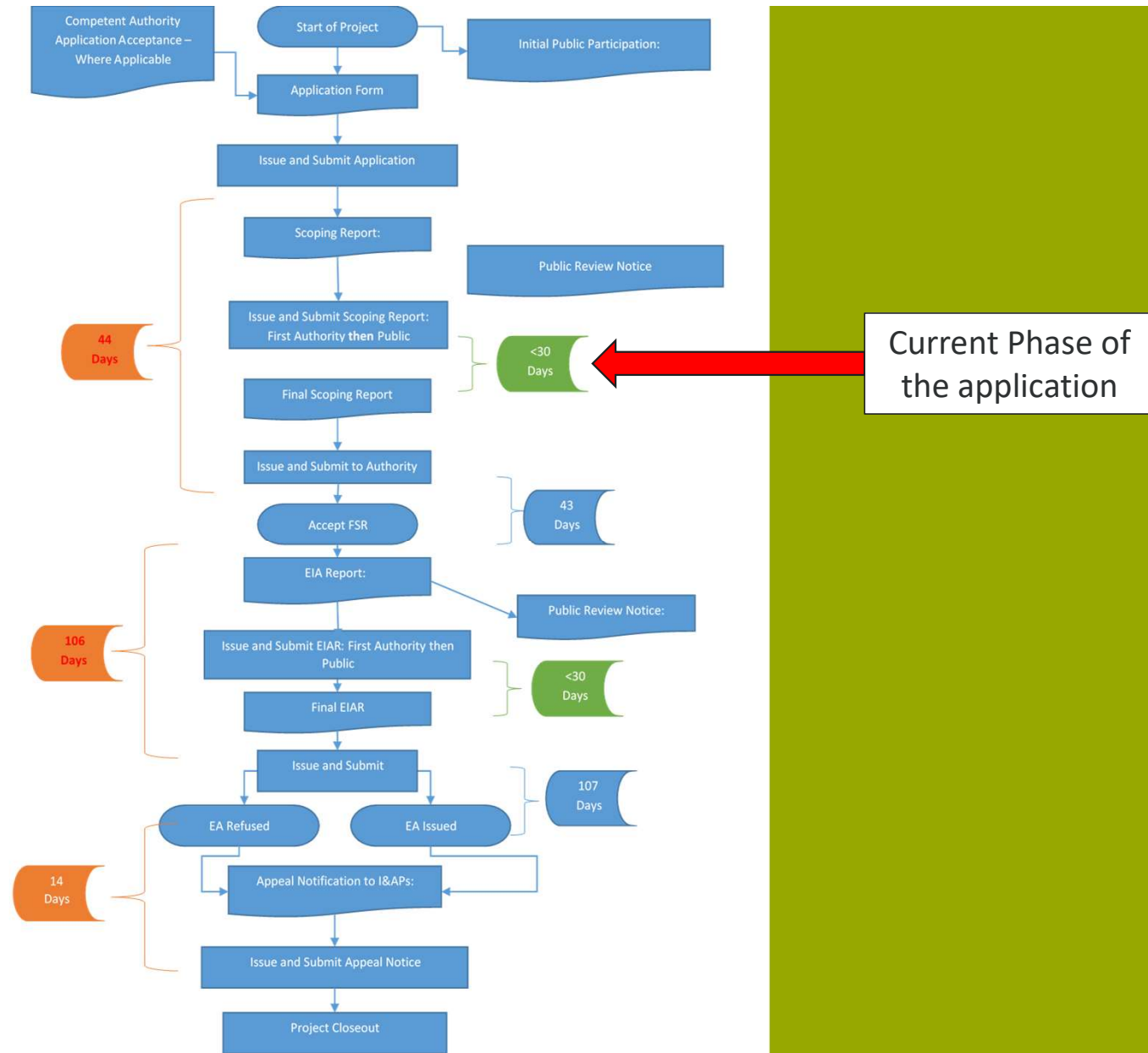
# EIA Process and Public Participation (continued)

- Full EIA process comprises of : Scoping and EIA Phases, each with prescribed public participation requirements
- Cluster 2 currently in the Scoping Phase:
  - The primary aim of scoping is to undertake a preliminary assessment of how the proposed project is likely to interact with the specific characteristics of the receiving environment.
  - The outcomes of scoping are a list of potential impacts and the identification of alternatives to be further investigated and assessed in the EIA Phase.
- Public Participation Process:
  - Affected & adjacent landowners, legal occupiers, relevant organs of state, NGO's, etc.
  - Presenting findings in the Scoping Report (report availability and public open day / focus group meetings).
  - Soliciting issues, concerns, comments with regards to the proposed activities.





# NEMA Scoping & EIA Flow Diagram

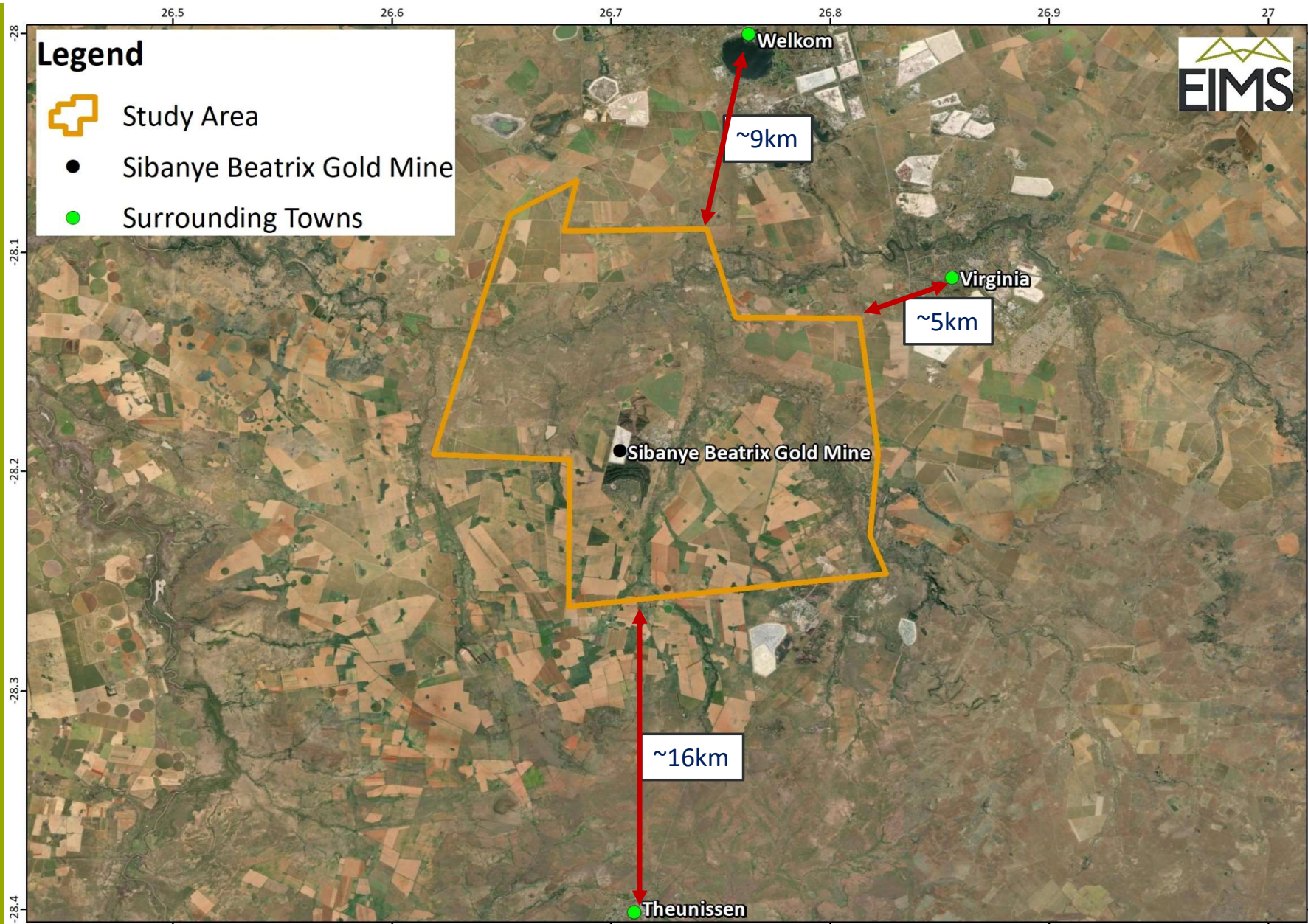




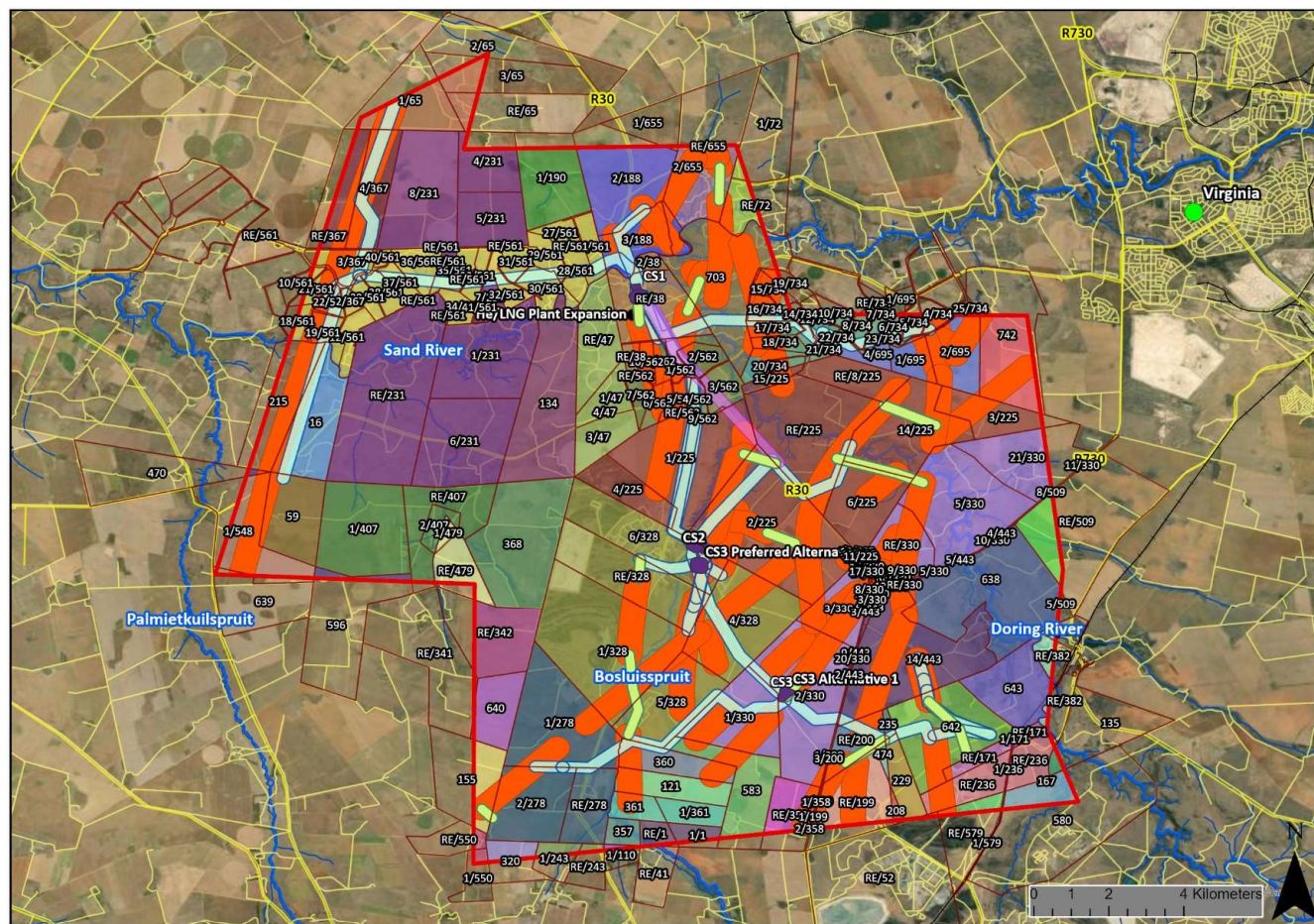
# Project Location

- The application and study area covers 284 farm portions within the Masilonyana and Matjhabeng Local Municipalities and includes ~27 500 hectares.
- The site boundary is ~5km southwest of Virginia, ~9km south of Welkom and ~16km north of Theunissen.









Legend

Adamsons Vley No. 655	Cabriere No. 215	Grusde No. 229	Klein Pan No. 320	Mooivlei No. 357	Vaalbank No. 190
Annex Glen Ross No. 562	Carlo No. 596	Hakkies No. 695	Kleinbegin No. 134	Nortier No. 361	Vlapan No. 358
Annex Grusde No. 474	Damplaats No. 341	Hakkies No. 695	Kovno No. 235	Palmietkuil No. 548	Welgelegen No. 382
Annex Mooivlakte No. 208	Dankbaarheid No. 16	Hakkies No. 742	Langlaagte No. 110	Palmietkuil No. 328	Weltevredre No. 638
Blaauwdrift No. 188	De Klerks Kraal No. 231	Harmonie No. 579	Leeuwaarden No. 171	Paulina No. 470	Weltevreden No. 443
Bloemhoek No. 509	Die Mond No. 479	Helpmekaar No. 47	Leeuwbult No. 52	Richelieu No. 135	Zoetendal No. 243
Boschluisspruit No. 278	Digito No. 642	Jonkers Rust No. 72	Leeuwbult No. 580	Rondehoek No. 200	Zonderzorg No. 342
Braklaagte No. 41	Doorn River No. 330	Jordaan No. 1	Lekkerlewe No. 643	Siberia No. 464	Zonderzorg No. 640
Brakspruit No. 121	Doorndeel No. 236	Jordaans Rust No. 59	Middelplaas No. 583	Spoorleggerswoning 54 No. 167	
Bruintjies Hoogte No. 367	Enkeldoorn No. 360	Kaalpan No. 65	Mond Van Doornrivier No. 38	Stille Woning No. 703	
Bruintjies Hoogte No. 367	Friskewaag No. 550	Kalkoenkrans No. 225	Mooifontein No. 639	Terra Blanda No. 155	
Bryan No. 561	Glen Ross No. 734	Klein Palmiet Kuil No. 407	Mooivlakte No. 199	Toulon No. 368	

284 farm portions

## Cadastral / Infrastructure

1473 Tetra4 Cluster 2 Project

### Legend

- Study Area
- Places
- Railway
- Roads
- Rivers
- Infrastructure**
  - Compressor Stations
  - LNG/LHe Plant
- Project Footprint Buffer Zones**
  - Pipeline (300m)
  - Wells Tansects (600m)
  - Transmission Loop Buffer (300m)
  - Extensions



### Data Sources:

CSG; ESRI, SANBI, DHSWS  
 Coord System: GCS WGS 1984  
 Datum: WGS 1984  
 Units: Degree  
 Ref: Cadastral Infrastructure

Date: 2022/08/12

EIMS Ref: Cad Infrast.

Compiled: CM

Reviewed: BW

Approved: LW



# Project Overview

- **Overview:**

- Cluster 2 development aims to produce a total of ~45 Million Standard Cubic Feet per Day (MMSCFD) of gas.
- The construction of the gas gathering network is planned to commence in ~May 2023 and be completed by ~October 2025.
- Construction of the LNG/LHe Plant is planned to commence in ~March 2023 and be completed by ~February 2026.
- The operational timeframe for the project is approximately 20 years (~2026 to ~ 2046)

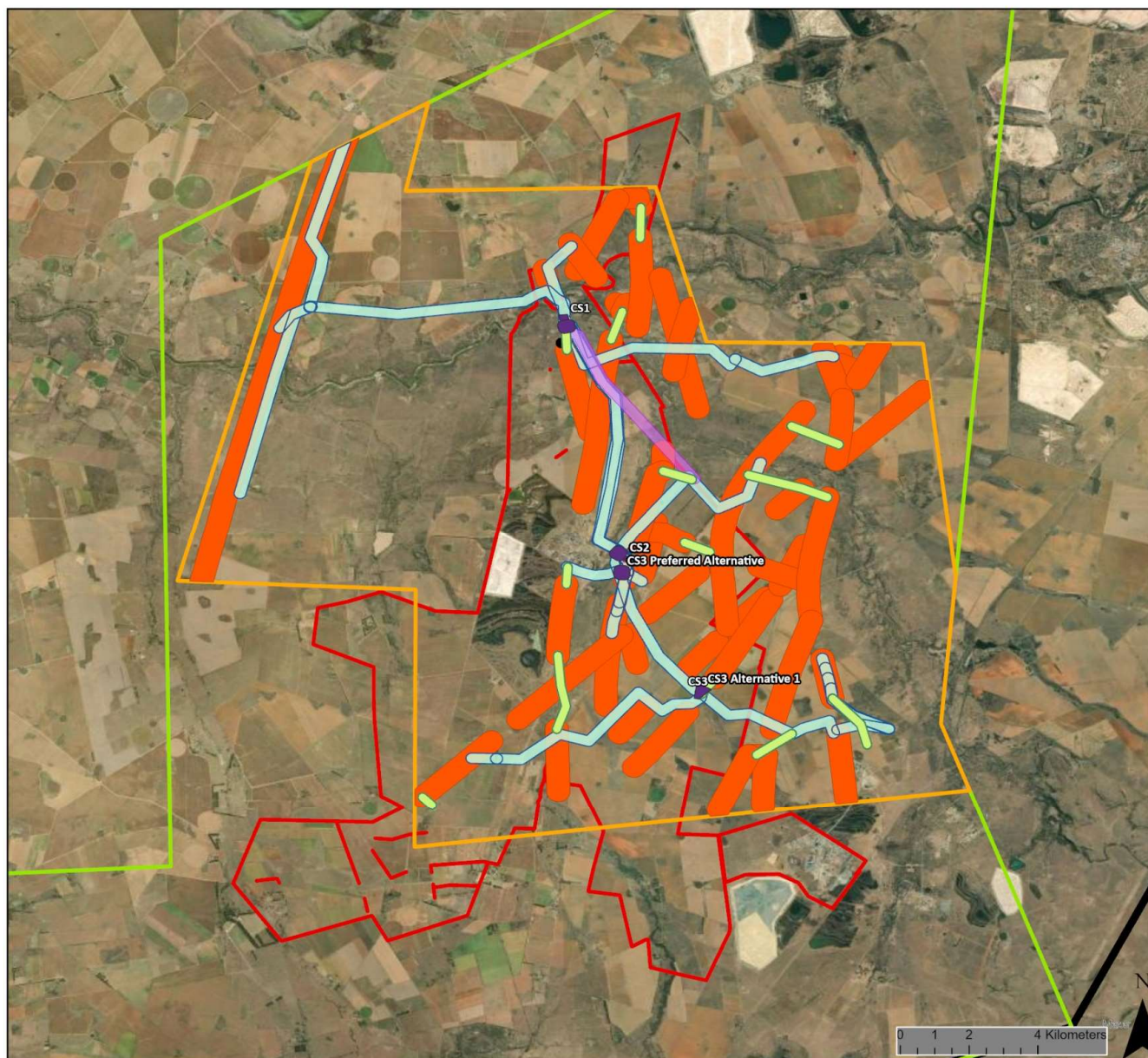


# Project Description

- ~400 exploration wells (each 50 m X 50 m = 250 m<sup>2</sup>)
- ~300 production wells (each 1,4 m x 1,1 m = 1.54 m<sup>2</sup>)
- ~480 km of gas transmission pipelines (10 m servitude)
- ~28 booster stations (each 10 m x 14 m = 140 m<sup>2</sup>)
- 3 compressor stations (each 60 m x 60 m = 3600 m<sup>2</sup>)
- Access roads (2.5 m wide)
- LNG/LHe Plant (~9.6 ha) with temporary camp/laydown area (~15.8 ha)





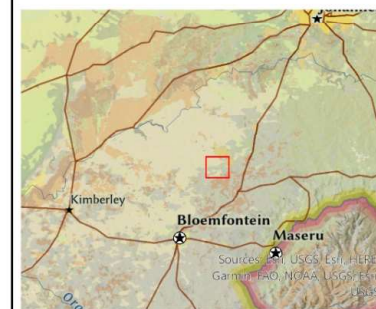


## Site Plan

1473 Tetra4 Cluster 2 Project

### Legend

- Approved 2011 Study Area
- Cluster 1 Approved Area (2017)
- Cluste 2 Application Area (2022)
- Infrastructure**
  - Compressor Stations
  - Extensions
  - LNG/LHe Plant
  - Transmission Loop Buffer (300m)
  - Pipeline (300m)
  - Wells Tansects (600m)



### Data Sources:

CSG; ESRI  
Coord System: GCS WGS 1984  
Datum: WGS 1984  
Units: Degree  
Ref: Site Plan

Date: 2022/07/19

EIMS Ref: Project History

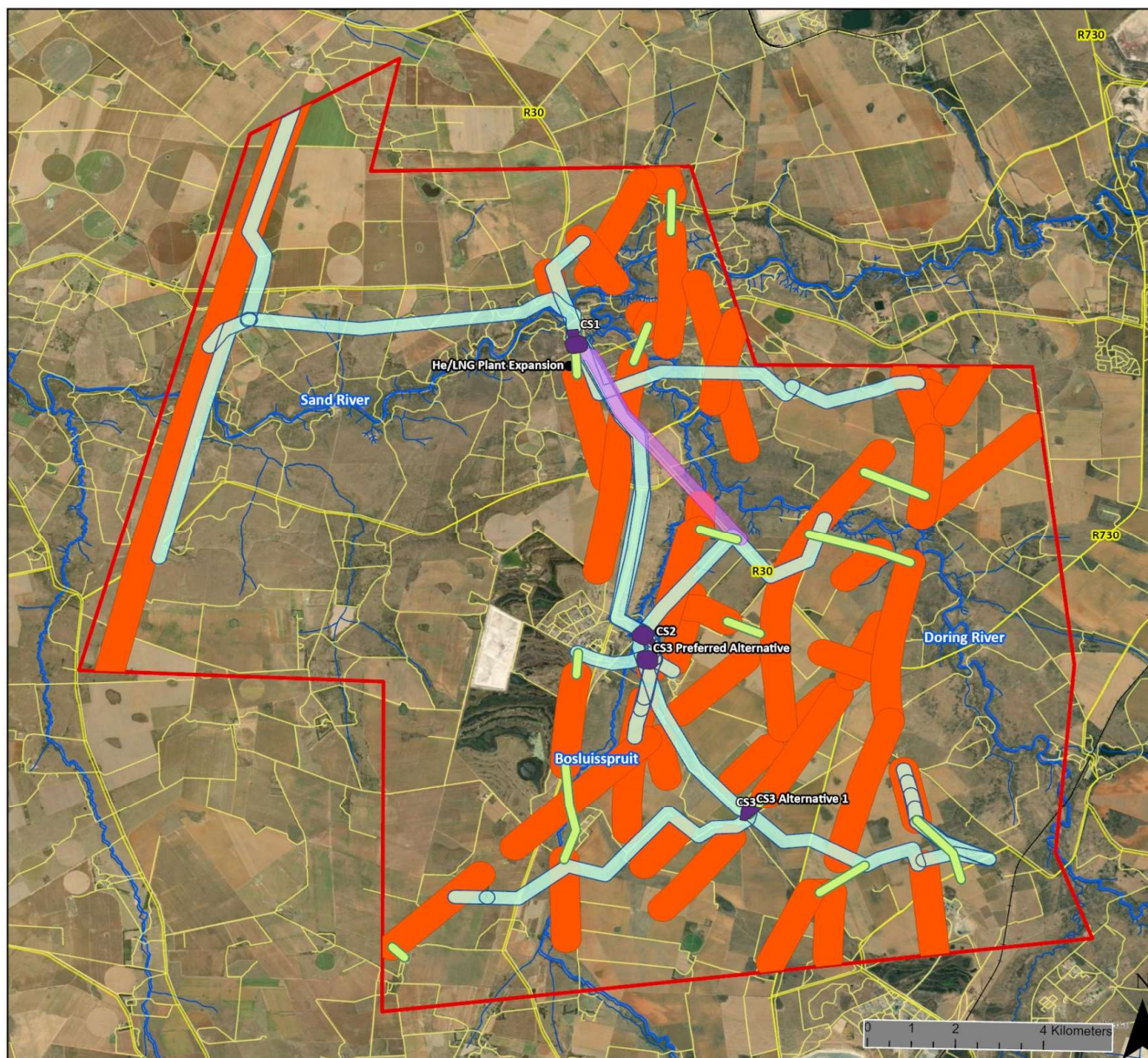
Compiled: CM

Reviewed: BW

Approved: LW







## Locality Map

1473 Tetra4 Cluster 2 Project

### Legend

- Study Area
- Places
- Railway
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- Rivers
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  - Pipeline (300m)
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### Data Sources:

CSG; ESRI, SANBI, DHSWS  
 Coord System: GCS WGS 1984  
 Datum: WGS 1984  
 Units: Degree  
 Ref: Locality Map

Date: 2022/07/19  
 EIMS Ref: Locality  
 Compiled: CM  
 Reviewed: BW  
 Approved: LW





Pigging Station



Compressor Station



LNG/LHe Plant



Pipeline Servitude

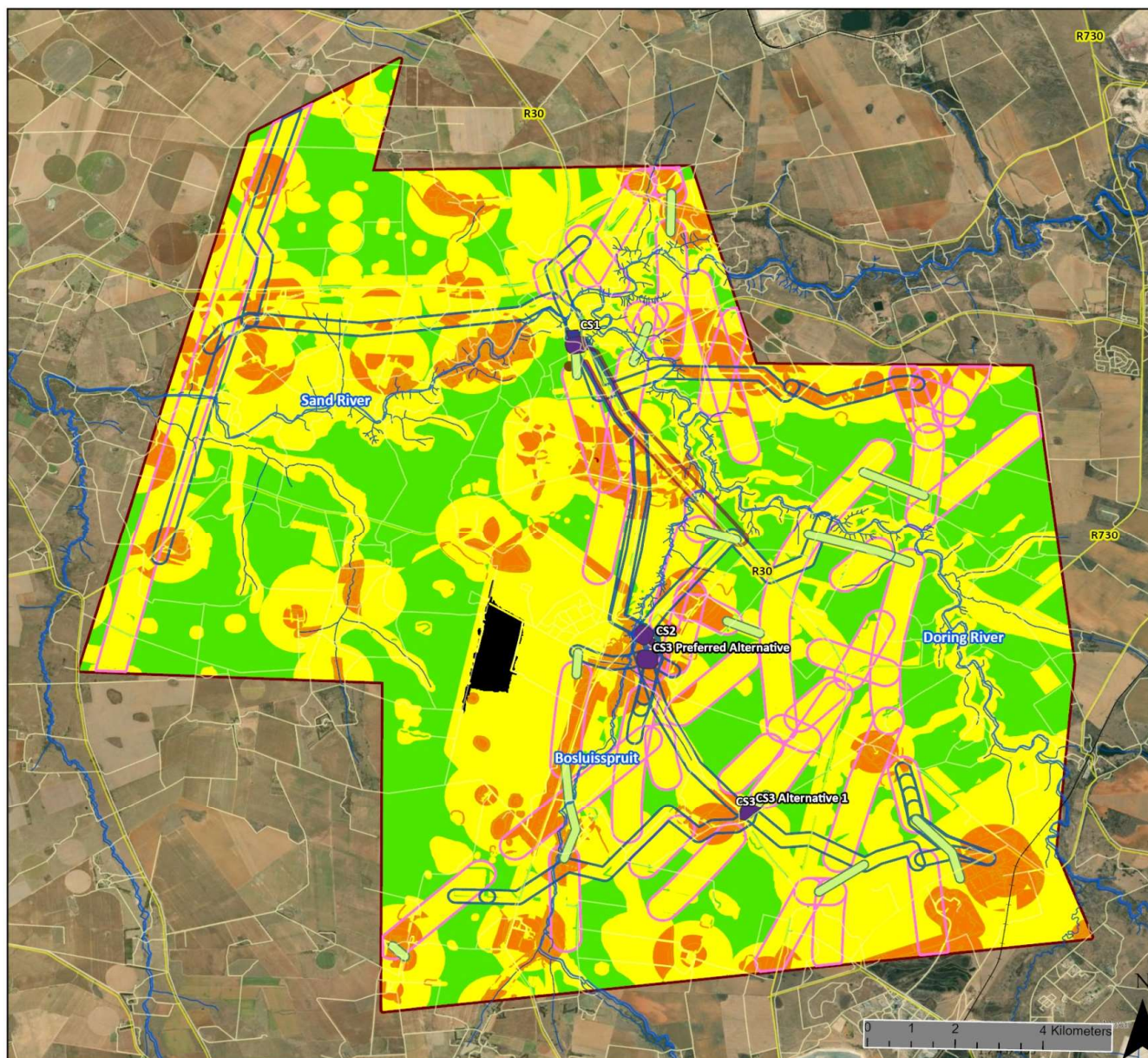


Low Point Drain

# Specialist Studies

Specialist Discipline	Company/Organisation
Agriculture, Soils and Hydropedology (soil water)	The Biodiversity Company
Air Quality & Health Risk + Climate Change / GHG	Airshed Planning Professionals
Economic	Strategy4Good
Geohydrology (groundwater)	Gradient Groundwater Consulting
Heritage and Palaeontology	PGS Heritage
Hydrology (surface water)	SMEC South Africa
Noise	Airshed Planning Professionals
Social	Equispectives Research and Consulting Services
Terrestrial Biodiversity	The Biodiversity Company
Visual	Environmental Planning and Design
Wetland and Aquatic	The Biodiversity Company





## Scoping Phase: Combined Sensitivity Map 1473 Tetra4 Cluster 2 Project

- Legend**
- Project Footprint Buffer Zones**
- Pipeline (300m)
  - Wells Tansects (600m)
  - Transmission Loop Buffer (300m)
- Infrastructure**
- Compressor Stations
  - Extensions
  - LNG/LHe Plant
  - Places
  - Railway
  - Roads
  - Rivers
  - Study Area
- FinalSens**
- Least Concern
  - Low
  - Medium
  - High
  - No-go Area



**Data Sources:**  
CSG; ESRI, SANBI, DHSWS  
Coord System: GCS WGS 1984  
Datum: WGS 1984  
Units: Degree  
Ref: Scoping Sensitivity

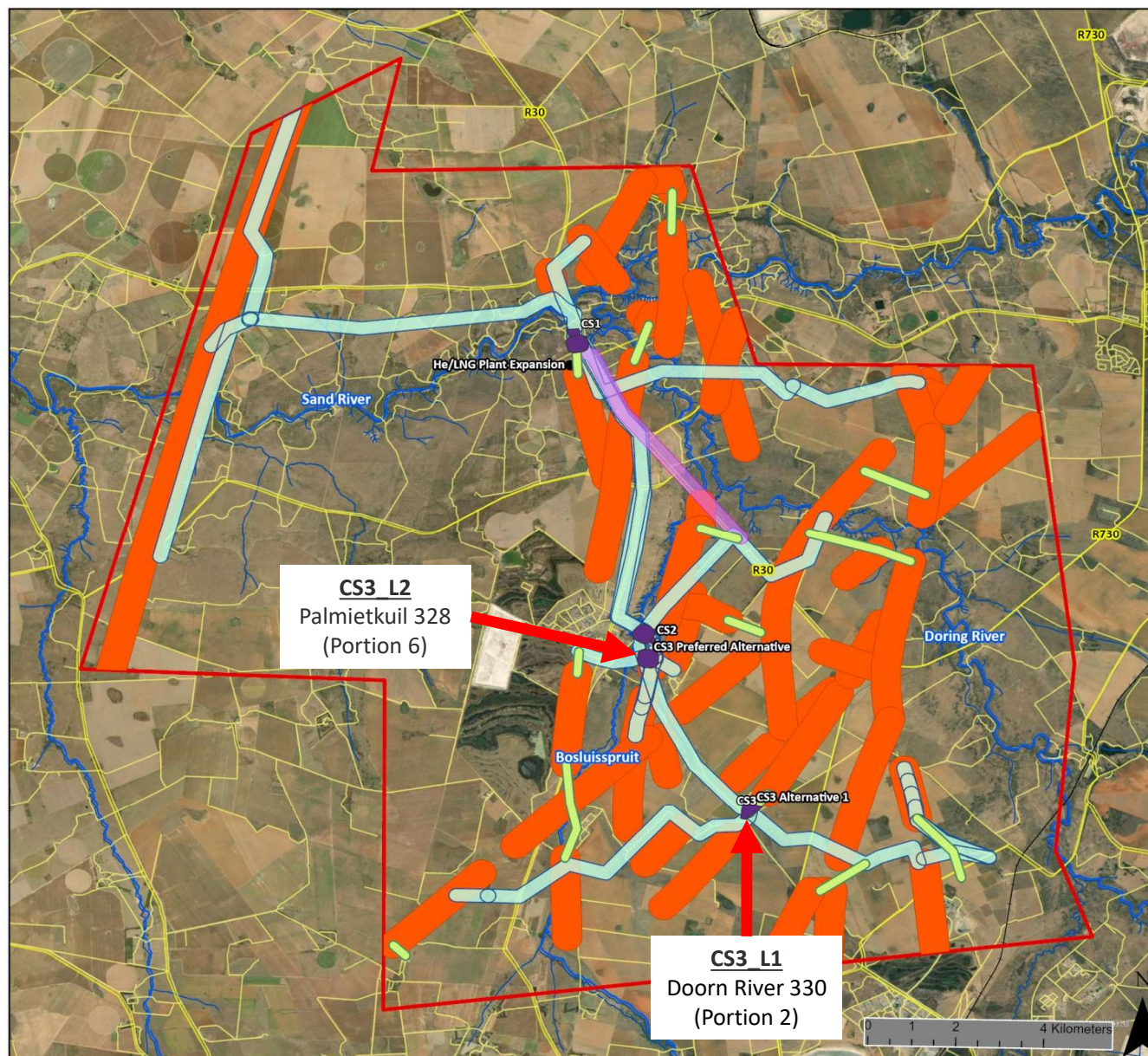
Date: 2022/06/29  
EIMS Ref: Sensitivity Baseline  
Compiled: CM  
Reviewed: BW  
Approved: LW





# Alternatives

Alternative Category	Alternative	Alternative Description Summary	Advantages	Disadvantages/ Risks	Carried into EIA
Location Alternatives	CS3_L1	Compressor Station 3 alternative located on the farm Doorn River 330 (Portion 2).	Well positioned within the southern gas pipeline network to balance the system without expensive reinforced pipeline network.	High risk that no electricity supply / connection is available in this location which would prevent operation of the compressor station and negatively affect the entire southern gas production network.	Yes
	CS3_L2	Compressor Station 3 located adjacent to the existing Cluster 1 Compressor Station A on farm Palmietkuil 328 (Portion 6).	Electricity supply is confirmed as the existing Cluster 1 CSA is already connected to the Eskom grid.	Would require a more costly pipeline design in the southern gas pipeline network.	Yes
Layout Alternatives	Based on a sensitivity mapping of the well transects and pipeline transects, any unacceptably high-risk areas will be delineated as no-go areas.				Yes
Process Alternatives	No specific feasible process alternatives were identified.				No
Technology Alternatives	No specific feasible technology alternatives were identified.				No
No-Go Alternative	No-Go	The proposed Cluster 2 project will not take place at all.	No environmental impacts as a result of the Cluster 2 project.	No benefits with respect to job creation and also no direct and indirect socio-economic benefits created for the local and regional economies.	Yes



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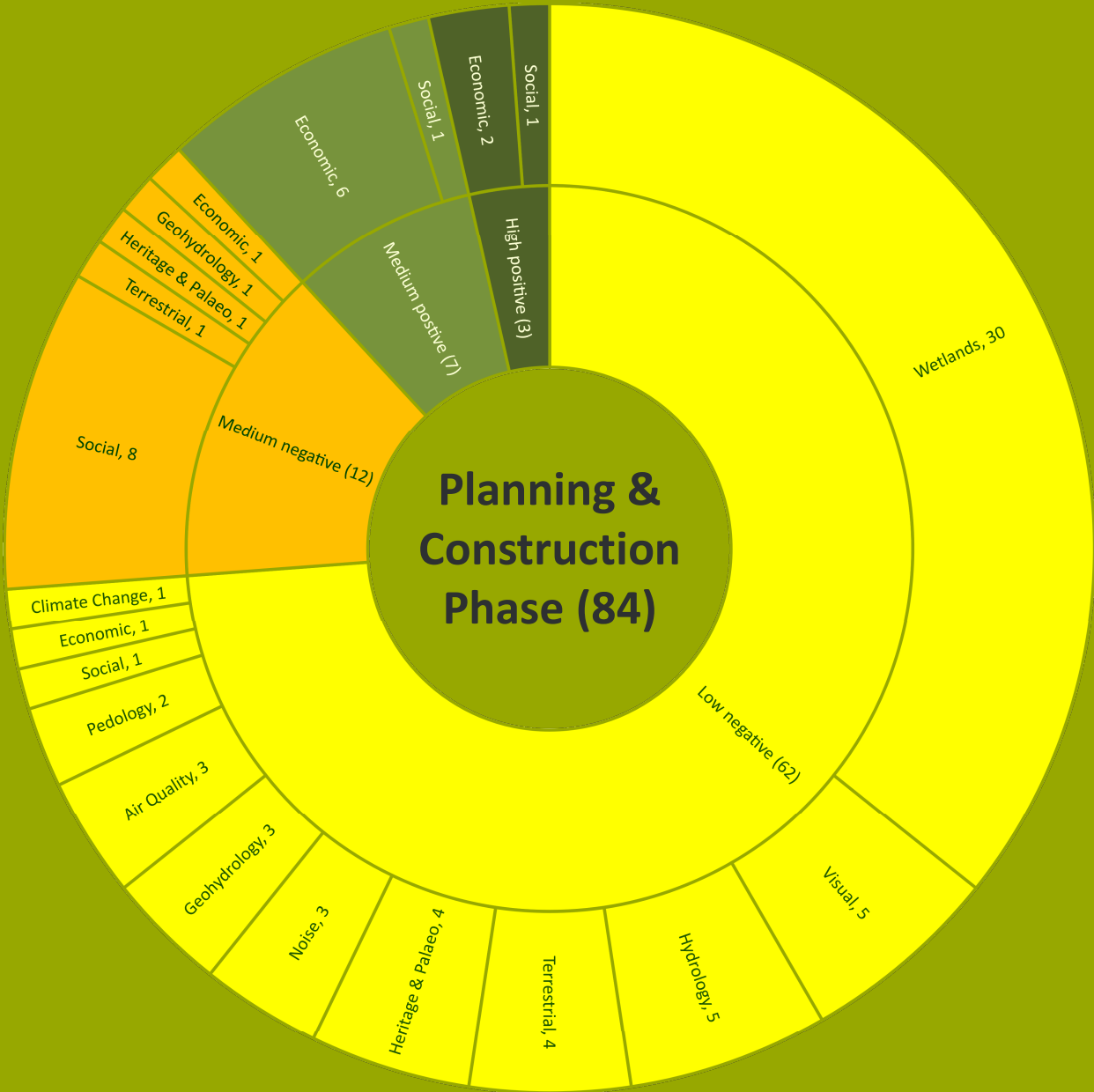


# Preliminary Impacts and Assessment

- 225 Preliminary impacts identified for the various project phases (planning, construction, operation, decommissioning, rehabilitation and closure).
- Mitigation/management measures for identified impacts are included in the Scoping Report and will be updated where necessary during the EIA phase.



Environmental Significance Rating	
Value	Description
≤ -17	<b>High negative</b> (i.e. where the impact must have an influence on the decision process to develop in the area).
> -17 ≤ -9	<b>Medium negative</b> (i.e. where the impact could influence the decision to develop in the area).
> -9 < 0	<b>Low negative</b> (i.e. where this impact would not have a direct influence on the decision to develop in the area).
0	<b>No impact</b>
>0 < 9	<b>Low positive</b> (i.e. where this impact would not have a direct influence on the decision to develop in the area).
≥ 9 < 17	<b>Medium positive</b> (i.e. where the impact could influence the decision to develop in the area).
≥ 17	<b>High positive</b> (i.e. where the impact must have an influence on the decision process to develop in the area).



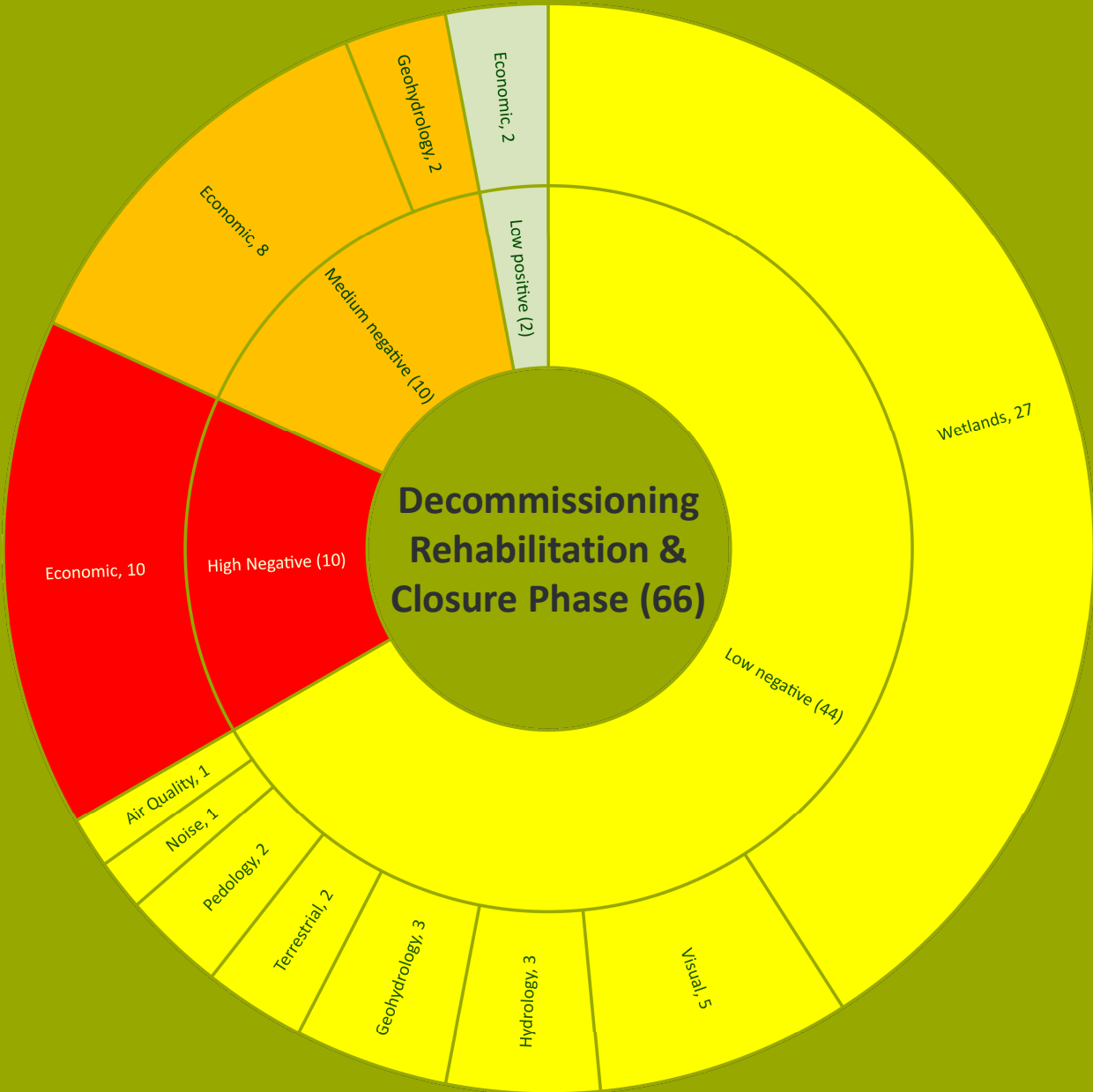


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$\geq 9 < 17$	<b>Medium positive</b> (i.e. where the impact could influence the decision to develop in the area).
$\geq 17$	<b>High positive</b> (i.e. where the impact must have an influence on the decision process to develop in the area).





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$\geq 17$	<b>High positive</b> (i.e. where the impact must have an influence on the decision process to develop in the area).



## Preliminary Impact Assessment (Highlights)

Social	Impact on livelihoods	Operation	-21
	Impact of servitudes on land values	Operation	-21
	Impacts on safety and security of local residents	Construction	-17
	Impacts on safety and security of local residents	Operation	-18
	Impacts on sense and spirit of place	Operation	-28
	Contribution to economy of South Africa	Operation	27
	Secondary economic opportunities	Construction	20
	Secondary economic opportunities	Operation	21
	Potential opportunity for education, skills development, and training	Operation	21



# Plan of Study for EIA

- EIA Phase will commence on acceptance of the Scoping Report by the PASA.
- Finalise specialist assessments.
- Alternatives:
  - Compressor Station 3 - Doorn Rivier 330 (Portion 2) vs Palmietkuil 328 (Portion 6)
  - Refined sensitivity planning approach to the consolidated sensitivity map in which any no-go areas will be delineated.



# Indicative Timeframes going forward

- Scoping Report availability: 29 July 2022 – 30 August 2022
- EIA Report availability: ~mid October to mid November 2022
- Submission of Final Reports: End November 2022
- Decision: ~March 2023

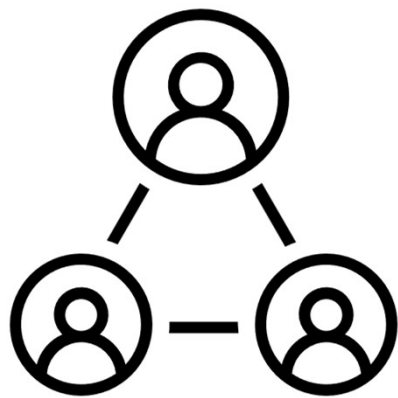


# Who to Contact

- Contact Person: Qaphela Magaqa
- EIMS Reference Number: 1473
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- Telephone: (011) 789 7170/ Fax: (086) 571 9047
- E-mail: [tetracluster2@eims.co.za](mailto:tetracluster2@eims.co.za)
- Please include the project reference number 1473 in all correspondence.







Discussion