

BACKGROUND INFORMATION DOCUMENT

ENVIRONMENTAL AUTHORISATION APPLICATION PROCESS FOR THE PROPOSED TETRA4 CLUSTER 2 GAS PRODUCTION PROJECT



PURPOSE OF THIS DOCUMENT:

- This Background Information Document (BID) provides you, as an Interested and Affected Party (I&AP), a high-level overview of the proposed project.
- The BID invites you, as an I&AP, to participate in the subsequent Public Participation Process.
- The BID provides you, as an I&AP with an opportunity to contribute and participate in the formulation of the Scoping and Environmental Impact Assessment Reports and Environmental Management Programme (EMPr).
- The BID also provides you, as an I&AP an opportunity to provide the project team with your comments, concerns and objections to the proposed project.

INTRODUCTION:

Tetra4 (Pty) Ltd (hereafter referred to as the applicant – Tetra4) has appointed Environmental Impact Management Services (EIMS) as the Environmental Assessment Practitioner (EAP) to assist with undertaking the necessary authorisation processes, including compiling the necessary reports and undertaking the statutory consultation processes, in support of the proposed project as described herein.

It is anticipated that several listed or regulated activities contained in the following legislation will potentially be triggered by the proposed project:

- Environmental Authorisation (EA) and amendments in accordance with the National Environmental Management Act- NEMA (Act 107 of 1998).
- Atmospheric Emissions Licence application/variation in accordance with the requirements of the National Environmental Management: Air Quality Act- NEM:AQA (Act 39 of 2004).
- Waste Management Licence in accordance with the requirements of the National Environmental Management: Waste Act- NEM:WA (Act 59 of 2008).
- Water Use Licence (WUL) in accordance with the National Water Act - NWA (Act 36 of 1998).
- Amendment of Rights Permits or Plans in accordance with Section 102 of the Mineral and Petroleum Resources Development Act - MPRDA (Act 28 Of 2002).

The exact enviro-legal requirements and activities will be confirmed during the Authority pre-application meetings.

The Environmental Impact Assessment (EIA) process will be undertaken in terms of Chapter 6 of the EIA Regulations, 2014 (GNR 982) promulgated under the NEMA (as amended). A Scoping and Environmental Impact Assessment (EIA) process will be followed.

Aim of the Background Information Document (BID):

The aim of the BID is to:

- Provide an overview of the Environmental Authorisation/Licensing Applications as well as the public participation processes which will be undertaken for the proposed project;
- Allow Interested and Affected Parties (I&APs) the opportunity to obtain a broad understanding of the proposed project and to request or share information; and
- Provide details on how I&APs can register their interest with and submit comments on the project. It is important to note that only registered I&APs will receive further communication regarding the project for the duration of the application process (i.e. invitation to review and comment on the Scoping and Environmental Impact Assessment Reports, specialist studies and the EMPr).



LOCATION, SCALE, AND EXTENT OF THE PROPOSED PROJECT:

LOCATION

The proposed project falls within the Masilonyana and Matjhabeng Local Municipalities, in the Lejweleputswa District Municipality, Free State Province. The site boundary is ~5km south west of the town of Virginia, ~9km south the town of Welkom and ~16km north of the town of Theunissen. The application area covers approximately 27 500 hectares, and the approximate centre point of the site is located at 28°10'20.47"S and 26°43'50.79"E. A locality map is included on page 6 of this BID for ease of reference.

The project covers various farm portions and a set of maps showing the farms and portions can be found on the EIMS website at www.eims.co.za/public-participation. Below is a list of parent farms of which certain portions of each are included under this application:

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

PROJECT DESCRIPTION:

The applicant wishes to expand their natural gas (helium and methane) operations, located within the approved production right area (Production Right Ref: 12/4/1/07/2/2). A project history and mineral tenure map is included on page 7 of this BID for ease of reference. The planned expansion to the existing approved production activities will involve up to 300 production wells, gas transmission pipelines and associated infrastructure, compressor stations and a Liquid Natural Gas (LNG) and Liquid Helium (LHe) plant ("LNG/LHe Plant") and associated infrastructure as part of the Cluster 2 expansion of the Project in order to meet the future production requirements. The Cluster 2 project will comprise of two components namely (1) the gas gathering network and (2) the LNG/LHe Plant.

As the specific location of new production wells and subsequent pipelines and associated infrastructure can only be confirmed once exploration activities are undertaken, this application is focussing on infrastructure transects (buffer areas) in addition to a broad assessment of the entire study area. Through this process any potential no-go areas or highly sensitive areas will be delineated, and appropriate mitigation measures identified where relevant. A map showing the infrastructure transects is included on page 8 of this BID for ease of reference.

The full field well development will comprise 3 phases/groups of wells during which exploration and drilling will be undertaken. The first phase will target ~15 Million Standard Cubic Feet per Day of gas (MMSCFD) followed by the second phase of ~30 MMSCFD and finally the third phase of ~45 MMSCFD. The construction of the gas gathering network (including pipelines, booster and compressor stations, etc) is planned to commence in ~May 2023 and be completed by ~December 2023. Construction of the LNG/LHe plant and associated infrastructure is planned to commence in ~March 2023 and be completed by ~February 2025. The operational (gas production) timeframe for the project is approximately 20 years (~2025 to ~2045).

LEGISLATIVE REQUIREMENTS

The proposed project requires certain authorisations, approvals, permits, and/or licences. The following requirements have specifically been identified at this stage and additional activities will likely be identified following the authority pre-application consultations:



Relevant Legislation	Listed activities or triggers	Authorisation, Approval, Licence, or Permit requirement:
Chapter 5 of the NEMA	GNR 983 (2014, as amended): Activity 21D: Any activity including the operation of that activity which requires an amendment or variation to a right or permit in terms of section 102 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity contained in this Listing Notice or in Listing Notice 3 of 2014, required for such amendment.	Environmental Authorisation (EA)
Chapter 5 of the NEMA	GNR 984 (2014, as amended): Activity 15: The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for- <ul style="list-style-type: none"> (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan. 	Environmental Authorisation (EA)
Chapter 5 of the NEMA	GNR 983 (2014, as amended): Activity 34: The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the release of emissions, effluent or pollution, excluding- <ul style="list-style-type: none"> (i) where the facility, infrastructure, process or activity is included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (ii) the expansion of existing facilities or infrastructure for the treatment of effluent, wastewater, polluted water or sewage where the capacity will be increased by less than 15 000 cubic metres per day; or (iii) the expansion is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will be increased by 50 cubic meters or less per day. 	Environmental Authorisation (EA) and amendment to Atmospheric Emission Licence (AEL)
NEMWA GN 921	GN 921 (2013) Category B11: The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	Waste Management Licence (WML)
Section 21 of the NWA	Section 21(c&i): impeding or diverting the flow of water in a watercourse and/or altering the bed, banks, course or characteristics of a watercourse.	Water Use Licence (WUL)

As a consequence of triggering the provisions above, there is a requirement to undertake an Environmental Impact Assessment Process (EIA) through a full Scoping and Environmental Impact Assessment (EIA) process. The EIA is to be undertaken in accordance with the requirements of the NEMA EIA Regulations (GNR982, 2014 as amended) and an integrated EA and Waste Management Licence application process will be followed. Additional listed activities under NEMA, NEMAQA, NEMWA and/or the NWA will be identified during the process.

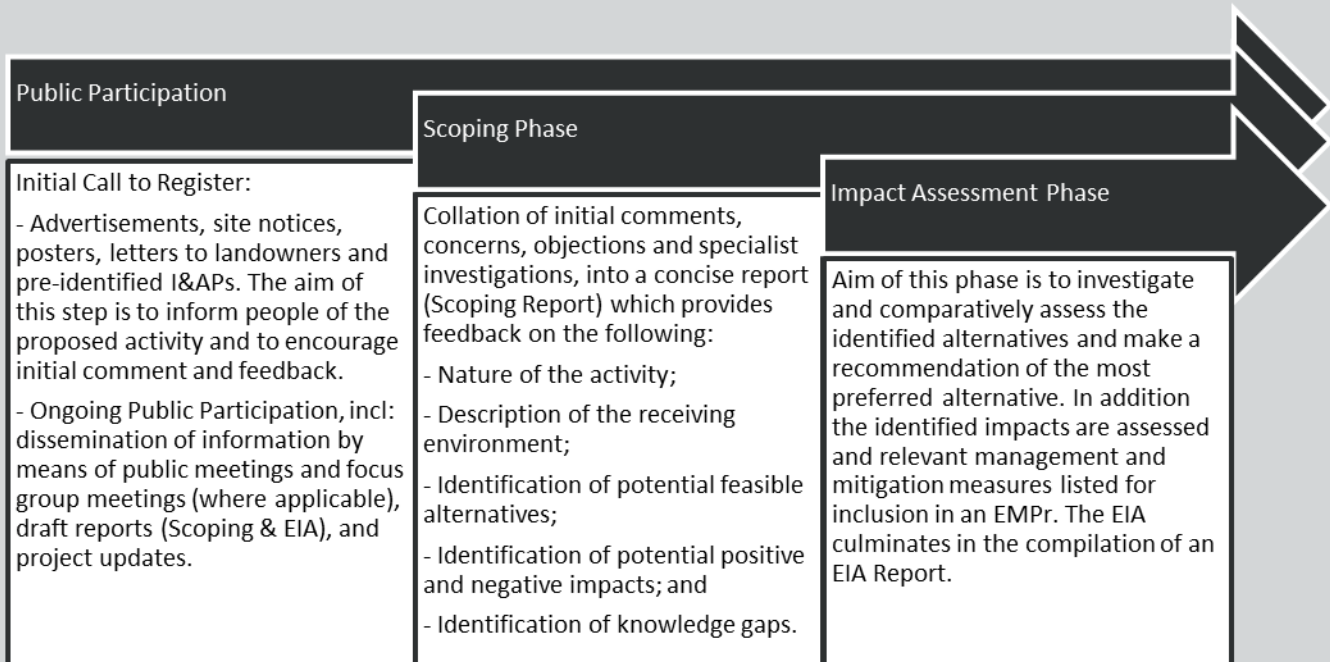


IMPACT ASSESSMENT PROCESS

An EIA process is a planning and decision-making tool, to describe and assess the physical, biological, social, and economic impacts which a given development or project may have. To be able to inform the decision-making process, it is important for public issues and concerns to be identified timeously, to enable the EIA team to evaluate them.

The EIA process allows for the environmental consequences of a proposed project to be identified up-front, investigated throughout the impact assessment process, and taken into consideration by the decision-making authorities. The EAP and various specialists also identify potential negative and positive impacts that could arise as a result of the proposed project and identify applicable mitigation measures required, to avoid or reduce negative impacts and to enhance positive impacts.

A broad overview of EIA process is provided below:



Once the relevant processes have been completed and the final documentation submitted to the competent authority, the competent authority reviews the application and makes an informed decision. The I&APs will be informed of the decision and their right to appeal in the event that they disagree with the decision.

PRELIMINARY ENVIRONMENTAL IMPACTS

One of the key drivers to a successful EIA is to ensure that potential impacts (both positive and negative) are identified and investigated. Additional impacts may be identified by the relevant specialists and will be included by the EIA Team in order to accurately and objectively assess these potential impacts. A number of potential environmental impacts associated with the proposed project have been identified. Preliminary identified potential impacts to be assessed in this EIA process include amongst others:

- Interference with existing land uses/livelihoods
- Damage to farm roads and existing infrastructure
- Alternative land use
- Employment and local economic development
- Dust and Noise
- Disruption of watercourse hydrology
- Surface or ground water quality
- Economic impact
- Air quality and climate change (Greenhouse Gas - GHG) impacts
- Health impacts
- Visual impacts
- Terrestrial and aquatic impacts
- Heritage and palaeontological impacts



The above-mentioned impacts should not be construed as the only impacts that will be identified during the course of the application process. Based on public consultation, specialist input and further detailed assessments, additional impacts will likely be identified and assessed.

All potential impacts will be identified and assessed following an impact assessment methodology guided by the requirements of the NEMA EIA Regulations. The broad approach to the significance rating methodology is to determine the environmental risk (ER) by considering the consequence (C) of each impact (comprising Nature, Extent, Duration, Magnitude, and Reversibility) and relate this to the probability/likelihood (P) of the impact occurring. This determines the environmental risk. In addition, other factors including cumulative impacts and potential for irreplaceable loss of resources, are used to determine a prioritisation factor (PF) which is applied to the ER to determine the overall significance (S).

Furthermore, based on the identified impacts and their ratings, mitigation and management measures are recommended for the applicant and these are included in an Environmental Management Programme (EMPr) towards ensuring that any negative impacts that cannot be avoided are minimised and managed, and positive impacts maximised.

Specialist studies will be utilised to guide and inform the assessment of the potential impacts. The specialist studies identified to be included in this assessment are indicated below and additional studies may be identified during the process:

- Agricultural Potential & Hydrogeology Impact Assessment
- Air Quality, Climate Change, Health Risk & GHG
- Economic Study and Impact Assessment
- Financial Provision update
- Geohydrology Impact Assessment
- Heritage Impact Assessment
- Hydrology Impact Assessment
- Noise Impact Assessment
- Social Impact Assessment
- Terrestrial Biodiversity Impact Assessment
- Visual Impact Assessment
- Wetland and Aquatic Impact Assessment

HOW TO GET INVOLVED

Should you feel that you may be interested in, or affected by, this project, it is essential that you register as an Interested and Affected Party (I&AP) in which case you will be kept informed regarding the project and afforded an opportunity to participate in the process. Please note that only registered I&APs will be included in future correspondence regarding the project and associated updates. You may register and/or comment as an I&AP in any of the following ways:

- Complete the I&AP registration form and questionnaire and return it to EIMS via email, fax or post;
- Submit written comments, registrations, or requests to EIMS via email, fax or post; and/or
- Via telephone call.

It is important to note that the EIA process is guided by legally stipulated timeframes and as such, in order to ensure your continued and valuable involvement in the project, we request that your registration requests and any preliminary comments are submitted to EIMS (contact details provided below) by **21 June 2022**. Registrations will still be accepted after this date and up to conclusion of the EIA process. By registering as an interested and affected party you consent to the collection and processing of your personal information as per the EIMS Privacy Notice available at www.eims.co.za/public-participation.

Please note that further to the above, all registered I&APs will also be notified in due course of further participation opportunities, as well as the availability of the Scoping and EIA Reports, EMPr and specialist studies upon which comments will be solicited.

Environmental Impact Management Services (Pty) Ltd (EIMS)

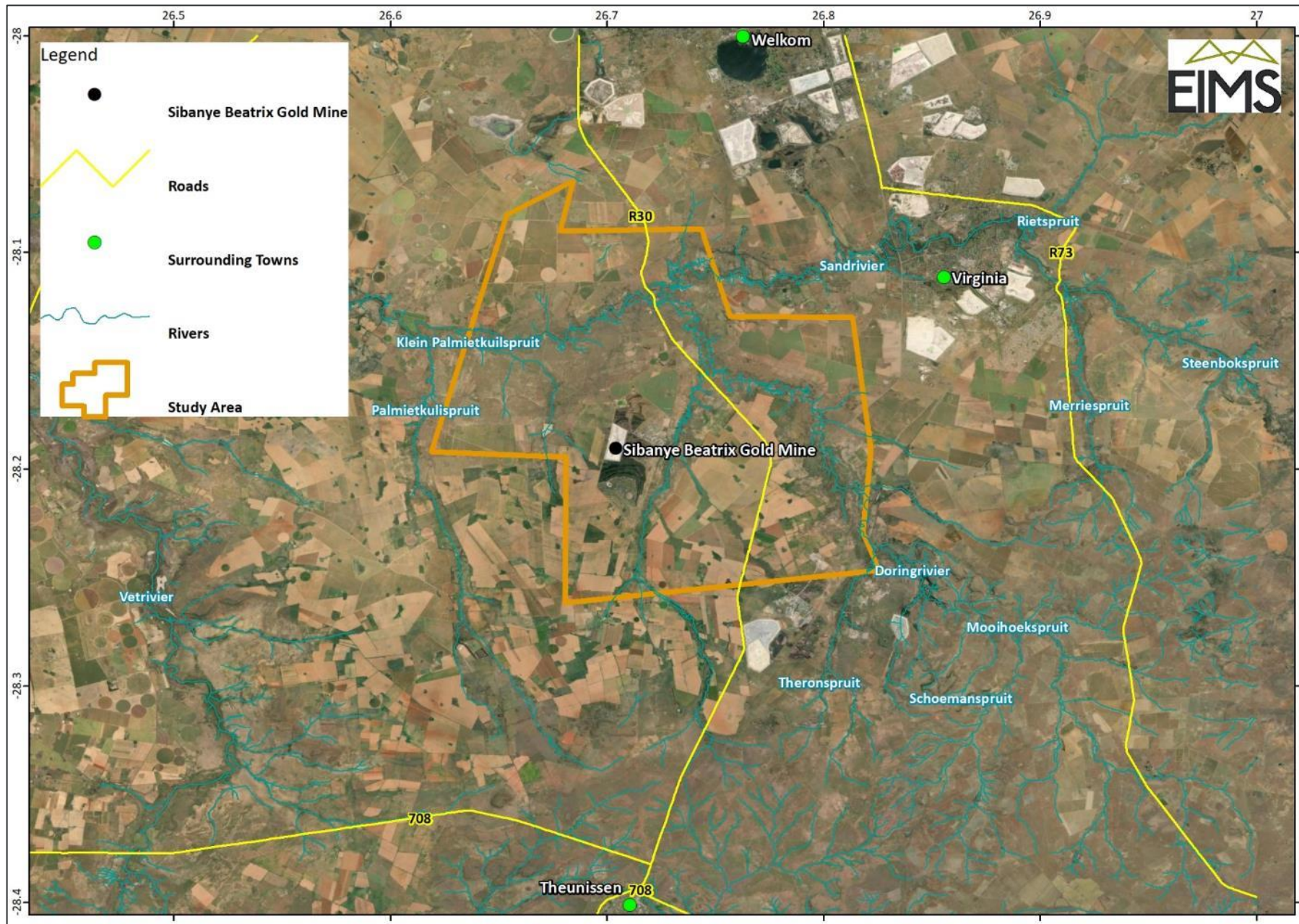
Contact Person: Qaphela Magaqa

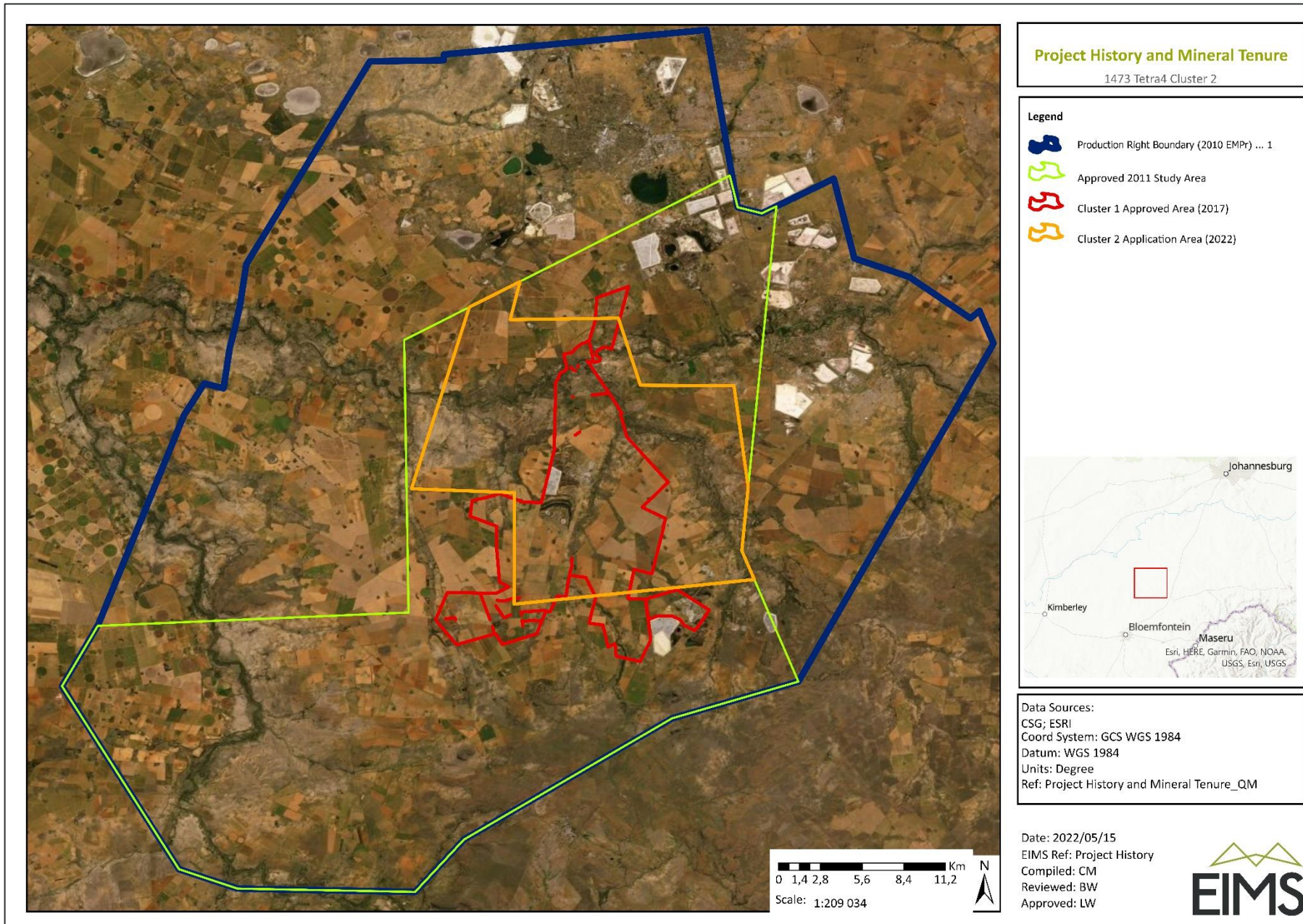
EIMS Reference Number: 1473

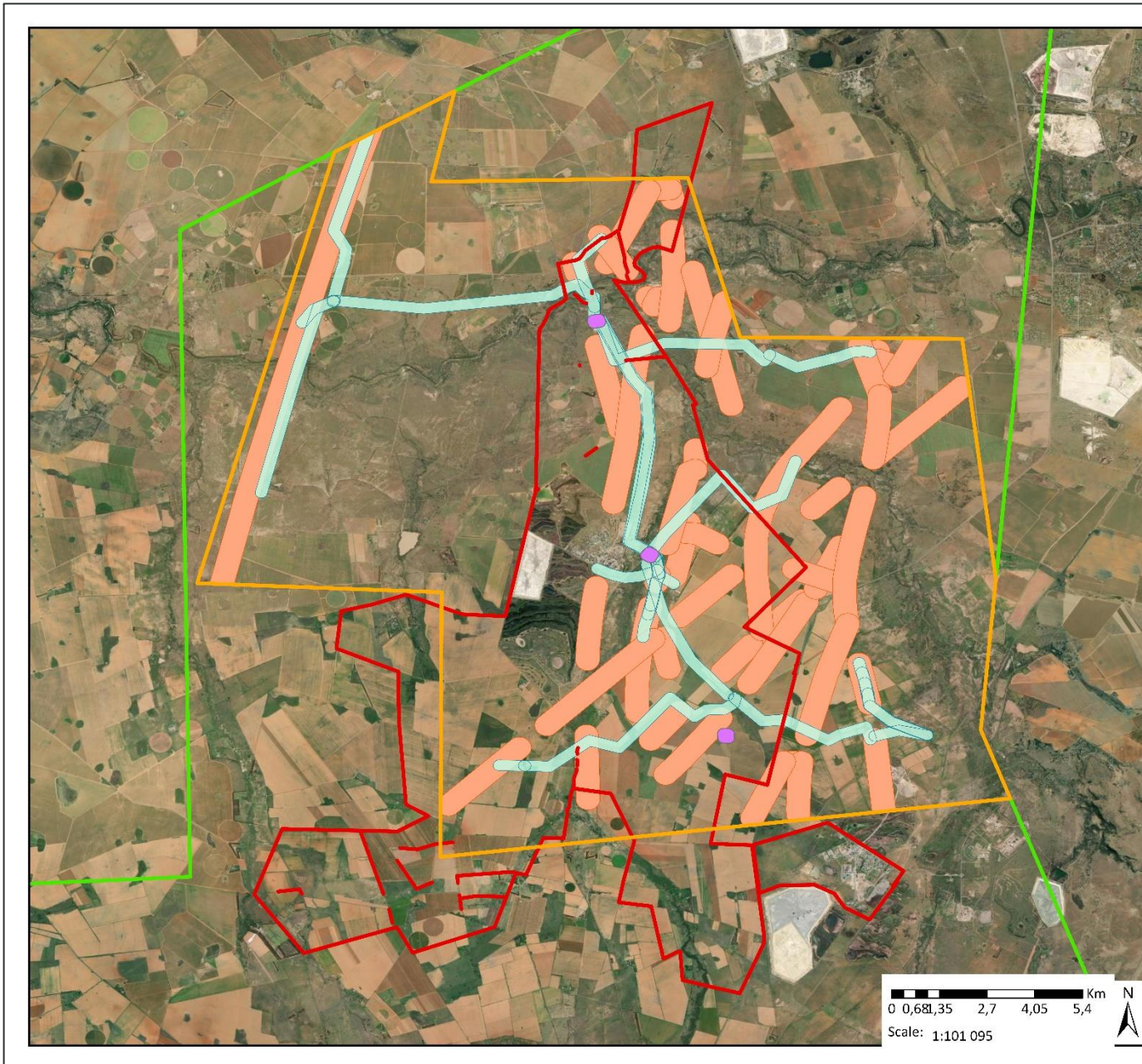
Postal Address: P.O. Box 2083; Pinegowrie; 2123

Telephone: (011) 789 7170/ Fax: (086) 571 9047

E-mail: tetracluster2@eims.co.za







Cluster 2 Project and Mineral Tenure

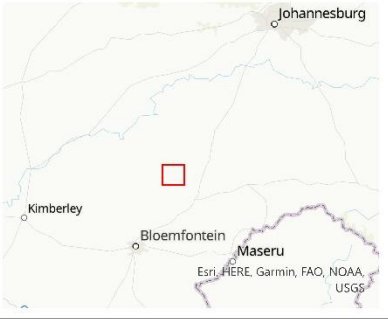
1473 Tetra4 Cluster 2

Legend

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

Project Footprint Buffer Zones

- Extensions (300m)
- Pipeline (300m)
- Wells Tansects (600m)
- Compressor Stations (300m)



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

Date: 2022/05/15
EIMS Ref: Project History
Compiled: CM
Reviewed: BW
Approved: LW

