

BACKGROUND INFORMATION DOCUMENT

THUNGELA LEPHALALE COAL BED METHANE ENVIRONMENTAL AUTHORISATION APPLICATION



Example of an LNG Production Facility



Example of a CBM Well

PURPOSE OF THIS DOCUMENT:

- This Background Information Document (BID) provides you, as an Interested and Affected Party (I&AP), an overview of the proposed project.
- The BID invites you, as an I&AP, to participate in the required 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 (EIA) Reports.
- 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:

Thungela Resources Limited (previously Anglo), hereafter referred to as the Applicant, has appointed Environmental Impact Management Services (EIMS) as the Environmental Assessment Practitioner (EAP) to assist with undertaking the necessary environmental application 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:

- National Environmental Management Act- NEMA (Act 107 of 1998- as amended);
- National Environmental Management: Air Quality Act- NEM:AQA (Act 39 of 2004);
- National Environmental Management: Waste Act- NEM:WA (Act 59 of 2008); and
- National Water Act – NWA (Act 36 of 1998).

The exact enviro-legal requirements and activities will be confirmed during the scoping phase of this project.

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 full EIA process will be followed which involves a scoping phase which is the ‘feasibility’ and largely desk-top assessment stage of the project, followed by more detailed assessments in the EIA phase.

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 EIA process (i.e. invitation to review and comment on the Scoping and EIA Reports).



LOCATION, SCALE, AND EXTENT OF THE PROPOSED PROJECT:

PROJECT DESCRIPTION:

The Applicant is currently the holder of a petroleum Exploration Right (ER) for coal bed methane (CBM) in the Lephale Local Municipality, Limpopo Province, South Africa. The exploration activities undertaken in accordance with this ER have indicated a potentially viable and extractable CBM resource. The Applicant consequently intends to apply to the Petroleum Agency SA (PASA) for a Production Right (PR) to extract and produce (utilize) the CBM resource.

The Applicant aims to extract the CBM resource from the PR area in a phased manner. At present a total of 4 phases are expected to reach the conceptual full field production which spans a total surface area of approximately 134 155 hectares (ha). The first production phases, namely Phase 1 and 2, comprise of ~9 new production wells and ~305 new production wells respectively which will be connected via a buried gas gathering network of pipelines to a centralised gas processing facility. In addition, the existing 10 production wells, constructed during the exploration phase (referred to as the original 5-spot and second 5-Spot) will also be connected to the gas processing facility. **This application only covers Phase 1 and Phase 2 as described above and additional permitting or licencing will be required at a later stage for the remaining Phase 3 and Phase 4 wellfield development should these be pursued.**

To optimally produce gas, hydraulic stimulation (fracturing) of the target coal seams is being proposed. The gas processing includes a compression and liquefaction facility to allow for the production of the final product, Liquefied Natural Gas (LNG), which will be distributed off site via road transport. The production for Phase 1 and 2 is planned to span a period of 30 years commencing from the date that all relevant approvals and licences have been obtained.

LOCATION

The full Production Right (PR) application area encompasses 224 farm portions and a total area of approximately 134 155 ha. The first 2 phases will comprise a smaller area within the broader PR area and will be the subject of this EIA and application for EA. The EA application area (i.e. phases 1 and 2) encompasses 14 farms and covers an area of approximately 14 229 ha. The PR and the EA application area falls within the Lephale Local Municipality and Waterberg District Municipality, Limpopo Province. The EA Application area is situated approximately 14km to the northwest of Lephale town, 5km north of Marapong, and approximately 11km northwest of Onverwacht.

- Regional Description:
 - Local Municipality: Lephale
 - Province: Limpopo
- Closest towns or points of interest: Lephale (~14km northwest), Onverwacht (~11km northwest), Marapong (~5km north)

Please refer to locality map at the end of this BID.

LEGISLATIVE REQUIREMENTS

The proposed project requires certain authorisations, approvals, permits, and/or licences. The following requirements have specifically been identified at this stage:

Relevant Legislation	Listed activities or triggers	Authorisation, Approval, Licence, or Permit requirement:
Chapter 5 of the NEMA	GNR 983 (2014, as amended): Activities 6, 8, 9, 10, 11, 12, 13, 16, 19, 21, 21C, 21D, 21F, 24, 25, 28, 34, 41, 45, 46, 47, 48, 50, 51, 53, 56, 57, 59, 60, 66A, and 67. GNR 984 (2014, as amended): Activities 1, 2, 4, 5, 6, 7, 15, 20, and 25.	Environmental Authorisation (EA)



	GNR 985 (2014, as amended): Activities 2; 4; 12; 13; 14; 15; 16; 22; 23; and 24.	
Chapter 4 and 5 of the NEM:AQA	GNR 893 (2013 as amended): Scheduled Activity: Sub-category 2.4 (Storage and Handling of Petroleum Products).	Atmospheric Emissions Licence (AEL)
Chapter 4 of the NEM:WA	GN921 (2013 as amended): Waste Management Activities A1; A5; A6; A7; A12; A13; A14; B1; B10; B11; C1; C2; C6; and C7.	Waste Management Licence (WML)
Chapter 4 of the NWA	NWA, Section 21 Water Uses: 21a; 21b; 21c; 21e; 21f; 21g; 21h; 21i; and 21j	Water Use Licence (WUL).

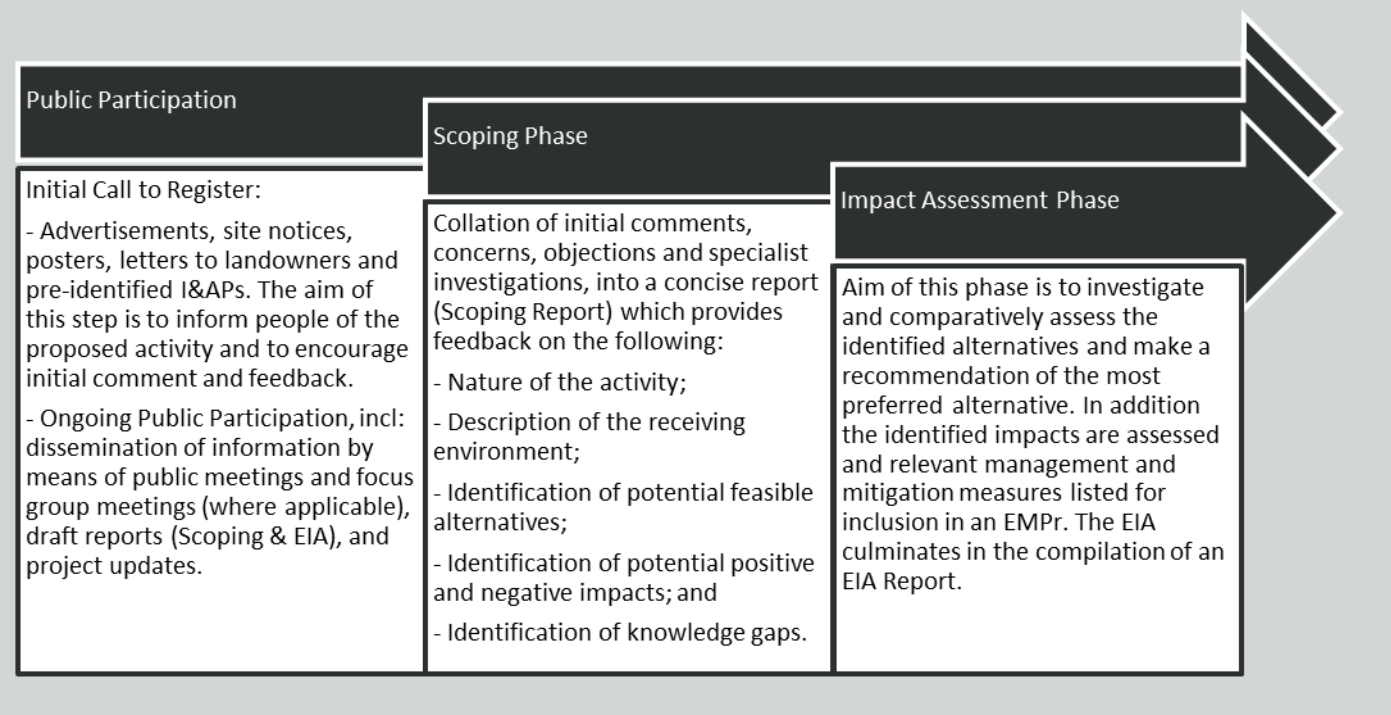
The exact listed activities triggered by this project will be refined during the scoping phase. As a consequence of triggering the provisions above, there is a requirement to undertake an **integrated Environmental Impact Assessment Process (EIA)**. The EIA is to be undertaken in accordance with the requirements of the NEMA EIA Regulations (GNR982, 2014 as amended).

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 board overview of EIA process is provided:





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 during the Scoping phase and relevant specialists will be included into 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:

- **Air Quality and Climate Change Impacts**
- **Surface Water Impacts**
- **Groundwater Impacts**
- **Ecological Impacts**
- **Noise and Visual impacts**
- **Social Impacts**
- **Heritage and Palaeontological Impacts**
- **Soil and Agricultural Impacts**
- **Economic Impacts**
- **Seismic Risks**
- **Major Hazardous Installations Risks**

The above-mentioned impacts and risks should not be construed as the only impacts that will be identified during the course of the EIA. 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 may be utilised to guide and inform the assessment of the potential impacts. The specialist studies identified to be included in this assessment include:

- **Air Quality Impact Assessment**
- **Climate Change Impact Assessment**
- **Surface Water Impact Assessment**
- **Groundwater Impact Assessment**
- **Terrestrial Ecology Impact Assessment**
- **Soils and Land Capability Impact Assessment**



- **Noise Impact Assessment**
- **Visual Impact Assessment**
- **Social Impact Assessment**
- **Economic Impact Assessment**
- **Heritage and Palaeontological Impact Assessment**
- **Seismic Risk and Impact Assessment**
- **Major Hazardous Installation Risk Assessment.**

The need for further specialist studies may be identified through the scoping process.

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).

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 Report and Environmental Impact Report upon which comments will be solicited.

Environmental Impact Management Services (Pty) Ltd (EIMS)

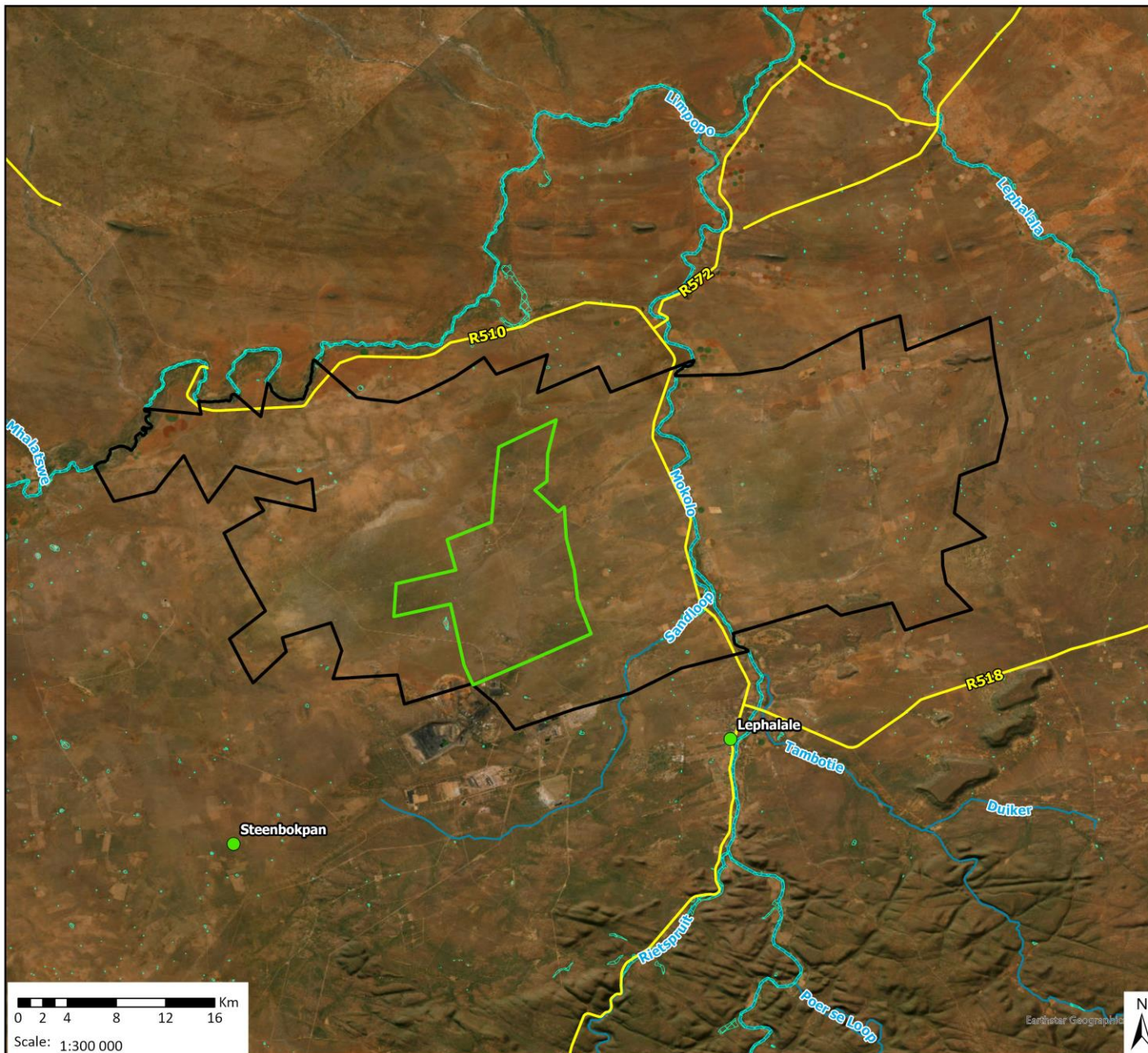
Contact Person: Lucien James

EIMS Reference Number: 1590

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

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

E-mail: LCBM@eims.co.za









Earthstar Geographic



Locality Map

1590 Thungela Lephalale CBM EIA

Legend

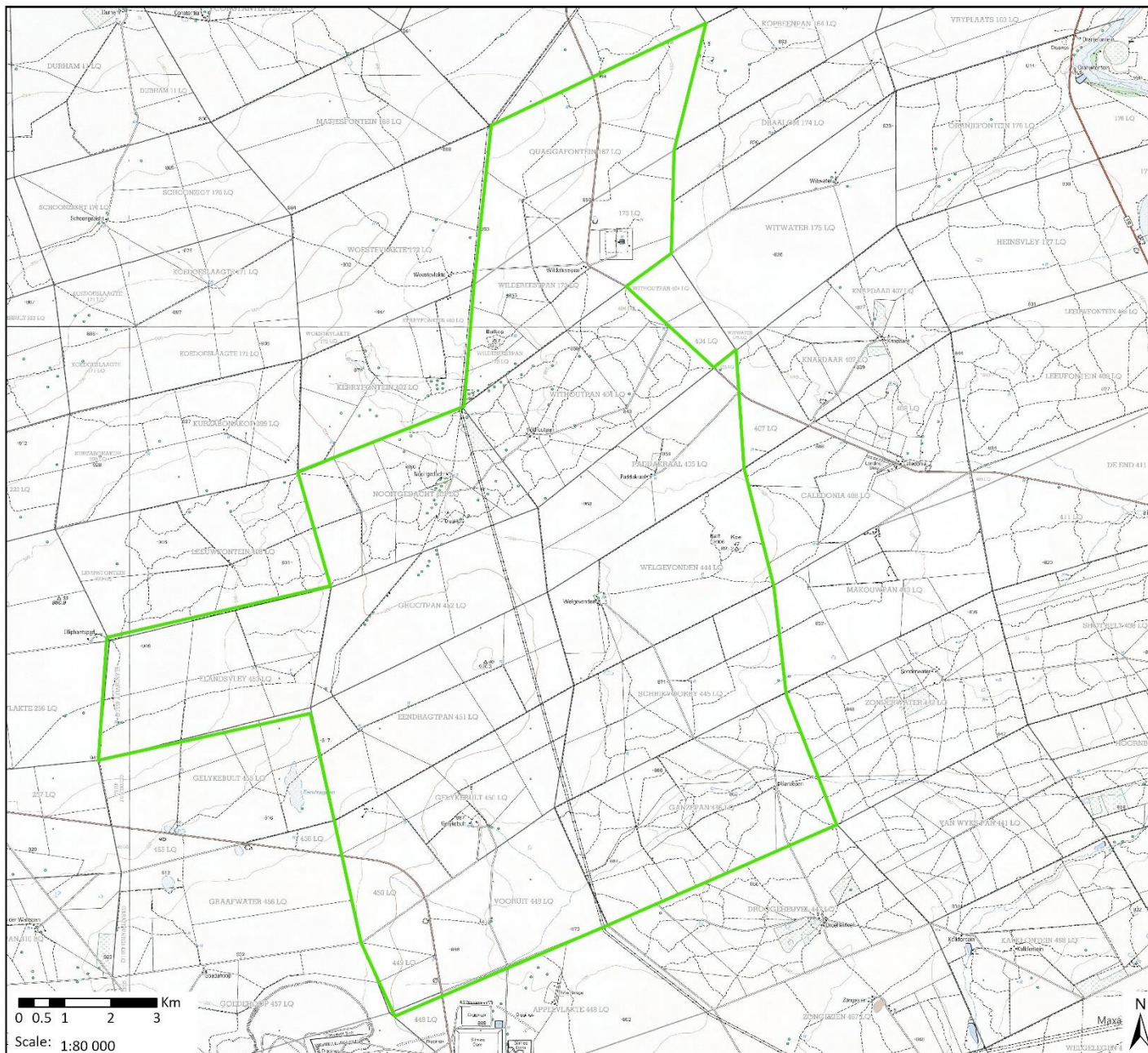
-  Production Right Application Boundary
-  Phase 1&2 Environmental Authorisation Application Boundary
-  NFEPA Wetlands
-  Rivers
-  Main Roads
-  Places



Data Sources:
CSG; ESRI
Coord System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
Ref: 1590_Locality

Date: 2023/08/17
EIMS Ref: 1590
Compiled: JW
Reviewed: LW
Approved: LW






Locality Map

1590 Thungela Lephalale CBM EIA

Legend

-  Phase 1&2 Environmental Authorisation Application Boundary



Data Sources:
CSG; ESRI; 1:50k scanned Topographical map
Coord System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
Ref: 1590_topo

Date: 2023/08/30
EIMS Ref: 1590
Compiled: JW
Reviewed: LW
Approved: LW

