

PREPARED FOR:

# Thungela Resources

PREPARED BY:



## SITE SCREENING AND VERIFICATION REPORT

Site ID:	Thungela CBM Project	Contractor:	EIMS
Location:	Thungela CBM Project, Lephalale Local Municipality, Limpopo	Inspector:	Lucien James
Client representative:	Andre Meyer	Inspection Date:	12 July 2023 (Updated 21/04/2026)

### 1. Background

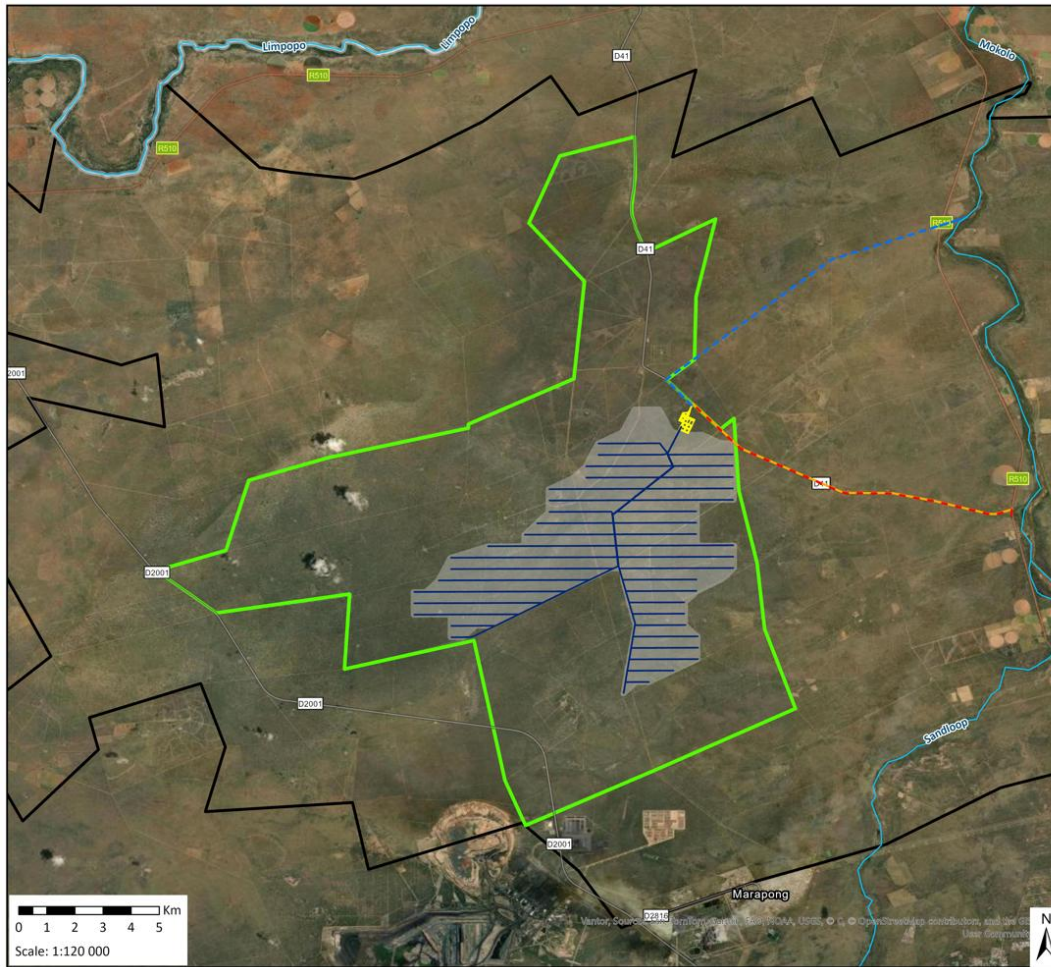
#### Background of the project:

Thungela Operations Proprietary Limited, a member of the Thungela Resources Limited Group (hereafter referred to as the Applicant or Thungela) has submitted a Production Right (PR) application to the Petroleum Agency SA (PASA) for coal bed methane (CBM) in the Lephalale Local Municipality, Limpopo Province, South Africa. Exploration activities which were undertaken in accordance with an Exploration Right (ER) have indicated a potentially viable and extractable CBM resource. The Applicant has applied to the PASA for a PR to extract and produce (utilize/beneficiate) the CBM resource.

Thungela aims to extract the CBM resource from the PR area in a phased manner. At present a total of 3 production 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 phase comprises of 333 production wells which will be connected via a buried gas gathering network of pipelines to a centralised gas processing facility. This phase will include 19 existing exploration phase wells as well as new wells to be constructed across the 20 properties of the EA area, all totalling to approximately 333 wells and situated within an area of approximately 20 443 ha.

To optimally produce CBM, hydraulic stimulation or hydraulic fracturing of the target coal seams is being proposed. Following stimulation, the coal seam is dewatered to reduce the hydrostatic pressure of the water within the coal seam which allows the gas to be released to the wellbore. The gas processing includes a compression and liquefaction facility to produce the final product, Liquefied Natural Gas (LNG), which will be distributed off site via road transport. The production is planned to span a period of 30 years commencing from the date that all relevant approvals and licences have been obtained.

### 2. Site Layout Plan



**Infrastructure Map**  
1590 Thungela Lephahale CBM EIA

**Legend**

- Production Right Application Boundary
- Environmental Authorisation Application Boundary
- Phase 1 LNG Plant
- Pipelines
- Deelkraal Road Upgrade
- Ph2 Discharge Pipeline Option 1
- Ph2 Discharge Pipeline Option 2
- Preliminary Well Area
- NFEPA Rivers

**ANA**

Map data: OpenStreetMap contributors, and the GIS User Community

**Data Sources:**  
CSG; ESRI; SANBI  
Coord System: GCS WGS 1984  
Datum: WGS 1984  
Units: Degree  
Ref: 1590\_Infrastructure\_0

Date: 2026/04/22  
EIMS Ref: 1590  
Compiled: JW  
Reviewed: LW  
Approved: LW



## 2. DEA Screening Tool Assessment

Aspect	Very High	High	Medium	Low
Agriculture		X		
Animal species		X		
Aquatic Biodiversity	X			
Civil Aviation			X	
Defense Theme				X
Archaeological and Cultural Heritage				X
Paleontology	X			
Plant Species Theme			X	
Terrestrial Ecology/Biodiversity	X			



### 3. Site Assessment

#### 3.1 Gradient (indicate the general gradient characteristics of site)

Aspect									
TSF site area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is the site located on or in the immediate vicinity of any of the following:

	Yes	No	Comment
Erosion Channels or areas of severe erosion/ destabilized soils	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wetlands (within 32m)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The application area spans a large area which includes certain wetlands and pans.
Unstable slopes or geological features (rocky outcrops)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There are a few isolated rocky outcrops across the study area (Bulkop, Kalkkop, and Koeikop).
Bare areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Other Sensitive or risk areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The site is traversed by geological faults and lineaments.
Are any existing servitudes and structures directly or indirectly affected by the proposed sites and routes (e.g. Eskom, public road servitudes and restrictions- 60m from National Road, farmer's water/irrigation supplies, etc.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Current road networks across the site, farm boreholes and water supply, servitudes between individual farms. Eskom powerlines run across the study area, including a 400kv powerline.

#### 3.2 Vegetation

Which of the listed descriptions best describes the general groundcover on and around the site?

Natural veld - good condition <input checked="" type="checkbox"/>	Natural veld with scattered aliens <input type="checkbox"/>	Natural veld with heavy alien infestation <input type="checkbox"/>	Veld dominated by alien species <input type="checkbox"/>	Gardens <input type="checkbox"/>
Sport field <input type="checkbox"/>	Cultivated land <input type="checkbox"/>	Paved surface <input type="checkbox"/>	Building or other structure <input checked="" type="checkbox"/>	Bare soil <input checked="" type="checkbox"/>
Comments on vegetation composition:	Site is well-vegetated with small to medium trees and shrubs across the site forming a thicket. Vegetation includes mostly indigenous species associated with the region. Some alien species present forming part of the natural vegetation of the site.			
Comments on weed species/type	Alien weed species are present on site, potentially affecting areas near road networks and paths of travel. As an example, common alien species observed in the area include <i>Bidens pilosa</i> and <i>Bidens bipinnata</i> (blackjack bushes).			

**Land cover/ use description: Describe the land uses on the site****Phase 1 Area**







Mainly game farmland and scattered farmsteads. A large portion of the area belongs to Thungela Resources and Exxaro with Phase 1 infrastructure limited to Thungela owned land. Flora and fauna in the larger application area are utilized for the purposes of game farming / hunting which is managed by individual landowners across the area. Various unpaved paths and roads cut across densely vegetated areas. Exxaro coal mining activities take place to the south-west of the area. An established dirt road cuts across the south-west of the area which links to the Exxaro mining operations. A coal mining residue deposit is located to the south of the site (Exxaro).

**4. General Comments and Recommendations**

The application covers a large area with various environmental sensitivities.



## Site Photos

		
<p>South Entrance to Deel Kraal 1 – This site is managed by Thungela Resources and includes several of the affected properties within it.</p>	<p>Picture taken at the South of the site. Cattle can be seen enclosed behind the fence of a farm within the Deel Kraal 1 area.</p>	<p>Main gate of the Thungela Lephalale CBM project main office compound in the north-west of the overall site.</p>
		
<p>A dirt road cutting through the dense vegetation to the North of the site.</p>	<p>Picture taken at Nooitgedacht Farm within the enclosed Lephalale CBM Project area. Vegetation has been cleared on the premises to accommodate for structures and facilities.</p>	<p>Picture taken of a pan within the area. An example of the occurrence of natural water features scattered across the site.</p>



Picture taken of natural fauna (giraffes) which are found within and surrounding the site.



An animal footpath traversing the natural vegetation occurring on site.



An example of some of the structures found around the site. Structures and buildings also facilitate game farming and hunting in the area.



## 7. Verification findings and motivation:

Assessment for specialist studies and motivation:					
Screening Tool Specialist Study Required:	Level of Sensitivity:	Suggested Sensitivity:	Required Assessment	level of	Motivation
Agriculture Theme	High	High	None.	<input type="checkbox"/>	Most of the site is rated as medium sensitivity and only very small, isolated areas of high sensitivity. A soil, land capability and agricultural assessment is being undertaken as part of the EIA.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input checked="" type="checkbox"/>	
			Other	<input type="checkbox"/>	
Animal Species	High	High	None.	<input type="checkbox"/>	A large portion of the site is rated as high sensitivity and indicates the presence of species of conservation concern (namely avifauna and mammals). This will be covered as part of terrestrial ecology as part of the EIA.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input checked="" type="checkbox"/>	
			Other	<input type="checkbox"/>	
Aquatic Biodiversity Theme	Moderate	Moderate	None.	<input type="checkbox"/>	The southern portion of the site is rated as very high sensitivity due to its location within a Freshwater Ecosystem Priority Area and the presence of wetland seeps and depressions. The Mogol river runs east of the Phase 1 area and discharge of treated water will take place into this river which is considered to have a high sensitivity rating owing to the nature of this being an established river system. A full aquatic and wetlands assessment is being undertaken.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input checked="" type="checkbox"/>	
			Other	<input type="checkbox"/>	
Archaeological and Cultural Heritage Theme	Low	Low	None.	<input type="checkbox"/>	Although the site is regarded as regionally low sensitivity, a full HIA is being undertaken as part of the EIA.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input checked="" type="checkbox"/>	
			Other	<input type="checkbox"/>	
Civil Aviation Theme	Medium	Low	None.	<input checked="" type="checkbox"/>	The nature of the development as well as the maximum height of the development components during both construction and operational phases will not pose a material risk to commercial air traffic. As such, no specialist aviation studies will be undertaken. It appears that the medium sensitivity relates to only a very small portion in the north of the study area being within 15km of an aerodrome (Fahad Private Game Reserve).
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input type="checkbox"/>	
			Other	<input type="checkbox"/>	
Defense Theme	Low	Low	None.	<input checked="" type="checkbox"/>	The defense theme was rated as low and



					therefore, no defense related studies will be undertaken.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input type="checkbox"/>	
			Other	<input type="checkbox"/>	
Paleontology Theme	Very High	High	None.	<input type="checkbox"/>	The entire site falls within an area designated as high and very high paleontological sensitivity. A full PIA is being undertaken as part of the EIA.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input checked="" type="checkbox"/>	
			Other	<input type="checkbox"/>	
Plant species Theme	Medium	Medium	None.	<input type="checkbox"/>	Most of the site is designated as medium sensitivity due to the presence of species of conservation concern. A full specialist Terrestrial Biodiversity Impact Assessment will be undertaken.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input checked="" type="checkbox"/>	
			Other	<input type="checkbox"/>	
Terrestrial Biodiversity Theme	Very High	Very High	None.	<input type="checkbox"/>	The southern section of the site, and the adjacent area to the north is designated as high sensitivity. This appears to be due to the site being within a designated Conservation Biodiversity Area (CBA) and its proximity to the Gideon Troskie Private Nature Reserve (it is understood that this farm is not utilized as a nature reserve but for game hunting purposes). Full assessment will be undertaken as part of the EIA.
			Compliance Statement	<input type="checkbox"/>	
			Full Assessment	<input checked="" type="checkbox"/>	
			Other	<input type="checkbox"/>	

Guidance notes:

- An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of “very high” or “high” sensitivity for terrestrial animal species must submit a Terrestrial Animal Species Specialist Assessment Report.
- An applicant intending to undertake an activity identified in the scope of this protocol on a site identified by the screening tool as being of “medium sensitivity” for terrestrial animal species must submit either a Terrestrial Animal Species Specialist Assessment Report or a Terrestrial Animal Species Compliance Statement, depending on the outcome of a site inspection undertaken in accordance with paragraph 4.
- An applicant intending to undertake an activity identified in the scope of this protocol on a site identified by the screening tool as being of “low” sensitivity for terrestrial animal species must submit a Terrestrial Animal Species Compliance Statement.
- Where the information gathered from the site sensitivity verification differs from the screening tool designation of “very high” or “high”, for terrestrial animal species sensitivity and it is found to be of a “low” sensitivity, then a Terrestrial Animal Species Compliance Statement must be submitted.
- Where the information gathered from the site sensitivity verification differs from the screening tool designation of “low” terrestrial animal species sensitivity and it is found to be of a “very high” or “high” terrestrial animal species sensitivity, a Terrestrial Animal Species Specialist Assessment must be conducted.
- If any part of the development falls within an area of confirmed “very high” or “high” sensitivity, the assessment and reporting requirements prescribed for the “very high” or “high” sensitivity, apply to the entire development footprint. Development footprint in the context of this protocol means, the area on which the proposed development will take place and includes the area that will be disturbed or impacted.