



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

APPLICATION FORM FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

IMPORTANT NOTICE

Kindly note that:

1. As from 8 December 2014, this document serves as the application form, and incorporates the requisite documents that are to be submitted together with the application for the necessary environmental authorisations in terms of the said Acts.
2. This application form is applicable while the Mineral and Petroleum Resources Development Amendment Act of 2008 is in effect, as the form may require amendment should the Act be further amended.
3. Applicants are required to apply for the necessary water use licence and any other authorisations nor licences to the relevant competent authorities as required by the relevant legislation. Upon acceptance of an application for a right or permit in terms of the MPRDA, applicants will be required to provide evidence to the Regional Manager that a water use licence has been applied for.
4. The Regional Manager will respond to the application and provide the reference and correspondence details of the Competent Authority, and in the event that the application for a right or permit is accepted, together with the date by which the relevant environmental reports must be submitted. Notwithstanding anything that may appear to be stated to the contrary in the acceptance letter, the timeframes are in fact aligned and the prescribed timeframes for the submission of documents as regulated by the NEMA regulations must be strictly adhered to.
5. The application must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
6. The failure to submit complete information as required in this application form may result in the refusal of the application for an environmental authorisation and consequently of the right or permit applied for.
7. This application must be submitted through the SAMRAD online application system of the Department of Mineral Resources under "Other documents to upload".
8. Unless protected by law, all information filled in on this application form will become public information on receipt by the competent authority. Any interested and affected party should and shall be provided with the information contained in this application on request, during any stage of the application process.
9. Please note that an application fee is payable in terms of the National Environmental Management Act and the National Waste Management Act, which fees must be paid upon lodgement of the application. Should the said application fees not be paid as prescribed the application for a right or permit in terms of the Mineral and Petroleum Resources Development Act cannot be considered to have been made in the prescribed manner and the said application for a right or permit will have to be rejected. In this regard the type of applications must be identified in the table below.

1. CONSULTATION BASIC ASSESSMENT AND/ OR SCOPING REPORT

PLEASE STATE TYPE OF AUTHORISATIONS BEING APPLIED FOR.

APPLICATION TYPE	APPLICABLE FEE	Mark with an X where applicable
NEMA S&EIR application on its own	R10 000.00	<input type="checkbox"/>
NEMA BAR application on its own	R 2 000.00	<input type="checkbox"/>
NEMWA S&EIR application on its own	R10 000.00	<input type="checkbox"/>
NEMWA BAR application on its own	R 2 000.00	<input type="checkbox"/>
NEMA S&EIR application combined with NEMWA S&EIR application	R 15 000.00	<input checked="" type="checkbox"/>
NEMA BAR application combined with NEMWA BAR application	R 3 000.00	<input type="checkbox"/>
NEMA S&EIR application combined with NEMWA BAR application	R 11 000.00	<input type="checkbox"/>

2. DETAILS OF THE APPLICANT

Project applicant:	Tetra4 (Pty) Ltd		
Registration no (if any):	2005/012157/07		
Trading name (if any):	Tetra4		
Responsible Person, (e.g. Director, CEO, etc):	Director		
Contact person:	Khalid Patel		
Physical address:	1 Bompas Road, Johannesburg, 2196, ZA		
Postal address:	1 Bompas Road, Johannesburg, ZA2196		
Postal code:	2196	Cell:	+27 83 656 2355
Telephone:	Tel: +27 10 045 6000	Fax:	
E-mail:	khalid@renergen.co.za		

3. ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) INFORMATION

EAP:	Brian Whitfield		
Professional affiliation/registration:	South African Council Natural and Scientific Professions (SACNASP) - 400202/09 Environmental Assessment Practitioners Association of South Africa (EAPASA) – 2022/4496		
Contact person (if different from EAP):	Same as Above		
Company:	Environmental Impact Management Services (Pty) Ltd		
Physical address:	8 Dalmeny Road, Pine Park, Randburg, 2194		
Postal address:	PO Box 2083, Pinegowrie, 2123, ZA		
Postal code:	2123	Cell:	+27 82 688 9850
Telephone:	+27 11 789 7170	Fax:	+27 86 571 9047
E-mail:	brian@eims.co.za		

If an EAP has not been appointed, please ensure that an independent EAP is appointed as stipulated by the NEMA Regulations, prior to the commencement of the process.

The declaration of independence and the Curriculum Vitae (indicating the experience with environmental impact assessment and relevant application processes) of the EAP must also be attached as **Appendix 1**.

PROJECT DESCRIPTION

Farm Name:	The application and study area covers various farm portions as depicted in the maps included in Appendix 6 . A table containing the farm names and portions is included in Appendix 6 .
Application area (Ha)	~27 500 hectares.
Magisterial district:	Masilonyana and Matjhabeng Local Municipalities, in the Lejweleputswa District Municipality, Free State Province.
Distance and direction from nearest town	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.
21-digit Surveyor General Code for each farm portion	A table containing the farm names and portions as well as the associated 21-digit Surveyor General Code for each farm portion is included in Appendix 6 .
Locality map	Attach a locality map at a scale not smaller than 1:250000 and attach as Appendix 2 .
Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaissance permit, Technical co-operation permit, Additional listed activity)	<p>Tetra4 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). The planned Cluster 2 expansion to the existing approved Cluster 1 production activities will involve up to 300 new 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.</p> <p>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) within which the activities will be undertaken. Through this process any potential no-go areas or highly sensitive areas within the infrastructure transects will be delineated, and appropriate mitigation measures identified where relevant.</p> <p>The Cluster 2 development will comprise 3 phases/groups of wells during which exploration and drilling will be undertaken. Each phase will target ~15 Million Standard Cubic Feet per Day of gas (MMSCFD) with a total target volume 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).</p> <p>In summary, there are 3 main components to the Cluster 2 development namely:</p> <ol style="list-style-type: none"> 1. Exploration and drilling; 2. Gas gathering infrastructure; and 3. LNG/LHe Plant.

4. ACTIVITIES TO BE AUTHORISED

(Please provide copies of Environmental Authorisations obtained for the same property as **Appendix 3**).

(For an application for authorisation that involves more than one listed activity that, together, make up one development proposal, all the listed activities pertaining to this application must be included. Note that any authorisation that may result from this application will only cover activities specifically applied for). (Attach a proposed site plan, drawn to a scale acceptable to the competent Authority, showing the location of all the activities to be applied for, as **Appendix 4**)

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
Exploration and Production Wells Exploration wells will be drilled and, if successful, converted into production wells. As the exact location of exploration well drilling cannot be identified at this stage, this study has followed the approach of assessing well corridors (600 m wide or 300 m on either side of known target fault lines). Exploration drilling entails the use of a truck, trailer or skid mounted percussion or diamond drill rig to drill to varying depths (~380 m to ~880 m) along known fault lines in order to strike the gas reserve. In order to achieve the required 300 production wells approximately 400 exploration wells may be drilled as not all exploration wells are anticipated to produce sufficient (or any) gas. Each exploration well will impact on approximately 50 m X 50 m and where a well is located on indigenous vegetation, this will require the temporary clearance of vegetation which will be rehabilitated post exploration. For the purposes of this application form, the area to be impacted is presented (~100 ha) while many wells will likely be located in already disturbed areas (e.g. farmlands, etc). A total of 300 new production wells will be installed progressively following exploration drilling. As not all exploration wells will be viable (i.e. gas producing), more than 300 exploration wells will be drilled. Exploration wells are expected to have roughly an 80 % success rate (i.e. converted into production wells). Production wells will be placed within a secured precast well chamber with manhole for access. Minimal mechanical infrastructure will be placed within the precast well chamber other than the wellhead, connecting pipeline, an isolation valve and sample point. The surface infrastructure for the manhole would be 1,4 m x 1,1 m (1.54 m ²) and the manhole surface height will be 0,25 m.	~400 Exploration wells: ~100 ha ~300 Production Wells: ~462 m ² / ~0.0462 ha	X	GNR 983: LN1 Activity 12 Activity 19 Activity 27 Activity 28 Activity 67 GNR 984: LN2 Activity 15 GNR 985: LN3 Activity 12 Activity 14 Activity 23	N/A
Drilling waste storage facilities Mineralised waste from exploration drilling (drill mud) will be temporarily stored in lined lagoons and/or suitable containers such as waste skips at each drill site. This will allow the settlement of the solids (drill mud) and reuse of the liquid (water) fraction of the drill mud. On completion of drilling, the waste (solid and liquid) will be disposed of at a licenced waste disposal facility. Each exploration well drill site will generate approximately 10 m ³ of drilling waste for disposal.	~4000 m ³ for exploration drill sites.	X	GNR 983: LN1 Activity 12 Activity 19 Activity 27 Activity 28 Activity 67 GNR 984: LN2 Activity 15 GNR 985: LN3 Activity 12 Activity 14 Activity 23	X

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
To achieve a total of 300 production wells, up to 400 exploration wells may be drilled. This will result in a total volume of drilling waste of ~4000 m ³ .			GN 921 Category A1 Category A6 Category A7 Category A12 Category A13 Category A14 Category B1 Category B10 Category B11	
Gas Pipelines Production wells will be connected with pipelines (predominantly underground) to transfer the gas to the booster stations, and then to compressor stations, and ultimately to the LNG/LHe Plant. Pipelines will be a combination of high-pressure steel as well as low-pressure high-density polyethylene (HDPE) and installed at a minimum depth of 1.5 m below surface level.	~480 km of pipelines with an operational servitude width of 10m. The construction right of way (impacted area) for the pipelines will be ~20 m wide and therefore the ~480km of pipelines will impact on ~960 ha. <i>The pipelines are classified as a "linear activity" and therefore the clearance of vegetation under LN1 and LN2 is not triggered while clearance of indigenous vegetation under LN3 is applicable.</i>	X	GNR 983: LN1 Activity 12 Activity 19 Activity 28 Activity 60 Activity 67 GNR 984: LN2 Activity 7 GNR 985: LN3 Activity 12 Activity 14 Activity 23	N/A
Booster Stations Localised inline gas booster stations will be installed for each cluster of 7-10 wells which will feed pressurised gas via pipelines from the production wells to the compressor stations. The booster stations will occupy an area of ~10 m x 14 m (140 m ²) and a total of 28 booster stations may be constructed.	~3920 m ² / 0.392 ha	X	GNR 983: LN1 Activity 12 Activity 19 Activity 27 Activity 28 Activity 67 GNR 985: LN3 Activity 12	N/A
Compressor Stations Three (3) new compressor stations will be constructed as part of the Cluster 2 development. The footprint for a compressor station including the gas drier station will be approximately 60 m x 60 m (3600 m ²).	~10800 m ² / 1.08 ha	X	GNR 983: LN1 Activity 12 Activity 19 Activity 27 Activity 28 Activity 67 GNR 985: LN3 Activity 12	N/A
Pigging Stations Inline pigging stations are installed near river crossings to allow for regular cleaning and inspection of the pipelines. The pigging stations allow for insertion of probes or cleaning pigs (plugs) in order to perform regular maintenance. There are approximately 4 major river crossings but with multiple pipe branches. In total there should be approximately 14 pig launcher/receiver pairs. Pigging stations occupy	~350 m ²	X	GNR 983: LN1 Activity 12 Activity 19 Activity 27 Activity 28 Activity 67 GNR 985: LN3 Activity 12	N/A

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an area of approximately 5 m x 5 m (~25 m ²) each.				
Low Point Drains Low Point Drains are installed along the pipeline to allow periodic maintenance of the pipeline whereby any condensate is able to be removed from the pipeline where the pipeline has a low point (gravity collection of condensates). Approximately 240 low point drains will be installed and each occupies an area of ~1.5 m ² .	~360 m ²	X	GNR 983: LN1 Activity 12 Activity 19 Activity 27 Activity 28 Activity 67 GNR 985: LN3 Activity 12	N/A
Access Roads Temporary access roads are required in areas where the exploration drill site is not readily accessible from existing access roads. Permanent access roads will be constructed in areas where the production wells, pigging stations, low point drains etc are not readily accessible from existing access roads. The temporary and permanent access roads will be approximately 2.5 m wide on average and where possible will be limited to a 2-spool type access road. Based on the Cluster 1 access road requirements, the average length of access roads per well will be in the order of ~250 m. Only where subsurface conditions require material to be imported to stabilise the area will this be undertaken. As the access roads are not spatially defined at this time due to exploration wells not being spatially defined, it is proposed that a sensitivity assessment approach will be utilised as a basis for identifying any specific no-go areas for access roads.	Assuming ~250 m per well and 400 exploration wells, a total of 100 km of access roads may be required.	X	GNR 983: LN1 Activity 12 Activity 19 Activity 24 Activity 48 Activity 56 Activity 67 GNR 985: LN3 Activity 4 Activity 12 Activity 14 Activity 18 Activity 23	N/A
LNG/LHe Plant The LNG/LHe plant comprises of the following process units: <ul style="list-style-type: none"> • Gas Treatment and Boosting System; • Helium Separation Unit; • Gas Liquefaction System; • LHe Storage (~2 x 100 m³); • LNG Storage (~11 x 300 m³); • LHe and LNG road tanker loading bays; • Access and internal roads; • Water system (service water and fire water tank as well as an evaporation pond); • Offices and ablution facilities; and • Sewage treatment plant and reverse osmosis plant. 	~9.6 Ha	X	GNR 983: LN1 Activity 27 Activity 28 Activity 51 Activity 59 GNR 984: LN2 Activity 4 Activity 5 Activity 15 GNR 985: LN3 Activity 10 Activity 12 Activity 22 GN 921 Category B1 Category B10 Category B11 Category C1 Category C2 Category C6	X GN921 Category B and C Norms and Standards for Storage of Waste, published under Government Notice R926 in Government Gazette 37088 of 29 November 2013; or Norms and Standards fix the Sorting, Shredding, Crushing, Screening or Bailing of General Waste, published under Government Notice No.1094 in Government Gazette 41175 of 11 October 2017;

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
Temporary laydown and camps Various contractor laydown camps will be required during construction phase and will include offices, ablution facilities, parking, fencing, waste storage areas, material storage, etc. These camps will be located adjacent to the LNG/LHe Plant area and possibly one at compressor station 1.	~15.8 Ha	X	GNR 983: LN1 Activity 27 Activity 67 GNR 985: LN3 Activity 12 GN 921 Category B1 Category B10 Category B11 Category C1 Category C2 Category C6	X GN921 Category B and C Norms and Standards for Storage of Waste, published under Government Notice R926 in Government Gazette 37088 of 29 November 2013; or Norms and Standards fix the Sorting, Shredding, Crushing, Screening or Bailing of General Waste, published under Government Notice No.1094 in Government Gazette 41175 of 11 October 2017
Evaporation Pond The Evaporation Pond will be constructed within the LNG/LHe Plant boundary and have an installed capacity of 1005 m ³ (working volume of 585 m ³) and cover an area of 103 m X 67 m (6901 m ²). Based on the design, the total depth will be 1.44 m. This facility will contain the dirty water from the operations and this water will be treated in the RO plant for reuse. Brine from water treatment will be disposed of offsite by a third-party licenced waste operator. The evaporation pond is not within or near to a watercourse and therefore LN1 Activity 12 and 48 or LN3 Activity 23 are not triggered. Furthermore the storage volume is below the threshold in LN1 Activity 13 and 50. No NEMWA activities are triggered by the evaporation pond.	<0.1 ha	X	GNR 983: LN1 Activity 16 GNR 985: LN3 Activity 12	N/A
Sewage Treatment Plant & Reverse Osmosis (RO) Plant The Reverse Osmosis Plant (RO Plant) will process more than 100 m ³ /d of dirty water from the evaporation pond in order to produce ~100 m ³ /day of treated water. The Sewage Treatment Plant design capacity is to process 30 m ³ /day. The Reverse Osmosis Plant (RO Plant) will remove salts from the wastewater in the evaporation pond and therefore fulfils the function of desalination of water.	<0.1 ha (but included in LNG/LHe Plant complex)	X	GNR 983: LN1 Activity 16 GNR 985: LN3 Activity 12	N/A

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
The RO Plant and Sewage Treatment Plant will be constructed within the LNG/LHe Plant complex.				
Waste storage The storage of general and hazardous waste at the LNG/LHe Plant during construction and operation requires registration under the NEMWA Norms and Standards.	>100 m ³ of general waste storage >80 m ³ of hazardous waste storage	Norms and Standards Registration for Activities listed in C1, C2 and C6	N/A	Norms and Standards Registration
Gas extraction and production operation This Cluster 2 application will form an expansion of the existing Cluster 1 gas production operations which are both located within the approved Production Right area (Ref: 12/4/1/07/2/2). The approved Production Right area covers ~187 000 ha and the Cluster 2 application area is ~27 500 ha. Cluster 1 and Cluster 2 application areas overlap. The Cluster 2 project entails a total of ~ 300 production wells to produce a total of 45 MMSCFD.	~27 500 ha	X	GNR 983: LN1 Activity 59 GNR 984: LN2 Activity 5	N/A
Existing approved EMPr Amendment (Section 102) As Cluster 2 application is an extension to the approved Cluster 1 production operations, the current approved Cluster 1 EMPr will be amended as part of this Cluster 2 application due to the similar nature of the activities.	N/A (Process activity)	X	GNR 983: LN1 Activity 21D	N/A
Existing approved AEL amendment for expansion of the LNG Processing Plant The approved AEL (LDM/AEL/YMK/014) for Cluster 1 plant will be amended to include the Cluster 2 Plant for Storage and Handling of Petroleum Products (Subcategory 2.4) - NEMAQA.	N/A (Process activity)	X	GNR 983: LN1 Activity 34	N/A

5. PUBLIC PARTICIPATION

(Provide details of the public participation process proposed for the application.)

Details of the Public Participation process to be followed.

5.1.1. IDENTIFICATION OF INTERESTED AND AFFECTED PARTIES TO BE CONSULTED

IDENTIFICATION CRITERIA	Mark with an X where applicable	
	YES	NO
Will the landowner be specifically consulted?	X	
Will the lawful occupier on the property other than the Landowner be consulted?	X	
Will a tribal authority or host community that may be affected be consulted?	X	
Will recipients of land claims in respect of the area be consulted?	X	
Will the landowners or lawful occupiers of neighbouring properties been identified?	X	
Will the local municipality be consulted?	X	
Will the Authority responsible for power lines within 100 metres of the area be consulted?	X	
Will Authorities responsible for public roads or railway lines within 100 metres of the area applied for be consulted?	X	
Will authorities responsible for any other infrastructure within 100 metres of the area applied for be consulted? (Specify) <i>Transnet, SANRAL, Eskom, Provincial roads authorities, etc. will be consulted.</i>	X	
Will the Provincial Department responsible for the environment be consulted?	X	
Will all of the parties identified above be provided with a description of the proposed mining /prospecting operation as referred above?	X	
Will all the parties identified above be requested in writing to provide information as to how their interests (whether it be socio-economic, cultural, heritage or environmental) will be affected by the proposed mining project?	X	
Other, Specify	Non-Governmental Organisations (NGOs) and Non-Profit Organisations (NPOs) including: <ul style="list-style-type: none"> • <u>African Conservation Trust</u> • <u>Afriforum</u> • <u>Birdlife South Africa</u> • <u>Centre for Environmental Rights</u> • <u>Conservation South Africa</u> • <u>Earthlife Africa</u> • <u>Endangered Wildlife Trust</u> • <u>Federation for Sustainable Environment</u> • <u>FrackFree SA</u> • <u>Groundwork South Africa</u> • <u>Wildlife and Environment Society of South Africa</u> • <u>World Wildlife Fund</u> 	

5.1.2. DETAILS OF THE ENGAGEMENT PROCESS TO BE FOLLOWED

<p>Steps to be taken to notify interested and affected parties (Describe the process to be undertaken to consult interested and affected parties including public meetings and one on one consultations. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. Photographs of notice boards, and copies of advertisements and notices notifying potentially interested and affected parties of the proposed application must be attached as Appendix 9)</p>	<p>PROVIDE DESCRIPTION HERE</p> <p>Interested and Affected Parties (I&APs) have been notified of the proposed expansion of the gas production activities (Cluster 2) during the Call to Register (CTR) period via newspaper advertisements, site notices and posters, registered letters, emails, SMS's and facsimiles. 78 Site notices in English, Afrikaans and Sesotho were placed in various locations within and surrounding the application area; and a newspaper advertisement was placed in English, Afrikaans and Sesotho in the Vista Newspaper that has wide distribution in the area.</p> <p>The Public Participation Process is and will be undertaken in accordance with the National Environmental Management Act (Act No. 107 of 1998 - NEMA) process and the Environmental Impact Assessment (EIA) Regulations, 2014. A minimum of 30 days was provided to the public to register as I&APs and to provide comments. A further 30 days will be provided to registered I&APs to review and comment on the Scoping Report as well as the Environmental Impact Assessment Report associated appendices. A public open day will be held during the Scoping review period and a further public open day as well as a public meeting will be held during the EIAR review period. Focus Group Meetings will also be held during both Scoping and EIAR review periods with affected landowners as well as occupiers where possible. Relevant information submitted by I&APs will be used to inform the Impact Assessment and compilation of the relevant reports.</p> <p>Copies of the initial call to register notifications are included in Appendix 9.</p>
<p>Information to be provided to Interested and Affected Parties.</p>	<p>Compulsory</p> <ul style="list-style-type: none"> • The site plan. • List of activities to be authorised • Scale and extent of activities to be authorised • Typical impacts of activities to be authorised (e.g. Surface disturbance, dust, noise, drainage, fly rock etc.) • The duration of the activity. • Sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land). <p>Other, specify:</p> <ul style="list-style-type: none"> • The need and motivation of the proposed project; • The gas production infrastructure; • Details of the MPRDA and NEMA Regulations that must be adhered to; • Date by which comment, concerns and objections must be forwarded through to EIMS; and • Contact details of the Environmental Assessment Practitioner (EAP) and acceptable mechanisms of communication.
<p>Information to be required from Interested and Affected Parties.</p>	<p>Compulsory</p> <ul style="list-style-type: none"> • To provide information on how they consider that the proposed activities will impact on them or their socio-economic conditions. • To provide written responses stating their suggestions to mitigate the anticipated impacts of each activity. • To provide information on current land uses and their location within the area under consideration. • To provide information on the location of environmental features on site to make proposals as to how and to what standard the impacts on site can be remedied. Requested to make written proposals. • To mitigate the potential impacts on their socio-economic conditions to make proposals as to how the potential impacts on their infrastructure can be managed, avoided or remedied). <p>Other, Specify</p> <p>A questionnaire was distributed to pre-identified I&APs (including landowners) with the aim to solicit specific information such as:</p> <ul style="list-style-type: none"> • Details of any additional landowner and contact information on lawful occupiers; • Details of any communities existing within the area; • Details of any Tribal Authorities within the area; • Details of any land claims; • Details of any other I&APs that need to be notified; • Details on any land developments proposed;

	<ul style="list-style-type: none"> • Details of any perceived impacts to the environment that should be considered in the assessment; and • Any specific comments, concerns or objections to the proposed production operation.
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6. DESCRIPTION OF THE ASSESSMENT PROCESS TO BE UNDERTAKEN

ITEM	DESCRIPTION
<p>Environmental attributes. Describe how the Environmental attributes associated with the development footprint will be determined.</p>	<p>The description of the existing status of the current receiving environment will be compiled through remote sensing data such as Lidar aerial photographs as well as onsite inspections undertaken during a screening site visit by the EAP. The DEA Screening Tool Report as well as the Site Sensitivity and Verification Report (SSVR) is included in Appendix 8. In addition desktop data, available GIS information as well as recent monitoring reports and available information from the Cluster 1 project will be utilised. Specialist site visits will also be used to update any available information or identify new information related to the environmental attributes of the receiving environment. Within the Scoping Report, the proposed project activities will be described and the environmental attributes which are likely to be affected by these activities identified.</p>
<p>Identification of impacts and risks. (Describe the process that will be used to identify impacts and risks.</p>	<p>The identification of potential impacts and risks for assessment will be undertaken through specialist investigations and I&AP consultation as well as the development of an in depth understanding of the activities, actions and processes to be undertaken on site based on the EAP's experience with similar projects (including the previous Cluster 1 EIA). The potential impacts and risks on broad environmental aspects, in respect of each of the main project actions, activities and processes will be assessed and presented in the Scoping Report and where applicable the Environmental Impact Assessment Report (EIAR).</p>
<p>Consideration of alternatives. Describe how alternatives, and in particular the alternatives to the proposed site layout and possible alternative methods or technology to be applied will be determined.</p>	<p>The identification and assessment of alternatives is a key component to the success of any application. Essentially, alternatives represent different means of meeting the general purpose and need of the proposed project through the identification of the most appropriate development proposal. Two levels of alternative screening will be investigated and considered which culminates into the identification of the feasible development alternative. The first level alternatives include land use, location, production method, and site access alternatives. These alternatives will determine the optimal process for the proposed production activities. After these viable alternatives have been assessed (if any), the level two alternatives including technology and phasing alternatives will be considered in order to ensure the best practicable option is proposed for the activity.</p>
<p>Process to assess and rank impacts. Describe the process to be undertaken to identify, assess and rank the impacts and risks each individual activity.</p>	<p>Please refer to Appendix 7 for a detailed description of the EIMS Impact Assessment Methodology.</p>
<p>Contribution of specialist reports Describe how specialist reports, if required, will be taken into consideration and inform the impact identification, assessment and remediation process.</p>	<p>Specialist studies will be utilised to guide and inform the assessment of the potential impacts. The specialist studies identified at the start of this application and to be included in this assessment include:</p> <ul style="list-style-type: none"> • Agricultural Potential & Hydrogeology Impact Assessment • Air Quality & Health Risk Assessment • Green House Gas (GHG) & Climate Change Study • 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

	<p>Should additional specialist studies be identified during the course of the application process, these will be included in addition to the above (where relevant).</p> <p>Specialist studies that will comply with the requirements of the EIA Regulations, 2014 as well as the Specialist Protocols published by the DFFE (where applicable). The relevant specialists will conduct site visits to verify sensitive features and assist with the identification of alternatives (where relevant). The specialist reports will be incorporated into the SR and EIAR and will be made available to registered I&APs for review and comment.</p>
<p>Determination of impact management objectives and outcomes. Describe how impact management objectives will be determined for each activity to address the potential impact at source, and how the impact management outcomes will be aligned with standards.</p>	<p>The objectives of the impact management measures shall be to firstly anticipate and avoid risks and impacts where practically possible. This shall be accomplished through the adoption of a risk and impact assessment process which aims to identify all relevant environmental and social risks and impacts of the project and those who are likely to be affected by such risks and impacts, including the issues identified by I&APs during the consultation process and any sensitive features identified by the specialists. The impact and risk identification process shall take into consideration each activity its associated potential impacts.</p> <p>As per the Need and Desirability Guideline (Integrated Environmental Management Guideline Series 9) the impact mitigation hierarchical approach will be followed by:</p> <ol style="list-style-type: none"> 1. Alternatives will be investigated to avoid negative impact altogether if possible; 2. Alternatives will be investigated to reduce (mitigate and manage) unavoidable negative impact; 3. Alternatives will be investigated to remediate impacts (rehabilitate and restore); 4. Options will be investigated to offset unavoidable negative impacts that remain after mitigation and remediation; and 5. Alternatives will be investigated to optimise positive impacts. <p>The EMP developed for the project shall include mechanisms whereby social and environmental risk and impacts shall be avoided and mitigated. The Generic Gas Pipeline EMPR shall be used (as required) while the Cluster 1 approved EMPR will be assessed to determine if any additional and specific mitigation measures are required.</p> <p>The objectives of this environmental management framework shall be:</p> <ul style="list-style-type: none"> • To anticipate potential risks and impacts associated with each activity pre-emptively through the implementation of risk assessment techniques and early warning systems such as environmental monitoring and inspections; • To develop and implement preventative measures to ensure known risks and impacts are addressed at source wherever possible; • To implement detailed management measures to ensure that where avoidance of impacts is not possible, mitigation measures are in place to minimize impacts to workers, affected communities, and the environment; • To provide a framework for adaptive environmental management within the EMPR whereby impacts from unplanned events or incidents caused by the project may be effectively controlled to minimise impacts to workers, affected communities, and the environment. <p>The management and mitigation measures shall be developed in accordance with applicable standards and guidelines, which shall include, but is not limited to:</p> <ul style="list-style-type: none"> • Legislated Standards (e.g. air quality guidelines and standards); • South African National Standards (SANS)(e.g. SANS water quality standards); • Where Applicable, International Standards and Guidelines; • Applicable National and Regional Frameworks (e.g. Bioregional Plans; Spatial Development Frameworks, National Protected Area Expansion Strategy Focus Areas, Environmental Management Frameworks, etc); • Applicable Guidelines developed by authorities (e.g. DMR guidelines, NEMA EIA guidelines and protocols, etc); and • Other Applicable guidelines (e.g. Mining and Biodiversity Guidelines).

7. OTHER AUTHORISATIONS REQUIRED

LEGISLATION	Mark with an X where applicable			
	AUTHORISATION REQUIRED		APPLICATION SUBMITTED	
	YES	NO	YES	NO
SEMA's				
National Environmental Management: Air Quality Act <i>(Note: Amendment to existing AEL towards end of EIA phase)</i>	X			X
National Environmental Management: Biodiversity Act <i>(Note: post authorisation species permits where relevant)</i>	X			X
National Environmental Management: Integrated Coastal Management Act		X		X
National Environmental Management: Protected Areas Act		X		X
National Environmental Management: Waste Act <i>(Note: Integrated authorisation application process as part of this EA application form)</i>	X		X	
National legislation				
Mineral Petroleum Development Resources Act <i>(Note: S102 EMPr amendment will be submitted during the later EIA application stage)</i>	X			X
National Water Act <i>(Note: application underway and running concurrent with EA/WML application process)</i>	X		X	
National Heritage Resources Act		X		X
Others: Please specify				

Please provide proof of submission of applications in **Appendix 5**.

In the event that an authorization in terms of the National Environmental Waste Management Act is required for any of the activities applied for please state so clearly in order for such an authorisation to be considered as part of this application.

An integrated EA and WML application process will be undertaken to include the NEMWA activities.

8. DRAFT EMPR

For consultation purposes, provide a high-level approach to the management of the potential environmental impacts of each of the activities applied for.

NOTE: The potential environmental impacts relating to this Cluster 2 application are mirrored in the approved Cluster 1 EMPr as Cluster 2 is an expansion of the current activities being undertaken under the Production Right. The table below therefore lists the activities as they apply to both Cluster 1 and Cluster 2. The intention is to amend the approved Cluster 1 EMPr as part of this Cluster 2 application with inclusion of any additional specific mitigation measures required as identified through the EIA process.

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining, - excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	PHASE (of operation in which activity will take place). State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure.	SIZE AND SCALE (of Disturbance) (volumes, tonnages and hectares or m ²)	TYPICAL MITIGATION MEASURES (Eg, storm water control, dust control, noise control, access control, rehabilitation etc...., etc....)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Production Wells Exploration drilling per well = 50 m X 50 m (2500 m ²). Production well infrastructure = 1.54 m ² .	Construction and Operational	~100 ha for exploration drilling operations. 462 m ² for production well footprints.	<ul style="list-style-type: none"> • Inform other users in writing of intent to undertake exploration drilling and comply with reasonable request to reduce the impact. • Negotiate compensation for interference with other users where necessary. • Locate exploration drilling in consultation with landowners to minimise impact on current land use. • Planning and location of production well infrastructure taking consideration of long term impact on current land use. 	EMPr
Drilling waste storage facilities	Construction	~4000 m ³	<ul style="list-style-type: none"> • Prevent contamination of surface and groundwater resources utilising suitable barrier systems. 	EMPr (WMP)

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	PHASE (of operation in which activity will take place). State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure.	SIZE AND SCALE (of Disturbance) (volumes, tonnages and hectares or m ²)	TYPICAL MITIGATION MEASURES (Eg, storm water control, dust control, noise control, access control, rehabilitation etc....., etc.....)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
			<ul style="list-style-type: none"> • Dispose of waste at a suitably licenced waste disposal facility. 	
Gas Pipelines	Construction and Operational	~64 km of pipelines	<ul style="list-style-type: none"> • Ensure pipelines are installed at a suitable depth below ground to prevent obstruction to surface activities (including agricultural practices such as ploughing depths). This will also serve as a safety measure to prevent accidental rupture of the pipeline. 	EMPr
Booster Stations	Construction and Operational	3920 m ² / 0.392 ha	<ul style="list-style-type: none"> • Locate inline booster stations within reasonable proximity to existing powerlines to access electricity supply. • Locate inline booster stations in suitable areas to minimise impact on current land use and optimise existing access roads. 	EMPr
Compressor Stations	Construction and Operational	1.08 ha	<ul style="list-style-type: none"> • Locate inline compressor stations within reasonable proximity to existing powerlines to access electricity supply. • Locate inline compressor stations in suitable areas to minimise impact on current land use and optimise existing access roads. 	EMPr
Pigging Stations	Construction and Operational	~16 m ² per pigging station	<ul style="list-style-type: none"> • Locate inline pigging stations in suitable areas to minimise impact 	EMPr

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	PHASE (of operation in which activity will take place). State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure.	SIZE AND SCALE (of Disturbance) (volumes, tonnages and hectares or m ²)	TYPICAL MITIGATION MEASURES (Eg, storm water control, dust control, noise control, access control, rehabilitation etc....., etc.....)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
			on current land use and optimise existing access roads.	
Low Point Drains	Construction and Operational	~16 m ² per pigging station	<ul style="list-style-type: none"> • Locate inline low point drains in suitable areas to minimise impact on current land use and optimise existing access roads. 	EMPr
Access Roads	Construction and Operational	~2 m wide access roads. Location and length dependent on exploration drill sites which can only be determined based on drilling data received during exploration phase.	<ul style="list-style-type: none"> • Negotiate proposed construction (temporary) as well as operational (permanent) access roads with the affected landowners. • Access roads must be suitably located taking cognisance of site sensitivities as identified in the EIA and EMPr. • Erosion protection measures must be installed where relevant to prevent preferential flows which could cause scouring sedimentation of watercourses etc. 	EMPr
LNG/LHe Plant	Construction and Operational	~9.6 Ha	<ul style="list-style-type: none"> • Clearance of the site must proceed in a phased manner while the plant is constructed to prevent unnecessary clearance of vegetation and exposure of bare soil. • Topsoil stripping and adequate storage must be undertaken to prevent the loss of topsoil and 	EMPr / AEL

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	PHASE (of operation in which activity will take place). State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure.	SIZE AND SCALE (of Disturbance) (volumes, tonnages and hectares or m ²)	TYPICAL MITIGATION MEASURES (Eg, storm water control, dust control, noise control, access control, rehabilitation etc....., etc.....)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
			topsoil must be used during rehabilitation. <ul style="list-style-type: none"> • Dust suppression must be undertaken on unpaved or gravel roads. • Stormwater Management Plan must be implemented to prevent uncontrolled runoff from site. Water from "dirty" areas must be directed to the evaporation pond to prevent possible contamination of surrounding water resources. • Emissions must be monitored on a regular basis during the operational phase of the plant. 	
Temporary laydown and camps Various contractor laydown camps during construction phase and will include offices, ablution facilities, parking, fencing, waste storage areas, material storage, etc. These camps will be located adjacent to the LNG/LHe Plant area and possibly one at compressor station A.	Construction	~15.4 Ha	<ul style="list-style-type: none"> • Clearance of the laydown areas and construction camps must proceed in a phased manner as and when various contractors mobilise to site. • Topsoil stripping and adequate storage must be undertaken to prevent the loss of topsoil and topsoil must be used during rehabilitation of the laydown areas and construction camps. • Dust suppression must be undertaken on unpaved or gravel roads. 	EMPr

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	PHASE (of operation in which activity will take place). State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure.	SIZE AND SCALE (of Disturbance) (volumes, tonnages and hectares or m ²)	TYPICAL MITIGATION MEASURES (Eg, storm water control, dust control, noise control, access control, rehabilitation etc....., etc.....)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
			<ul style="list-style-type: none"> • Erosion control measures must be implemented. • Waste separation and storage areas must be clearly demarcated and waste removed from site on a regular basis. Waste is to be disposed of at a suitably licenced waste disposal facility. • Sufficient ablution facilities must be provided for and must be maintained in a clean and hygienic state. Sewage must be collected by a suitable and licenced waste contractor. 	
Evaporation Pond The Evaporation Pond will be constructed within the LNG/LHe Plant boundary and have an installed capacity of 1005 m ³ and cover an area of 103 m X 67 m (6901 m ²). This facility will contain the dirty water from the operations and this water will be treated in the RO plant for reuse. Brine from water treatment will be disposed of offsite by a	Operational	6901 m ²	<ul style="list-style-type: none"> • The evaporation pond must be fenced off with suitable safety signage erected to warn of the potential dangers. • Relevant safety equipment must be available at all times. • Water monitoring must be undertaken in accordance with the General Authorisation for the facility. 	EMPr

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	PHASE (of operation in which activity will take place). State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure.	SIZE AND SCALE (of Disturbance) (volumes, tonnages and hectares or m ²)	TYPICAL MITIGATION MEASURES (Eg, storm water control, dust control, noise control, access control, rehabilitation etc....., etc.....)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
third-party licenced waste operator. The evaporation pond is not within or near to a watercourse and therefore LN1 Activity 12 and 48 or LN3 Activity 23 are not triggered. Furthermore the storage volume is below the threshold in LN1 Activity 13 and 50. No NEMWA activities are triggered by the evaporation pond.				
Sewage Treatment Plant & Reverse Osmosis (RO) Plant The Reverse Osmosis Plant (RO Plant) design capacity is to produce 4m ³ /hour (96 m ³ /day). The Sewage Treatment Plant design capacity is 30m ³ /day. The RO design capacity equates to 96 m ³ /day which is below the 100 m ³ /day threshold in LN1 Activity 25 so therefore	Operational	<0.1 ha	<ul style="list-style-type: none"> • The sewage and RO plants must be maintained in a sound state to ensure that adequate treatment of waste water is undertaken. • All brine or sludge must be adequately stored and disposed of at a suitably licenced waste disposal facility. 	EMPr

ACTIVITIES	PHASE	SIZE AND SCALE (of Disturbance)	TYPICAL MITIGATION MEASURES	COMPLIANCE WITH STANDARDS
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc</p> <p>E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)</p>	<p>(of operation in which activity will take place).</p> <p>State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure.</p>	<p>(volumes, tonnages and hectares or m²)</p>	<p>(Eg, storm water control, dust control, noise control, access control, rehabilitation etc....., etc.....)</p>	<p>(A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)</p>
<p>not triggered. The Sewage Plant design capacity is only 30 m³ per day so well below the threshold in LN1 Activity 25.</p> <p>The Evaporation Pond will be constructed within the LNG/LHe Plant boundary and have an installed capacity of 1005 m³ and cover an area of 103 m X 67 m (6901 m²).</p>				

9. CLOSURE PLAN

In the space provided under each heading below, please provide a high-level description of the plan for closure and the information that will be provided in the draft EMPr accompanying draft basic assessment report or environmental impact reports going forward.

NOTE: The Closure Aspects and Closure Plan relating to this Cluster 2 application are mirrored in the existing Cluster 1 Closure and Financial Provisioning and both Cluster 1 and Cluster 2 fall under the approved Production Right (Ref: 12/4/1/07/2/2). It is therefore the intention is to adjust the Cluster 1 NEMA Financial Provisioning to reflect and incorporate the Cluster 2 new expansions.

<p>Baseline environment Describe how the baseline environment will be determined with the input of interested and affected parties and due cognizance of the current land uses and or existing biophysical environment</p>	<p>The baseline environment will be determined through the desktop assessments and specialist studies utilising GIS data and available datasets such as NFEPa, CBA, and BGIS as well as site visits and any information shared by I&APs. Potential site sensitivities will be investigated and land uses both on site and in the surrounding area will be identified.</p> <p>A questionnaire will be shared with I&APs as well as on the EIMS website in an attempt to request feedback on various aspects such as existing landuses, the social and biophysical environment, tenants, occupiers, land claims, identification of other I&APs as well as provide an opportunity to share comments on any potential impacts of the proposed development.</p>
<p>Closure objectives Describe the closure objectives and the extent to which they will be aligned to the baseline environment</p>	<p>The overall closure objective will be to ensure that the post closure environment aligns with the pre-development as far as reasonably possible.</p> <p>Closure of the project on completion of production activities will require the removal and safe disposal of surface infrastructure. Grouting/cementing (plugging) of the wells will be undertaken to prevent interplay between the gas reserve or the shallow and deeper aquifers. Ongoing water monitoring will be undertaken post closure to monitor the water resources for any pollution from the sealed wells. The impacts of closure and post-closure will be further assessed and detailed in the EIA Phase Report.</p>
<p>Rehabilitation Plan Describe the scale and aerial extent of the prospecting or mining listed activities to be authorised, including the anticipated prospecting or mining area at the time of closure, and confirm that a site rehabilitation plan drawn to a suitable scale will be provided in the draft EMPr to be submitted together with the draft EIR or Basic Assessment Report as the case may be.</p>	<p>The aerial extent (square meters or hectares) of the production operation is provided in Section 5 above. At the closure phase, it is anticipated that the project will consist of ~300 production wells, pipelines and associated inline facilities as well as the LNG/LHe Plant and associated infrastructure. The site rehabilitation plan will be investigated and presented in the EMPr during the EIA Phase.</p>
<p>Rehabilitation Cost Describe how the rehabilitation cost will be determined and provide a preliminary estimate thereof</p>	<p>The Cluster 1 rehabilitation and closure costs will be adjusted to include Cluster 2 and the required adjustments will be required for the financial provisioning. The Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations promulgated under section 44(aE), (aF), (aG), (aH) read with sections 24(5)(b)(ix), 24(5)(d), 24N, 24P and 24R of the National Environmental Management Act, 1998 (Act No.107 of 1998) (20 November 2015) will be considered and this will, where relevant, be included in the EIA Report to be compiled during the EIA Phase. A rough estimate of the Cluster 2 costs is in the order of R100-R200 million but this can only be more accurately presented once the necessary assessments and cost calculations have been completed.</p>
<p>Decommissioning</p>	<p>Surface rehabilitation of the underground pipelines and temporary laydown/camps will take place following construction while other infrastructure such as wells, inline stations, roads,</p>

<p>Considering that rehabilitation must take place upon cessation of an activity, describe when each of activities applied for will be rehabilitated in terms of either the cessation of the individual activity or the cessation of the overall prospecting or mining activity.</p>	<p>LNG/LHe Plant etc will be rehabilitated following decommissioning at the end of production activities.</p>
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Khalid Patel

Signature of the applicant / Signature on behalf of the applicant:

Tetra4 (Pty) Ltd

Name of company (if applicable):

21 July 2022

Date:

**APPENDIX 1
DECLARATION OF THE EAP**

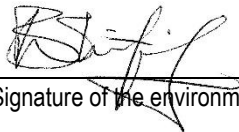
I, **Brian Whitfield**, declare that –

General declaration:

- I act as the independent environmental practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest (delete whichever is not applicable)

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;
- ~~I have a vested interest in the proposed activity proceeding, such vested interest being:-~~



Signature of the environmental assessment practitioner:

Environmental Impact Management Services (Pty) Ltd - EIMS

Name of company:

21 July 2022

Date:

List of Appendices:

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Appendix 3_2 Cluster 1 EA.pdf

Appendix 3_3 Cluster 1 EA Amendment 1.pdf

Appendix 3_4 Cluster 1 EA Amendment 2.pdf

Appendix 3_5 AEL.pdf

Appendix 4_Site Plan.jpg

Appendix 5_WUL Application Proof of Commencement.pdf

Appendix 6_0. Table of properties.pdf

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Appendix 6_3. Farm Portions inset 1.jpg

Appendix 6_4. Farm Portions inset 2.jpg

Appendix 7_Impact Assessment Methodology.pdf

Appendix 8_1. DFFE Screening Tool Report.pdf

Appendix 8_2. SSVR.pdf

Appendix 9_Initial Public Participation