

Private Bag X 09, Roggebaai, 8012, Tel: 021 427 1000, Fax: 021 427 1046 Atterbury House, 09 Riebeeck Street, Cape Town, 8001

Enquiries: Ms. Portia Seaba Ref: E-Mail Address: portia.seaba@dmre.gov.za

WC 30/5/1/2/2/10103MR

Sub-Directorate: Mine Environmental Management

REGISTERED LETTER

Adelaide Ruiters and Exploration (Pty) Ltd 1612 The Oval Henley on Klip MEYERTON 1961

Attention

: Adelaide Ruiters

Tel Fax : 084 7234 555 : 086 574 5248

Email

: adelaide@arme.co.za

Dear Madam

APPLICATION FOR AN INTEGRATED ENVIRONMENTAL AUTHORISATION (IEA) LODGED IN TERMS OF SECTION 24 OF NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AS AMENDED AND NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT 59 OF 2008, NEMWA) AS AMENDED READ IN CONJUNCTION REGULATION 21 OF THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REGULATIONS, 2014 AS AMENDED, FOR MINING PHOSPHATE, LIMESTONE, AGGREGATE, SAND, RUTILE, ZIRCON, MONAZITE, GARNET, FELDSPAR, CALCITE, APATITE, TITANIUM OXIDE, RARE EARTH, ILMENITE, SANDSTONE, HEMATITE/GOETHITE, SCHORL AND QUARTZ ON REMAINDER OF THE FARM ZANDHEUWEL 126, PORTION 61 OF THE FARM WITTEKLIP 123, CERTAIN PORTION OF REMAINDER OF PORTION 2 OF THE FARM YZERVARKENSRUG 127 AND CERTAIN PORTION OF REMAINDEROF PORTION 1 OF THE FARM 124, IN THE MALMESBURY DISTRICT: WESTERN CAPE REGION

With reference to the above mentioned application, please be advised that the Department has decided to **grant** Integrated Environmental Authorisation (IEA) in terms of NEMA, Environmental Impact Assessment Regulations of 2014 as amended, 2014

(NEMA EIA Regulations and NEMWA. The IEA and reasons for the decision are attached herewith.

In terms of regulation 4(2) of the NEMA EIA Regulations, you are instructed to notify all registered interested and affected parties, in writing within 14 (Fourteen) calendar days, from the date of the department's decision in respect of your application and the relevant provisions regarding the lodgement of appeal must be provided for in terms of the National Appeal Regulations of 2014.

Should you wish to appeal any aspect of the decision, you must submit the appeal to the Minister of Environment, Forestry and Fisheries and a copy of such appeal to the Department of Mineral Resources and Energy (Western Cape Regional Office), within 20 days from the date of notification, and such appeal must be lodged as prescribed in by Chapter 2 of the National Appeal Regulations of 2014, by means of the methods as prescribed below:

Appeal to the Department of Environment, Forestry and Fisheries.

Attention

: Directorate Appeals and Legal Review

Email By post

: appealsdirectorate@environment.gov.za : Private Bag X 447, PRETORIA, 0001

By hand

: Environmental House. Corner Steve Biko and

Soutpansberg Street, Arcadia, Pretoria, 0083

Copy of the lodged appeal to the Department of Mineral Resources and Energy

Attention

: Regional Manager: Western Cape Region

By facsimile : (021) 427 1046

E-mail

: Pieter.Swart@dmre.gov.za

By post

: Private Bag X 09, Roggebaai, 8012

By hand

: 9th floor Atterbury House, 9 Riebeeck Street, Cape Town, 8001

Should you decide to appeal, you must comply with the National Appeal Regulation of 2014 in relation to notification of all registered interested and affected, and a copy of the official appeal form can be obtained from the Department of Environment, Forestry and Fisheries.

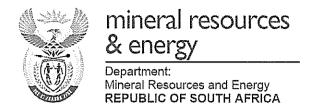
Kind Regards

APPROVED

REGIONAL MANAGER: MINERAL REGULATION

WESTERN CAPE REGIONAL OFFICE

DATE:



Private Bag X 09, Roggebay, 8012, Tel: 021 427 1000, Fax: 021 427 1046 Atterbury House, 09 Riebeeck Street, Cape Town, 8001

Integrated Environmental Authorization (IEA) in terms of Section 24 of National Environmental Management Act, 1998 (Act 107 of 1998) as amended and National Environmental Management: Waste Act, 2008 (Act 59 of 2008, NEMWA) as amended.

Mining of Phosphate, Limestone, Aggregate, Sand, Rutile, Zircon, Monazite, Garnet, Feldspar, Calcite, Apatite, Titanium Oxide, Rare Earth, ILmenite, Sandstone, Hematite/goethite, Schorl and Quartz on Remainder of the farm Zandheuvel No 126, Portion 61 of Farm Witteklip 123, Certain portion of Remainder Portion 2 of the Farm Yzervarkensrug No 127 and Certain portion of Remainder of Portion 1 of the Farm 124.

Reference number:	WC 30/5/1/2/2/10103MR
Holder of Integrated Environme Authorisation:	Adelaide Ruiters and Exploration (Pty) Ltd
Location of activities:	Remainder of the farm Zandheuvel No 126, Portion 61 of Farm Witteklip 123, Certain portion of Remainder Portion 2 of the Farm Yzervarkensrug No 127 and Certain portion of Remainder of Portion 1 of the Farm 124, in the Malmesbury District



ACRONYMS

DEPARTMENT: Department of Mineral Resources and Energy

ECO: Environmental Control Officer

IEA: Integrated Environmental Authorisation
EIA: Environmental Impact Assessment
EIA REGULATIONS: EIA Regulations, 2014 as amended
EMPr: Environmental Management Programme

EIR: Environmental Impact Report

HWC: Heritage Western Cape

I&AP: Interested and Affected Parties

MPRDA: Mineral and Petroleum Resources Development Act, 2002

(Act 28 of 2002), as amended

NEMA: National Environmental Management Act,

1998 (Act 107 of 1998), as amended

NEMWA: National Environmental Management: Waste Act, 2008 (Act

59 of 2008), as amended

SAHRA: South African Heritage Resources Agency

DECISION

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this IEA that the applicant should be authorised to undertake **NEMA and NEMWA** listed activities specified below. Details regarding the basis on which the Department reached this granting decision are set out in **Annexure** "1" and "2" of this IEA.

NEMA EIA AND NEMWA LISTED ACTIVITIES AUTHORISED

By virtue of the powers conferred on it by NEMA, NEMA EIA Regulations, NEMWA and Government Notice 921 of 2013 as amended, the Department of Mineral Resources hereby **Authorises**- Adelaide Ruiters and Exploration (Pty) Ltd with the following contact details –

Adelaide Ruiters and Exploration (Pty) Ltd

1612 The Oval Henley on Klip MEYERTON

1961

 Attention
 : Adelaide Ruiters

 Tel
 : 084 7234 555

 Fax
 : 086 574 5248

Email : adelaide@arme.co.za



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to undertake the following activities (hereafter referred to as "the activities"):

Listed Activities	Activity and/or project description
Activity 24 of Government Notice No. R 983 as amended by GN 327 of April 2017	Construction of access roads and internal haul roads and upgrading of existing access
The development of a road—	roads (including the relevant stormwater
(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8	infrastructure).
metres; but excluding a road— (a) which is identified and included in activity 27 in Listing Notice 2 of 2014;	Access Roads and Internal Service Roads: ±10 km long x 10 m wide
(b) where the entire road falls within an urban area; or(c) which is 1 kilometre or shorter.	Haul Roads: ± 3.5 km long x 18 m wide.
Activity 56 of Government notice No. R 983 as amended by GN 327 of April 2017	Construction of access roads and internal haul roads
The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre—	and upgrading of existing access roads (including the relevant stormwater infrastructure).
(ii) where no reserve exists, where the existing road is wider than 8 metres; excluding where widening or lengthening occur inside urban areas.	Access Roads and Internal Service Roads: ± 10 km long x 10 m wide Haul Roads: ± 3.5 km long x 18 m wide.
Activity 4 I of Government Notice No. R985 as amended by GN 324 of April 2017	Construction of access roads and internal haul roads and upgrading of existing access
The development of a road wider than 4 metres with a reserve less than 13,5 metres.	roads (including the relevant stormwater infrastructure).
Western Cape i. Areas zoned for use as public open space or equivalent zoning; ii. Areas outside urban areas; (aa) Areas containing indigenous vegetation;	Access Roads and Internal Service Roads: ± 10 km long x 10 m wide Haul Roads: ± 3.5 km long x 18 m wide.



Activity 18 i of Government Notice No. R985 as amended by GN 324 of April 2017

The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.

- i. Western Cape
- i. Areas zoned for use as public open space or equivalent zoning;
- ii. All areas outside urban areas:
- (aa) Areas containing indigenous vegetation;

Construction of access roads and internal haul roads and upgrading of existing access roads (including the relevant stormwater infrastructure).

Access Roads and Internal Service Roads: ± 10 km long x 10 m wide Haul Roads: ± 3.5 km long x 18 m wide.

Activity 17 of Government notice No. R984 as amended by GN 325 of April 2017

Any activity including the operation of that activity that requires a mining right as contemplated in Section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks, directly related to the extraction of mineral resources; or the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing; but excluding the secondary processing of mineral resource, including the smeltina reduction, refining beneficiation. calcining gasification of the mineral resource in which case activity 6 in this Notice applies.

Construction of a processing plant and associated infrastructure including mine offices and workshops & establishment of ore stockpiles in 7.6 ha area.

Activity 15 of Government Notice No. R984 as amended by GN 325 of April 2017

The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for—

- (i) the undertaking of a linear activity; or
- (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

Mining of ore from open cast pit/s Three open pits with combined footprint of 110 ha.

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Activity 12 of Government Notice No. R985 as amended by GN 324 of April 2017

The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. Western Cape Establishment of mine residue facilities and topsoil stockpiles. Two Mine Residue Facilities with a combined footprint of 76 ha. Two topsoil stockpiles with a combined footprint of 8 ha.



i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity

Assessment 2004;

- ii. Within critical biodiversity areas identified in bioregional plans;
- v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.

Activity 6 of Government Notice No. R984 as amended by GN 325 of April 2017

The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding—

- (i) activities which are identified and included in Listing Notice 1 of 2014;
- (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;
- (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.

Activity 13 of Government Notice No. R 983 as amended by GN 327 of April 2017

The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.

Construction of storm water and service water dams:

Process water pond/reservoir (PWP)

Grey water pond (GWP)
Pollution control dams (PCD) x4

PWP: 5000 m³ GWP: 5000 m³

PCDs: 47 800 m³, 6 862m³, 32 900 m³ & 36 370 m³

APPROVED

Construction of storm water and service water dams:

Process water pond/reservoir (PWP)

Grey water pond (GWP)

Pollution control dams (PCD) x4

PWP: 5000 m³ GWP: 5000 m³

PCDs: 47 800 m³, 6 862m³, 32 900 m3 & 36 370 m3 Construction of facilities for the Activity 14 of Government notice No. R 983 as amended by GN 327 of April 2017 storage of oil, diesel and fuel. Two 80 m³ diesel storage tanks The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres. Activity 10i of Government Notice No. R985 as Construction of facilities for the amended by GN 324 of April 2017 storage of oil, diesel and fuel. The development of facilities or infrastructure for the Two 80 m³ diesel storage tanks storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres **APPROVED** Western Cape i. Areas zoned for use as public open space or equivalent zoning; ii. All areas outside urban areas; Activity 10: Category B of Government Notice No. Establishment of mine residue 921 of 2013 as amended facilities and topsoil stockpiles. Two Mine Residue Facilities with a combined footprint of 76 ha. The construction of a facility for a waste management activity listed in Category B of this scheme (not in Two topsoil stockpiles with a isolation to associated waste management activity). combined footprint of 8 ha. Backfilling of open pits,110ha. Establishment of mine residue Activity 11: Category B of Government Notice No. 921 of 2013 as amended facilities and topsoil stockpiles. Two Mine Residue Facilities with The established or reclamation of a residue stockpile a combined footprint of 76 ha. Two topsoil stockpiles with a or residue deposit resulting from activities which require a mining, exploration or production. combined footprint of 8 ha. Backfilling of open pits, 110ha.

Detailed description of the activities are as follows:

The resource will be mined by conventional truck and shovel open pit mining. The mining of this sedimentary phosphate will not include any blasting. The mine will be divided into three



(3) open pits. Mining will start in the west with Open Pit 1. Mining will then proceed to Open Pit 3 and Open Pit 2 will be mined last. The depth of mining will range from 40 (pit 1) to 100 m (pit 3). Waste/ overburden from Open Pits 1 and 3 will be hauled to a designated mine residue facility south-east of Pit 3 (Eastern Mine Residue Facility). Once the Eastern Mine Residue Facility reaches capacity and sufficient space is available in Pit 1, the waste/ overburden from Pit 3 will be backfilled into Pit 1 together with filter press tailings from the plant. The filter press tailings and waste/ overburden from Pit 3 will also be backfilled into Pit 3 when space becomes available at Pit 3. The Waste/ overburden from Pit 2 will be backfilled into Pit 1 and once natural ground level is reached a new Mine Residue Facility will be created on the footprint of Open Pit 1. Once mining is finished the mine residue facilities will be partially backfilled into Open Pits 2 and 3.

The ore removed from the open pits will be fed to the plant at a rate of 120 kilotonnes per month (ktpm). The material will go through a sizing screen where the oversize material (>10 mm) will be removed. The oversize material will be backfilled into the open pits. The ore will be fed to a spiral plant where the heavy minerals will be removed and thereafter it will go through a ball mill and a flotation circuit. The material will then report to a Concentrate Thickener where excess water will be removed. The material will then be pumped via pipeline (beneath the TR85/1 tar road) to a storage facility at Pindulo VDM where more water will be removed from the ore by means of a Filter Press. The excess water will be pumped back via return water pipeline to the Concentrate Thickener at the plant. The Final Phosphate Concentrate will be stockpiled at Pindulo VDM and sold.

Waste/ overburden from mining activities will be stored on the Western Mine Residue Facility to the southeast of the open pit areas when mining commences. The facility will be used for the co-disposal of filter press tailings and waste/ overburden. The general sequence of conventional open pit mining will be as follows:

Strip Waste/ overburden: The waste material overlying the ore will be removed by digging, pushing, scraping, followed by loading into the 40-ton haul trucks for transportation to the mine residue facilities or as backfill for the portion being rehabilitated.

Ore Production: The ore will be excavated, loaded and hauled to the flotation plant where the Run of Mine (ROM) will be tipped into the ROM feeder for processing.

Rehabilitation: Concurrent backfilling and rehabilitation is the method preferred for this project and will decrease the overall environmental footprint.



Topsoil will be placed on a dedicated topsoil facility to the west of Pit 1 and another facility to the south of Pit 3.

Mine infrastructures will consist of the following:

- Ore handling and storage facilities (stockpiles)
- Two mine residue facilities
- · Topsoil storage facilities
- Potable Water Tank, Process Water & Grey Water Ponds and Four Pollution Control Dams
- Product and Return Water Pipelines
- Processing Plant
- Emergency (generators) and electricity distribution facilities (powerlines and substations)1
- · Fuel Storage Facilities
- Site Access Road and Haul Roads
- · Water and sewage reticulation
- Sewage Treatment Plant
- Water Treatment Plant
- Mine offices and general buildings

Site description and location:

Adelaide Ruiters and Exploration (Pty) Ltd proposed to mine different minerals as mentioned above on Remainder of the farm Zandheuvel No 126, Portion 61 of Farm Witteklip 123, Certain portion of Remainder Portion 2 of the Farm Yzervarkensrug No 127 and Certain portion of Remainder of Portion 1 of the Farm 124 in the Malmesbury District at the following co-ordinates:

GPS coordinates for the proposed Mining areas are provided below:

Nr	Lat	Long
Α	32°57'40.58" S	17°58'50.89" E
В	32°56'30.60" S	17°58'37.94" E
C	32°56'26.75" S	17°59'07.62" E
D	32°56'36.25" S	18°00'07.62" E
Ε	32°56'36.03" S	18°00'17.55" E
F	32°56'51.11" S	17°59'59.51" E
G	32°56'37.58" S	18°00'36.13" E
Н	32°56'56.47" S	18°00'46.29" E
I	32°58'14.80" S	18°00'00.32" E



The SG codes:

C04600000000012600000 C04600000000012300061 C04600000000012700002 C04600000000012400001 C046000000000012400003 C046000000000012400000



SCOPE OF THE AUTHORISATION

Granting of this **IEA** is subject to the conditions set out below and in **Annexure 2** (Departmental standard conditions). The Environmental Management Programme (EMPr) attached complies with section 24N of NEMA and Appendix 4 of NEMA: EIA Regulations is hereby approved, therefore it must be adhered to throughout the life cycle of the operation.

INTEGRATED ENVIRONMENTAL AUTHORISATION SITE SPECIFIC CONDITIONS

- 1. Mining activities must be conducted in accordance with the approved Environmental Management Programme and the attached layout plan.
- All approved mining areas must be surveyed and clearly demarcated and fenced off prior to any development. All areas indicated as "no-go" areas on the layout plan must be clearly demarcated and any mining activities including stockpiling and storage of materials is prohibited on those areas.
- 3. The applicant must appoint an experienced biodiversity offset specialist within six (6) months of project approval. The specialist must submit a suitable biodiversity offset plan within six months of appointment to the Department for consideration and approval. The applicant must implement this biodiversity offset according to the schedule therein. This biodiversity offset is required to help minimise the residual High negative ecological impact of the proposed project and must be aligned with best practices and available guidelines.
- 4. The trained personnel must undertake Search and Rescue of tortoises and any other reptiles, mammals and amphibians prior to development (site clearing) of any area. All collected specimens must be moved unharmed to the West Coast National Park, or any suitable receiving area approved by the relevant authorities, with the relevant permits.
- 5. Shade-cloth barriers (1.5m tall) along the outside of the operational areas must be installed as soon as site preparation is completed (bush clearing and topsoil removal), to prevent tortoises and other animals wandering onto site from non-mining areas and getting crushed, and to minimise windblown sand drift. These shade-cloth fences must be dug into the ground so that animals cannot get under them.
- 6. Daily patrols must be undertaken to ensure that no animals are trapped inside fences. If there are any, they must be released unharmed outside the areas.



- 7. Large scale plant Search and Rescue of all development areas must be undertaken prior to any topsoil or vegetation removal. This must be undertaken by an experienced horticultural contractor. Rescued plant material must include seeds (vacuum and hand harvesting), bulbs, rhizomes, whole plants and cuttings and must be stored and propagated in appropriate conditions in a dedicated plant nursery either nearby or on site.
- 8. A buffer of 100 m must be kept between the mine open pits and the railway line.
- 9. All topsoil to a depth of 300mm must be removed from the mining area and stored separately from the waste/ overburden, and reused during the rehabilitation phase, as it contains much of the seedbank and most of the bulbs. Topsoil must be stored for as short a period as possible.
- 10. All disturbed areas (in and around the development footprints) must be rehabilitated on an ongoing basis with suitable locally indigenous Strandveld plant species, sourced primarily from material harvested on site prior to any site development.
- 11. Ongoing alien invasive plant management must be undertaken throughout the site during life of mine, and afterwards until the mine closure certificate is issued. It is particularly important that this be undertaken in all areas requiring rehabilitation, and in all conservation areas. The efficacy of such operations must be independently audited every two years, with required changes noted by the auditors acted upon within 3 months.
- 12. Dust fallout as outlined in the Air Quality Impact Assessment Report, be undertaken to monitor the impacts from the proposed project activities. Dust suppression chemicals (or wastewater) must be used on roads and surfaces where dust levels are excessive.
- 13. Visible semi-permanent markers must be placed on the mining boundary before mining activities commences and must be kept for the duration of mining. Mining activities must strictly be conducted within the demarcated area.
- 14. Agreement must be concluded between HWC and the applicant to facilitate effective and ongoing palaeontological monitoring and mitigation. In addition, a workplan must be submitted to HWC that includes detailed procedures to be applied during the vegetation clearance and mining.
- 15. Mining activities must be conducted concurrent with rehabilitation and measures such as mulching and/or immediate cover with vegetation must be taken to ensure that the rehabilitated surface is protected from forces of erosion.
- 16. Access to the site must be through an existing access road as indicated on the layout plan and the construction of new access road is prohibited.
- 17. All recommendations and conditions set out in the specialist reports and the approved EMPr must be strictly adhered to.



ANNEXURE 1: RECORD OF DECISION (RoD) REF. NO 16/2/7/G300/G210/Y1: WASTE MANAGEMENT LICENCE FOR ADELAIDE RUITERS AND EXPLORATION (PTY), ZANDHEUVEL PHOSPHATE MINE WASTE RELATED ACTIVITIES IN TERMS OF SECTION 50 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT 59 OF 2008), WESTERN CAPR PROVINCE

CONDITIONS FOR THE EXPANSION OF MINE RESIDUE DEPOSITS (MRD), MINE WASTE ROCK DUMPS AND ASSOCIATED POLLUTION DAMS (PCDS) AT ADELADE RUITERS MINING AND EXPLORATION (PTY) LTD FOR PROPOSED ZANDHEUVEL PHOSPHATE MINE.

APPROVED

1. CONSTRUCTION

- 1.1 Adelaide Ruiters & Exploration (Pty) Ltd shall construct the Mine Residue Deposits (MRD), Mine Waste Rock Dumps, and associated Pollution Control Dams (PCDs) at its proposed Zandheuvel Phosphate Mine, in terms of the designs and Construction Quality Assurance (CQA) plan as submitted to and approved by the Responsible Authority in terms of Government Notice R632 in the Government Gazette 39020 of 24 July 2015 or its successor in title.
- 1.2 Construction within the site must be carried out under the supervision of a Professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 2000 (Act 46 of 2000) and in line with approved designs.
- 1.3 The Site, or any portion thereof must be covered and maintained in such a way that-
 - 1.3.1 the formation of pools, and/or damming due to rain is prevented.
 - 1.3.2 free surface runoff of rainwater is ensured.
 - 1.3.3 contamination of stormwater is prevented.
 - 1.3.4 minimal or no erosion occurs.
- 1.4 Limitations: This Record of Decision does not exempt the designer from complying with any other legislation. This review refers only to the activity as specified and described in the signed design report and drawings listed under documentation submitted for consideration.
- 1.5 Commencement: One month's written notice must be given to the Responsible Authority before commencement of construction activities. Such notice shall make clear reference to the site location details and the reference number of the project as indicated above and one month's written notice must be given to the





- Responsible Authority before commencement of the operational phase activities. These written notices shall be included in the supporting documentation to the Engineers certificate of completion.
- 1.6 Deviation from accepted design: The Licence Holder must notify the Responsible Authority in writing, within 24 (twenty-four) hours if any condition of this design and its acceptance cannot be, or is not, adhered to during construction and operation. The notification must be supplemented with reasons for non- compliance, and proposed rectification measures.
- 1.7 Engineering Records: Comprehensive design and construction records, including topographical surveys and methodical materials test results (on all materials used), shall be maintained and archived and accessible for the life of the facilities (including decommissioning).
- 1.8 Accountability: the authorities shall not be held responsible for any damages or losses suffered by the application or its successor in the title in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of approval set out in this document or any other subsequent document emanating from these conditions of acceptance.
- 1.9 Demarcation, cordons, barriers and warning systems: the Licence Holder must place cordons, barriers and warning systems around facilities to define the nature and extent of each area.
- 1.10 Reporting to authorities: all significant differences between predicted and actual performance of the facilities shall be reported to the authorities annually in writing.
- 1.11 Confirmation of Pollution Risk: The Licence Holder shall confirm the waste risk a assumption within six months of operation by means including an assessment of the return water dam quality and the mine residue deposit pollution control dam (dirty water dam) sampling.
- 1.12 Overtopping of return water dam and pollution control dams (dirty water dam): The Licence Holder shall report every overtopping incident within 24 hours of event to the Responsible Authority in writing and treat each as a pollution incident with appropriate remediation. Such notification shall be provided to the DWS Regional Manager and Director General.
- 1.13 Wastewater Sewage Treatment package plant: The Licence Holder shall confirm the performance of the package wastewater treatment package plant with respect to containment standard and treated effluent quality by means of monthly monitoring of a leak detection system beneath the plant and effluent discharge sampling. The monitoring results shall be made available to the Responsible Authority annually or upon request and be used to inform the 5 yearly licence review.
- 1.14 Return Water Dam barrier system: The return water balancing dam lining Option 2 is rejected for failing to recognise the effects of desiccation and



wastewater interaction as well as absence of GCL confinement load, whereas Option 1 and 3 as listed in the design report may be accepted provided that the strain limitation to less than 3% due to load including point loads is demonstrated in writing prior to the commencement of mining operations. This assessment shall include consideration of the cleaning process during operational life.

- 1.15 Stability of the 70m height Mine Residue deposit: the Licence Holder shall confirm the stability assumptions be means of materials strength tests and instrumentation to confirm pore water pressure throughout the life of mine and include at least a pseudo static seismic analysis.
- 1.16 Construction Completion Certificate: The Engineers certificate of construction completion shall include supporting evidence of compliance with the standard specifications in the design report and be provided to the authorities for written acceptance prior to commencement of activities.
- 1.17 Monitoring and Reporting: The Licence Holder shall implement a monitoring and reportin system which includes a monthly record of volumes in the return water dam and two PCDS (Dirty water dams) as well as dewatering and volume and water quality of dust suppression water noting that the MRD is unlined). The monitoring system results are to be made available to the Responsible Authority annually or upon request.
- 1.18 Standard specifications and construction quality assurance protocols: the Licence Holder shall amend the Project specifications and the QCQA plan of subappendices B and C to the design report in appendix 14 to reflect inclusion of SANS specifications SANS1526 (2015) and SANS10409 (2020) as amended, and amend QAQC document to at least to the same standard of the Technical Advisory Note and Example CQA on the DFFE website for Construction Quality Assurance of pollution control and water conservation barrier systems.
- 1.19 The Master plan must be updated to include the proposed farms or areas, and water use authorisation obtain where required. Sufficient watercourse buffers must be implemented.
- 1.20 The clean water drains must be made as be made as natural as possible and discharge into bio retention ponds and designs to be submitted for approval.
- 1.21 Possible degrading physical effects to watercourses must be monitored and remediated.
- 1.22 Any development which occurs within 1:100-year flood line and/or within 500m from the boundary of a wetland would require a water use licence in terms of section 40 of the National Water Act, 1998 (Act 36 of 1998).

 APPROVED



2 WATER QUALITY MANAGEMENT

2.1 Storm Water Management

2.1.1. All runoff water (stormwater) arising as a result of precipitation on land adjacent to the site must be prevented from entering the site, diverted and drained from the site.

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3. MONITORING

3.1 Surface and Groundwater water monitoring

- 3.1.1 A groundwater monitoring and management plan comprising of no less than a total of nine boreholes in terms of quality and quantity should be developed as per table 19-2 of the hydrogeological report to ensure there are monitoring boreholes up a down-gradient of the proposed open cast areas, pollution control dam, and mine residue deposits facilities during mining phases phase.
- 3.1.2 Ensure that the three conceptual boreholes (CBH2, CBH2 and CBH3) are sited and drilled using geophysical techniques to optimise drilling targets and maximize the likelihood of intercepting potential groundwater pollution caused by mining activities.
- 3.1.3 The conceptual boreholes are sited and drilled to ensure penetration through the shallow and deeper acquires for the purpose of early detection of pollution plume.
- 3.1.4 All the monitoring boreholes must always be properly sealed at the surface to prevent surface pollution into the groundwater system.
- 3.1.5 Groundwater monitoring is conducted at least on a quarterly basis upstream and downstream of the mining activities and proposed facilities.
- 3.1.6 The monitoring network follows an exponential spread with the progression of the mining phases, i.e. increase the number of monitoring boreholes with the increasing number of mining activities.
- 3.1.7 The hydrochemical data generated form hydrocensus phase and new drilled boreholes must be used as baseline quality prior to mining, during operational, decommissioning and post mining phases to assess water quality data.
- 3.1.8 The data from the monitoring event must be used to continually update the geohydrological model before commencement of mining activities with updated impacts and mitigation, followed by an annual update of the groundwater model in



- an effort to detect pollution at early stages to inform the implementation of suitable remedial actions.
- 3.1.9 The pollution control dams (PCDs), overburden stockpiles and mine residue deposits facilities must not be constructed on the Colenso fault intersected on site during the drilling event as this geological structure has the potential to act as preferential pathway for migration of contamination plume.
- 3.1.10 The licence holder must closely monitor and implement appropriate management measures for the elevated concentration of Sodium, chlorine, total dissolved solid, sulphate, iron, and manganese encounter in the newly drilled boreholes to minimise and to ensure the desired concentrations are achieved or met.
- 3.1.11 The licence holder must ensure that the treated sewage water to be used for beneficiation processes is only employed within the processing plant area in order to prevent potential contamination of the underlying aquifers which are a sole source of groundwater supply to some neighbouring users.
- 3.1.12 The licence holder must monitor the dewatering activities through collection of groundwater levels within the opencast areas to ensure prevention of the identified dewatering impacts on the identified west coast town trust farmhouse during the operational phase. Suitable management and compensative measures must also be implemented for the predicted water level decline in neighbouring boreholes to be impacted.
- 3.1.13 The licence holder must prevent the predicted release of contamination plume form mine residue facilities. This potential migration of pollution plume must be intercepted and contained within the boundaries of the mining areas by means of interception boreholes between the mining areas and the nearby receptors.
- 3.1.14 The licence holder must employ suitable mitigation measures for the increased recharge and higher permeability of the backfilled material. A clay final layer below the topsoil cover must be employed and compacted to reduce and minimize rainfall recharge into the rehabilitated opencast pits.
- 3.1.15 The licence holder must prevent potential decant by minimizing recharge and hydraulic heads within the rehabilitated pits.
- 3.1.16 The backfilling methodology to be employed for the opencast pits must prevent pit lake formation since it is predicted that this will create elevated salt concentrations due to higher evaporation on surface leading to the deterioration of the groundwater environment.



- 3.1.17 Management measures must be implemented for the protection of the shallow aquifer as it is the potential receptor of contamination form the backfilling activities.
- 3.1.18 Suitable management of the stormwater is recommend around proposed opencast pits, pollution control dams and mine residue deposits facilities such that clean surface water runoff is prevented form entering or coming into contact with the dirty surface areas. Consideration must be given to the construction of berms around the opencast areas to minimise flooding into open pit workings. These berms must also allow free drainage away from the opencast pit.
- 3.1.19 Storage of any hazardous material/substances during construction and operation at the processing plant and close to the mine service area must be on adequately bunded floor and the walls on bund areas must be impervious to prevent infiltration of any spillage and leakage into the subsurface soil and groundwater system.
- 3.1.20 The licence holder must take note that the envisaged rehabilitation of the open areas via backfilling with tailing material triggers the national water act as well as regulation 3 of government notice (GN. 704).
- 3.1.21 The licence holder must apply for an Exemption from Regulations on use of water for mining and related activities aimed at the protection of water resources (GN 704) regulation 4 (c) for undertaking backfilling activities.
- 3.1.22 The licence holder must apply for relevant section 21 (g) water use of the national water act and must receive authorisation for the activity prior to commencement of backfilling activities.
- 3.1.23 The license holder must also ensure compliance with the water use license application (WULA) process of the Department of \water and Sanitation to obtain Authorisation for the applicable water uses.
- 3.1.24 In the case of pollution at decommissioning and post mining phases, the cause of the pollution must be investigated, and remediation measures should be implemented to reduce the potential for migration of any contaminants form the site. Groundwater mitigation/management measures in page 56-59 of the hydrogeological and Geochemical Specialist study.
- 3.1.25 The groundwater monitoring must be continued post decommissioning of the site until the water quality is within acceptable standard and the responsible authority approves that the monitoring can cease.
- 3.1.26 If the groundwater and downstream users are affected by unacceptable water quality as result of contamination plume emanating form the site activities, the applicant must compensate the users with portable water.

3.2 Detection Monitoring

3.2.1. Monitoring for groundwater quality must be conducted for variables listed in Annexure 1 - quarterly or such frequency as may be determined by the Responsible Authority. The list of variables may be amended or revieed through a written notice by the responsible authority to align with water resources protection measures or issued Water Use Licence from time to time.

3.3 Investigative monitoring

3.3.1 If, in the opinion of the Responsible Authority, a water quality variable listed under the detection monitoring programme, as referred to in condition 3.2.1, shows an increasing trend, the Licence Holder shall initiate a monthly monitoring programme until such time that the variable is within acceptable limits confirmed by the responsible authority.

4 METHODS OF ANALYSIS

4.1 Sample analysis, for samples taken under the monitoring programme specified in condition 3, must be conducted by the recognized analytical laboratory, accredited by the South African National Accreditation System (SANAS), or that participates in a recognised Proficiency Testing Scheme to analyse the relevant constituents in the monitoring programme.

5 **AUDITING**

5.1 Audits and inspections

- 5.1.1 The Responsible Authority reserves the right to audit and/or inspect the Site at any time and at such a frequency as the Responsible Authority may decide, or to have the Site audited or inspected.
- 5.1.2 The Licence Holder must make any records or documentation available to the Responsible Authority upon request, as well as any other information the Responsible Authority may require.

6 REPORTING

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6.1 Reporting of Incidents

6.1.1 The License Holder must, within 24 hours, notify the Responsible Authority of the occurrence or detection of any incident on the Site which has the potential to cause, or has caused water pollution.



- 6.1.2 The Licence Holder must, within 14 days, or a shorter period of time, if specified by the Responsible Authority, from the occurrence or detection of any incident referred to in condition 6.1.1, submit an action plan, which shall include a detailed time schedule, to the satisfaction of the Responsible Authority of measures taken to-
- 6.1.2.1 correct the impact resulting from the incident;
- 6.1.2.2 prevent the incident from causing any further impacts; and/or;
- 6.1.2.3 prevent a recurrence of a similar incident.
- 6.1.3 In the event that measures have not been implemented within 21 days to address impacts caused by the incident referred to in condition 6.1.1, or measures which have been implemented are inadequate, the Responsible Authority may implement the necessary measures at the cost and risk of the Licence Holder.

6.2 Other Reports

- 6.2.1 The information required in terms of condition 2 must be reported to the Responsible Authority in a yearly report. The information must also be included into a trend report, which must contain a graphical presentation of all results obtained previously at any specific point, as well as an interpretation and discussion of the results of each monitoring occasion.
- 6.2.2 The Licence Holder must submit a written report to the Responsible Authority regarding any deviations from plans described in this RoD and must obtain written permission from the Responsible Authority before such deviations may be implemented.

7 GENERAL

7.1 The issuance of this RoD does not exempt the Licence Holder from compliance with any other legislation including Section 40 of the National Water Act, 1998 (Act 36 of 1998).



ANNEXURE I: WATER QUALITY VARIABLES REQUIRED FOR DETECTION MONITORING

Monitor at quarterly intervals for:

Alkalinity (P.Alk)

Ammonia (NH₃-N)

Chemical Oxygen Demand (COD)

Chlorides (CI)

Electrical Conductivity (EC)

Nitrate (NO₃-N)

рΗ

Potassium (K)

Total Dissolved Solids (TDS)

Calcium (Ca)

Fluoride (F)

Magnesium (Mg)

Sodium (Na)

Sulphate (SO₄)

Boron (B)

Iron (Fe)

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Design Engineering Acronyms

CCL- Compacted Clay Liner StdPr- Standard Proctor

GCL- Geosynthetic Clay Liner MDD- Maximum Dry Density

GM- Geomembrane OMC- Optimum Moisture Content

GT- Geotextile DT- Double Textured

GD- Geodrain ST- Single Textured

GN- Geonet NWNP- Non-Woven Needle Punched

HDPE- High Density Polyethylene OIT- Oxidative Induction Time

LLDPE- Linear Low-Density Polyethylene ESCR- Environmental Stress Cracking

Resistance



PVC- Poly Vinyl Chloride

VoC- Volatile Organic Compound

PP- Polypropylene

PET- Polyester

PCD-Pollution Control Dam

RWD- Return Water Dam

FSL- Full Supply Level

NOC- Non-Overspill Crest

NGL- Natural Ground Level

GWL- Ground Water Level

FoS- Factor of Safety

LCS-Leachate Collection System

LDS- Leak Detection System

RoM-Run of Mine

TSF-Tailings Storage Facility

1v:4h- 1 vertical in 4 horizontal slope

1:100yr- 1 in 100 year return period flood event

Rf-Rain Fall

MAR- Mean Annual Runoff

SEF- Safety Evaluation Flood

PMF- Probable Maximum Flood

Slunits- Standard International Units

CQA- Control Quality Assurance

PrEng- Professional Engineer as defined by Act 46 of 2000

NWA- National Water Act, Act 36 of 1998 as amended

NEMA-National Environmental Management Act, Act 107 of 1998 as amended.

NEMWA- National Environmental Management Waste Act, Act 59 of 2008

PAJA- Public Administrative Justice Act, Act 3 of 2000

PFMA-Public Finance Management Act, Act 1 of 1999

PL-Plastic Limit

LL- Liquid Limit

PI- Plastic Index

FM- Fineness Modulus

G:L/M/S:B+/- - General Waste:

Large/Medium/Small Water Balance

Site: positive

/Negative

EMP- Environmental Management Plan





MR2- Minimum Requirements for Waste Disposal by Landfill 2nd Edition, 1998

MPRDA- Mineral and Petroleum Resources Development Act, Act 28 of 2002 as amended.

R636- Norms and Standards for Disposal of Waste to Landfill R636 of 23 August 2013

NEMA Regulations 2014 refers to the regulations 982, 983, 984, 985

NEMWA Regulations 2013 refers to Regulations 634, 635, 636, of 23 August 2013 and Regulations 921 to 926 of 29 November 2013.

NWMS National Waste Management Strategy Gazette No. 2012

DWS- Department of Water and Sanitation

DEA- Department of Environmental Affairs

DMR- Department of Mineral Resources

MSW- Municipal Solid Waste

WWTW- Waste Water Treatment Works

H:H- High Hazard

H:h - Low Hazard

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ANNEXURE 2: REASONS FOR THE DECISION

1. Key factors considered in making the decision

All the information presented to the Department was considered during the Department consideration of the application. A summary of the issues which, in the Department's view, were of the most significance are set out below: -

- a) The information contained in the application form received by the Department on 08 August 2018.
- b) The Scoping report received by the Department on 25 September 2018 accepted on 09 November 2018.
- c) The information contained in the EIR and EMPr received by the Department on received on 22 July 2020 and 15 June 2021.
- d) Public Participation Process Report (PPP) is attached in the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. Public



Participation Process (PPP) that was undertaken by the Applicant has satisfied the minimum requirements prescribed in the EIA Regulations R982 of 2014 as amended by (GN 326) for public involvement and the PPP results shows that the concerns raised by the I&APs and the Authorities were addressed by the EAP in the EIA&EMPR.

- e) The objectives and requirements of the applicable and relevant legislation, frameworks and development plans, policies and guidelines, and the EIA Regulations of 2014 as amended by (GN 326).
- f) The environmental impacts associated with the proposed activities outlined in the EIA&EMPR will be addressed through the implementation of the proposed mitigation measures outlined in the EMPr compiled by Exigo Sustainability (Pty) Ltd.
- g) The Botanical and Faunal Impact Assessment compiled by Nick Helme is attached as Appendix 6.4 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 202. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- h) Wetland Screening report compiled by Enviroswift is attached as Appendix 6.4 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- i) The Health Impact Assessment compiled by CSIR, Smart Places is attached as Appendix 6.14 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- j) Socio-Economic Impact Assessment report compiled by Coastal and Environmental Services is attached as Appendix 6.1 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- k) The Air Quality Impact Assessment report compiled by Airshed Planning Professionals (Pty) Ltd is attached as Appendix 6.8 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 202. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- I) Environmental Noise Impact Assessment by Enviro-Acoustic Research cc. is attached as Appendix 6.9 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.



- m) Hydrogeological and Geochemical Specialist Study compiled by Exigo Sustainability (Pty) Ltd is attached as Appendix 6.6 of the EIA&EMPR received by the Department on 22 July 2020. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- n) Agricultural and Soils Assessment compiled by CES Environmental, and Social Advisory Services is attached as Appendix 6.5 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project
- o) Integrated Heritage Impact Assessment compiled by Neels Krugers of Exigo Sustainability is attached as Appendix 6.2 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- p) Palaeontological Assessment (Desktop Study) compiled by John Pether of Geological and Palaeontological Consultant is attached as Appendix 6.3 of the EIA&EMPR received by the Department on22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- q) Storm Water Management Plan compiled by Cas Coetze Consulting in Water Technology is attached as Appendix 6.7 of the EIA&EMPR received by the Department on22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project
- r) Traffic Impact Assessment compiled by Mowana Engineering (Pty) Ltd is attached as Appendix 6.10 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- s) Visual Impact Assessment compiled by Graham A Young Landscape Architect is attached as Appendix 6.11 of the EIA&EMPR received by the Department on22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project
- t) Radiological Impact Assessment compiled by AquiSim Consulting (Pty) Ltd is attached as Appendix 6.12 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021. The recommendations and mitigation measures outlined in the report will be implemented during the relevant phase within lifecycle of the project.
- u) Record of Decision (Rod) Ref. No. 16/2/7/G300/G210/Y1 for waste management licence from DWS received on 29 November 2021.



- v) The Closure/Rehabilitation Plan prepared by Vula Environmental Resources is attached as Appendix 6.13 of the EIA&EMPR received by the Department on 22 July 2020 and 15 June 2021 which included the information that is required for successful rehabilitation and decommissioning phase of the project.
- w) The Comments from Mine Health and Safety are in support of the proposed project and mitigation measures outlined will be implemented during the relevant phase within the lifecycle of the project.
- x) The Applicant has complied with Section 24P of the National Environmental Management Act, 1998 (Act 107 of 1998) and provided the financial provision for the management of environmental impacts.

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2. Findings

After consideration of the information and factors listed above, the Department made the following findings –

- a) The potential impacts on the proposed site were clearly investigated and mitigation measures were outlined.
- Potential impacts from mining activities will be managed through the implementation of mitigation measures proposed in the EMPr and specialist studies.
- c) The current land use for the proposed mining site is agricultural. However, the land is largely unused, with only a few animals being farmed by a tenant in a small enclosure adjacent to one of the old farmhouses. Most of the land has remained unused for some time.
- d) The proposed mining area also straddles one of the Transnet railway lines in the area.
- e) The Ecological Impact Assessment by Helme (2020a) identified that large portion of the proposed mining area has been determined as Critical Biodiversity Area (CBA) 1 and portions of designated climate change adaptation corridors. Therefore, the overall ecological impact of the proposed mine is likely to be Very High negative before mitigation and Medium to High negative after mitigation, and thus cannot be strongly supported. Helme (2020a) mentioned that the impacts can be partly mitigated by undertaking effective and large-scale rehabilitation of the mining footprint and disturbed areas; however, the impact with mitigation will remain high. Therefore, from an ecological perspective, the no-go alternative is preferred as the ecological impacts for the no development option would be much lower (neutral to low negative) than that of the proposed project. Helme further mentioned that, due to the value of the resource, the



pressure to mine, the phosphate resource in future will remain even if the mining right is not granted.

- f) Permanent loss of 55 ha of high sensitivity vegetation, 35 ha of medium sensitivity vegetation and 102 ha low sensitivity vegetation; as well as a loss of portions of site populations of at least 8 plant Species of Conservation Concern. The cumulative impact prior to mitigation is considered Very High negative before mitigation and Medium to High negative after mitigation. The proposed conservation areas (biodiversity offset areas) on and off-site will be significant positive impacts for conservation in the region, which would be very likely not be realized in the No-Go alternative (Helme, 2020a). The specialist study recommended that applicant must appoint an experienced biodiversity offset specialist within six months of the project receiving approval and the specialist must submit a suitable biodiversity offset plan within six months of appointment. The applicant must implement this biodiversity offset according to the schedule therein.
- g) The hydrological setting of the study area falls within the Berg River hydrogeological unit of the sandveld group aquifer; however, the proposed proposed mining area is located outside the perimeter of either the Elandsfontein Aquifer System or Langebaan Road Aquifer System. No rivers or wetlands occur on the proposed site, the closest watercourse to the project is the Bok River which is about 2km away from the site. The outcomes of hydrogeological and geochemical study include no fatal flaws or unmanageable risks.
- h) In terms of heritage resources, Saldanha is well known for the occurrence of Stone Age, heritage remains as well as fossil remains. Isolated occurrences of Stone Age material occur within the proposed project footprint. These occurrences are rated as of low heritage significance due to the small number of formal and diagnostic tools, and general loss of context of the lithics. The potential impact on the resource is therefore considered to be low.

Mining activities (large excavations) may result in a negative direct impact on the fossil content of the affected subsurface. The impact is positive for palaeontology, provided that efforts are made to watch out for and rescue the fossils and that all mitigation measures as proposed by the specialist are being implemented.

No human burials were documented in the project area, but a large municipal cemetery occurs about 400m west of the western boundary of the project area. The cemetery will not be directly impacted by proposed mining developments, but careful cognisance should be taken of potential indirect impact on the sites over the long term.

HWC's Final Comment, recommended that a Heritage Agreement be concluded between HWC and the applicant to facilitate effective and ongoing palaeontological monitoring and mitigation. In addition, a workplan



must be submitted to HWC that includes detailed procedures to be applied during the vegetation clearance and mining.

- i) The findings of all other specialist studies undertaken for the project provide an assessment of both the benefits and potential negative impacts anticipated as a result of the proposed project. The specialist studies conducted concur that, provided that all the mitigation and management measures and specialist recommendations are implemented, there are no environmental fatal flaws that should prevent the proposed project from proceeding.
- j) Public Participation Process complied with Chapter 6 of the 2014 EIA Regulations R.982 as amended by (GN 326). The PPP included, *inter-alia*, the following:
 - Advertisements, notifying the public of the submission of the Environmental Authorisation (EA) application and the Mining Right Application (MRA) and requesting I&AP's to register their comments with Exigo, were placed in two local newspapers; namely the Weslander (English advertisement) and Die Burger (Afrikaans advertisement) on 16 and 17 August 2018 respectively.
 - Notice boards were erected at key locations surrounding the project site as well as in Vredenburg, Langebaan and Saldanha at the Municipal Offices and public libraries on the 13th of August 2018, to inform surrounding communities and adjacent landowners of the proposed development.
 - Identified stakeholders were directly informed by post, email, fax or sms of the proposed development on the 13th of August 2018:
 - Two public open days were held during the review period of the DSR on 30 and 31 August 2018 to provide I&APs with the opportunity to raise issues and comments. The public open days were advertised in two local newspapers indicted above. All issues raised by the I&APs during the public open days were included to the Final Scoping Report (FSR).
 - Another public open day was held during the review period of the Draft Environmental Impact Assessment and Environmental Management Programme Report (DEIA&EMPR) on Wednesday, 20 November 2019.
 - Hard copies of draft Scoping report and draft EIA and EMPr were available for viewing at the public libraries in Vredenburg, Langebaan and Saldanha.
 - An electronic version of draft Scoping report and draft EIA and EMPr were made available on Dropbox and copies were made available to stakeholders upon request.
 - The final/draft EIA&EMPR was subjected to a public participation process of at least 30 days (15 March 2020 to 17 April 2020). The report was made available for public comment as part of the final and draft EIA&EMPR, inclusive of the Health Impact Assessment Report. The availability of the EIA&EMPR was announced via notification letters to all registered I&APs. The Final Draft EIA&EMPR was subjected to a public participation process of at least 30 days (15 March 2020 to 17 April 2020). The report was made



available for public comment as part of the Final DEIA&EMPR, inclusive of the Health Impact Assessment Report. The availability of the Final DEIA&EMPR was announced via notification letters to all registered I&APs. The commenting period and submission of comments kept on changing due to lockdown and Government Notice R.650 which was promulgated by the DEFF on 5 June 2020. Therefore, comments on the Final DEIA&EMPR needed to be submitted to Exigo on/or before 17 July 2020.

- All stakeholders were provided with a 30-day commenting period for draft Scoping report and EIA and EMPr.
- Proof of consultation and comments received from the Interested and Affected Parties are included in the EIA and EMPr;
- Comments and issues raised by interested and affected parties were adequately addressed and issues and responses summary are attached as Appendix 8B in the EIA and EMPr; and
- The register of interested and affected parties was opened and is included in the EIA and EMPr Appendix 8A.

ANNEXURE 2: DEPARTMENTAL STANDARD CONDITIONS

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1 SCOPE OF AUTHORISATION

- 1.1 The holder of EA must be responsible for ensuring compliance with the conditions contained in the EA. This includes any person acting on the holder's behalf, including but not limited to an agent, servant, contractor, subcontractor, employee, consultant, or any person rendering a service to the holder of EA.
- 1.2 Any changes to, or deviation from the project description set out in this EA must be approved in writing by this Department before such changes or deviation may be affected. In assessing whether to grant such approval or not, the Department may request such information as is deemed necessary to evaluate the significance and impacts of such changes or deviation and it may be necessary for the holder of the EA to apply for further authorization in terms of the EIA Regulations.
- 1.3 The activities, which are authorised, must only be carried out at the property indicated in the EA and/or on the approved EMPr.
- 1.4 When any of the holders of the EA contact details change including name of the responsible person, physical or postal address or telephonic details, the holder of the EA must notify the Department as soon as the new details become known to the holder of the EA.
- 1.5 The EA does not negate the responsibility of the holder to comply with any other statutory requirements that may be applicable to the undertaking of such activity (ies).



1.6 The holder of EA must ensure that all areas where the authorised activities occur have controlled access to ensure safety of people and animals.

2 APPEAL OF AUTHORISATION

- 2.1 The holder of EA must in writing, within 14 (fourteen) calendar days from the date of this decision and in accordance with EIA Regulation 4(2) do the following:
- 2.2 Notify all registered I&APs of -
 - 2.2.1 The outcome of the application;
 - 2.2.2 The date of the decision:
 - 2.2.3 The date of issue of the decision and:
 - 2.2.4 The reasons for the decision as included in Annexure 1 and Departmental standard conditions in Annexure 2.
 - 2.2.5 Copy of the lodged appeal must be addressed to the Department of Mineral Resources and Energy on the address given on page 2 of the EA
- 2.3 Draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations.
- 2.4 Draw the attention of all registered I&APs to the manner in which they may access the decision.
- 2.5 Provide the registered I&APs with:
 - 2.5.1 Name of the holder (entity) of this EA;
 - 2.5.2 Name of the responsible person for this EA;
 - 2.5.3 Postal address of the holder:
 - 2.5.4 Telephonic and fax details of the holder and
 - 2.5.5 E-mail address of the holder if any.

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3 COMMENCEMENT OF THE ACTIVITY (IES)

- 3.1 To ensure safety, all employees must be given the necessary personnel protective equipment (PPE) and any employee without PPE must not be allowed on site.
- 3.2 This EA must be provided to the site operator and the requirements thereof must be made fully known to him or her.
- 3.3 Hauling routes for vehicles used during mining and machinery must be clearly marked and appropriate signaling must be posted to that effect. Furthermore,



- movement of vehicles and machinery must be restricted to the approved mining areas.
- 3.4 Appropriate notification sign must be erected at the mining site, warning the public (residents, visitors etc.) about the hazard around the mining site and presence of heavy vehicles and machinery.
- 3.5 Vegetation clearance must be limited to the actual development (mining) footprint in accordance with the approved layout plan, and mitigation measures must be implemented to reduce the risk of erosion and alien species invasion.
- 3.6 Topsoil stripped before mining must be protected from erosion, contamination and/or pollution and stockpiling of topsoil must not take place in the drainage lines or areas where it will impede water runoff.
- 3.7 If any soil contamination is noted at any phase of the proposed activity (ies), the contaminated soil must be removed to a licensed waste disposal facility designed for such waste and the site must be rehabilitated to the satisfaction of the Department and Department of Water and Sanitation. The opportunity for the onsite remediation and re-use of contaminated soil must be investigated prior to the disposal and this Department must be informed in this regard.
- 3.8 An integrated waste management approach that is based on waste minimization (waste management hierarchy) must be implemented and must incorporate avoidance, reduction, recycling, treat, reuse and disposal where appropriate. Ensure that no refuse generated on the mining area is placed, buried, dumped or deposited on the adjacent properties or public places and open space.
- 3.9 Uncontaminated storm water must be prevented from coming into contact with the waste and must be diverted away from the storage site and the mining area.
- 3.10 The waste generated during mining activities must be stored in animal proof containers and must be removed from site and disposed of at a registered disposal facility. Proof of disposal at a registered disposal facility must be kept and produced to any official of this Department on request.
- 3.11 In terms of sections 28 and 30 of NEMA, and sections 19 and 20 of the National Water Act, 1998 (Act No. 36 of 1998), any costs incurred to remedy environmental damage must be borne by the person responsible for the damage. It is therefore imperative that the holder of the EA reads through and understand the legislative requirements pertaining to the project. It is the Applicant's responsibility to take reasonable measures which include informing and educating contractors and employees about environmental risks of their work and training them to operate in an environmentally acceptable manner.



- 3.12 Vehicles and machineries must be serviced and maintained in the manner whereby excessive smokes and noise production is reduced to acceptable levels, and to prevent oil leaks.
- 3.13 Residents (if any) on the property and surrounding areas must be informed if any unusual noise activities are planned in the mining area.
- 3.14 Dust suppression measures must be implemented on all exposed surface and access road to minimize and control airborne dust.
- 3.15 The protection of all historical and pre-historical cultural resources must remain on site and no mining activity/-ies is/are allowed within 100 diameters from those resources. Should any heritage remains be exposed during operation or any actions on the site, the following shall be applied:

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 - i. All work at the affected area must cease;
 - ii. These must immediately be reported to the South African Heritage Resource Agency (SAHRA) and or Western Cape Heritage Resource Agency (in accordance with the applicable legislation). Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from the South SAHRA and or Western Cape Heritage Resource Agency
 - iii. The area should be demarcated in order to prevent any further work there until an investigation has been completed;
 - iv. An archaeologist should be contacted immediately to provide advice on the matter;
 - v. Should it be a minor issue, the archaeologist will decide on future action. Depending on the nature of the find, it may include a site visit;
 - vi. If needed the necessary permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist;
 - vii. The removal of such archaeological material will be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter;
 - viii. Work on site will only continue after the archaeologist/ SAHRA has agreed to such a matter.

Heritage remains include: archaeological remains (including fossil bones and fossil shells); coins; maddens, indigenous and/or colonial ceramics; any



articles of value or antiquity: marine shell heaps; stone articrafts and bone remains; structures and other built features; rock art and rock engravings; shipwrecks, and graves or unmarked human burials. A qualified archaeologist must be contracted where necessary (at the expense of the applicant and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority.

- 3.16 Care must be taken to ensure that the material and excavated soil required for backfilling are free of contamination from hydrocarbons.
- 3.17 Hydraulic fluid or chemicals required must be stored in a concrete lined surface with bund walls, designed in such a manner that any spillage can be contained and reclaimed without any impact on the surrounding environment. Should any spills occur it should be cleaned immediately by removing spillage together with the polluted solids and dispose it in the authorised disposal site permitted of such waste. The regional office of the Department of Water and Sanitation must be notified within 24 hours of an incident that may pollute surface and underground water resources.
- 3.18 Chemical sanitation facilities or system such as toilets that do not rely on the seepage of liquids must be provided with a ratio of 1 for every 15 workers. These must be placed such that they prevent spills or leaks to the environment and must be maintained according to the operating instructions and the content thereof must be disposed of at an authorised wastewater treatment works. Proof of disposal must be kept on site and be produced upon request.
- 3.19 The holder of EA must ensure that any water uses listed in terms of Section 21 of National Water Act must get authorisation from Department of Water and Sanitation prior to the commencement of such activity (ies).
- 3.20 This EA does not purport to absolve the holder of EA from its common law obligations towards the owner of the surface of land affected.
- 3.21 The holder of EA must ensure that rehabilitation of the disturbed areas caused by operation always comply with the approved EMPr.
- 3.22 This EA may be amended or withdrawn at any stage for non-compliance and provides no relief from the provisions of any other relevant statutory or contractual obligations.
- 3.23 The holder of EA must note that in terms of Section 20 of the National Environmental Management: Waste Act, 2008 (Act No.59 of 2008), no person may commence, undertake or conduct a waste management activity, except in accordance, with the requirements of norms and standards determined in terms of Section 19 (3) for that activity or a waste management license is issued in respect of that activity if license is required.





- 3.24 An appeal under Section 43 (7) of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended) suspend an EA or exemption or any provisions of conditions attached hereto, or any directive unless the Minister directs otherwise.
- 3.25 Should you be notified by the Minister of a suspension of the authorization pending appeal procedure, you may not commence with the activity (ies) until such time that the Minister allows you to commence with such activity (ies) in writing.
- 3.26 The Department reserves the right to audit and/or inspect the activity (ies) without prior notification at any reasonable time and at such frequency as may be determined by the Regional Manager.
- 3.27 Subject to the commencement and duration requirements of the MPRDA, the EA is valid for the period for which the aforesaid permit/right is granted. When the renewal application of the permit/right is lodged; the EA validity, obligations and liabilities which were attached thereto immediately before the date on which it lapsed continue to be valid until the decision of the renewal is made and become valid again with the intervals of the approved renewal period.
- 3.28 This EA will only be effective on the event that a corresponding Permit/Right is issued in terms of MPRDA as amended and none of the activities listed in this EA may commence without a Permit/Right.
- 3.29 The listed activity (ies), including site preparation, must not commence within 30 (thirty) calendar days of the date of the notification of the decision being sent to the registered I&APs ,this is inclusive of the10 days condonation period. If an appeal is lodged with the appeal administrator, the effect of this environmental authorization is suspended until such time as the appeal is decided.
- 3.30 Should there be any conflicting conditions between this EA and other approval granted by other authorities, it is upon the holder of EA to bring it to the attention of the Department for resolution.

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4 MANAGEMENT OF ACTIVITY (IES)

- 4.1 A copy of the IEA and EMPr must be kept at the property or on site office where the activities will be undertaken. The IEA and EMPr must be produced to any authorised officials of the Department who request to see it and must be made available for inspection by any employee or agent of the holder of the IEA who works or undertakes work at the property (ies).
- 4.2 The contents of the EMPr and its objectives must be made known to all contractors, subcontractors, agent and any other people working on the site,



- and any updates or amendments to the EMPr must be submitted to the department for approval.
- 4.3 Any complaint received from the I&AP during all phases of the facility must be attended to as soon as possible and addressed to the satisfaction of all concerned interested and affected parties.
- 4.4 The holder of the IEA must prevent nuisance conditions or health hazards, or the potential creation of nuisance conditions or health hazards.
- 4.5 The holder of the IEA must ensure that all non-recyclable waste are disposed of at a waste management facilities licensed to handle such wastes and all recyclable waste are collected by licensed waste management facilities for recycling, reuse or treatment.
- 4.6 In order to prevent nuisance conditions, the holder of the IEA must ensure that all storage skips and bins are not overfilled. The holder of the EA must also make sure that littering of waste within the mining area is prohibited.
- 4.7 Non-compliance with any condition of this IEA and the approved EMPr is an offence in terms of section 49A(1)(c) of NEMA and may result in criminal proceedings and issuing of a directive in terms of Section 28 and or a compliance notice in terms of section 31L of NEMA.
- 4.8 Only listed activity (ies) that are expressly specified in the IEA must be undertaken, and additional or new activities not specified herein must be applied for by the holder and authorised by the competent authority in the form of an amendment of the IEA and the EMPr before such activities may be commenced with. This condition is also applicable in the case of the amendment, addition, substitution, correction, and removal or updating of any detail in the aforesaid IEA and EMPr.
- 4.9 Rehabilitation of the disturbed surface caused by operation must comply with the approved EMPr.
- 4.10 The holder of IEA must appoint the ECO before commencement of construction and operational activities and ensure that the name and contact details of the ECO is made available to the Regional Manager within 30 days of commencement. The holder of IEA must also ensure that an ECO is always available on site during construction and operational activities of the slime dam 6 at all times comply with the issued IEA and approved EMPr. APPROVED

4.11 The ECO must:

4.11.1 Keep and maintain a detailed incidents register (including any spillages of fuels, chemicals or any other material).



- 4.11.2 Keep a complaint register on site indicating the complaint and how the issues were addressed, what measures were taken and what the preventative measures were implemented to avoid re-occurrence of complaints.
- 4.11.3 Keep records relating to monitoring and auditing on site and avail them for inspection to any relevant authorised officials.
- 4.11.4 Keep copies of all environmental reports submitted to the department.
- 4.11.5 Keep the records of all permits, licences and authorisations required by the operation.
- 4.11.6 Compile a monthly monitoring report and make it available to the department if requested.
- 4.11.7 The duties and responsibility of the ECO must not be seen as exempting the holder of the IEA from the legal obligations in terms of NEMA.
- 4.12 The footprint of the activities must be limited on the areas authorised for the actual construction works and operational activities and all areas outside of the footprint must be regarded as a "no go" areas.

5 REPORTING TO THE DEPARTMENT

- 5.1 The holder of IEA must:
 - 5.1.1 Submit an Environmental Audit Report to this Department annually and such report must be done by qualified Environmental Assessment Practitioner and the audit report must specify whether conditions of this IEA and EMPr/closure plan are adhered to;
 - 5.1.2 the audit report must be in accordance to appendix 7 of the 2014 EIA regulations as amended;
 - 5.1.3 identify and assess any new impacts and risks as a result of undertaking the activities, if applicable;
 - 5.1.4 identify shortcomings in the EMPr/closure plan, if applicable;
 - 5.1.5 identify the need, if any, for any changes to the management, avoidance and mitigation measures provided for in the EMPr;
 - 5.1.6 if applicable, specify that the corrective action/s taken for the previous audit's non-conformities, was adequate and must;
 - 5.1.7 be submitted by the holder to the competent authority within 30 days from the date on which the auditor finalised the audit.



- 5.2 Should any shortcomings in terms of Regulation 34(4) be identified, the holder must submit recommendation to amend the EMPr/closure plan in order to rectify any shortcomings identified with the aforementioned audit report.
- 5.3 The holder of the IEA must annually assess the environmental liabilities of the operation by using the master rates in line with the applicable Consumer Price Index (CPI) at the time and address the shortfall on the financial provision submitted in terms of section 24P of NEMA.
- 5.4 The holder of the IEA must, within 24 hours of any incidents occurring, notify the Competent Authority of the occurrence or detection of any incident on the site, or incidental to the operation of the site, which has the potential to cause, or has caused pollution of the environment, health risks, nuisance conditions or water pollution.
- 5.5 The holder of the IEA must, within 14 days, or a shorter period of time, if specified by the Competent Authority from the occurrence or detection of any incident referred to in condition 5.4, submit an action plan, which must include a detailed time schedule, and resource allocation signed off by top management, to the satisfaction of the Competent Authority of measures taken to
 - 5.5.1 Correct the impact resulting from the incident;
 - 5.5.2 Prevent the incident from causing any further impact; and
 - 5.5.3 Prevent a recurrence of a similar incident.
 - 5.5.4 In the event that measures have not been implemented within 21 days of the incident referred to in condition 5.4, or measures which have been implemented are inadequate, the Competent Authority may implement the necessary measures at the cost of the holder of the IEA.

6 SITE SECURITY AND ACCESS CONTROL

- 6.1 The holder of the IEA must ensure effective access control to the site to reasonably prevent unauthorised entry. Signs indicating the risks involved in unauthorised entry must be displayed at the entrance.
- 6.2 The mining area must be fenced off and lockable gates must be installed to restrict unauthorised access to the mining area.
- 6.3 Weather proof, durable and legible notices in at least three official languages applicable in the area must be displayed at the entrance to the Site. These notices must prohibit unauthorised entry and state the hours of operation, the name, address and telephone number of the holder of the IEA and the person responsible for the operation of the site.

7 EMERGENCY PREPAREDNESS PLAN



- 7.1 The holder of the IEA must draft, maintain and implement an emergency preparedness plan and review it annually when conducting audit and after each emergency and or major accident. The plan must, amongst others, include:
 - 7.1.1 Site Fire
 - 7.1.2 Spillage
 - 7.1.3 Natural disasters such as floods
 - 7.1.4 Industrial action
 - 7.1.5 Contact details of police, ambulances and any emergency center closer to the site.
- 7.2 The holder of IEA must ensure that an up-to-date emergency register is kept during all phases of the operation. This register must be made available upon request by the department.

8 INVESTIGATIONS

- 8.1 If, in the opinion of the Competent Authority, nuisances or health risks may be or is occurring on site, the holder of the IEA must initiate an investigation into the cause of the problem or suspected problem.
- 8.2 If, in the opinion of the Competent Authority, pollution may be or is occurring, the holder of the IEA must initiate an investigation into the cause of the problem or suspected problem. Such investigation must include the monitoring of the water quality variables and air quality, at those monitoring points and such frequency as may be specified by the Competent Authority.
- 8.3 Investigations carried out in terms of conditions 8.1 and 8.2 above must include the monitoring of the relevant environmental pollution and/or degradation, nuisance and health risk variables, at those monitoring points and such frequency to be determined in consultation with the Competent Authority.
- 8.4 Should the investigation carried out as per conditions 8.1 and 8.2 above reveal any unacceptable levels of pollution, the holder of the IEA must submit mitigation measures to the satisfaction of the Competent Authority.
- 8.5 The holder of the IEA must comply with Section 28 of the NEMA and ensure that the construction and operational activities are conducted in an environmentally friendly manner.

9 COMMISSIONING AND DECOMMISSIONING

9.1 The commissioning and decommissioning of listed activities must take place within the phases and timeframes as set out in EMPr.

10 SITE CLOSURE



- 10.1 The holder of IEA must apply for a closure certificate in terms of Section 43 of Mineral and Petroleum Resources Development Act (Act 28 of 2002), as amended within 180 days of occurrence of lapsing, abandonment, cancellation, cessation, relinquishment and completion of development.
- 10.2 The application for closure indicated above must be submitted together with all relevant documents as indicated in Section 43 of Mineral and Petroleum Resources Development Act (Act 28 of 2002), as amended.
- 10.3 No exotic but, only indigenous plants must be utilized for rehabilitation purposes.
- 10.4 The holder of IEA remains responsible for any environmental liability, pollution or ecological degradation, the pumping and treatment of extraneous water, compliance with the conditions of IEA and the management and sustainable closure thereof until the Minister has issued a Closure Certificate in terms of Section 43 of Mineral and Petroleum Resources Development Act (Act 28 of 2002). Where necessary the Minister may retain certain portion of financial provision for residual, health or environmental impacts that might be known in future.

11 NEMA PRINCIPLES

The NEMA Principles (set out in Section 2 of NEMA, which apply to the actions of all Organs of State, serve as guidelines by reference to which any Organ of State must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- > the effects of decisions on all aspects of the environment to be taken into account:
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- > the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between Organs of State through conflict resolution procedures; and
- > the selection of the best practicable environmental option.

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12 DISCLAIMER

The Department of Mineral Resources in terms of the conditions of this environmental authorisation shall not be responsible for any damages or losses suffered by the



holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

13 RECOMMENDATIONS

In view of the above, the Department is satisfied that, subject to compliance with the EMPr/closure plan and conditions stipulated in the Integrated Environmental Authorisation, the activities will not conflict with the general objectives of Integrated Environmental Management stipulated in Chapter 5 of NEMA, and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels. The Integrated Environmental Authorisation (IEA) is accordingly granted.

Your interest in the future of our environment is appreciated.

WESTERN CAPE REGIONAL OFFICE

Kind Regards

DATE:

DEPT. OF MINERAL RESOURCES
AND ENERGY

PRIVAATSAK / PRIVATE BAG X9

08 APR 2022

REGIONAL MANAGER: MINERAL REGULATION

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