

**STRICTLY CONFIDENTIAL – FOR OFFICIAL USE ONLY**

Ref No: WC 30/5/1/2/3/2/1 (162 and 163 EM)

Regional Manager: Mineral Regulation  
 Mineral Regulation  
 Western Cape Region

**RECORD OF RECOMMENDATION 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 WITH REGULATION 21 OF THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REGULATIONS, 2014 AS AMENDED, FOR MINING OF HEAVY MINERALS (ILMENITE, LEUCOXENE, RUTILE, ZIRCON, MONAZITE, GARNET AND STAUROLITE) ON REMAINING EXTENT OF THE FARM GEELWAL KAROO 262 AND 10 BEACHES ADJACENT TO THE REMAINING EXTENT OF THE FARM KLIPVLEY KAROO 153, PORTION 4, 5, 6 AND 7 OF THE FARM KLIPVLEY KAROO 153, FARM PERSEEL WESKUS 191, 192, 193, 194, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206 AND PORTION 3 OF THE FARM GRAAUWDUINEN 152 IN THE VANRHYNSDORP MAGISTERIAL DISTRICT: WESTERN CAPE REGION**

<b>Applicant:</b>	Mineral Sands Resources (Pty) Ltd
<b>Farm Name:</b>	The remaining extent of the farm Geelwal Karoo 262 and 10 Beaches adjacent to the Remaining extent of the Farm Klipvley Karoo 153, Portion 4,5,6 and 7 of the farm Klipvley Karoo 153, Farm Perseel wekus 191, 192, 193, 194 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206 and Portion 3 of the Farm Graauwduinen 152 in the Magisterial District of Vanrhynsdorp

The Integrated Environmental Authorisation (IEA) for the above-proposed activity (ies) refers:

*NB: For the purpose of this status report the following abbreviations will be used to refer to: EMPR for Environmental Management Programme, EMP for Environmental Management Plan, WML for Waste Management Licence, ROR for Record of Recommendation, EAP for Environmental Assessment Practitioner, POM for Principal Inspector of Mines, MHS for Mine Health and Safety, EA for Environmental Authorisation, MEM for Mine Environmental Management, BAR for Basic Assessment Report, S & EIR for Scoping and Environmental Impact Assessment Report, MPRDA for Mineral and Petroleum Resources*

*Development Act, NEMWA for National Environmental Management Waste Act, NEMA for National Environmental Management Act, DWS for Department of Water and Sanitation, IEM for integrated Environmental Management and IEA for Integrated Environmental Authorisation.*

## 1. BACKGROUND

Mineral Sands Resources (Pty) Ltd (hereinafter referred to as "the applicant") lodged an application for IEA and associated activities in terms of Section 24 of NEMA read in conjunction with Regulation 21 of NEMA EIA Regulations on 12 April 2018 for mining of heavy minerals (Ilmenite, Leucoxene, Rutile, Zircon, Monazite, Garnet and Staurolite) in the above mentioned properties.

The SR was due for submission on 01 June 2018 as required by Regulation 21 and it was received on 25 May 2018. The Scoping report was reviewed for compliance with NEMA EIA Regulations and it was accepted on 27 June 2018. The holder was instructed to submit the EIA&EMPR within 106 days of the acceptance of SR as required by Regulation 23 of NEMA EIA Regulations. The EIA&EMPR was due on 15 October 2018 as required by Regulation 23 of NEMA EIA Regulations. The applicant requested extension of time to submit final EIA&EMPR in order for a Geotechnical specialist to finalise Geotechnical Impact Assessment (GIA) until 15 November 2018 and the final EIA&EMPR was received on 14 November 2018. The IEA decision was due on 26 March 2019 as per the NEMA EIA Regulations. The decision couldn't be taken before or on the due date since the application is an IEA for both EA and WML for waste disposal which requires Record of Decision (RoD) from DWS (Section 50 of NEMWA). The final EIA&EMPR was consulted with DWS on 14 November 2018 in order to obtain their RoD for WML. The RoD was e-mailed on 03 May 2019 and hard copy received on 20 May 2019. The EIA&EMPR was perused by the Mine Environmental Management sub-directorate for compliance with the relevant provisions of NEMA EIA Regulations. The EIA&EMPR was found to be in compliance with NEMA EIA Regulations and on 10 May 2019 the applicant was instructed to submit financial provision to an amount of R15 200 000.00 on or before 31 May 2019. The financial guarantee to the above amount was received on 20 May 2019.

## 2. DETAILS OF ACTIVITIES AUTHORISED:

## NEMA AND NEMWA LISTED ACTIVITIES AUTHORISED

Listed Activities	Activity and/or project description
<p><b>Activity 28 of Government notice No. R 983 as amended by GN 327 of April 2017</b> Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:</p> <p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p>	Remove topsoil and stockpile
<p><b>Activity 24 of Government notice No. R 983 as amended by GN 327 of April 2017</b></p> <p><i>The development of a road—</i></p> <p>(i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or</p> <p>(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road—</p> <p>(a) which is identified and included in activity 27 in Listing Notice 2 of 2014;</p> <p>(b) where the entire road falls within an urban area; or</p> <p>(c) which is 1 kilometre or shorter.</p>	Development of Haul ore along haul road to run-of-mine stockpile wider than 8m.
<p><b>Activity 25 of Government notice No. R 983 as amended by GN 327 of April 2017</b> <i>The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.</i></p>	Tailings will be pumped as slurry from processing plant through the tailings disposal plant and return it to backfill the mine void. Decant access water and return water to the processing plant.

<p><b>Activity 10 of Government notice No. R 983 as amended by GN 327 of April 2017</b>  <i>The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes –</i>  <i>(i) with an internal diameter of 0,36 metres or more;</i>  <i>or</i>  <i>(ii) with a peak throughput of 120 litres per second or more;</i></p> <p><i>excluding where—</i>  <i>(a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or</i>  <i>(b) where such development will occur within an urban area.</i></p>	<p>Tailings will be pumped as slurry from processing plant through the tailings disposal plant and return it to backfill the mine void. Decant access water and return water to the processing plant.</p>
<p><b>Activity 17 of Government notice No. R984 as amended by GN 325 of April 2017</b>  <i>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 a mineral resource, including the smelting beneficiation, reduction, refining calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.</i></p>	<p>Mining of valuable heavy mineral deposit on ten beaches along a stretch of coastline north of Mineral Sand Resources (Pty) Ltd mine on an area of 43.7ha and primary processing in mobile primary beach concentrator.</p> <p>Inland mining and processing of valuable heavy minerals on the Farm Geelwal Karoo 262 on an area of 75ha.</p> <p>Infrastructure /plant expansion area of 64ha to accommodate additional processing plants, stockpile areas, industrial yards, parking and laydown areas.</p>
<p><b>Activity 15 of Government Notice No. R984 as amended by GN 325 of April 2017</b>  <i>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for—</i>  <i>(i) the undertaking of a linear activity; or</i>  <i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</i></p>	<p>Remove topsoil on 75ha inland mining and stockpile.  Primary concentration circuit improvements.  Construction of 22 kV powerline.</p>

<p><b>Activity 12 of Government Notice No. R985 as amended by GN 324 of April 2017</b></p> <p>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.</p> <p><b>i. Western Cape</b></p> <p>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;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</p> <p>iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</p> <p>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.</p>	<p>Remove topsoil on 75ha inland mining and stockpile. Primary concentration circuit improvements. Construction of kV powerline.</p>
<p><b>Activity 19A of Government notice No. R 983 as amended by GN 327 of April 2017</b></p> <p>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from—</p> <p>(i) the seashore;</p> <p>(ii) the littoral active zone, an estuary or a distance of 100 metres inland of the highwater mark of the sea or an estuary, whichever distance is the greater; or</p> <p>(iii) the sea; —but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>a) will occur behind a development setback;</p>	<p>Depositing and excavating material from the sea.</p>

<ul style="list-style-type: none"> <li>b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</li> <li>c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</li> <li>d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</li> </ul>	
<p><b>Activity 12 of Government notice No. R 983 as amended by GN 327 of April 2017</b> The development of—</p> <ul style="list-style-type: none"> <li>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</li> <li>(ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— <ul style="list-style-type: none"> <li>(a) within a watercourse;</li> <li>(b) in front of a development setback; or</li> <li>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding— <ul style="list-style-type: none"> <li>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</li> <li>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</li> <li>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</li> <li>(dd) where such development occurs within an urban area;</li> <li>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</li> <li>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and</li> </ul> </li> </ul> </li> </ul>	<p>Widening of the northern haul road and beach access roads at 6ha area.</p> <p>Widening of public road OP9764 to 8 m between farm Geelwal Karoo 262 and the northern beaches.</p>

where indigenous vegetation will not be cleared.	
<b>Activity 7: Category B of Government Notice No. 921</b>  <i>The disposal of any quantity of waste to land.</i>	The average tailings production is approximately 711ktpa and will be pumped as slurry from processing plant through the tailings disposal plant and backfilled in the mine void. Decant access water and return water to the processing plant.
<b>Activity 10: Category B of Government Notice No. 921</b>  <i>The construction of a facility for a waste management activity listed in Category B of this scheme (not in isolation to associated waste management activity).</i>	The average tailings production is approximately 711ktpa and will be pumped as slurry from processing plant through the tailings disposal plant and backfilled in the mine void. Decant access water and return water to the processing plant.
<b>Activity 11: Category B of Government Notice No. 921</b>  <i>The established or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining, exploration or production.</i>	The average tailings production is approximately 711ktpa and will be pumped as slurry from processing plant through the tailings disposal plant and backfilled in the mine void. Decant access water and return water to the processing plant.

**3. THE FOLLOWING ARE REASONS WHY THE DECISION WAS MADE TO GRANT AN INTEGRATED ENVIRONMENTAL AUTHORISATION:**

- 3.1. The procedure that has been followed is in accordance with NEMA, NEMA: EIA Regulations and NEMWA.
- 3.1. Public Participation Process (PPP) was undertaken and the applicant has satisfied the minimum requirements as prescribed in Chapter 6 of NEMA EIA Regulations for public involvement as the I&APs including Organs of State that administer environmental laws were consulted and their comments were adequately addressed. The full results of public participation process undertaken for the proposed mining project are attached in the EIA and EMPr

**3.2.1 The Interested and Affected Parties including Organs of State raised amongst others the following concerns:**

- The road transport has a significant impact on other road users and the existing road network, rail transport must be investigated.
- The removal of beach sand may result in beach, cliff and dune erosion, and setback lines should be stipulated.
- Impacts related to sea water in tailings and cliff stability must be investigated.
- The proposed extension of mining activities will have a tremendous impacts on the environment, including marine life.
- The extension area is along a highly sensitive coast much of which has never been disturbed before. The proposed mine extends into pristine and sensitive Critical Biodiversity Areas (CBAs).
- The mining area proposes extensive expansion and does not include any detail on any conservation areas or buffer zones (offset areas). The proposed mining is in close proximity to the Olifants River Estuary, being one of the only two open mouth systems along the entire West Coast of South Africa and the Important birding area.

To address the above concerns about sensitivity of the area, the applicant appointed 3Foxes Biodiversity Solutions to conduct Terrestrial Ecology Specialist to assess the environmental impacts on the flora and fauna. The specialist has recommended mitigation measures to avoid and/or minimise impacts on sensitive environment (Appendix 11F of EIA & EMPr).

**Heritage Western Cape (HWC)** requires that a Heritage Impact Assessment (HIA) that satisfies the provisions of Section 38 (3) of National Heritage Resource Act be submitted. This HIA must have specific reference to impacts on Archaeological and Palaeontological resources.

The studies were conducted and integrated into the final EIA&EMPR which was again consulted with HWC in order to obtain their final comments. The final comments from HWC indicates that if any archaeological material, palaeontological material or human burials are uncovered during the course of development then work in the immediate area must be halted and the find



protected in situ as far as is possible. The find would need to be reported to the heritage authorities and may require inspection by an appropriate heritage practitioner. Such heritage is the property of the state and may require excavation and curation in an approved institution.

- 3.2. The environmental impacts associated with the proposed activity will be addressed through the implementation of the proposed mitigation measures outlined in the EIA and EMPr compiled by Sue Reuther and Scott Masson of SRK Consulting and the recommendations by the specialist studies to investigate key potential, direct, indirect and cumulative impacts. The following specialist studies were undertaken for the project:
  - 3.2.1. The Soil and Land capability Impact Assessment, Air quality Impact Assessment and the Groundwater Impact Assessment reports attached as appendix 11A -C of the EIA and EMPr;
  - 3.2.2. The Marine Ecology Impact Assessment, Freshwater Ecology Impact, and terrestrial Ecology Impact Assessment studies attached as Appendix 11D-F of the EIA and EMPr;
  - 3.2.3. Archaeology and Palaeontology Impact Assessment studies attached as Appendix 11G-H of the EIA and EMPr;
  - 3.2.4. Traffic and Geotechnical Impact Assessment studies attached as Appendix I-J of the EIA and EMPr;
- 3.3. The RoD received from DWS received on 03 May 2019 recommends approval of a waste management license with conditions (see Rod in file).
- 3.4. The Mine Residue Characterisation and Waste Classification report attached as Appendix 13A & B of the EIA and EMPr;
- 3.5. Comments received from the Principal Inspector of Mines; and,
- 3.6. The applicant complied with Section 24P of the National Environmental Management Act, 1998 (Act 107 of 1998) and provided the financial provision to an amount of R15 200 000.00 for the management of environmental impacts.

4. RECOMMENDATIONS

In consideration of the above the sub-directorate: Mine Environmental Management recommends that the application for IEA by Mineral Sands Resources (Pty) Ltd be granted. If you are in support of this recommendation please sign the IEA addressed to the applicant.

Recommendation Approved

Recommendation Not Approved

.....  
REGIONAL MANAGER:  
MINERAL REGULATION  
WESTERN CAPE REGION  
DATE: 16/06/19

.....  
REGIONAL MANAGER  
MINERAL REGULATION  
WESTERN CAPE REGION  
DATE:

.....  
MR B.P MOHASOA  
DEPUTY DIRECTOR: MINE ENVIRONMENT  
WESTERN CAPE REGION  
DATE: 07/06/2019

.....  
MS P. SEABA  
ASD: MEM  
WESTERN CAPE REGION  
DATE: 07/06/2019

20  
my