



MUNISIPALITEIT OVERSTRAND
RESTANT VAN PLAAS NR. 312,
AFDELING BREDASDORP: AANSOEK OM
VERGUNNINGSGEBRUIK EN
GOEDKEURING VAN 'N MYNBOU
REHABILITASIEPLAN: MNRE SETPLAN
T/A AGRI-SEA NAMENS DJ PENWILL
PROPERTIES (PTY) LTD

OVERSTRAND MUNICIPALITY
REMAINDER EXTENT OF FARM
NO. 312, BREDASDORP DIVISION:
APPLICATION FOR CONSENT USE AND
APPROVAL OF MINING
REHABILITATION PLAN: MESSRS
SETPLAN T/A AGRI-SEA ON BEHALF OF
DJ PENWILL PROPERTIES (PTY) LTD

UMASIPALA WASE-OVERSTRAND
RUBUKHULU BENTSALELA BEFAMA
NO. 312, EBREDASDORP DIVISION: ISICELO
SOKUSETYENZWA KWEMVUME NEMVUME
YESICWANGCISO SOKUBUYISELWA
KWESIMO SANGAPHAMBILI SEMIGODI:
OOMNUMZANA SETPLAN T/A AGRI-SEA
EGAMENI DJ PENWILL PROPERTIES (PTY)
LTD

Kennis word hiermee gee kragtens Artikels 47 en 48 van die Overstrand Munisipaliteit Wysigingsverordening op Munisipale Grondgebruikbeplanning, 2020 (Verordening) vir die volgende aansoeke van toepassing op bogenoemde eiendom, naamlik;

1. vergunningsgebruik (mynbou) ingevolge Artikel 16(2)(o) van die Verordening, ten einde die uitbreiding van die bestaande Die Dam steengroef tot 'n area van 4,819ha groot te akkommodeer.
2. goedkeuring ingevolge Artikel 16(2)(g) van die Verordening vir 'n mynbou rehabilitasieplan.

Volle besonderhede rakende die voorstel hierbo is beskikbaar vir inspeksie gedurende weksdae tussen 08:00 en 16:30 by die Departement: Stadsbeplanning, Patersonstraat 16, Hermanus en die Gansbaai Biblioteek, Hoofweg, Gansbaai. Enige kommentare moet skriftelik wees, u naam, adres, en kontakbesonderhede bevat, sowel as u belang in die aansoek en die redes vir kommentaar, welke kommentaar die Munisipaliteit (Patersonstraat 16, Hermanus / (f) 0283132093 / (e) alida@overstrand.gov.za) moet bereik voor of op **13 Januarie 2023**. Telefoniese navrae kan gerig word aan die **Senior Stadsbeplanner, Mnr SW van der Merwe** by 028 313 8900.

Die Munisipaliteit mag weier om kommentare te aanvaar na die sluitingsdatum. Enige persone wat nie kan lees of skryf nie kan bogenoemde toepaslike Munisipale Departement besoek waar hul deur 'n munisipale amptenaar bygestaan sal word ten einde hul kommentaar te formuleer.

Munisipale Bestuurder, Overstrand Munisipaliteit, Posbus 20, **HERMANUS**, 7200

Munisipale Kennisgewing Nr.160/2022

Notice is hereby given in terms of Sections 47 and 48 of the Overstrand Municipality Amendment By-Law on Municipal Land Use Planning, 2020 (By-Law) of the following applications applicable to the above-mentioned property, namely:

1. consent use (mining) in terms of Section 16(2)(o) of the By-Law, in order to accommodate the extension of the existing Die Dam quarry to an area of 4,819ha in extent.
2. permission in terms of Section 16(2)(g) of the By-Law for approval of a mining rehabilitation plan.

Full details regarding the proposal are available for inspection during weekdays between 08:00 and 16:30 at the Department: Town Planning, 16 Paterson Street, Hermanus and Gansbaai Library, Main Road, Gansbaai. Any comment must be in writing, quoting your name, address and contact details, as well as your interest in the application and the reasons for comment, which comment must reach the Municipality (16 Paterson Street, Hermanus / (f) 0283132093 / (e) alida@overstrand.gov.za) on or before **13 January 2023**. Telephonic enquiries can be made to the **Senior Town Planner, Mr SW van der Merwe** at 0283138900.

The Municipality may refuse to accept comments received after the closing date. Any persons who cannot read or write may visit the above appropriate Municipal Department where a Municipal official will assist them in formulating their comment.

Municipal Manager, Overstrand Municipality, P.O. Box 20, **HERMANUS**, 7200

Municipal Notice No. 160/2022

Isaziso sinikwe ngokuphathelele kwiCandelo lama-47 nelama-48 - lomThetho kaMasipala wesiLungiso wase-Overstad kuYilo lokuSetyenziswa koMhlaba kaMasipala (the Overstrand Municipality Amendment By-Law on Municipal Land Use Planning), 2020, (UmThetho kaMasipala)) ukuba izicelo ezisebenzayo zomhlaba ezichazwe ngasentla ezizezi:

1. ukusetyenziswa kwemvume (emigodini) ngokuphathelele kwiCandelo le-16(2)(o) lomThetho kaMasipala ukulungiselela ulwandiso lweDie Dam quarry ekhoyo kummandla obukhulu buzi-4,819ha.
2. Imvume ngokuphathelele kwiCandelo le-16(2)(g) lomThetho kaMasipala imvume yesicwangciso sokubuyisela isimo sangaphambili semigodi.

linkcukacha ezipheleleyo malunga nesi sindululo ziyafumaneka ukuze zihlolwe ngeentsuku zomsebenzi phakathi kweyure-08:00 ne-16:30 kwiSebe: loCwangciso lweDolophu, 16 Paterson Street, Hermanus kwaye nakwiThala Leencwadi laseGansbaai, Main Road, eGansbaai. Naziphi na izimvo kufuneka zibe zezibhaliweyo, uchaze igama lakho, idilesi kunye neenkukacha zonxibelelwano, umdla kwisicelo, kunye nesizathu sokunika izimvo, ekufuneka zifike kuMasipala (16 Paterson Street, Hermanus / (f) 0283132093 / (e) alida@overstrand.gov.za) ngomhla okanye phambi komhla **13 EyoMqungu 2023**. Imibuzo ngomnxeba ingathunyelwa kuMchwangcisi weDolophu oPhezulu, uMunu SW van der Merwe kule nombolo yomnxeba 028-313 8900.

UMasipala angala ukuthatha izimvo ezifike emva komhla wokuvalwa. Nabani na ongakwazi ukufunda nokubhala angahambela kwiSebe lokuCwangcisa lweDolophu apho igosa likamasipala liza kuncedisa ukuze ukwazi ukuqulunqa uluvo lwakho.

Umlawuli kaMasipala, uMasipala wase-Overstrand, P.O. Box 20, **HERMANUS**, 7200

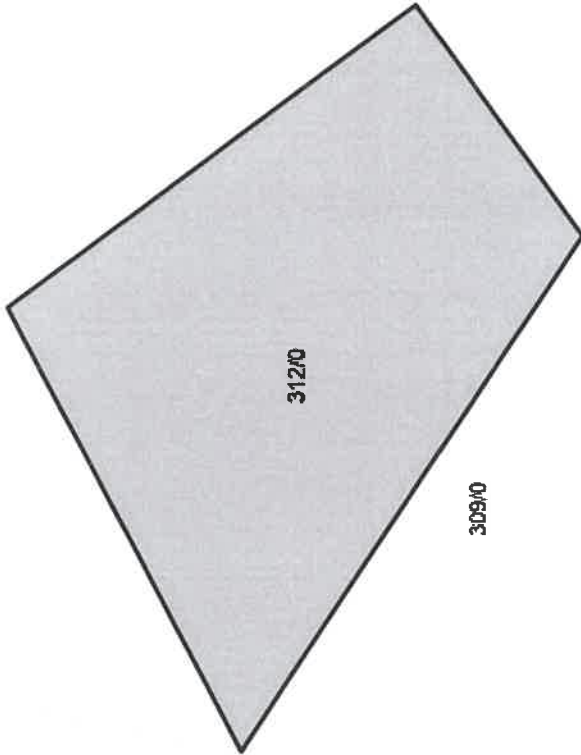
Isaziso sikaMasipala esinguNombolo. 160/2022

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REMAINING EXTENT OF FARM NO.312, DIVISION BREDASDORP



Date: 2022/11/14

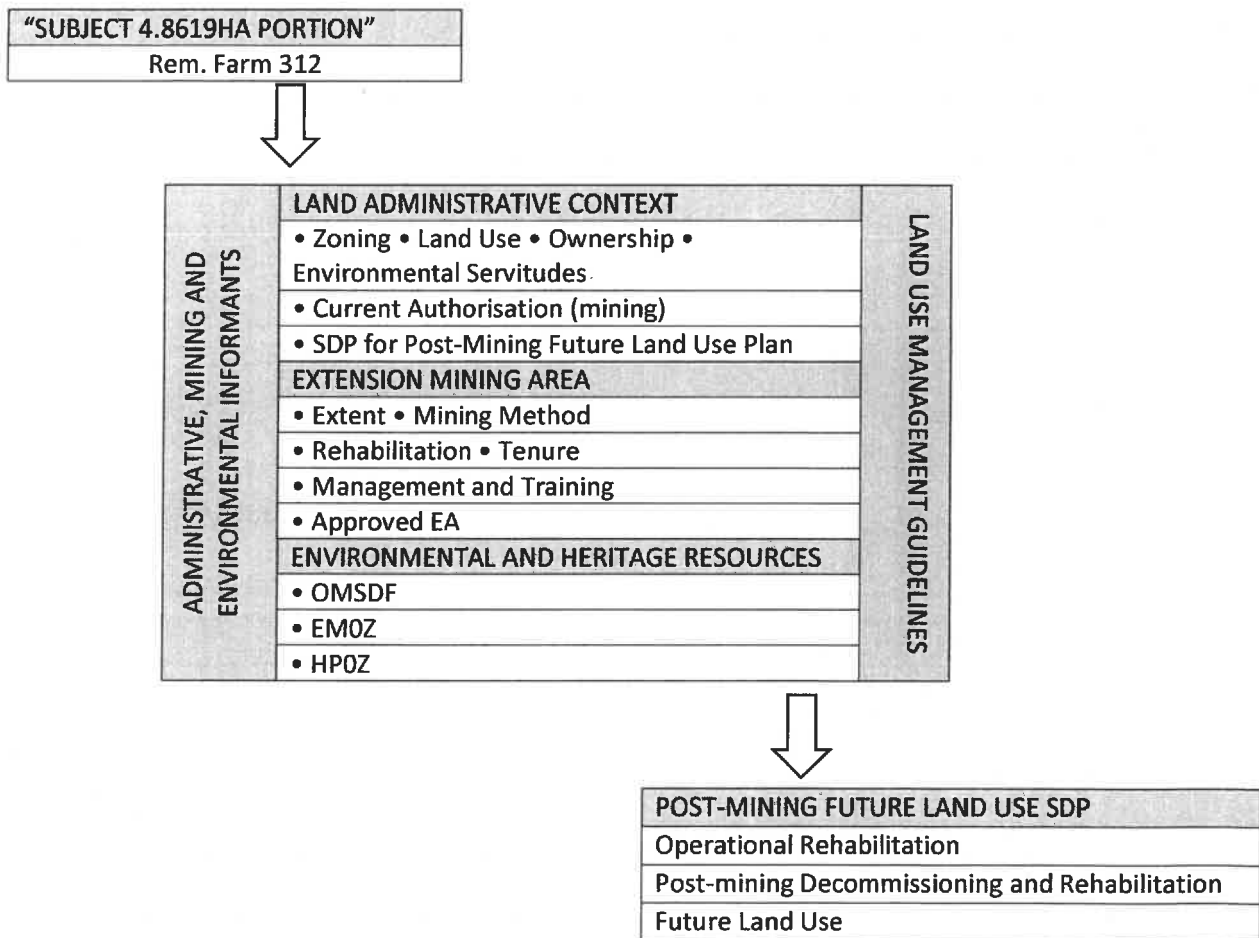
1. INTRODUCTION

1.1. Purpose of this Report

The purpose of this application has as its objective the land use authorisation of the extension for the existing Die Dam hard rock quarry and the putting in place of a Post-Mining Site Development Plan (SDP) to manage the post-mining rehabilitation land use of the approved Mining Permit extension of the existing quarry on a portion of the Remaining Extent of the Farm 312, Registration Division of Bredasdorp located in the Overstrand Municipal Area, Western Cape. Figure 1 illustrates the location of Rem. Farm 312 1.6km north of the R43, 8.7km north-east of Pearly Beach and 14km north-west of Die Dam. Figures 1 and 2 illustrate the location of the existing Die Dam Quarry abutting the northern boundary of Rem. Farm 312, accessed via a gravel road from the R43.

Pursuing such mining authorisation will seek an alignment with the current Land Administrative Context (i.e. zoning, development rules, etc.), the recent EIA approval, the Municipal Spatial Development Framework and Environmental Management Framework (EMF), notably the Environmental Management Overlay Zones (i.e. HPOZ and EMOZ), together with other land use planning and management informants (e.g. IDP) (refer Diagram 1).

Diagram 1: Application Context



1.2. Demand for Hard Rock Construction Material

Several parties have operated the hard rock quarry on Rem. Farm 312 over the past two decades. Such continuous operation over the years and support of the Overstrand construction industry clearly demonstrates the demand for construction aggregate in the Overstrand, the built product of which is reflected in the significant scale of urban development growth in the Overstrand during the same period. Overstrand, as recognised in and promoted through its forward vision and planning, needs to maintain, refurbish and continue to grow its development, with eco-and marine tourism and education, medical services and retirement underpinning it as a regional, national and international sought-after destination and investment. Critical to maintaining and growing its economy is “*construction aggregate*”, a fundamental input to any development, its maintenance and refurbishment, irrespective of building technology and material type, with accommodation, road, harbour and services infrastructure development essential to Overstrand’s on-going development and investment attraction.

The renewal of the current Mining Permit and a growing demand for aggregate in the general construction industry and for road building and upgrading prompted the consideration of extending the existing quarry on Rem Farm 312 or the securing of such material from other sites. While other locations presented quality material in certain instances, such sites also comprised inherent environmental or nuisance constraints to surrounding communities and environs. Accordingly, the pursuance of extension of the existing hard rock excavation, given that the existing quarry is ideally placed to continue to support the Overstrand/ Overberg development initiative given the following:

- The quarry being established, with an existing and mitigated footprint disturbance of its mining area and logistical facility accommodating its workshop, mine office, loading and dispatch area, together with its access road;
- Having significant reserves of hard rock; and
- Being located relatively central and in close proximity to its Overstrand and Overberg customers.

Accordingly, the extension of the construction aggregate quarry on portion of Rem Farm 312 has a competitive edge over any alternative existing and potential quarry sites, given the following:

- Uninterrupted and continued supply of construction aggregate to the wider Overstrand and Overberg construction industry (both having growing construction sectors) at a competitive price given the proximity of customers (Bredasdorp to Kleinmond).
- Continued employment of existing staff and benefits to the labour sending community given secured job opportunities, contributing financially to the local economy.
- A shorter delivery route due to its location relative to consumers, offering a road maintenance cost saving and increased public road user safety insofar heavy truck movement.
- Reserves of construction aggregate (78,965m³; tight) supported by an existing logistical facility and access.
- Sound environmental performance given appropriate quarry planning and mitigation management.

1.3. Application

The land use authorisation application is lodged by Setplan trading as Agri-Sea on behalf of D. J. Penwill Properties (Proprietary) Limited (Reg. No 1984/000169/07), owner of the Remaining Extent of Farm 312, Division of Bredasdorp, Western Cape Province and the mining company Penmyn (Pty) Ltd. Refer Annexure A for a Company Resolution from D. J. Penwill Properties (Proprietary) Limited and Annexure B for a Power of Attorney from R. Penwill, the designated representative.

The application, having its purpose the extension of the existing construction aggregate quarry on a 4.8619ha portion of the Remaining Extent of Farm 312 situated in the Overstrand Municipal Area, Registration Division Bredasdorp, Western Cape, is submitted in terms of the Overstrand Municipality: Amendment By-Law on Municipal Land Use Planning, 2020 and includes the following:

- (i) Section 16 (2)(o): Consent Use to Permit Mining in Agricultural Zone 1: Agriculture (AGRI) of the 4.8619ha portion of the Remaining Extent of Farm 312
- (ii) Section 16(2)(g): A Post-Mining Future Land Use Site Development Plan for the 4.8619ha portion of the Remaining Extent of Farm 312.

The **Pre-Application Consultation** comprised a telephonic discussion on 22 July 2022 with the Senior Town Planner; Town Planning; Infrastructure and Planning, Overstrand Municipality to confirm the applications to be submitted in terms of the Overstrand Municipality: Amended By-Law on Municipal Land Use Planning, 2020. Furthermore, a written confirmation request was forwarded on 21 July 2022 to the Chief Environmental Officer at Overstrand Municipality insofar the landscape-wide environmental informants to be addressed.

The content of this Report, prepared in motivation of the abovementioned applications, also augments the information required in the "Land Use Management Application Form". The completed and signed Application Form is attached to the application, with a copy thereof in Annexure D.

This report is supported by the **Appendices and Annexures Report** (Report 1655/R2 dated July 2022), inclusive of Appendices 1-6 and Annexures A - I.

While this application has as its primary purpose meeting the requirements of the Overstrand Municipality Land Use Scheme (OMLUS) 2020, it will draw heavily on the following:

- (i) **The Basic Assessment Report and Environmental Management Programme Report** (Report 2537/MP/D-BAR dated October 2021) for Die Dam Quarry as submitted for Environmental Authorisation in terms of the National Environmental Management Act, 1988 and the National Environmental Management Waste Act, 2008 in respect of Listed Activities that have been triggered by applications in terms of the Mineral and Petroleum Resources Act, 2002 (MPRDA) (as amended). Such application was lodged with the Department of Mineral Resources (File Ref.no. WC/5/1/3/2/10285MP), with approval of the Environmental Authorisation dated 1 July 2022 (Refer Annexure C and Appendix 1), and the Mining Permit dated 12 August 2022 and valid for two (2) years, extendable to a maximum of 5 years (refer Annexure I)
- (ii) **Authorisations and comment received** to date as part of the abovementioned **BA/EMP process** include:
 - Department of Mineral Resources and Energy, Western Cape Regional Director letter dated 1 July 2022 (refer Appendix 1) insofar the Environmental Authorisation approval.
 - Overstrand Municipality: Infrastructure and Planning Directorate; Town Planning letter dated 5 July 2017 (refer Appendix 2).
 - Heritage Western Cape letter dated 8 February 2022 (refer Appendix 3).
 - Western Cape Government; Department of Environmental Affairs and Development Planning: Development Facilitation letter dated 10 December 2021 (refer Appendix 4).
 - Breede-Gouritz Catchment Management Agency letter dated 6 December 2021 (refer Appendix 5).
 - CapeNature: Conservation Intelligence letter dated 10 December 2021 (refer Appendix 6).
- (iii) **Other compliances**, including:
 - SPLUMA Section 52 not being applicable as this land development does not materially impact on national matters, policy objectives or functional areas, neither will it be prejudicial to the economic, health or security interests of one or more provinces or the Republic as a whole, or impede the effective performance of the functions of one or more municipalities or provinces insofar matters within their functional area of legislative competence.

- LUPA Section 53 and the Western Cape Land Use Regulations (2015) Section 10 not being applicable to the proposed mining extension area on the 4.8619ha portion of Remaining Extent of Farm 312 given that while such portion is zoned for agricultural purposes, such land portion has been mined as an aggregate quarry of up to 20.0m depth over the past 10 year period, resulting in no agricultural activity being practised. Furthermore, the land portion comprises less than the 5.0ha prescribed in terms of Section 53 and Regulation 10.

The balance of this motivation report is structured as follows:

- Section 2 puts forward the administrative and land use context
- Section 3 identifies the environment affected by the extension mining area
- Section 4 puts forward the mine development and rehabilitation
- Section 5 focusses on impact management and mitigatory measures to address impacts
- Section 6 puts forward a post-mining future land use Site Development Plan
- Section 7 assesses the desirability of the mining, with specific reference to the following:
 - Consistency with the Municipality's Spatial Development Framework and Zoning Regulations (Land Use Scheme)
 - Economic impact
 - Social impact
 - Capital investment
 - Compatibility with surrounding land uses
 - Impact on existing services
 - Impact on safety, health and well-being of the surrounding community
 - Impact on existing use rights
 - Impact on heritage
 - Impact on the biophysical environment
 - Traffic impacts and related considerations
- Section 8 draws conclusions and makes a recommendation on the application.

It is noted that no specialists were appointed in support of both the Mining Permit application and this land use authorisation application, however noting that the BA/ EMP report includes a NEMA Environmental Screening (refer Annexure G for report), and the inclusion of relevant environmental data as contained in the Municipality's Environmental Management Overlay Zones (2020) (i.e. HPOZ and EMOZ), its Environmental Management Framework (EMF, 2020), the Western Cape Provincial Biodiversity Strategic Plan (2017) and the National Protected Area Expansion Strategy (NPAES, 2020).

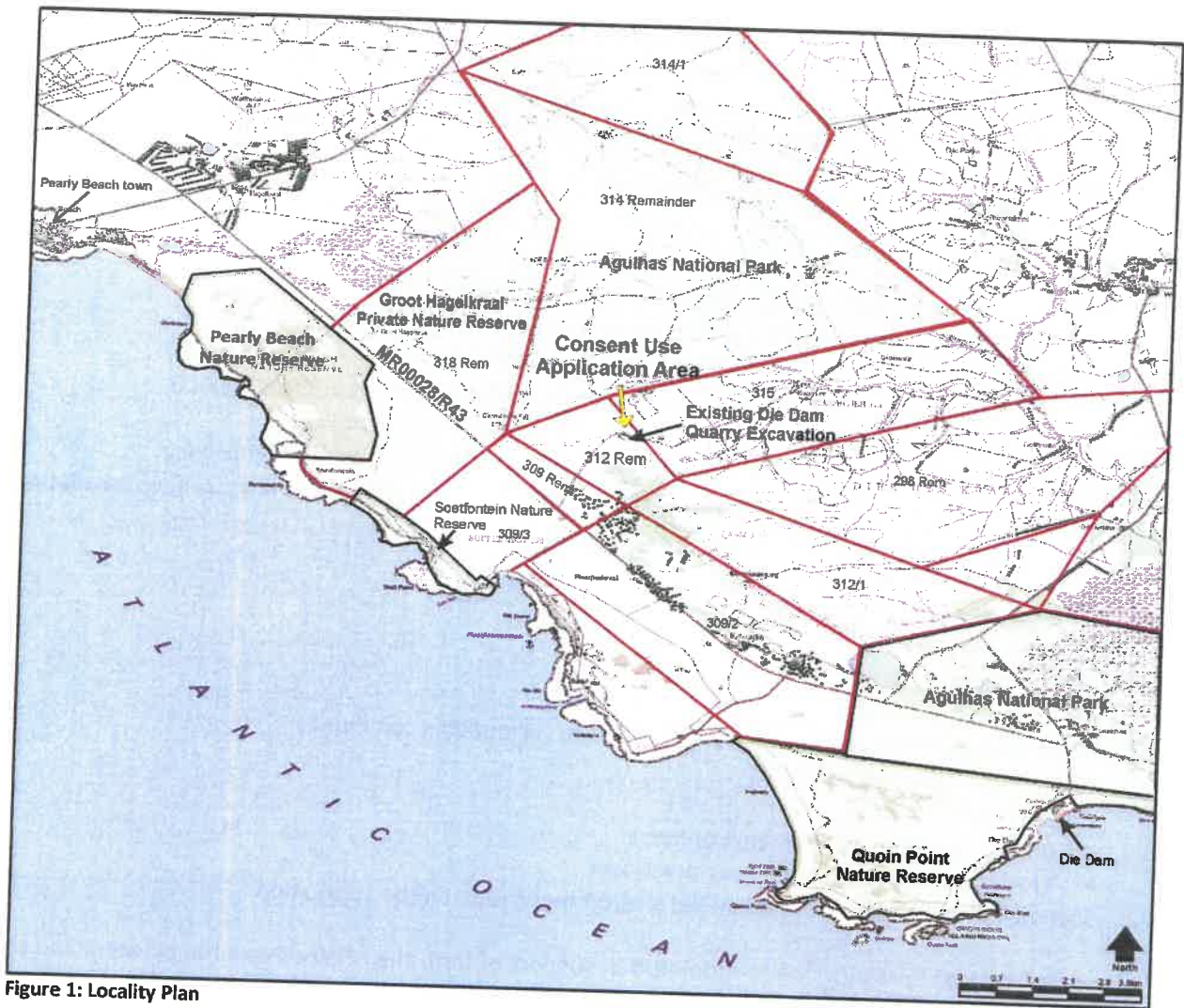


Figure 1: Locality Plan

2. ADMINISTRATIVE AND LAND USE CONTEXT

This section serves to outline the past and current land use management insofar mining within the “cadastral context” and seeks to authorise such land use within the operational phase, rehabilitation phase and post-mining future land use phase in terms of the Municipal Land Use Scheme, 2020.

2.1. Property Description

The “subject property” of this application as depicted in Figure 2 is the Remaining Extent of the Farm 312, Division Bredasdorp, Western Cape Province. Such property is 301,7090 hectares in extent. The “subject portion” of this application as depicted in Figure 2 is a 4.8619ha portion of Rem Farm 312, such portion as depicted as ABCDEFG in Figure 2.

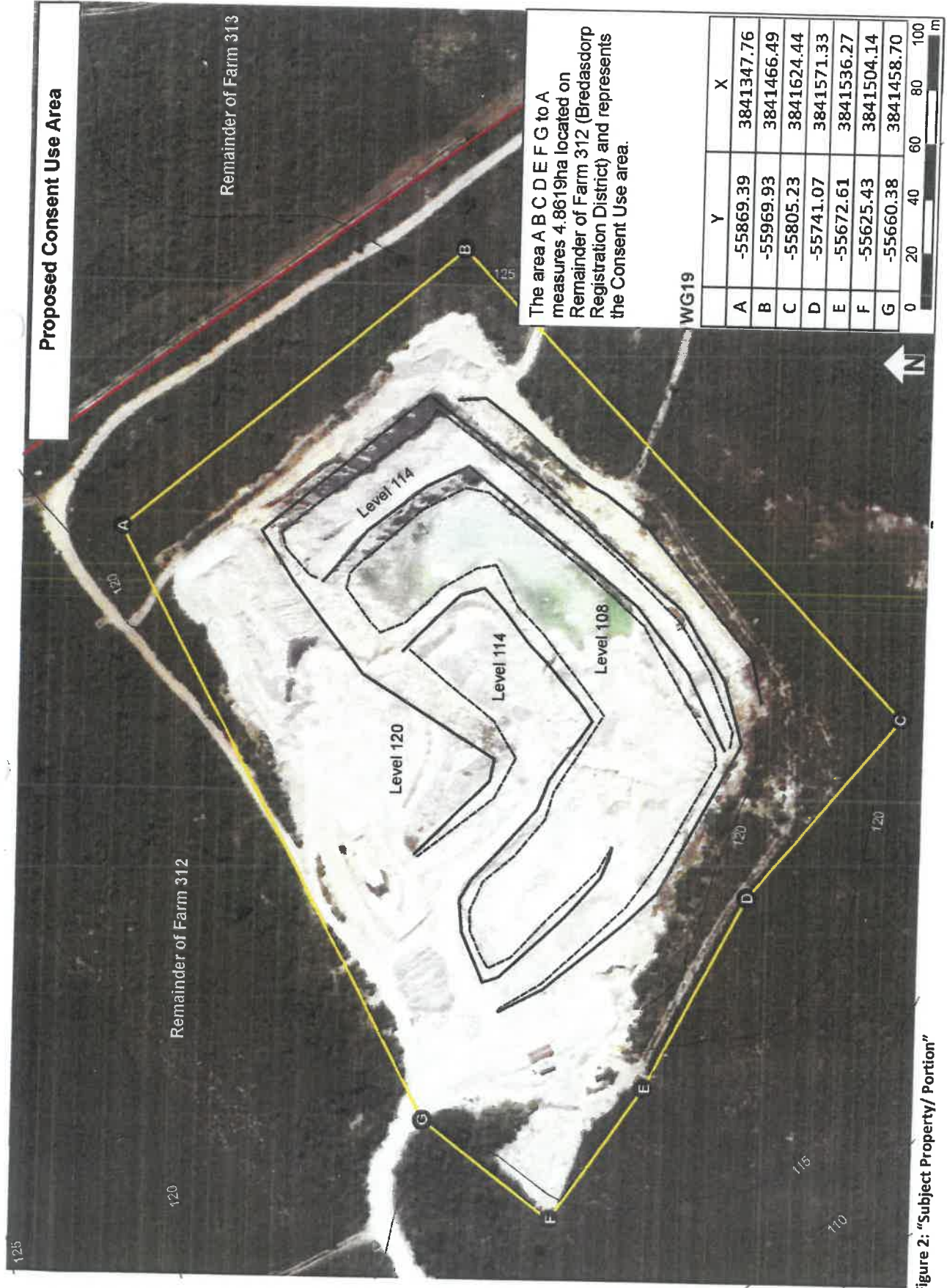


Figure 2: "Subject Property/ Portion"

2.2. Property Ownership

2.2.1. Remaining Extent of Farm 312

Ownership of the "subject property portion" within Rem Farm 312 vests in D. J. Penwill Properties (Proprietary) Limited (reg. 1984/000169/07) in Deed of Transfer No: T000085793/2000 (Registration date 11 October 2000) (refer Annexure E) and Diagram as per Title Deed No Brad.Q.1=12-1-12(2.6.1868) (refer Annexure F).

Insofar Rem Farm 312, the following title deed restrictions and currently registered servitudes are noted.

- (i) Subject to conditions referenced to in Deed of Transfer No T5290 dated June 1898, such being historical and not having any relevance to the proposed quarry extension, also noting that such conditions have had no relevance to the previous mining of the quarry or the approval thereof.
- (ii) The Diagram attached to Title Deed No Brad.Q1-12 dated 2.6.1869 (refer Annexure F) includes no physical/spatial servitudes impacting upon the proposed quarry extension.
- (iii) R. Penwill, designated representative of the land owner D.J. Penwill Properties (Proprietary) Limited, confirms that no servitudes are registered over Rem. Farm 312, noting that authorisation to utilize the Farm 312 and quarry access road by Koks Rivier 313, ie. the farm to the north-east, to gain access over Rem. Farm 312 and Rem Farm Buffel Jacht 309 to the MR28/R43, is by special permission granted by the landowner to both such properties, that being D.J. Penwill Properties (Pty) Ltd.

2.2.2. Abutting Cadastral Portions and Ownership

Abutting/ surrounding properties include the following cadastral portions, which together with their ownership, are depicted in Figure 3 and Table 1.

Table 1: Surrounding Property Ownership

Property Description	Owner
Waterford 314	South African National Parks
Koks Rivier 313	Frederick Joubert Trust
RE/298	Haasvlakte Trust
1/312	D.J. Penwill Prop (Pty) Ltd
Buffel Jacht 2/309	D.J. Penwill Prop (Pty) Ltd
Buffel Jacht RE/309	D.J. Penwill Prop (Pty) Ltd
Hagel Kraal RE/318	Eskom Holdings (Pty) Ltd

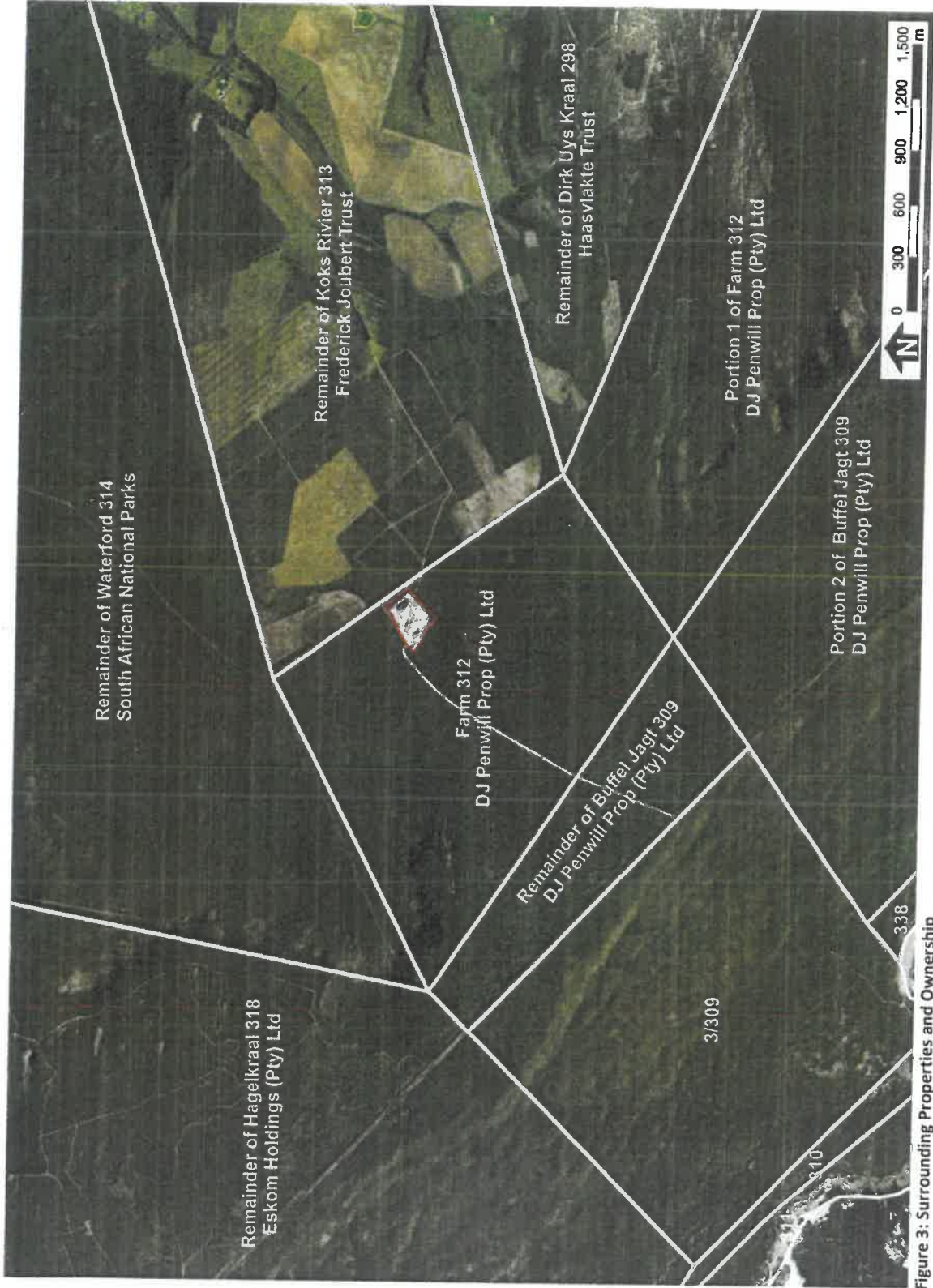


Figure 3: Surrounding Properties and Ownership

2.3. Authorisation of the Die Dam Quarry

The following authorisation status insofar mining and land use on Rem Farm 312.

2.3.1. Current Mining Status

Between 2017 and 2022 mining authorisation vested in a mining permit approval issued in 2017 and extended for five (5) years. Accordingly, the new 2022 Mining Permit application by Penmyn (Pty) Ltd and subsequent Environmental Authorisation approval dated 1 July 2022 (refer Annexure C) and Mining Permit issued on 12 August 2022 (refer Annexure I).

2.3.2. Mining Land Use Management

Between 2017 and 2022 the mining land use authorisation for the mining of a 1.47ha portion of the existing Die Dam aggregate mine was in terms of Section 15 of the Land Use Planning Ordinance as per the Overstrand Municipality approval dated 5 July 2017, notably subject to the following (refer Appendix 2):

- The operation of the mining activity be subject to a valid mining permit.
- That the mining area be restricted to the area of 1.47ha as indicated on the Site Development Plan.

Accordingly, this application for a consent use in Agricultural Zone (AGRI) in terms of the Overstrand Municipality: Amendment By-Law on Land Use Planning, 2020 to accommodate the extension (4.819ha) of the mining in the existing Die Dam Quarry as per the Environmental Authorisation dated 1 July 2022 (refer Annexure C) and Mining Permit dated 12 August 2022 (refer Annexure I).

2.4. Zoning

Zoning of the "subject property/ portion" and abutting properties, as sourced from the Overstrand Municipality Schedule 2 Land Use Scheme (2020): Rural Map 4: Pearly Beach Area (refer Figure 4) being Agricultural Zone 1: Agriculture (AGRI).

The following **development parameters** being applicable to mining on Rem Farm 312 are noted insofar **Agricultural Zone 1: Agriculture (AGRI)**:

- (i) Common Building Line: 30.0m for a land unit >10.0ha
10.0m for a land unit 10ha \geq 1ha
- (ii) Building Height: 8.0m, with Council permission to 12.0m

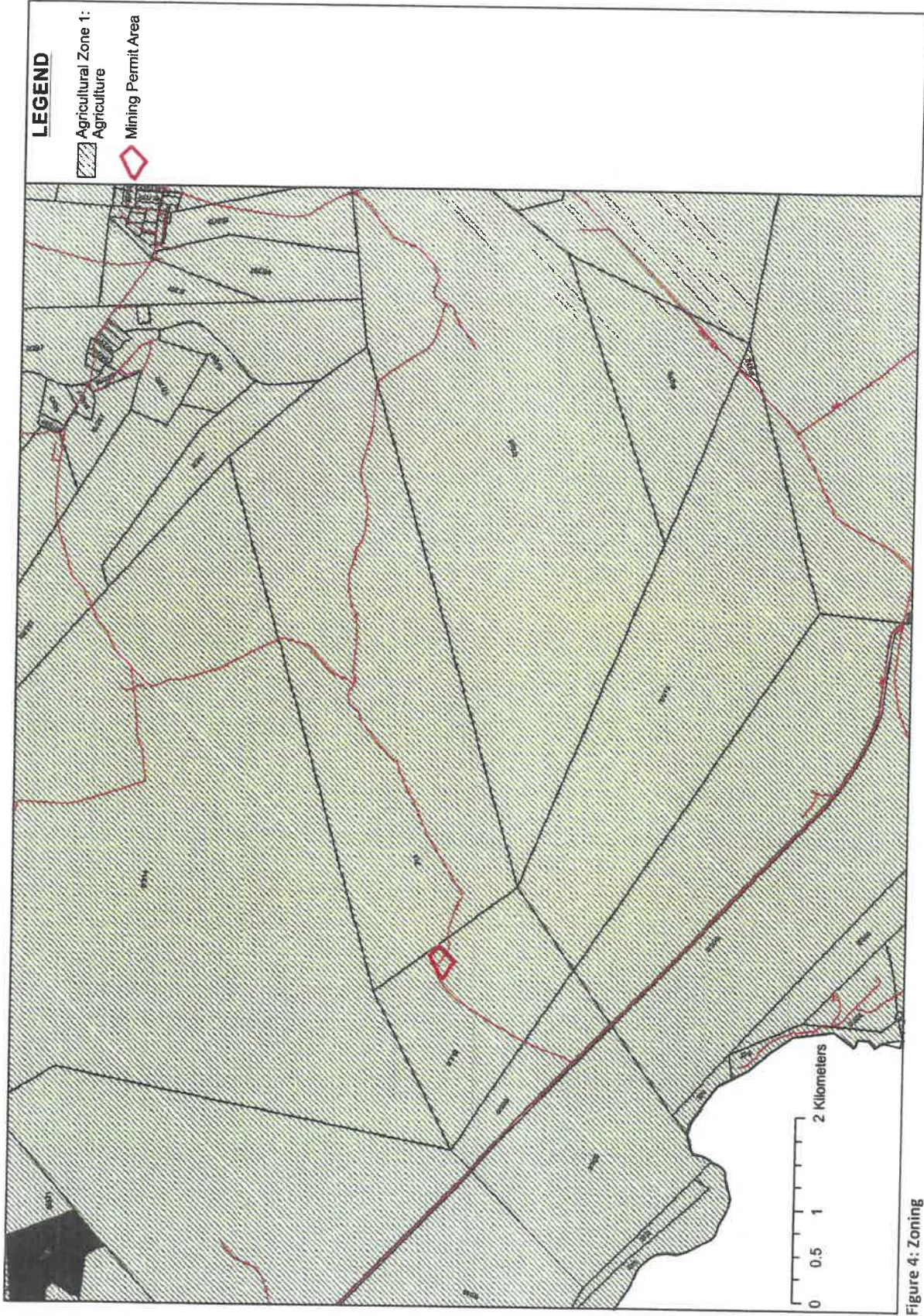


Figure 4: Zoning

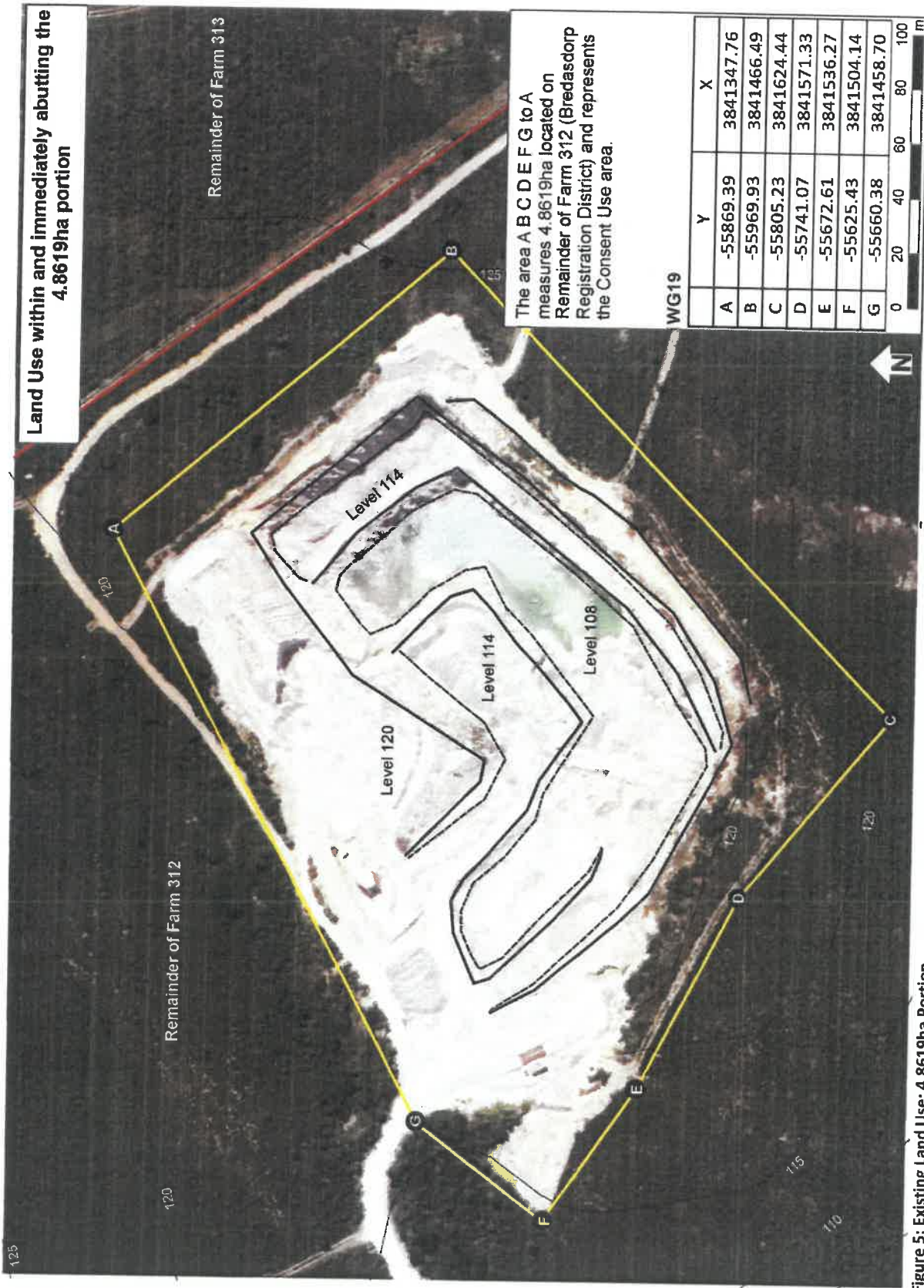


Figure 5: Existing Land Use: 4.8619ha Portion

2.5. Land Use and Engineering Services

2.5.1. Rem Farm 312

As illustrated on Figures 1, 3 and 6, Rem Farm 312 comprises an undisturbed wilderness area, with no cultivated agriculture occurring, the main non-agricultural use being the existing Die Dam Quarry, and the main infrastructure being the gravel access road which provides access to both the farm and the quarry from the R43 (MR00028).

2.5.2. Quarry

The 4.8619ha Mining Permit area accommodates of the following land uses (refer Figure 5):

- 90% unrehabilitated earlier quarrying footprints of the excavation and the plant/stockpiling area (refer Photo 1).
- The other 10% being land classified as undisturbed wilderness which may not be disturbed during the lifespan of the proposed mining. (refer Photo 2)
- Logistical facilities comprising three (3) containers, a weighbridge and a mobile bunded fuel tank (refer Photo 3) in support of the mining.

2.5.3. Surrounding Area

In terms of surrounding land use, the following: (refer Figures 1, 3 and 6):

- The closest farmstead to the site is the Koksrivier farmstead located some 2800m north-east of the site.
- The R43 (MR00028) at its closest point is 1600m to the south
- Pearly Beach settlement is located 8.7km to the west.
- There are cultivated lands on the neighbouring farm to the north-east of the site, with the closest lands located about 150m to the north.
- South African National Parks owned land to the north (Rem. Farm Waterford 314) and the south-east, together with Quoin Point Nature Reserve abutting Die Dam.
- Groot Hagelkraal Private Nature Reserve and Pearly Beach Nature Reserve to the west.

2.5.4. Engineering Services

Engineering services employed at the quarry when operational include the following (also refer Section 5.2.5):

- (i) Gravel road access from the R43(MR00028) via a gated intersection.
- (ii) Electrical power from a portable on-site generator.
- (iii) Self-contained portable chemical toilets supplied and serviced by a contractor.
- (iv) Potable water (bottled) brought to the site as required, with raw water from the pumping sump in the excavation being used for dust suppression (stockpiling area and access road) under the driest and windiest condition.
- (v) Waste removal, including:
 - Domestic waste (soft-drink containers, lunch wrappers, etc.) retained within vehicles for storage in dedicated receptacle at the on-site container for removal to a municipal facility.
 - Industrial waste (used oil cans, used fuel filters, oiled rags, etc.) transferred to a dedicated receptacle at the on-site container for removal, together with any oil-spill contaminated sand, by a specialist contractor for disposal at a dedicated facility.
- (vi) Storm water management through side – and mitre-drains along the access road and via drainage slopes on the quarry benches.



Photo 1: Overall view of the site from the eastern most point of the excavation.

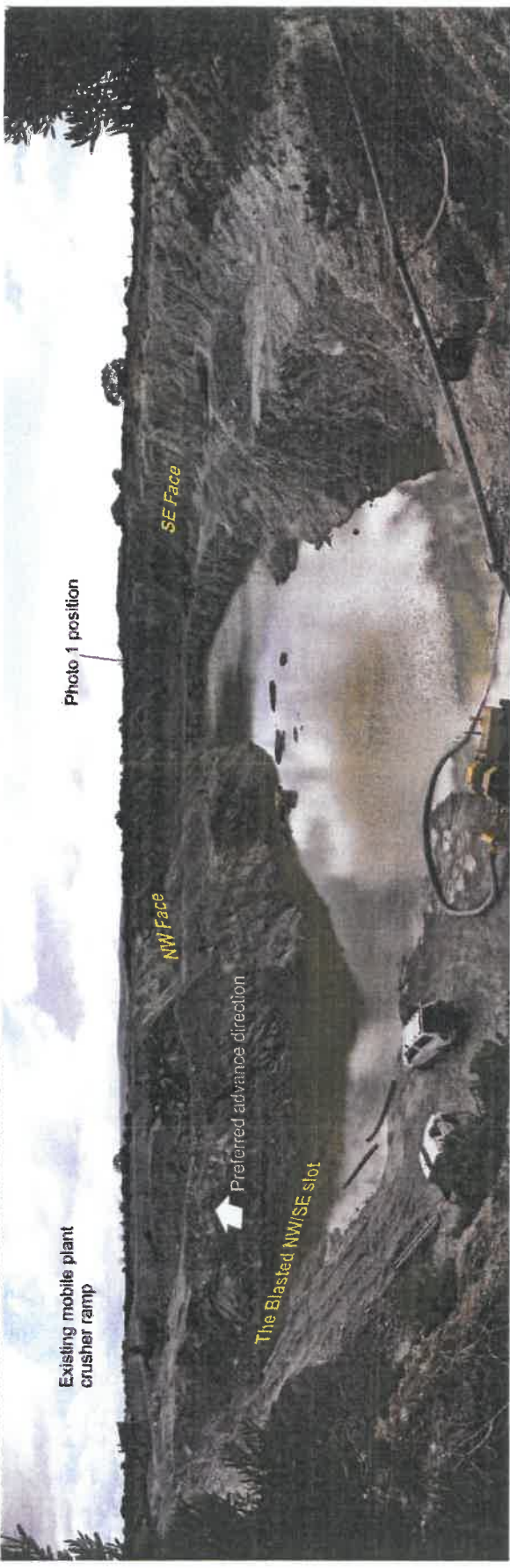


Photo 2: Looking north over the excavation showing the NW/SE slot blasted to achieve optimal advance direction (from safety point of view)



Photo 3: Logistical facilities on site

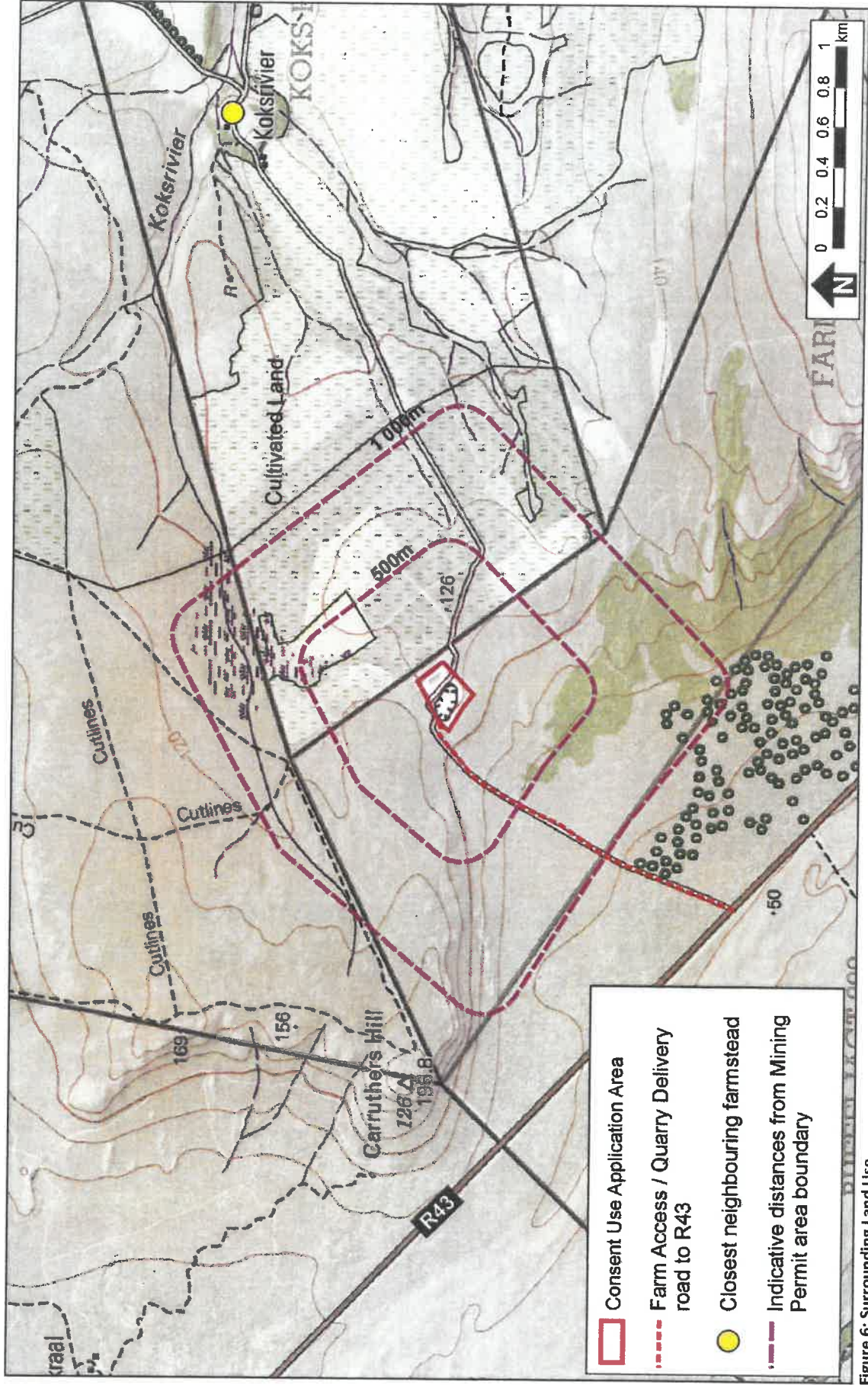


Figure 6: Surrounding Land Use

3. ENVIRONMENT AFFECTED BY THE MINING EXTENSION AREA

The environmental sensitivity of the proposed mining extension area and the surrounding receiving environment is informed by existing environment resource data given that the development footprint of the extension area (refer Section 2.5.2 and Figure 5) equals the existing quarry disturbance footprint, with no further disturbance of the remaining peripheral wilderness area within the Mining Permit Area to be permitted. Such data availability from the BA-EMP Report and its NEMA Environmental Screening (refer Annexure G), Cape Farm Mapper, The Overstrand Municipality Environmental Management Framework (EMF, 2012) the Western Cape Biodiversity Strategy Plan (2017), the National Protected Area Expansion Strategy (2020), and the Overstrand Municipality's Environmental Management Overlay Zone Regulations (EMOZ, 2020) and the Heritage Protection Overlay Zone Regulations (HPOZ, 2020). According, no additional specialists have been engaged in the Mining Permit application and this land use authorisation application.

Accordingly, this section puts forward selective extracts from the Basic Assessment Report and Environmental Management Programme Report for the Die Dam Quarry Extension application (Report 2537/MP/D-BAR dated October 2021), with an emphasis on the following:

- Natural resources; including topography and land capability, soils, fauna and flora, surface and groundwater
- Disturbance; including visual, noise and dust

3.1. Existing and Extension Mine Extent and Footprint

The existing quarry footprint relative to the Mining Permit site is illustrated in Figure 5, noting the following.

- The Mining Permit area comprises 4.8619ha as depicted in Figure 5
- The existing mining (i.e. disturbed) footprint equals 4.3757ha or 90%
- The undisturbed natural area within the Mining Permit equals 0.4862 or 10%

3.2. Environment Affected by the Proposed Activity

3.2.1. Topography

Figure 1 illustrates the existing contours on the published 1:50 000 topocadastral sheet.

The site is within a generally flat area which rises slowly to the mountains and rolling hills in the rural hinterland. The existing site is located on the top of a local relatively flat-topped plateau above the coastal plain as shown in Diagram 2.

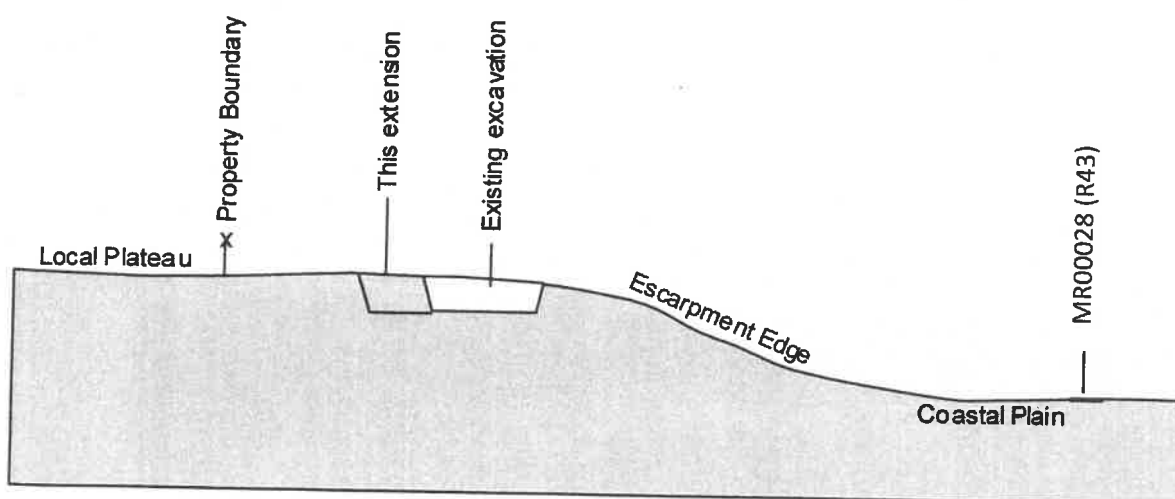


Diagram 2: Topography

3.2.2. Visual Impact

The site is completely free of views from any surrounding residence or R43/ MR00028 public road. The cross-section in Diagram 3 shows the view-line from the R43. It is imperative that the crest of the “escarpment” ridge never be broken by the excavation in order to limit / avoid visual impact from the coastal plain and specifically from the R43 public road which is identified as a “Route of Local Scenic Significance” in terms of HPOZ: Scenic Drives (refer Figure 12).

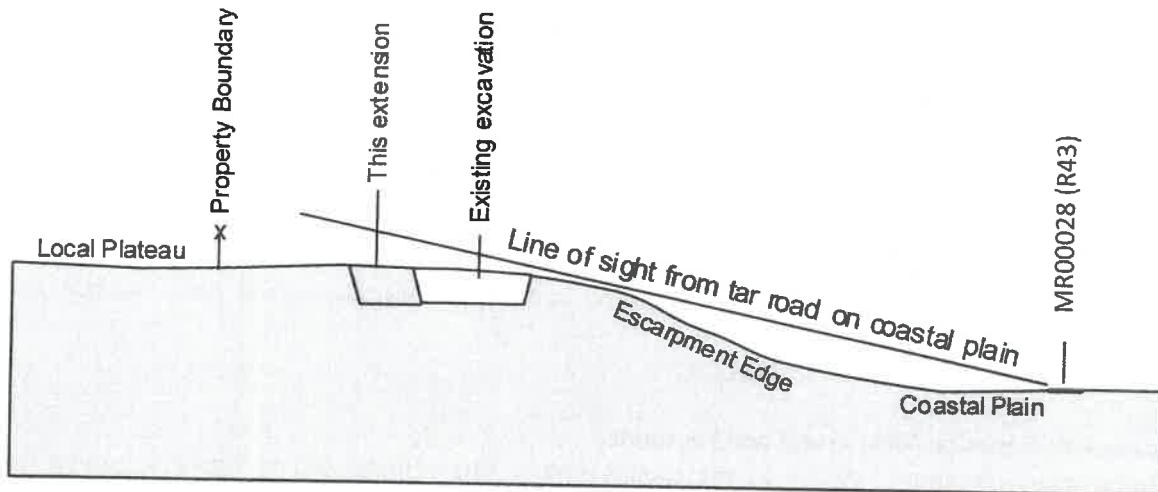


Diagram 3: Visual Impact

3.2.3. Soil

No advance beyond the current disturbance area is contemplated in this Mining Permit application and as such no further disturbance of topsoil will take place.

The original topsoil comprised well-drained sandy Mispah form soil (i.e. very thin topsoil over weathered / fresh arenite (sandstone)). Such topsoil depth varies between non-existent topsoil cover to a maximum depth of 20cm. This profile can be seen on-site in the track which traverses the site.

Given the relative scarcity of topsoil, the conservation thereof is of utmost importance and is critical to the rehabilitation of the site.

Some topsoil has been removed and retained in berms to the north from the more recent workings which have taken place as depicted in Photo 4. While such topsoil is most likely insufficient to cover the entire site, a large percentage of the final excavation will most likely flood as a shallow reedbed.



Photo 4: Existing topsoil berm along northern edge of disturbance area

In addition, material potentially suitable as topsoil / growing medium has been placed in a berm beyond (i.e. south of) the logistical facilities. Figures 5 and 14 indicate and quantify the existing topsoil berms totalling some 265.7m³.

3.2.4. Land Capability / Agriculture

The site is located in the **Strandveldvoetheuwels Homogenous Farming Area** (Cape Farm Mapper), with the dryland potential classified as **high**. While no cultivation takes place on Rem Farm 312, some cultivation occurs beyond the property boundary to the north-west, including Honey Bush tea and pasture species being cultivated closest to the excavation. Other grains (Wheat and Canola) are cultivated further to the west.

Grazing capacity on surrounding areas is moderate at 30ha / large stock unit.

The NEMA Environmental Screening (refer Annexure G) maps/ qualifies "agriculture sensitivity" within the proposed Mining Permit Area as being a "**low to medium**" land.

Notwithstanding the possible agricultural potential of the site before mining, the previous disturbance of the site has made the proposed excavation extension area unsuitable for agriculture / cultivation.

The proposed excavation is contained within the currently disturbed area, with no disturbance of any virgin veld or agricultural land within the remainder of the Mining Permit Area being contemplated.

Western Cape Government: DEADP; Directorate Pollution and Chemical Management in letter dated 10 December 2021 (refer Appendix 4) noted the following:

- Existing topsoil be placed either side of access road to ensure protection of such soil.
- Erosion of any work surface be rehabilitated to pre-mining condition."

3.2.5. Natural Vegetation

The site is located within the Overberg Sandstone Fynbos biome (refer Figure 7). No vegetation disturbance is planned in respect of the Mining Permit Area, given that the current disturbance footprint will not be exceeded.

The vegetation type is classified as Critically Endangered and the site is located within a CBA (refer Figure 8). As such, absolutely no disturbance is permitted without at least a full specialist Biodiversity Assessment.

Mucina and Rutherford note the following in respect of conservation of this vegetation type:

- Target 30%. Only 6% statutorily conserved in the Agulhas National Park, Fernkloof, Babilonstoring, Heuningberg, Maanschynkop, Salmonsdam and Caledon Nature Reserves. Additional area protected in private conservation areas such as Vogelgat, Brandfontein, Jan Malherbe, Groothagelkraal, Fynbosrand, Brandfontein-Rietfontein and Waterfall.
- About 6% transformed (cultivation). Alien *Pinus pinaster*, *Acacia cyclops*, *A. saligna*, *Hakea sericea*, *H. gibbosa* and *Leptospermum laevigatum* occur in places.
- Erosion is "very low and low"

It is important to note that the site is identified in the National Protected Area Expansion Strategy for possible inclusion into Agulhas National Park. The site is also located in the "Protected Area Buffer EMOZ"

in terms of the EMOZ Regulations (2020) for the Overstrand Municipality, but does not vest in any other EMOZ's or the HPOZ for Overstrand (refer Section 3.2.14.3 and Figures 11 and 12).

Insofar aquatic biodiversity, the absence of any watercourses within the quarry area is noted, with the closest surface water feature located across the watershed, restricting any impact from the quarry.

The NEMA Environmental Screening (refer Annexure G) maps/ qualifies both "biodiversity sensitivity", "plan species sensitivity", "terrestrial biodiversity sensitivity" and "aquatic biodiversity sensitivity" within the proposed Mining Permit Area as being "**very high**", noting the need for protection.

No specialist study has been called for in respect of Natural Vegetation given no additional disturbance of virgin land within the Mine Permit Area.

CapeNature: Conservation Intelligence letter dated 10 December 2021 (refer Appendix 6) notes the following:

" - A general concern regarding lack of rehabilitation to date and lack of topsoil available for rehabilitation as this was lost from the footprint decades ago.

- Authorisation in terms of the National Water Act be obtained for the quarry waterbody, particularly if any water uses are contemplated.

- Mitigation be in place to prevent fauna falling into the quarry and drowning.

- Invasive alien vegetation in areas surrounding the quarry be cleared, up to 100m surrounding the quarry and along the access road to prevent spreading to surrounding areas, including protected areas."

3.2.6. Animal Life

Vast expanses of the same vegetation surrounding the site provide a habitat suitable for species typical of the area. These include small buck, rodents (rats, mice, shrews etc.), reptiles (snakes) birds and insects. The large scale of the habitat type, when compared to the extent of the proposed activity negates significance of any impact in this regard.

The NEMA Environmental Screening (refer Annexure G) maps/ qualifies "animal species sensitivity" within the Mining Permit Area as "**high**".

The continued development of the site does not represent any threat to any corridor or connectivity of natural systems, given its location in the extreme north of the NPAES and CBA.

No specialist study has been called for in respect of Animal Life, given no additional disturbance of virgin land within the Mine Permit Area.

3.2.7. Archaeology and Cultural Heritage

It is noted that the proposed Mining Area extension, while not located within the Heritage Protection Overlay Zone (HPOZ) for Overstrand, takes cognizance of HPOZ: Scenic Drives which identifies the R43 (1.6km distant from the quarry) as a "Route of Local Scenic Significance" (refer Figure 12).

The NEMA Environmental Screening (refer Annexure G) maps/ qualifies "archaeological and cultural heritage sensitivity" as "**low**".

There is no risk of any disturbance to any artefacts of cultural significance given the previous disturbance of the site. There is no risk of visual impact given the retention of the current disturbance area out of the viewshed of any surrounding residence or public road.

It is noted that a completed Notice of Intent to Develop dated 20 December 2021 (refer Annexure H) was submitted as part of the BAR/EMPr assessment. Heritage Western Cape response dated 8 February 2022 (refer Appendix 3) includes:

"You are hereby notified that, since there is no reason to believe that the proposed mining, Erf 312 Pearly Beach, will impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required."

"However, should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately, and Heritage Western Cape must be notified without delay."

Western Cape Government: DEADP; Development Facilitation letter dated 10 December 2021 (refer Appendix 4):

"Although the proposed mining area is disturbed by previous mining activities, it is recommended that Heritage Western Cape be notified of the application for their information."



Figure 7: Vegetation (Source: Map of the vegetation types of South Africa (Mucina & Rutherford 2006)).

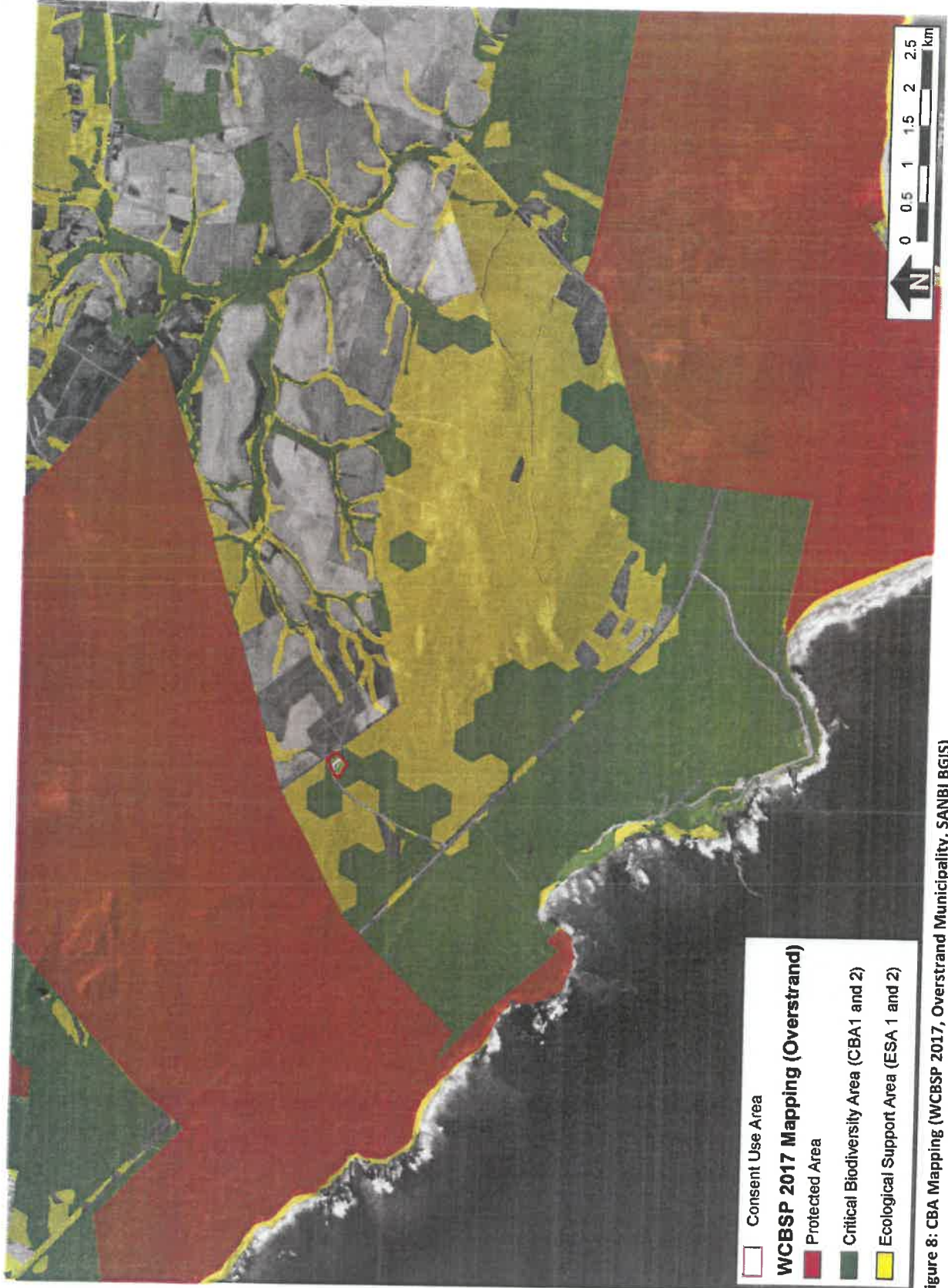


Figure 8: CBA Mapping (WCBSp 2017, Overstrand Municipality, SANBI BGIS)

3.2.8. Palaeontology

It is noted that the proposed Mining Area extension is not located within the Heritage Protection Overlay Zone (HPOZ) for Overstrand insofar palaeontological significance.

The NEMA Environmental Screening (refer Annexure G) maps/qualifies "paleontological sensitivity" as "high".

John Almond in a description of the Palaeontological Heritage in the Peninsula Formation (J Almond, 2010) classifies the Palaeontological sensitivity in this Peninsula formation as **Low** and states that "No palaeontological mitigation is recommended here for this formation".

Furthermore, the following is quoted from the ResearchGate website (Hiller, Norton. (1992). The Ordovician System in South Africa: a review. Global perspectives on Ordovician geology. (473-485): "The Ordovician sequence is mainly unfossiliferous apart from trace fossils, but the Cedarberg Formation in the Western Cape has yielded a number of invertebrate remains including brachiopods, trilobites, conodonts and chitinozoans".

3.2.9. Surface Water

The site is located in Quaternary Drainage basin G50A which is in the Breede Gouritz Catchment Management Agency's area of jurisdiction. It is not located within a Strategic Water Source Area of South Africa (i.e. in respect of surface and groundwater).

According to Cape Farm Mapper, the Mean Annual Run-off (MAR) is a fairly low 52.58mm/annum, with an Annual Rainfall of approximately 540mm/annum.

The site drains towards the south (i.e. down the escarpment), but there are no southward flowing water courses within 500m of the site. The stream channels which are in place down the "escarpment" are all very short and terminate blindly in the scree and Aeolian material below (refer Figure 9).

The closest NFEPA registered wetland is located 400m to the north (i.e. beyond a watershed). Such wetland has been partially disturbed by cultivation and will in no way be impacted upon by the proposed extension of the excavation.

Photos 1 and 2 show the pit to be flooded, illustrating flooding after extensive rains in one of the wetter winters in Cape Town for more than a decade. The volume of water currently in the pit is calculated as $5\ 591\text{m}^2 \times$ average depth of (liberal) $1.7\text{m} = 9\ 504\text{m}^3$ (maximum). The General Authorisation allows for the storage of $10\ 000\text{m}^3$.

Such water will be removed during mining of the site, but it may be required that a Water Use Licence will be required for post-mining storage of water.

3.2.10. Groundwater

The site is located in Quaternary Basin G50A. Cape Farm Mapper reveals the following statistics:

Aquifer Type:	Fractured
Aquifer Yield:	0.5- 2.0l/s (Low)
Classification:	Major
Susceptibility:	Medium
Vulnerability:	Moderate
Depth to Groundwater:	30.85m
Groundwater Recharge:	30.38mm/a

Groundwater Quality: 150-370mS/m (EC) - Fair

No groundwater will be abstracted during the proposed continuation of mining on the site and the limitation of the excavation to 12m depth means that there is no risk of exposing the aquifer at 30.85m depth.

Breede Gouritz Catchment Management Agency letter dated 6 December 2021 (refer Appendix 5) notes the following:

- " - Special care should be taken to prevent any accidental negative impact on surface and ground water.*
- Sufficient dust suppression be undertaken.*
- Application for water use should the dam be used to store water after the lifespan of the mine.*
- Polluted stormwater should be contained and managed in such a way that it does not pose a threat to surface and groundwater resources.*
- Future development should not have a detrimental effect on water resources, both surface and ground water."*

Western Cape Government: DEADP; Directorate Development Management; Waste Management, Pollution and Chemical Management in letter dated 10 December 2021 (refer Appendix 4) notes the following:

- " - Clarity required whether a WUL will be required for the proposed mining.*
- Mining be done in a manner to avoid stormwater ponding on-site, with stormwater being managed so as to not contaminate surrounding water bodies.*
- The berms constructed around the mine must be adequate to reasonably divert stormwater away from the mine."*

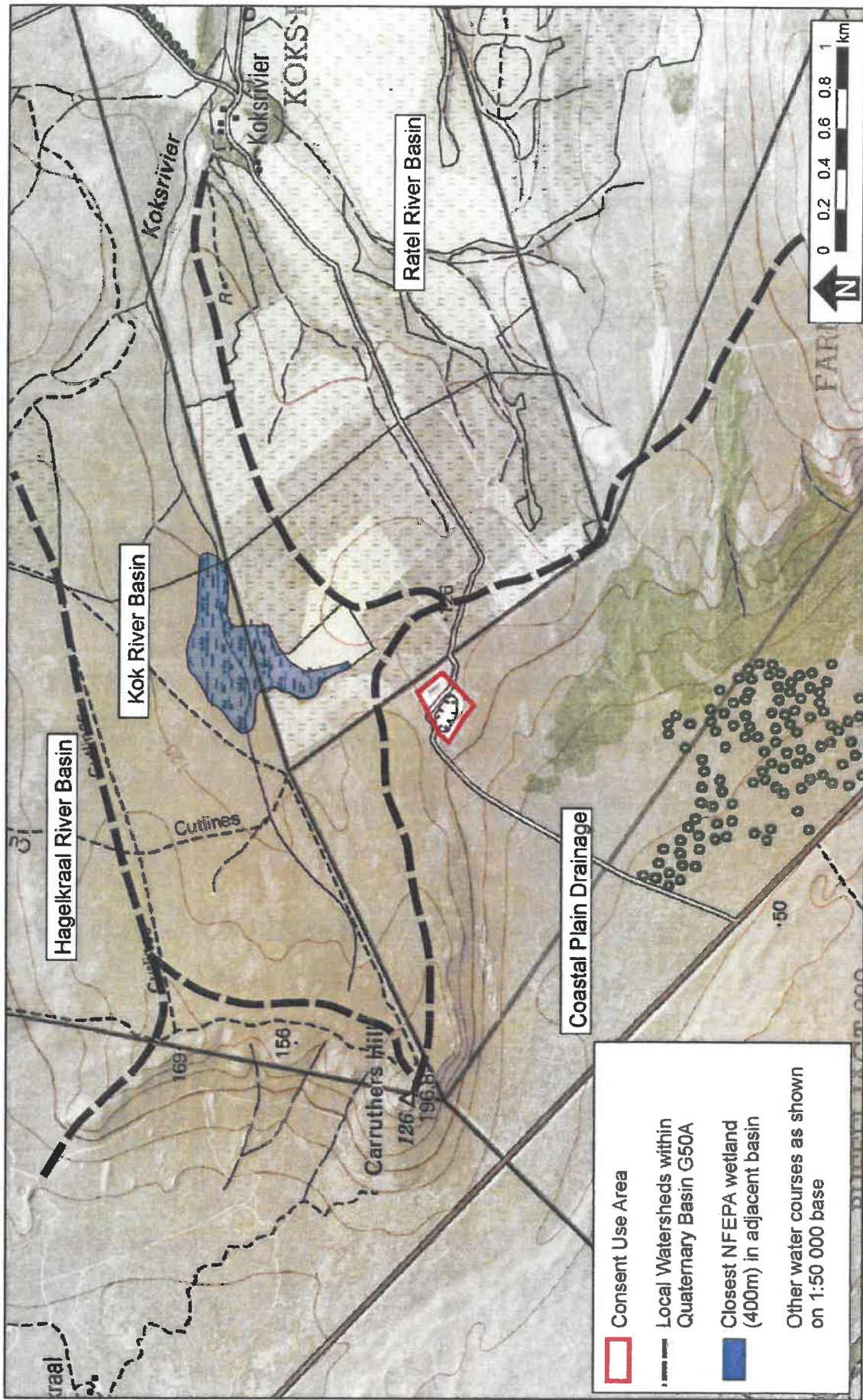


Figure 9: Surface Water Regime

3.2.11. Air Quality (Dust)

Attention is drawn to paragraph 4.8.4 of the following extract from SANS regarding recognition that certain enterprises need to operate within “band 3” by virtue of “the practical operation of the enterprise...” provided that the best available control technology is applied for the duration”.

“DUST FALL STANDARDS SANS 1929:2004

4.8 Dust Deposition

4.8.1 General

The four-band scale to be used in the evaluation of dust deposition is given in 4.8.2 and target, alert and action levels indicated in 4.8.3. Permissible margins of tolerance are outlined in 4.8.4 and exceptions noted in 4.8.5.

4.8.2 Evaluation Criteria for Dust Deposition

Dust deposition rates shall be expressed in units of $\text{mg m}^{-2} \text{ day}^{-1}$ over a 30-day averaging period. Dust deposition shall be evaluated against a four-band scale as presented in Table 9.

Table 9 – Four-band scale evaluation criteria for dust deposition

Band number	Band description	DUSTFALL RATE (D) ($\text{mg} / \text{m}^2 / \text{day}^{-1}$ 30-day average)	Comment
1	Residential	$D < 600$	Permissible for residential and light commercial.
2	Industrial	$600 < D < 1\ 200$	Permissible for heavy commercial and industrial.
3	Action	$1\ 200 < D < 2\ 400$	Requires investigation and remediation if two sequential months lie in this band, or more than three occur in a year.
4	Alert	$2\ 400 < D$	Immediate action and remediation required following the first exceedance. Incident report to be submitted to relevant authority.

4.8.3 Target, Action and Alert Thresholds are given in Table 10

Table 10 – Target, action and alert thresholds for dust deposition

Level	DUSTFALL RATE (D) ($\text{mg} / \text{m}^2 / \text{day}^{-1}$ 30-day average)	Averaging period	Permitted frequency of exceedances
Target	300	Annual	
Action residential	500	30 days	Three within any year, no two sequential months
Action industrial	1 200	30 days	Three within any year, no two sequential months.
Alert threshold	2 400	30 days	None. First exceedance requires remediation and compulsory report to authorities.

4.8.4 Margin of Tolerance

An enterprise may submit a request to the authorities to operate within Band 3 (ACTION Band), as specified in Table 9, for a limited period, providing that this is essential in terms of the practical operation of the enterprise (for example the final removal of a tailings deposit) and provided that the best available control technology is applied for the duration.

No margin of tolerance will be granted for operations that result in dustfall rates which fall within Band 4 (ALERT Band) as specified in Table 9.

4.8.5 Exceptions

Dustfalls that exceed the specified rates but that can be shown to be the result of some extreme weather or geological event shall be discounted for the purpose of enforcement and control. Such event might typically result in excessive dustfall rates across an entire metropolitan region, and not be localised to a particular operation. Natural seasonal variations, such as dry windy period during the Highveld spring will not be considered extreme events for this definition”

Ambient dust levels are very low and existing dust sources in this area are limited to the following:

- Vehicles on unsurfaced roadways
- Ploughing in season of the cultivated lands to the north

Within the mine property dust at work stations (e.g. loading, crushing) and along the untarred delivery/access route to the R43, dust will be controlled through wetting if required. Additionally, delivery trucks leaving the quarry will be free of particles in order to limit dust and residue deposits on the R43 (refer Section 5.2.6).

It is noted that during past operation of the quarry, no complaints insofar dust have been received.

3.2.12. Noise

Ambient noise levels are very low. Existing noise sources in this area result from:

- Occasional traffic on the R43 (MR00028)
- Local rural related noise

Potential noise sources arising from the quarry operation include:

- Drilling for blasting
- Basting which is likely to occur at most once every 3-4 months (if that)
- Excavator loading shot rock at the quarry face
- Haul vehicles
- Stockpiling and stockpile dispatch loading (front-end loader or excavator)
- Delivery vehicle noise, and
- Crushing and screening noise if such actions are contemplated on site.

As is the case of dust, the quarry industry has developed a set of established noise attenuation measures including:

- (i) Maintenance of exhaust silencers on mobile plant and trucks
- (ii) Rubber belting enclosure of primary and secondary crusher structures

Given isolation from surrounding land uses, noise impact is likely to be extremely low, further noting the receipt of no noise complaints during previous years of the quarry operation.

Western Cape Government: DEADP; Air Quality Directorate in letter dated 10 December 2021 (refer Appendix 4) notes the following:

“ - Noise monitoring be conducted during operation and measures put in place to minimize noise emissions, including notification of blasting.”

3.2.13. Delivery Traffic

Delivery will take from the quarry onto and via the R43 (MR00028), with the largest majority of material being transported to Gansbaai. A production rate of 2 000m³ per month (or 4320 tons per month), will result the generation of about 8 trucks per day using a 25-ton average truck size over 22 days / month. Such delivery has occurred during past quarry operation without any complaints having been lodged.

3.2.14. Alignment with the 2020 Municipal Spatial Development Framework, Environmental Overlay Zone Regulations (2020) and Heritage Protection Overlay Zone Regulations (2020)

Insofar the proposed aggregate quarry mining extension on Rem Farm 312, the following spatial planning frameworks and policy informants are relevant.

3.2.14.1. Overstrand Municipality Spatial Development Framework (OMSDF, 2020)

The 2020 MSDF (refer Figure 10), and to a large extent the 2006 SDF, make note of two (2) land uses which are noteworthy in terms of the proposed quarry extension, namely:

- (i) **“Mining activities** in the Municipal area include clay, gravel, kaolin, **stone aggregate** and sand mining, often located in environmentally sensitive and visually prominent areas”

- (ii) **Tourism activity destinations** (e.g. Shark Alley, Die Dam, Quoin Point), which while making The Gansbaai- Die Dam an attractive sub-region, require protection of the coastal zone, its **pediment slopes**, their **view-sheds** and **the regional system of environmental corridors** originating in the upper mountain areas and terminating at the coastline where they support coastal tourist nodes (e.g. Pearly Beach, Die Dam).

Such **land uses, operational mining and post-mine conservation** resonate as follows in the Environmental Objective (EO) of an “*Environmentally Sustainable and Resilient Overstrand*” as put forward in the **MSDF (2020) and the EMF (2014)**:

- (i) “*EO2: Protect Biodiversity and Agricultural Resources*” through:
- **Preventing unsustainable change** in land use of biodiversity rich rural areas, agricultural activity and soil with agri-potential
 - The **desirability of designating mining areas** taking into account the worth of the material to be extracted against the long-term costs to the visual quality of the area, the potential loss in agri-potential, as well as impacts on existing rights of neighbouring property owners.
- (ii) “*EO3: Overstrand’s Rural Areas and Settlements are Integrated by Natural Environment or Green Corridors that Connect Ecosystems and Contribute to Biodiversity Conservation*”, through:
- Encouraging and supporting the **development of networks of open space** that sustain and enhance eco-system functioning, connecting fragments of indigenous and/ or conservation-worthy vegetation, protecting waterways and regenerating the natural environment.

3.2.14.2. Environmental Management Overlay Zone Regulations, 2020

The Environmental Management Overlay Zone (EMOZ) Regulations 2020 have as their objective providing a mechanism for land use management to give effect to specific guidelines or address a special management issue, noting that such regulations do not invalidate any land use rights or authorisation that existed when such regulations came into effect, but may place additional constraints on existing rights.

Insofar the Environmental Overlay Zones, the area of the existing and proposed extension of the aggregate quarry vests within the **Protected Area Buffer Environmental Management Overlay Zone** (“Protected Area Buffer EMOZ”) (refer Figure 11) which has as its **purpose** the following:

“To protect the integrity of National, Provincial and Municipal Nature Reserves from negative external pressures/ impacts while reducing pressure on core areas and to assist in preserving their value to the eco-cultural tourism economy of the Overstrand through alignment of appropriate land use and regulations”, notably the Agulhas National Park to the north (Rem 314) and the Groot Hagelkraal Private Nature Reserve to the north-west (Rem 318), insofar the existing and to-be extended aggregate quarry.

Accordingly, the Protected Area Buffer EMOZ regulations focus on the following:

- (i) **Minimizing negative impacts** on the abovementioned natural reserves/ parks, including:
- Prioritizing areas in such Buffers for Alien Vegetation Control Programmes when necessary, and
 - Prioritizing areas for pro-active and/ or urgent Fire Control Management where fire risk exists

- (ii) Limiting and/or prohibiting inappropriate land uses in such Buffers, as per land use listings in the Regulation Schedules.

3.2.14.3. Heritage Protection Overlay Zone Regulations, 2020

While the existing and extension aggregate quarry does not vest within the “*Landscape of Very High Natural, Scenic and Heritage Significance; Heritage Protection Overlay Zone (“Landscapes HPOZ”)*”, cognizance is taken of “HPOZ: Scenic Drives” (refer Figure 12), which denotes the R43 (MR00028) as a “*Route of Local Scenic Significance*”, such route being integral to accessing landscapes of high natural, scenic and heritage significance and promoting the cultural, tourism, environmental and amenity potential of Overstrand landscapes, its sense of place and economic base.

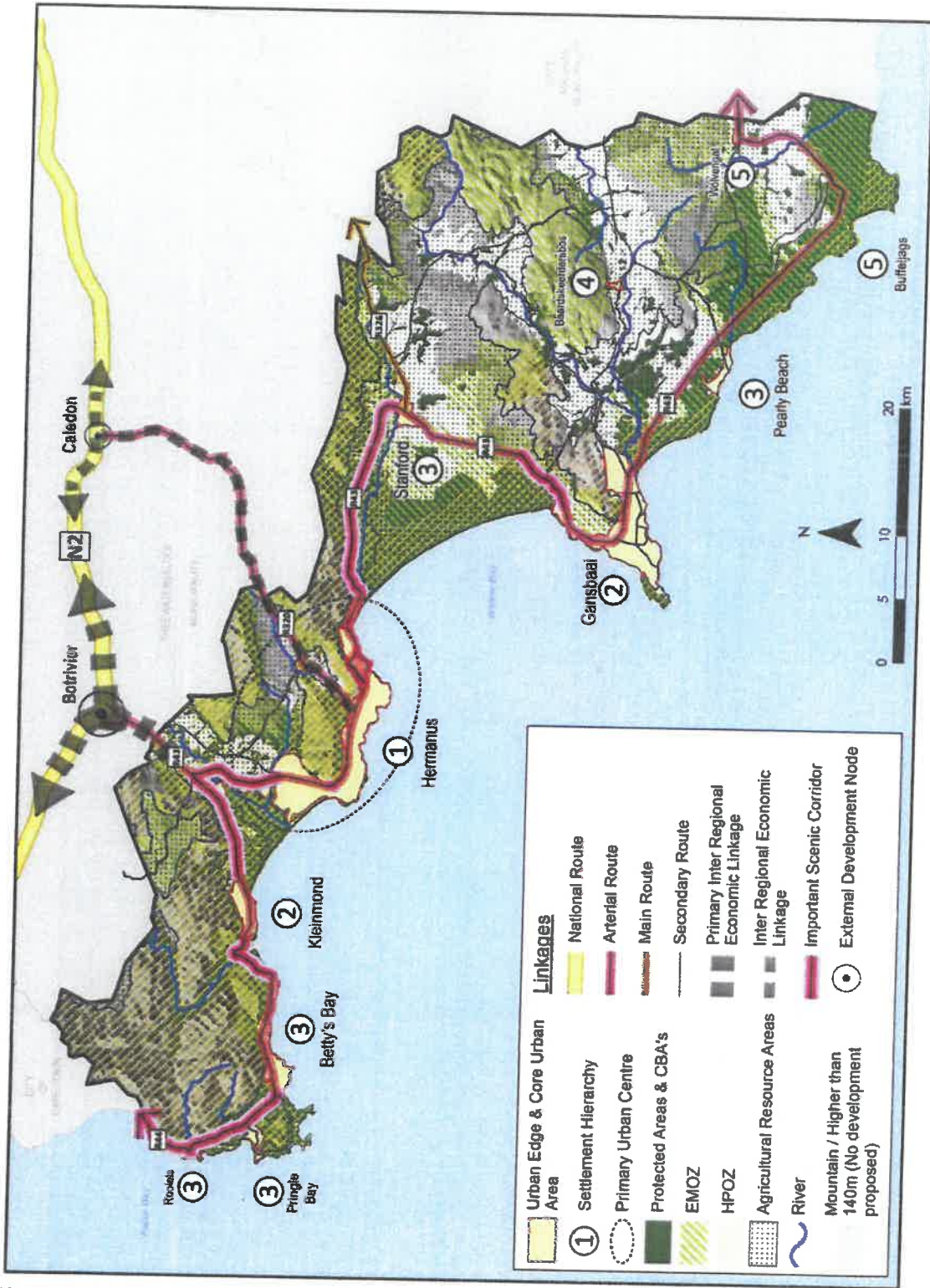


Figure 10: OMSDF, 2020

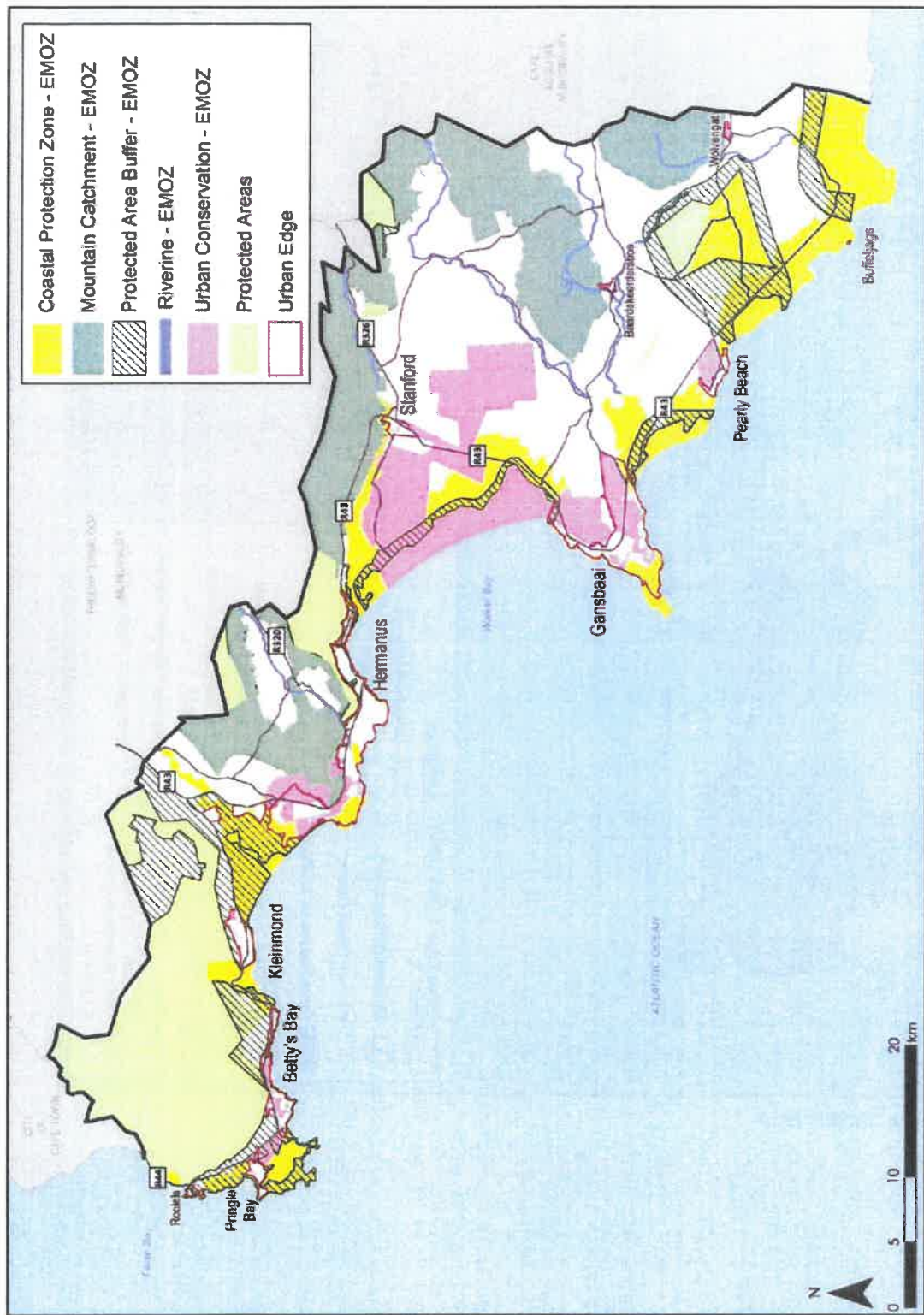


Figure 11: Composite EMOZ

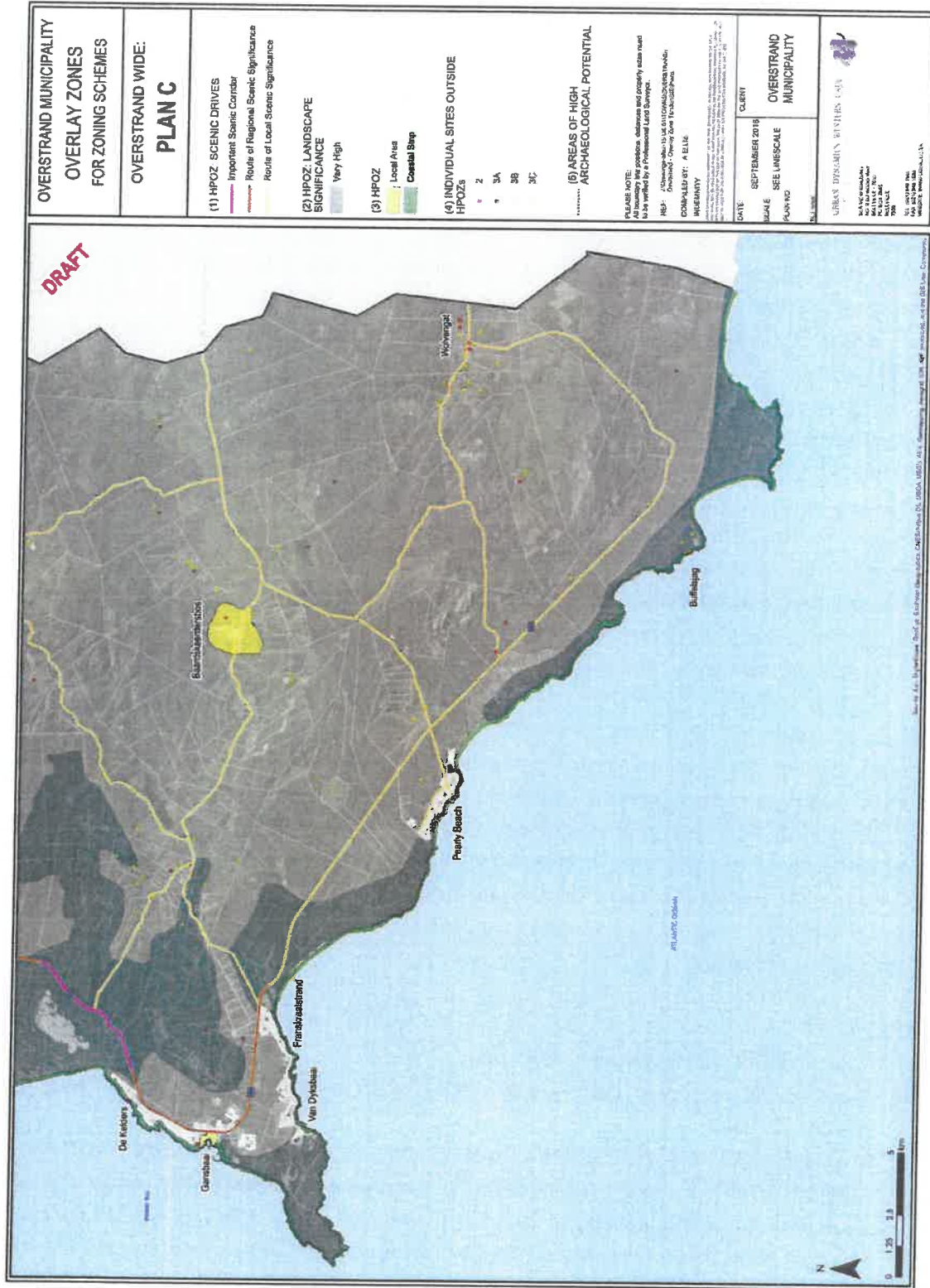


Figure 12: HPOZ: Scenic Drives

3.2.14.4. Alignment with OMSDF 2020, EMOZ (2020) and HPOZ (2020)

The following briefly demonstrates the alignment of the aggregate quarry extension on Rem Farm 312 insofar the aforementioned “spatial framework” and “environmental regulations”. Such alignment also having as its purpose the informing a Post-Mining Future Land Use Site Development Plan (SDP) in Section 6 and Figure 16 of this report for the proposed quarry extension.

(i) Alignment with the OMSDF (2020)

Alignment of the proposed mine extension with the 2006 SDF’s “Agricultural Zone” for modified landscapes, an equivalent of the “Urban Conservation EMOZ”, given the quarry’s post-mining land use including conservation, reinstatement of natural vegetation and wildlife habitat fostering underpinning the core principles of the 2006 “Agricultural Zone” and that of the OMSDF 2020.

(ii) Alignment with the “Protected Area Buffer EMOZ”

While the existing and proposed quarry extension on Rem Farm 312 is located within both the Protected Area Buffer EMOZ and a National Protected Area Expansion Strategy focus area, it impacts on such buffer/ area is limited given the following (refer Sections 3, 4 and 6, together with Figures 5, 14, 15, 16 and 17).

- No expansion of the quarry mining footprint, given all of the extension being within the existing disturbed area
- All existing natural vegetation areas between disturbed footprint and the Mining Permit Area boundary to be retained and subject to rehabilitation during the quarry’s operational phase, including alien vegetation management
- Rehabilitation of the quarry to “wilderness” status, with its post-mining future land use being “conservation”, and subject to on-going alien vegetation management
- During operation appropriate and EMP required dust attenuation and noise abatement mitigation programmes to be in place, together with fire control management.

(iii) Alignment with the “HPOZ Scenic Drives”

Diagram 2 (Section 3.2.1) clearly illustrates that the entire portion of the existing and proposed extension of the quarry mining area is located on the top of a relatively “flat-topped” local plateau above the coastal plain and pediment slope, noting that no mining will occur on or over the escarpment edge. As demonstrated in Section 3.2.2 and Diagram 2, the viewshed from surrounding areas and the R43 – MR00028 public road will not be eroded, the Quarry Layout Plan (refer Figure 15) ensuring that the crest of the “escarpment” ridge never to be broken by the excavation in order to limit/ avoid visual impact.

Conclusion:

Accordingly, this section concludes the following:

- (i) That the land use (operational and post-mining) of the proposed extended quarry aligns with the OMSDF 2020.
- (ii) That alignment with OMSDF (2020), EMOZ (2020) and the HPOZ (2020) reinforces the integration of the mine operation and its post-mining rehabilitation within the socio economic and environmental setting of the coastal plain and inland pediment slope, with the Post-Mining Future Land Use Site Development Plan (SDP) confirming such alignment and integration (refer Section 6 and Figure 17)

3.3. Environmental Synthesis

Figure 13: Environmental Synthesis superimposes the existing and proposed extension of the aggregate quarry (Mining Permit Area) within the context of the following environmental sensitivities as identified and presented in Section 3.2.

- (i) Biodiversity Areas, including:
 - The Protected Area comprising the Agulhas National Park to the north of the quarry site.
 - Critical Biodiversity Area (Overberg Sandstone Fynbos) within the undisturbed peripheral portion of the quarry Mining Permit Area.
 - Ecological Support Area within the peripheral portion of the site
- (ii) Natural Protected Area Expansion Strategy (NPAES) Designated/ Focus Area, including the southern portion of the site
- (iii) Vegetation Biome boundaries, notably that of the Overberg Sandstone Fynbos, within which the site is located.
- (iv) The Environmental Management Overlay Zone's "Protected Area Buffer EMOZ" within which the site is located, noting that the site is located outside of the "Coastal Protection EMOZ" and the "Mountain Catchment EMOZ", but in close proximity (1.6km) of an HPOZ: Scenic Drive, the R43, a "route of local scenic significance".
- (v) Contour intervals denoting the local plateau location of the site and the coastal pediment slope, with the local watershed informing drainage to the south.

The above environmental sensitivities, together with their spatial context, serve to inform both the Quarry Layout Plan (Section 4 and Figure 15) and the Post-Mining Future Land Use Site Development Plan (Section 6 and Figure 17).

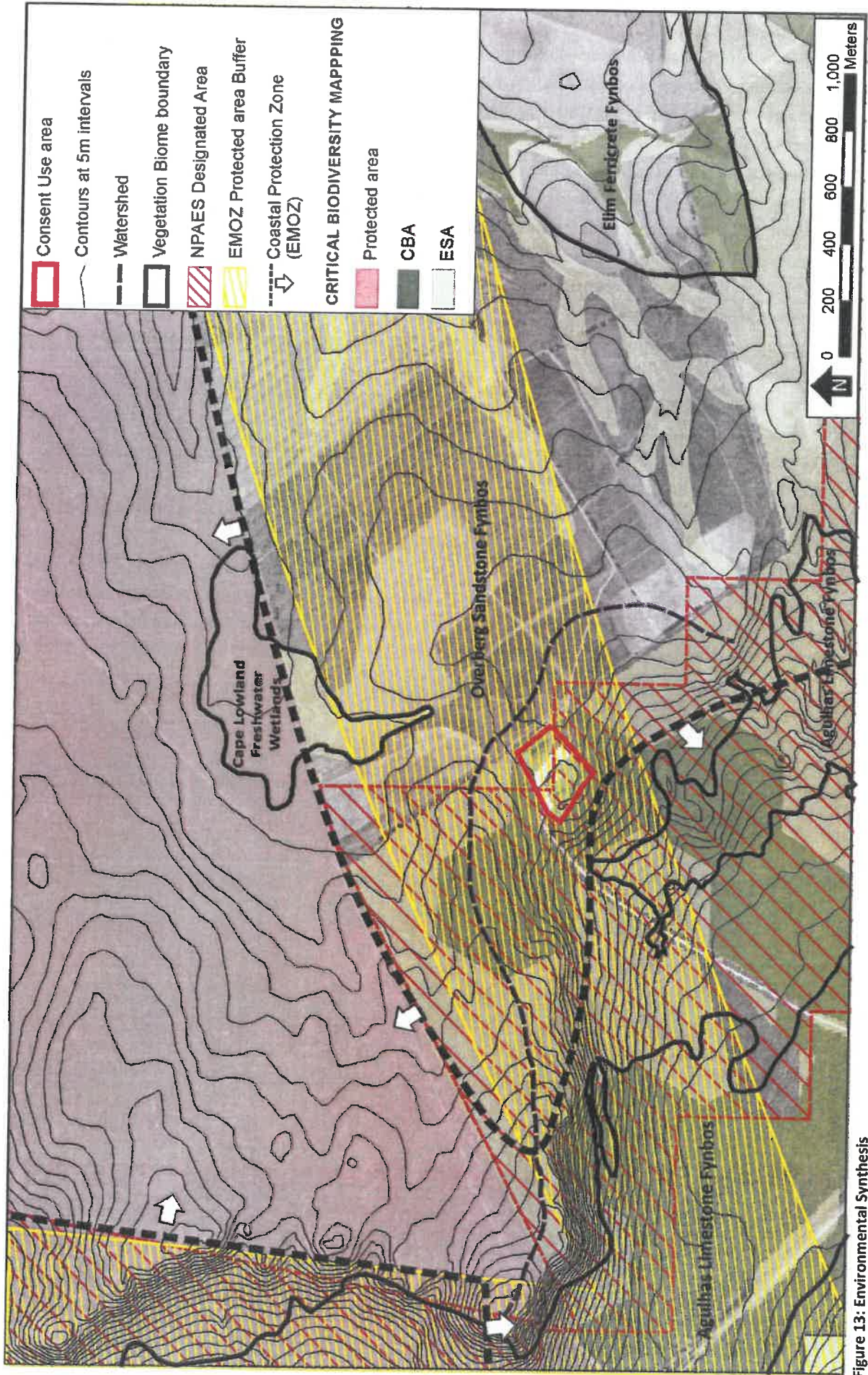


Figure 13: Environmental Synthesis

4. QUARRY DEVELOPMENT AND REHABILITATION

4.1. Quarry Layout Plan

4.1.1. Background to Material Sourcing and Demand

An on-going and growing demand for construction aggregate in the general construction industry and for road building and upgrading has prompted the lodging of a mine permit application to continue the operation of the Die Dam Quarry which is an existing quarry excavation, having been operated for several years under a mining permit. Accordingly the current mine permit has been lodged to continue the operation of the quarry.

The purpose of licensing this site is primarily to produce hard rock aggregate suitable for quality construction concrete and for the supply of road stone. The excavation has vertical faces which can readily be advanced to the north-west and a floor which can be deepened both by drilling and blasting. Furthermore, as seen in the Existing Quarry Site Layout (Figure 14), the footprint of the earlier mining and stockpiling area and the haul road into the pit are suitable to accommodate the further extension use of the site.

4.1.2. Geology and Excavation Planning Informants

Given that certain aspects of the environment dictate any excavation extension, the following aspects were considered and incorporated where necessary into the mine plan:

- (i) The structural geology at this site is very complicated through previous tectonic movement and closely spaced jointing / bedding which has resulted in a reasonably fractured material which requires minimal charging during blasting. All indicators on surface beyond the planned excavation extent, as well as subsurface exposures in the north-west face and north-east face of the recent slot in the south of the excavation (refer Photo 6), point to the material continuing westward to the planned excavation extent of the mining extension.
- (ii) Given that the rock type is highly fractured with a complicated joint pattern could lead to potential for bedding plane slip and joint and wedge failure. Accordingly, the applicant has employed a specialist to compile a "Mandatory Code for Practice to Combat Rock Fall and Slope Instability Related Accidents". Such report, dated 2019, is to inform the Environmental Induction Training.
- (iii) The main excavation planning informant is the absolute avoidance of any natural vegetation within the Mining Permit Area. Any consideration of a future Mining Right application would require a full botanical / biodiversity assessment.
- (iv) The earlier disturbed plant and stockpile area (refer Photo 7), together with the previous access road from the R43, dictates the suitability for the proposed re-use of these areas for their continued purpose and accordingly the Quarry Layout Plan (Figure 15) reflects on such.
- (v) The excavation is not visible to traffic along the R43 public road to the south and therefore no southward advance of faces is permitted, to ensure that such lack of visual exposure continues
- (vi) The configuration of the existing excavation as seen in Figure 14 and Photos 5 and 6 yields a reasonably obvious advance of existing faces to the north-west, without any access required into the natural surrounds.

4.1.3. Mining Method

The existing quarry will be further developed by:

- (i) No topsoil stripping will be required given the retention of the excavation within the current / previous disturbance area.
- (ii) The existing adit / haul road in the west will be used onto the existing floor
- (iii) Blasted rock will be loaded by excavator to dump trucks for hauling to either:
 - A mobile crusher intake ramp for tipping into the crusher hopper, if such crusher is contemplated, or, but most likely to,
 - A raw material stockpile for loading to dispatch vehicle for direct dispatch for processing off-site at another licenced facility

- (iv) If crushing and screening does take place on-site it will take place by a mobile crushing and screening plant located within the previous disturbed area or on the excavation floor
- (v) Product or raw material stockpiling will be conducted by haul truck, with loading by front-end loader to dispatch loading of delivery trucks.

4.1.4. Proposed Excavation Site Layout / Mine Phasing

The proposed excavation plan consists of the north-west advance of the north-west face as per limits depicted in Figure 15. The access to the floor will be via the existing haul road, with access in the south-west corner. Face advance must take place through the advance of 2 x 6m faces for a total excavation depth of about 12m.

Calculated reserves indicate that there is sufficient material to be mined in the two (2) year planning period (at 2 500m³ sales per month):

	Area	Depth	Volume m ³	Lifespan (months)
Bench 114	5 294m ²	6m	31 764m ³	12
Bench 108	6 743m ²	7m	47 201m ³	18
Total			78 965m³	30

4.1.5. Access Road

The existing access route (refer Figure 3) from the R43 that has been in place for several years will continue to be used. Note that this access road is also used by the landowner to access the farm.

4.1.6. Engineering Services

Located within a rural/ farming area no municipal services are available to the quarry, only services developed/ operated by the farming enterprise, noting the following:

(i) Raw water

The only application of raw water will be the occasional use of water in dust control of road and stockpiling area surface dust generation. Within the context of minimising water requirement for dust control, the project planning prescribes:

- The application of fresh crushed and screened stone to on-site maneuvering areas which will not powderise under traffic to cover the underlying in situ soil which would otherwise be a high dust generator. This has already been done and is in place.
- The access road is made of sandy material and does not generate dust. In addition, high speeds are impossible to achieve on this access road given speed bumps and mitre drains being in place.

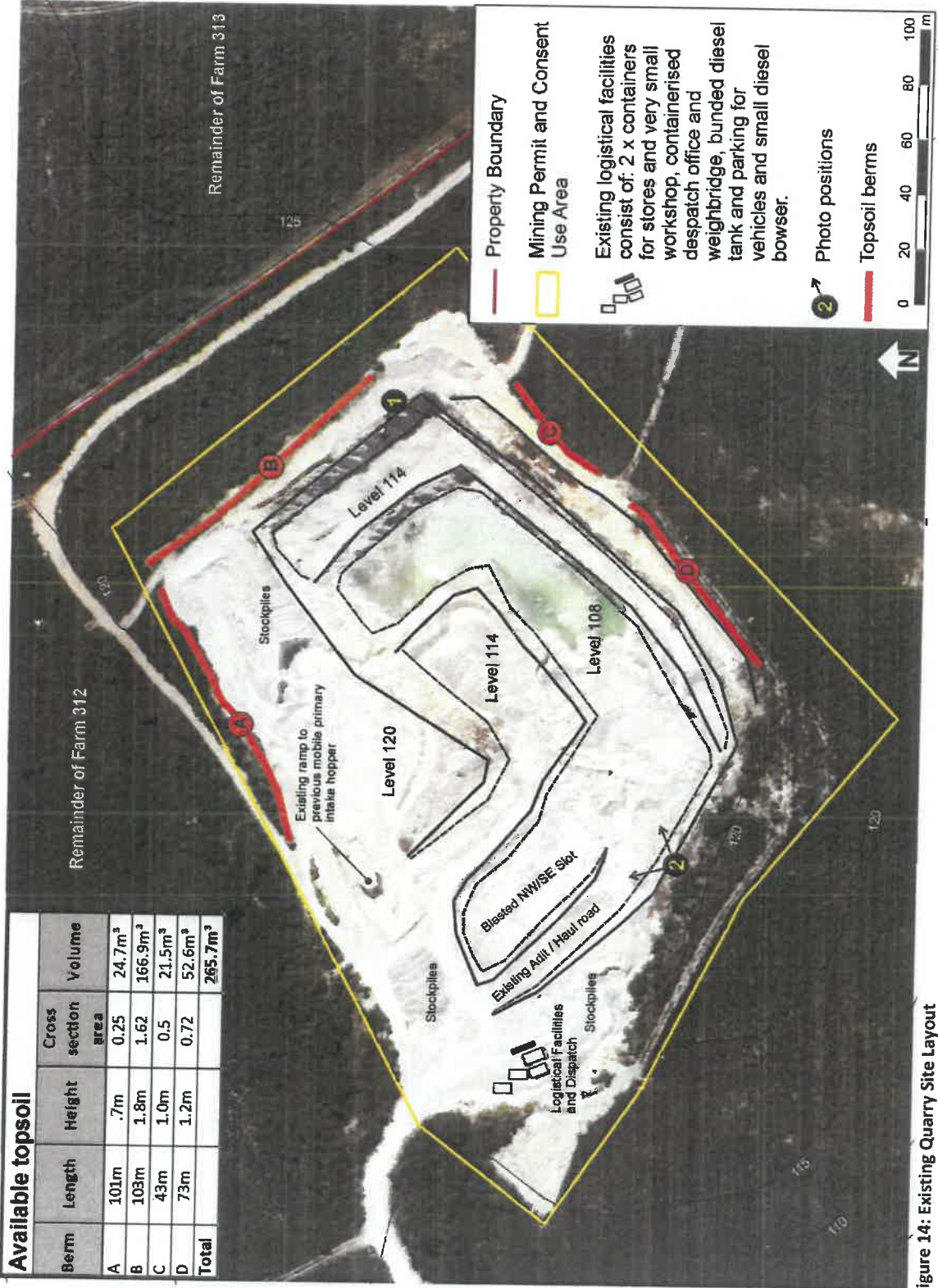
Within the above context dust control is not required very often, except under the driest and windiest of conditions. Water for surface wetting will be obtained from the pumping sump within the excavation.

To further limit water requirements, chemical toilets will be provided.

(ii) Potable water

Will be brought to site daily as bottled water by the staff vehicle from Gansbaai

Accordingly, the pursuance of construction aggregate mining within the existing quarry, as put forward in the following sections.



Available topsoil

Berm	Length	Height	Cross section area	Volume
A	101m	.7m	0.25	24.7m ³
B	103m	1.8m	1.62	166.9m ³
C	43m	1.0m	0.5	21.5m ³
D	73m	1.2m	0.72	52.6m ³
Total				265.7m³

Figure 14: Existing Quarry Site Layout

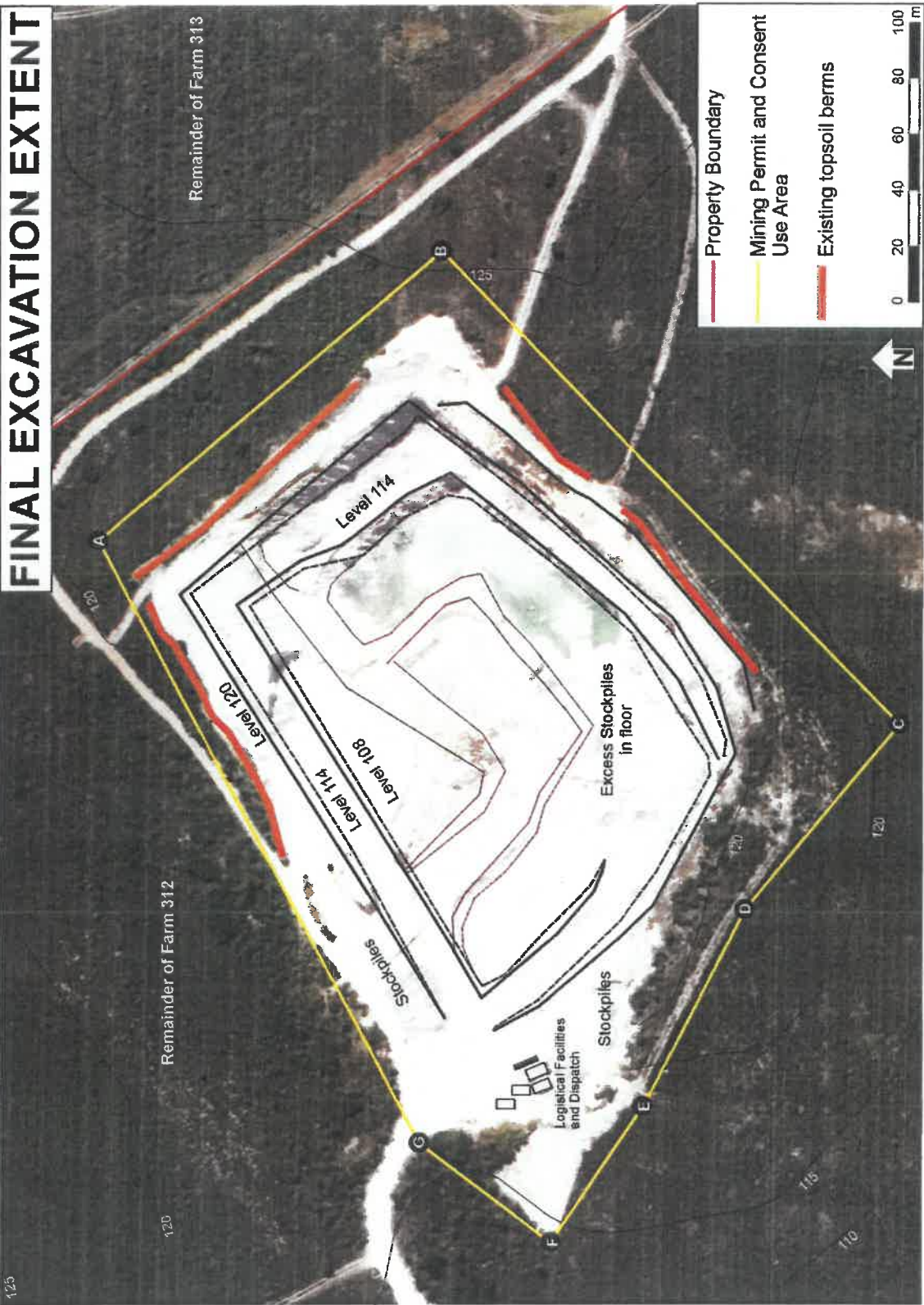


Figure 15: Quarry Layout Plan: Final Extent of Excavation

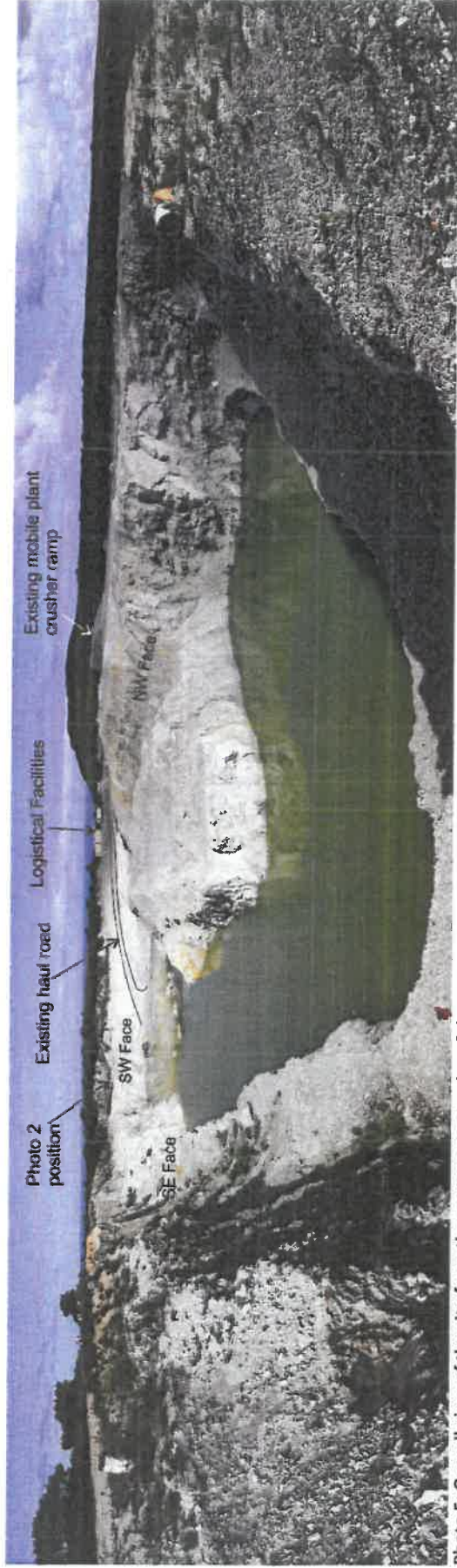


Photo 5: Overall view of the site from the eastern most point of the excavation.



Photo 6: Looking north over the excavation showing the NW/SE slot blasted to achieve optimal advance direction (from safety point of view)



Photo 7: Logistical facilities on site

4.2. Quarry Decommissioning and Rehabilitation

4.2.1. Closure Plan

The "Closure Plan" has been compiled as per the stipulated content as per Appendix 5 of NEMA, and informed by the content of the EMP to which such plan is attached, such closure plan also having been subject to public input.

(i) Closure Objectives

The overall objective is to limit the impact of operational mining and residual post-mining impacts.

The overall closure objective is to return the site environment (excluding the access road which will be retained for use by the landowner) so that it can form part of the surrounding wilderness area. The proposed end-use of the site will be facilitated through the following target actions:

- All current disturbed areas, except the access road and excavation, will be rehabilitated through removal of as much chipped stone cover as possible for backfilling in the pit, then ripping and covering with topsoil and revegetation.
- The excavation will flood to a shallow reedbed, the upper benches may be topsoiled and vegetated and the faces will provide a cliffed habitat in the context of the site location within the NPAES and Protected Area Buffer Zone of the EMOZ
- Safety of the pit must be ensured and a safety excavation perimeter treatment is required

In addition, it is an operational objective that the current disturbance area will not be exceeded.

(ii) Management Objectives

In order to achieve the closure objectives, the following management objectives must serve the project during operation:

- To avoid any disturbance of virgin areas in the continued use of this site. All activities must take place within the current disturbance area
- To continue the use of existing facilities within the context of the temporary use (e.g. containers not buildings, mobile not fixed plant, and a transportable steel as opposed to a concrete fuel tank bund), thereby providing for a minimal additional residual impact to that presented by the disturbed existing site.
- To consider and implement industry-known attenuation measures to limit operational impacts of dust, noise and hydrocarbon pollution
- To recognise the value of topsoil previously stockpiled and ensure no disturbance / removal of such.
- Access to "No-Go" areas must be prevented through demarcation and environmental education of all staff members.
- Implementing all specified appropriate measures during establishment to avoid unnecessary disturbances
- Achieving minimal operational impacts during life-of-mine.
- Achieving a minimal additional post-mining residual impact

(iii) Proposed Mechanisms for Monitoring Compliance with, and Performance Assessment against, the Closure Plan and Reporting Thereon.

It is estimated that decommissioning rehabilitation will take at 3 - 6 months to complete. The following is required in terms of monitoring, actions taken and reporting of the decommissioning rehabilitation toward closure:

- Post-operational phase Environmental Audit (before implementing decommissioning rehabilitation): The aim of this audit is to ensure that the measures as proposed in the EMP and this “closure plan” are still valid for the site. This audit is internal and is not required that it be distributed to the competent authority (although there is no reason why it cannot be if the holder so wishes).
- This audit will inform any additional measures or specifics not contemplated in detail in the EMP.
- Decommissioning rehabilitation is then conducted
- A post-decommissioning *Draft* Environmental Audit is then undertaken. Any shortcomings must be rectified, and the *Final* Environmental Audit is then compiled.
- Such Final document is included as part of the Closure Application as lodged.

4.2.2. Decommissioning and Rehabilitation

Informed by the “closure plan”, the management of environmental damage as a result of undertaking of decommissioning and closure activities requires the following activities, mitigation and processes.

(i) Excavation Perimeter Shaping and Topographical Controls

In order to maximise the safety of the residual excavation, the following measures must be put in place in respect of the excavation edge configuration (refer Diagram 4):

- The excavation must be fenced at least 5m from edge of the excavation. The fence must be danger signposted
- A safety berm of 1m high must be constructed (using material from a trench 1m deep) (refer Photo 8)
- Below the perimeter safety berm and trench, there must be a 3m wide overburden stripped bench 0.5m below ngl, which bench shall serve as the perimeter safety bench.
- The 6m high faces on benches will then follow below that to the final floor approximately 12m below natural ground level.

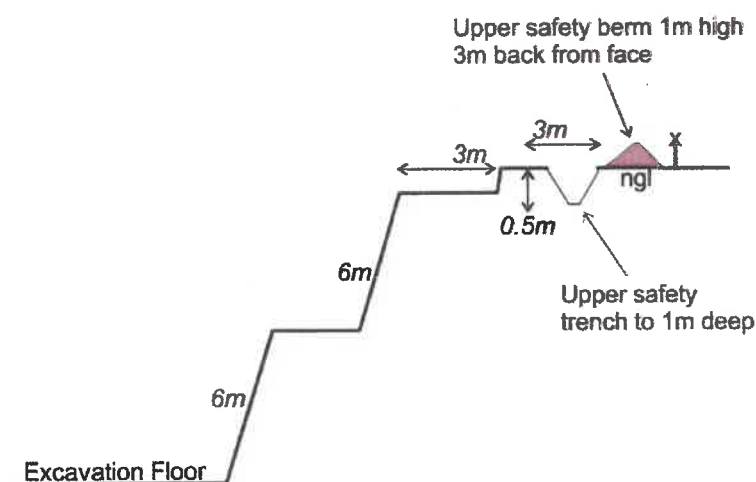


Diagram 4: Excavation Perimeter Shaping and Rehabilitation



Photo 8: Typical perimeter safety bench during hard-rock quarry rehabilitation

(ii) Topsoil Handling as it Applies to Decommissioning Rehabilitation

The proposed site layout in terms of this plan is located entirely within previously disturbed area and absolutely no virgin soil or vegetation will be disturbed. Unfortunately, although some topsoil removal and stockpiling did take place in the previous disturbance of the site, there is clearly not sufficient to provide topsoil cover for the entire disturbed area (i.e. not the Mining Permit Application area, but rather the disturbed area) which measures 3.1ha. However of this 3.1ha, approximately 2.3ha forms the excavation of which 1.4ha forms the eventual flooded floor, resulting in an area of just 0.8ha requiring cover with topsoil.

It has been calculated that the remaining topsoil available in berms on site for rehabilitation totals just 265m³. If this were to be spread to 5cm depth, then that would cover an area of just over 0.5ha. Noting the shortfall, it is thus critical that the stockpiled topsoil is carefully retained for the life of mine. It is recommended that this topsoil be utilised as follows during decommissioning / closure, noting no topsoil replacement on benches:

- The denuded area surrounding the excavation must be rehabilitated through first removing as much stone chip covering as possible (for return to the pit), then ripping to as deep as feasible to daylight the underlying soils as much as possible
- Topsoil must be selectively replaced over the 0.5ha that has least underlying soils brought to surface as a result of the ripping.

(iii) Revegetation as it Applies to Decommissioning and Closure as per (ii) above

- Seed collecting and sowing

It is recommended that seed be:

- Collected from indigenous pioneer species neighbouring the site. This seed must be stored in a suitable, dry dark storage facility and be re-sown (raked) into the topsoil as part of the rehabilitation process in April following mining closure, or
- In the absence of the presence of this pioneer species that the following seed be sowed over the rehabilitated area:
 - *Arctotheca calendula*
 - *Arctotis stoechadifolia*
 - *Carpobrotus acinaciformis*
 - *Carpobrotus edulis*
 - *Gazania rigens var. rigens*
 - *Gazania rigens var. uniflora*
 - *Eriocephalus africanus*

- *Metalasia muricata*
 - *Pelargonium capitatum*
 - *Pelargonium cucullatum*
 - *Tetragonia fruticosa*
 - *Seriphium plumosum*
 - *Plectranthus neochilus*
- Alien Vegetation Management:
Existing and future Rooikrans (*Acacia saligna*) must be removed from site and stumps must be treated with approved herbicide.

(iv) Decommissioning / Closure Hydrocarbon Management and Domestic and Industrial Waste Management Protocol

– Domestic Waste handling

The operators must be trained to keep their domestic waste (in the form of lunch wrappers, cigarette boxes, etc.), in their cab for the day. The material must then be taken to the head office site in Gansbaai on a daily basis. The volumes are absolutely minimal.

– Fuel receipt, storage and dispensing:

In the management of fuel supply, receipt, storage and use, the following procedures will be followed, cautions taken and facilities built to properly manage this operational sector:

- The fuel delivery bowser driver will be cautioned to adhere to safe driving speeds and drive cautiously at the mine and along the access road.
- At the time of decommissioning there may be no diesel tank installation at the site and fuel may be required to be brought in by diesel bowser as required.
- During dispensing of fuel to field vehicles via fuel trailer, the dispensing vehicle is to be fitted with suitable pumps and funnel extensions to reduce the risk of spillage in the transfer of fuels.

– Emergency and other repairs on site:

In the event of a breakdown with repair being required in the field, the staff should be trained in use of drip trays and suitable funnels (not to drain oil into the sand) for filling and draining of lubricants and the staff shall be provided with such equipment to prevent oil contamination.

In addition:

- Used/replaced filters, hoses, belts, cloths, etc. are to be placed in a bin for disposal in a regional industrial waste handling site. Used filters are not to be buried at the site of repair (nor discarded in an excavation to be backfilled).
- In the event of soil contamination, the oil and contaminated soils are to be placed in black disposal bags and transported to suitable facility.
- All operators are to check their equipment for leaks and report such leaks on a daily basis.

4.2.3. Rehabilitation Plan

The “Closure Plan” is depicted spatially in the Rehabilitation Plan (refer Figure 16) which depicts measured areas and compatibility with the proposed end-use, including the following:

- Removal of all structures and plant
- Ensuring edge configuration for upper bench
- Ripping hardened area
- Topsoil covering

- Allowing quarry floor flooding
- Retaining access road

4.2.4. Financial Provision/ Rehabilitation Quantum

The closure objectives for decommissioning are specified in Section 4.2.1 and accordingly the calculation of the financial provision provides for achieving such closure objectives and implementing the decommissioning and rehabilitation plan as per Figure 16. The rehabilitation fund required has been calculated to be R280 000 as per the EMPr.

DECOMMISSIONING REHABILITATION

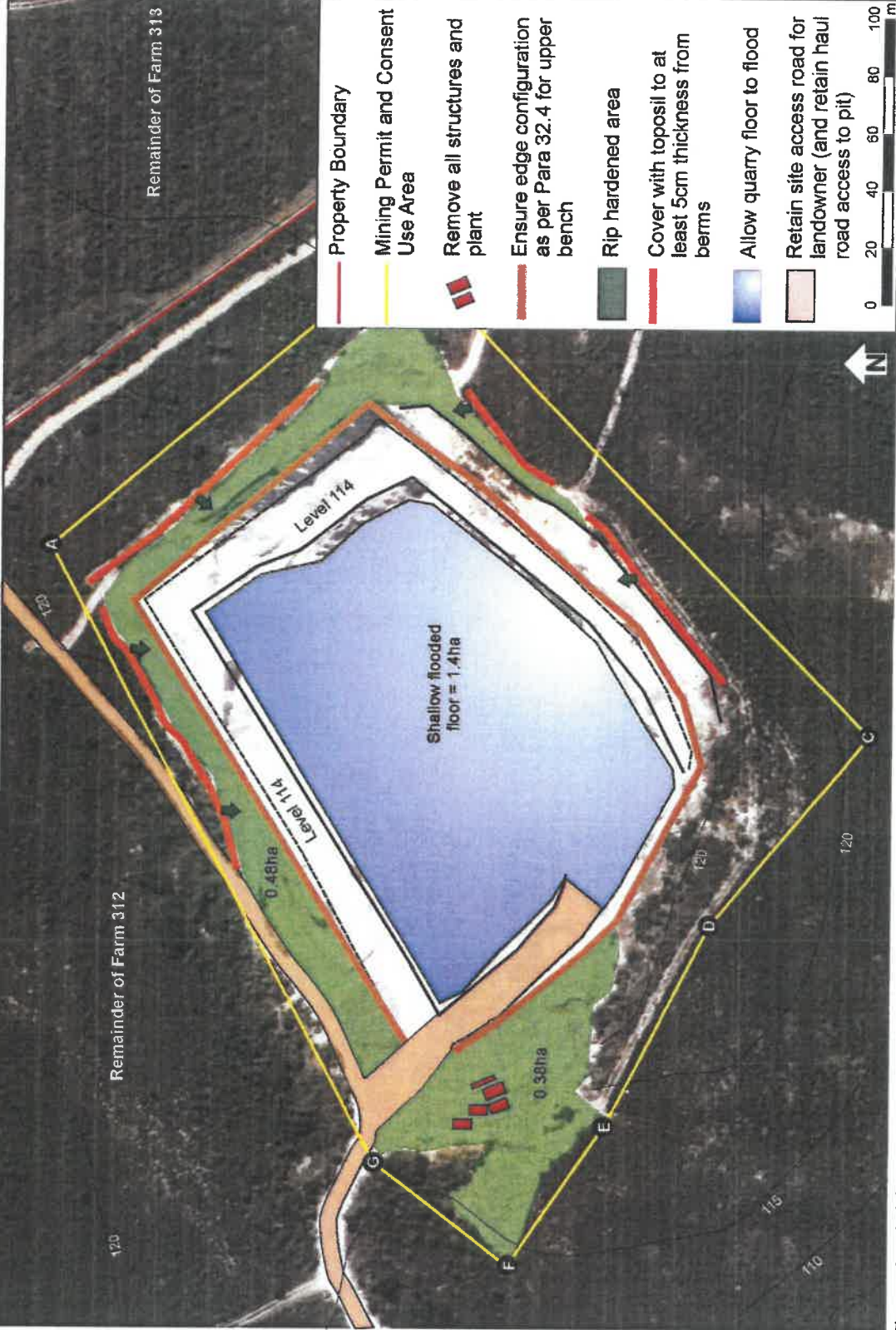


Figure 16: Rehabilitation Plan

Motivation Report: Application in terms of Overstrand Municipality Planning By-Law (2020) Die Dam: 1655: July 2022

5. IMPACT MANAGEMENT AND PROTOCOLS

5.1. Impact Management

Notwithstanding the measures prescribed in the following methodologies and protocols, the applicant is reminded of its "duty of care" prescribed in section 28 of the NEMA, 1998 which states that *"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment."*

Accordingly, the BAR/ EMPr puts forward the following **Environmental Impact Statement**:

5.1.1. Impact Management Objectives

- To avoid any disturbance of virgin areas in the continued use of this site. All activities must take place within the current disturbance area
- To continue the use of existing facilities uses within the context of the temporary use (e.g. containers not buildings and mobile not fixed plant with mobile steel not concrete fuel tank bund) thereby providing for a minimal additional residual impact to that presented by the disturbed existing site.
- To consider and implement industry known attenuation measures to limit operational impacts of dust, noise and hydrocarbons.
- To recognise the value of topsoil previously stockpiled and ensure no disturbance / removal of such.
- Access to "No-Go" areas must be prevented through demarcation and environmental education of all staff members.
- Implementing all specified appropriate measures during establishment to avoid unnecessary disturbances
- Achieving minimal operational impacts during the life-of-mine.
- Achieving a minimal additional post-mining residual impact

The overall objective is to limit the impact of operational mining and residual post-mining impacts.

5.1.2. Impact Management Outcomes

- To restrict activities to current footprint
- Ensure that excavation development takes place as per Quarry Layout Plan: Final Extent of Excavation in Figure 15
- To limit noise and dust nuisance to legislated standards in terms of environmental impact. Note that at this stage no monitoring is required but should any aspect result in complaints then environmental level monitoring must take place
- To ensure that the site is at all times free of any hydrocarbon pollution or staining on surface.

5.1.3. Summary Key Findings of Environmental Impact Assessment

The findings are that the proposed mining of the quarry in terms of the BAR/EMPr will result in insignificant impacts given the use of the existing quarry disturbance footprint in virtually all aspects of the environment.

In respect of the environmental impacts, the EAP found that appropriate mitigation measures generally applied in the quarry industry should adequately meet the required levels of attenuation and risk reduction, primarily given the relative isolation of this site and the low sensitivity of the disturbed area.

5.1.4. Summary of Positive and Negative Impacts and Risks

Given that no better alternatives have been identified at this stage, the positive and negative impacts of the proposed activities as contained in this document are summarised below:

Negative impacts / risk to the environment:

- (i) No impact on vegetation or visual impact.
- (ii) Dust and noise impact from drilling, blasting and earthmoving equipment on site. Impact will be negligible as attenuation measures known in the industry will be applied.
- (iii) Potential for Hydrocarbon pollution will be contained by implementation of the waste and hydrocarbon in Section 5.2.5 "Domestic and industrial waste and hydrocarbon management protocol"

Positive impacts include:

- (i) Employment for staff (although limited)
- (ii) Supply of material
- (iii) Rental income to the landowner
- (iv) Use of the existing site eliminates the disturbance of a virgin site to mine similar quality material.

5.1.5. Environmental Authorisation

Department of Mineral Resources and Energy letter dated 1 July 2022 (refer Appendix 9): "***The Department has decided to grant an environmental authorisation in terms of the National Environmental Management Act (Act 107 of 1998). The environmental authorisation and reasons for the decision are attached herewith***" (refer copy of EA in Annexure C).

The following summary of approved listed activities and EA site specific conditions of the approval, as relating to the project which involves a mining permit application for aggregate mining activities on an area of 4.8619ha, with a drilling and blasting open-cast mining method being used to conduct mining activities.

- (i) Approval to undertake the following listed activities:

Activity 21 of Government notice No. R983 as amended by GN 327 of April 2017

"Any activity including the operation of that activity which requires a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including —

(a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource; or

(b) 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 Listing Notice 2 applies."

- (ii) EA site specific conditions, notably relating to land use and management and spatial reservation:

- (i) Mining activities must be conducted in accordance with the approved Environmental Management Programme and the site layout plan.
- (ii) Visible semi-permanent markers must be placed on the mining boundary before mining activities commences and must be kept for the duration of mining.

- (iii) Access to the site must be limited to the approved access road depicted on the layout plan (existing farm roads) and construction of any other access road is prohibited on site.
- (iv) Surface water run-off must be monitored and effective measures to prevent soil erosion must be implemented during the lifecycle of the project.
- (v) Storm water must be managed on site and adequate control measures must be implemented to prevent pollution on surface and groundwater resources.
- (vi) If the applicant chooses to store water that exceeds the threshold in the dam after the lifecycle of the quarry, application for Water Use licence must be submitted to the relevant authority and approval must be obtained before such activity is commenced.
- (vii) The depth of the excavation must be restricted to 12m.
- (viii) Should there be a need to extend the excavation area within the approved 4.816ha area, topsoil of 200mm must be stripped before mining commences and stockpiled to be used during rehabilitation of the mined area, however, the application to amend the Environmental Authorisation must be submitted to the Competent Authority for consideration.
- (ix) Topsoil must be stored within the approved mining area. The management of topsoil must be done as per the approved EMP and this EA.
- (x) The stockpiled topsoil must be protected from and/or against losses by water and wind erosion. Driving over topsoil stockpile is prohibited.
- (xi) Should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately, and Heritage Western Cape must be notified without a delay.
- (xii) Aggregate leaving the site must be covered with tarpaulin cloth during transportation to prevent blowing away by wind and causing pollution nuisance to other road users and the general public.
- (xiii) Refueling must be done on an impermeable surface to prevent contamination of soil and groundwater. Vehicles and equipment must be parked on an impermeable surfaces or PVC lining and/or drip trays must be placed underneath.
- (xiv) The speed limit of the vehicles on site must be restricted to 20km/hour.
- (xv) Noise levels of machinery and mining activities within the mining area must be monitored and controlled; noise generated from excavations, screening, loading of the material stockpiling activities and decommissioning/rehabilitation of the mining area must comply with the Western Cape Noise Control Regulations (Provincial Notice 200/2013) of June 2013).
- (xvi) Dust suppression measures must be implemented during mining activities, and this may include spraying of the mining area and access road with an environmentally friendly dust- allaying agent. Dust must be managed according to the National Dust Control Regulations (GN No. 827 of 1 November 2013).
- (xvii) Alien clearing must be done continuously on site and within 100m of the area around approved Environmental Authorisation including the area along the access road.
- (xviii) After mining the immediate edges of excavation must be reduced to blend with the surrounding topography.

- (xix) Hazardous and general waste generated at the mining area must always be stored separately and transported to the authorised facility recognised for such work.
- (xx) Rehabilitation of the site must be done in accordance with this EA and the approved EMPr.
- (xxi) All recommendations and conditions set out in the approved EMPr must be strictly adhered to.

5.2. Methodologies and Protocols

The following impact management methodologies/ activities and protocols are identified and put in place to achieve the impact management objectives and outcomes

5.2.1. Demarcation of Activity Areas: Demarcation of “No-Go” Areas and “No-Go” Area Management

A set of posts must be securely placed to demarcate the Excavation Areas. These posts must be visible from one another. Employees /operators must be informed of this maximum extent and absolutely no access is permitted beyond these beacons.

The “No-Go” areas must form part of the Environmental Induction Training (which forms part of the Environmental Awareness Programme).

5.2.2. Topsoil Handling Methodology

The proposed site layout in terms of this plan is located entirely within previously disturbed area and absolutely no virgin soil or vegetation will be disturbed. Unfortunately, although some topsoil removal and stockpiling did take place in the previous disturbance of the site, there is clearly not sufficient to provide topsoil cover for the entire disturbed area (i.e. not the Mining Permit Application area, but rather the disturbed area) which measures 3.1ha. However, of this 3.1ha, approximately 2.3ha forms the excavation of which 1.4ha forms the eventual flooded floor, resulting in an area of just 0.8ha requiring cover with topsoil.

It has been calculated that the remaining topsoil available in berms on site for rehabilitation totals just 265m³. If this were to be spread to 5cm depth, then that would cover an area of just over 0.5ha:

Noting the shortfall, it is thus critical that the stockpiled topsoil is carefully retained for the life of mine. It is recommended that this topsoil be utilised as follows:

- No topsoil replacement on benches
- The denuded area surrounding the excavation must be rehabilitated through first removing as much stone chip covering as possible (for return to the pit), then ripping to as deep as feasible to daylight the underlying soils as much as possible
- Topsoil must be selectively replaced over the 0.5ha that has least underlying soils brought to surface as a result of the ripping.

5.2.3. Re-vegetation Methodology

(i) Seed collecting and sowing:

It is recommended that seed be:

- Collected from indigenous pioneer species neighbouring the site. This seed must be stored in a suitable, dry dark storage facility and be re-sown (raked) into the topsoil as part of the rehabilitation process in April following mining closure, or
- In the absence of the presence of this pioneer species that the following seed be sowed over the rehabilitated area:
 - *Arctotheca calendula*

- *Arctotis stoechadifolia*
- *Carpobrotus acinaciformis*
- *Carpobrotus edulis*
- *Gazania rigens var. rigens*
- *Gazania rigens var. uniflora*
- *Eriosephalus africanus*
- *Metalasia muricata*
- *Pelargonium capitatum*
- *Pelargonium cucullatum*
- *Tetragonia fruticosa*
- *Seriphium plumosum*
- *Plectranthus neochilus*

(ii) Alien Vegetation Management:

Existing and future Rooikrans (*Acacia saligna*) must be removed from site and stumps must be treated with approved herbicide.

5.2.4. Excavation Perimeter Shaping and Rehabilitation

In order to maximise the safety of the residual excavation, the following measures must be put in place in respect of the excavation edge configuration (refer Diagram 4 and Photo 8 in Section 4.2.2).

- (i) The excavation must be fenced at least 5m from edge of the excavation. The fence must be danger signposted
- (ii) A safety berm of 1m high must be constructed (using material from a trench 1m deep)
- (iii) Below the perimeter safety berm and trench, there must be a 3m wide overburden stripped bench 0.5m below ngl, which bench shall serve as the perimeter safety bench.
- (iv) The 6m high faces on benches will then follow below that to the final floor approximately 12m below natural ground level.

5.2.5. Domestic and Industrial Waste and Hydrocarbon Management Protocol

Note that there will be minimal volumes of domestic and industrial waste emanating from this excavation operation; however the following must to be implemented.

The waste streams that could potentially emanate from this site, include:

(i) Domestic Waste handling

A mobile containerised office/store will be placed on site for the duration of mining activities. All on-site personnel must be trained to keep their domestic waste (ie lunch wrappers, cigarette boxes, etc.,) at such facilities, and dispose of all domestic waste in dedicated waste bins. All domestic waste should be regularly removed from the site and be transferred to a suitable receptacle off-site until final disposal.

(ii) Sewage handling

There are to be chemical toilets on site. This ablution facility should be well maintained and is to be serviced regularly under contract. No use of the veld for ablutions is permitted and staff should be strongly cautioned in this regard.

(iii) Hydrocarbon Management

While fuel may be dispatched from the Applicant's main logistical facilities to refill the mining area equipment, and while maintenance vehicles will similarly visit the site on a daily basis, a mobile on-site

bunded diesel tank of not exceeding 30 000l may be provided adjacent to the containerized office/store should it be required, and is included as a hydrocarbon management option.

– Possible Bunded Diesel Tank

A tank of less than 30 000L capacity in preferably a steel as is currently the case as shown in Photo 7 may continue to be provided in locality shown in Figure 15.

The diesel tank shall be provided with a suitable impermeable apron on which any diesel spills should be decontaminated from time to time.

Diesel delivery drivers shall be cautioned to drive carefully on the quarry access road to avoid accidental diesel spillage.

A commercial diesel treatment product such as Spillsorb™ shall be kept on site and responsible staff shall be instructed in its use.

– Vehicle /pump leaks:

Vehicles and equipment must be checked on a daily basis for oil/diesel/hydraulic fluid leaks. Drip trays must be available on site and should any oil/fuel/lubricant leak from the equipment, then such leaked fluid is to be collected via the drip trays into drums for transport to Oilkol or similar contractor/depot for recycling.

Should such leaked oil contaminate the topsoil, then such topsoil and oil must be removed from site and spread on a concreted area where it can be treated with a commercial product such as Spillsorb™.

– On-site repairs: All repairs other than minor repairs (such as replacement of hydraulic hoses etc. and daily greasing and oil top-up) will take place off-site in the workshop at the applicant's main head office site in Gansbaai Industrial Area.

– Emergency repairs on site:

In the event of a breakdown repair being required in the field, the staff are trained and will again be instructed during environmental induction training in the use of drip trays and suitable funnels (not to drain oil into the sand) for filling and draining of lubricants and the staff shall be provided with such equipment to prevent oil contamination.

In addition:

- Used/replaced filters, hoses, belts, cloths, etc. are to be placed in the bins marked specifically for industrial waste at the site store container for removal from site and disposal through the contractor's main workshop. Used filters are not to be buried at the site of repair (nor discarded in adjacent veld).
 - In the event of accidental intense soil contamination, the contaminated soils are to be removed and placed in suitable bags or drums for disposal at a licensed facility or depot, and any remnant contamination to be treated with the appropriate commercial decontaminant in the Spillsorb™ or other range.
- Staff training and awareness
- All staff involved in mobile plant operation and maintenance are to be made aware of these oil and lubricant procedures. Staff will be given environmental induction training on the:
- Deleterious effects of oil / fuel on the environment
 - Handling of oil leaks onto soil

– General Provisions

- All operators are to check their equipment for leaks and report such leaks on a daily basis. All equipment and vehicles will be maintained in good working order.
- No used oils are to be used as dust suppressants on maneuvering areas.
- All heavy vehicles where parked overnight will have drip trays.
- If spills do occur on the sand, absorbent material such as Drizit or wood shavings are to be placed on top of the spill and removed to waste drums and then to the contractor's off-site yard; this must be disposed of at a suitable hazardous waste facility.
- All contaminated soil/material must also be removed and disposed of or treated with a suitable treatment process.
- Protective gear must be used during clean-up of spills.
- There will be an incident management system, including procedures and training, for dealing with incidents.
- Used oil drums are to be suitably sealed and sited within bund trays to prevent spillage.

Should any pollution of water resources be detected during the mining operation, the Department of Water and Sanitation must be informed immediately and appropriate remediation processes must take place in consultation with Department of Water and Sanitation.

Western Cape Government: DEADP; Waste Management Directorate in letter dated 10 December 2021 (refer Appendix 4) note the following:

"- Spilled hydrocarbons be treated as hazardous waste, be appropriately stored and removed from the site.

- It is imperative that various waste types be managed appropriately.

- Management of non-mining waste must be reported on."

5.2.6. Dust Management Protocol

Despite the isolation of the site, dust management must be implemented in the interest of maintaining safety, employee health, ensuring that dust settlement on adjacent vegetation does not impact on the vegetation.

(i) Dust sources at this site will be as follows:

- Very limited drilling dust as the drill rigs employed are all fitted with dust extraction systems
- Haul road dust from the haul vehicle tyre powdering of haul road surface
- Stockpiling and stockpile dispatch loading
- Delivery vehicle road dust
- Delivery vehicle load if uncovered

If crushing and screening is ever contemplated on site then additional dust sources will be:

- Haul vehicle tipping into primary crusher hopper
- Crushing and screening

(ii) Dust Attenuation Measures

As the above sources are common to all hard-rock quarrying sites, the quarry industry has developed appropriate dust attenuation measures which include the following, the majority of which will only be contemplated if required:

- Prescription for dust extraction systems on drills. This must be in put into practice.
- Water cart wetting of haul roads (when required) with consideration of armouring such roads in fresh crushed hard material to limit powdering of haul road surfaces. This site is very small and no significant speeds are reached by haul vehicles (as a result dust generation is low).

- The Delivery road cannot be travelled at speed because of existing speed bumps and mitre drains. Install additional speed bumps if required to limit speed and concomitant dust generation.
- Covering delivery vehicle loads.

If a processing plant is considered and dust becomes an issue, then the following can be considered:

- Enclosing material transfer points on the plant and providing chute drop points onto stockpiles
- Shade cloth surrounding of the tipping into the primary hopper.

Western Cape Government: DEADP; Air Quality Directorate in letter dated 10 December 2021 (refer Appendix 4) note the following:

“- Monitor and prevent future dust emissions insofar blasting and drilling through suppression techniques.

- Avoid mining activities on high-wind days.

- Air pollution be monitored and mitigated as per EMPr.”

	<p>storage facility.</p> <ul style="list-style-type: none"> - Species to be as per BAr/ EMPr - Revegetation to target denuded/ ripped/ topsoiled area surrounding excavation. 	
2.3. Alien Vegetation	<ul style="list-style-type: none"> - The entire Mining Permit Area, including the undisturbed periphery 	<ul style="list-style-type: none"> - Existing and future Rooikrans (<i>Acacia saligna</i>) and any other alien species be removed from the site, with stumps being treated with approved herbicide.
2.4. Excavation Perimeter Shaping and Topographical Controls	<ul style="list-style-type: none"> - Excavation edge; need to maximize safety of the residual (i.e. post-mining) excavation edge configuration 	<ul style="list-style-type: none"> - Maximizing of the safety of the residual excavation edge requires the following measures being put in place: <ul style="list-style-type: none"> • Excavation must be fenced at least 5.0m from the edge of the excavation, with such fence being "danger" signposted. • Safety berm of 1.0m height be constructed utilizing material from its trench (1.0m depth) - Below the perimeter berm and trench, a 3,0m wide overburden stripped bench at 0.5m below ngl be put in place, such bench serving as the perimeter safety bench of excavation, with the 6.0m high faces on the benches following below within the excavation, down to the final floor level +-12.0m below natural ground level.
2.5. Administration 2.5.1. Land Use	<ul style="list-style-type: none"> - Applicable to the 4.8619ha; Consent Use and SDP Area 	<ul style="list-style-type: none"> - Approval conditions of Consent Use and SDP be adhered to during operational phase - Land Use Category to revert to Agriculture Zone 1 post-rehabilitation
2.5.2. Future Use	<ul style="list-style-type: none"> - Subject (4.8619ha) portion of Rem Farm 312 	<ul style="list-style-type: none"> - Alignment of rehabilitated portion (4.8619ha) of Rem Farm 312 with adjacent and surrounding agriculture and conservation, and applicable plans and programmes, including alien vegetation, resource and fire management, (e.g. EMOZ, HPOZ, NPAES, etc.).

2.6. Quarry Closure	– Total Mining Permit Area, with Closure informing the Rehabilitation Plan.	– Give effect to and spatially retain and manage measured areas and their compatibility with the proposed end-use through the following as per the Rehabilitation Plan: <ul style="list-style-type: none"> • Removal of all structures and plant • Ensuring edge configuration • Ripping of hardened area • Topsoil covering and seeding • Allowing quarry floor flooding • Retaining haul road into pit • Retaining quarry access road
2.7. Financial Provision/ Rehabilitation Quantum	– Secured financial provision for achieving closure objectives	– Financial Provision as calculated (Rehabilitation Quantum) as per the EMPr to achieve the closure objective and implementing the decommissioning and rehabilitation as per the Rehabilitation Plan.

6.2. Function of the Post-Mining Future Land Use SDP

The SDP will serve to spatially and/ or functionally define and align the following within the post-mining context of the 4.8619ha portion of Rem Farm 312:

- The rehabilitation of the Mining Permit area components, inclusive of the operational mining area (i.e. disturbed) and natural/ indigenous vegetation areas (peripheral area).
- The Mining Permit Area and remainder of Farm 312, the latter being wilderness area.
- Various mining post-development components, including the residual land-forms (i.e. excavation, mining benches and faces, quarry access road and pit haul road).
- Several resource protection and enhancement programmes currently being rolled-out on surrounding farms and applicable to Rem Farm 312, including NPAES (Agulhas National Park being on adjacent Farm Rem 314), as well as the Municipality’s alien vegetation, fire and resource management programmes within their EMOZ and HPOZ.
- Giving effect to a spatially retaining and managing proposed end-use through the Rehabilitation Plan by ensuring and maintaining excavation edge configuration and safety, managing quarry floor flooding and monitoring quarry and haul road access for both environmental and safety purposes.
- Ensuring a defensible and appropriate post-mining land use definition, notably Agricultural Zone 1, which includes Conservation as a “primary use”.

6.3. Future Land Use

Figure 17: SDP; Post-Mining Future Land Use spatially presents the proposed future post-mining land use within the Mining Permit Area, as per the main closure objective (refer Section 4.2.1 (i)),

6. SITE DEVELOPMENT PLAN: POST-MINING FUTURE LAND USE PLAN

While the operation and decommissioning/ rehabilitation of the aggregate quarry (existing and extension) will be in terms of the Quarry Layout Plan: Final Extent of Excavation (refer Section 4.1 and Figure 15) and the Rehabilitation Plan (refer Figure 16 and Section 4.2), the purpose of Section 6 is to present the **Post-Mining Future Land Use Site Development Plan (SDP)** for the proposed extension of the existing Die Dam Quarry on portion of Rem Farm 312, commencing with the informants to such plan emanating from the quarry's operation, decommissioning and rehabilitation, and concluding with its post-mining future land use.

6.1. Informants to the Post-Mining Future Land Use SDP

This section comprises the SDP informants emanating from existing ecosystem sensitivities, physical features (e.g. plateau location), administrative restrictions (e.g. management responsibility), mining parameters and rehabilitation requirements as identified during past quarry mining and put forward in the approved BAR/ EMPr and approved EA conditions, and as forthcoming from municipal regulations and policy (e.g. OMSDF, Environmental Management Overlay Regulations, etc.) as documented in previous sections of this report.

Table 2 puts forward the spatial and other restrictions, sensitivities and opportunities to the aggregate quarry extension, notably its development, operation, rehabilitation and post-mine use.

Table 2: Informants to Post-Mining Future Land Use

Areas or Sensitivities and other Informants Presenting Restrictions and/ or Opportunities	Description/ Locality	Objectives and Management
1. Operational Phase 1.1. Indigenous and Alien Vegetation	<ul style="list-style-type: none"> - Critically Endangered remnants of Overberg Sandstone Fynbos within undisturbed peripheral 0.4862ha portion of site area located between the edge of the quarry disturbance footprint and the Mining Permit Area outer boundary. - Alien infestation (e.g. <i>Acacia cyclops</i>, <i>Hakea sericca</i>, etc.) within the undisturbed area peripheral to the quarry disturbed footprint. 	<ul style="list-style-type: none"> - Retention of all indigenous vegetation within undisturbed peripheral site portion outside quarry disturbed footprint. - Management of indigenous vegetation as per the requirements of the following to ensure as promote Fynbos/ Strandveld restoration during mining: <ul style="list-style-type: none"> • Critical Biodiversity Area • Ecological Support Area • Protected Area Expansion Strategy (NPAES) Focus Area - Alien vegetation management within the undisturbed area during the mining/ operational period, with such vegetation management also during the post-mining rehabilitation "after-care" period.

<p>1.2. Local Plateau and Escarpment Edge</p>	<ul style="list-style-type: none"> - Quarry location within a potentially highly exposed coastal plain view-shed given its location relevant to the crest of the coastal escarpment. 	<ul style="list-style-type: none"> - Restrict quarry excavation to "flat topped" local plateau above the coastal plain and pediment slope, ensuring that the crest of the "escarpment ridge" is never broken by the excavation in order to prevent visual impact. - Manage quarry visual interface in accordance with HPOZ: Scenic Drives. - Adhere to excavation extent limit as per Quarry Layout Plan: Final Extent of Excavation. - Retain existing topographic form surrounding excavation
<p>1.3. Topsoil</p>	<ul style="list-style-type: none"> - Relative scarcity of topsoil for rehabilitation 	<ul style="list-style-type: none"> - No excavation advance beyond the current disturbance area to prevent any further disturbance of topsoil - Conservation of existing topsoil berms on edge of the disturbance area given such soil being critical to the future rehabilitation of the site.
<p>2. Decommissioning and Rehabilitation Phase 2.1. Topsoil Replacement</p>	<ul style="list-style-type: none"> - Existing 265m³ of berm stored topsoil peripheral to outer edge of distributed area - Denuded area +-0.5ha surrounding excavation 	<ul style="list-style-type: none"> - Topsoil be replaced as follows: <ul style="list-style-type: none"> • Denuded areas surrounding the excavation must be rehabilitated first through removing as much stone chip covering as possible (for return to excavation pit), then being mechanically ripped as deep as feasible to daylight the underlying soils as much as possible. • Topsoil be selectively placed over the +-0.5ha that has the least underlying soil subsequent to the ripping.
<p>2.2. Revegetation</p>	<ul style="list-style-type: none"> - Seed collection from indigenous pioneer species neighbouring the site be stored in a suitable dark 	<ul style="list-style-type: none"> - Seeds to be re-sown (raked) into the rehabilitation replaced topsoil in April following quarry closure.

that being to limit the impact of the operational mining and residual post-mining impacts, notably to return the site environment in order that it can form part of the surrounding wilderness area, with the proposed end-use of the site being facilitated through the following target actions:

- An operational objective that the current disturbance area will not be exceeded
- All current disturbed areas (except for the access road and excavation) will be rehabilitated through surface preparation, topsoiling and seeding with indigenous species.
- Flooding of the excavation to a shallow reedbed and water fowl habitat, while vegetating the upper terraces, which together with the faces, will provide a cliffed habitat for raptors, all in context of the site location within the NPAES and Protected Area Buffer Zone of the EMOZ.
- Safety of the pit being ensured through excavation perimeter treatment.

Accordingly, Figure 17 puts forward the **Wilderness-Conservation Area** “post-mining future land use”, inclusive of the following components:

- Retained and restored undisturbed indigenous vegetation peripheral area located between the disturbed footprint of the quarry and the outer boundary of the Mining Permit area
- The rehabilitated (ripped, topsoiled and seeded) disturbed footprint area peripheral to the excavation edge.
- The excavation, inclusive of all benches having been rehabilitated, with seeding where surface soil or available top-soil permits
- Existing infrastructure supporting the Wilderness-Conservation Area, including:
 - The excavation perimeter edge treatment comprising a safety berm and trench, with a safety fence and danger warning signage.
 - The quarry access road which also provides owner access to the farm, and the haul road into the excavation/ pit, both roads providing access to the quarry itself for safety/ resource management purposes (e.g. wildlife and domestic stock watering and nature/ adventure visitors, as well as for fire and alien vegetation management access.

The above SDP use/ infrastructure areas vest in the following SDP Spatial Budget in Table 3.

Table 3: SDP Spatial Budget

Land Use/ Infrastructure	Components and Extent (ha)	
(i) Vegetation Areas (Wilderness)		
- Restored undisturbed indigenous vegetation	1.2978	
- Rehabilitated disturbed areas	0.8600	
- Rehabilitated excavation areas	0.8901	
Total Restored Vegetation Areas		3.0479
(ii) Shallow flooded Area (quarry floor)	1.4000	
Total Flooded Area		1.4000
(iii) Supporting Infrastructure		
- Excavation safety berm, trench and fence	0.2155	
- Retained quarry haul road	0.1371	
- Retained farm access road	0.0614	
Total Supporting Infrastructure		0.4140
(iv) TOTAL SDP: POST-MINING WILDERNESS – CONSERVATION AREA		4.8619

Critical to the success of the post-mining land sustainability are the following:

- Need for its further integration within wilderness-conservation programmes given its partial (50%) inclusion as a NPAES Designated Area and being within the EMOZ: Protected Area Buffer, in order to further unlock support for management programmes (e.g. resource, fire, alien vegetation, eco-tourism), notably within the context of the EMOZ and “support options” for private land conservation offered by CapeNature.
- Need for the proposed wilderness-conservation post-mining land use to vest within a “primary land use zone” including wilderness/ conservation as a primary use, to facilitate continued private ownership and integration with the wilderness use of the remainder of Rem Farm 312.

SDP: Post-Mining Future Land Use

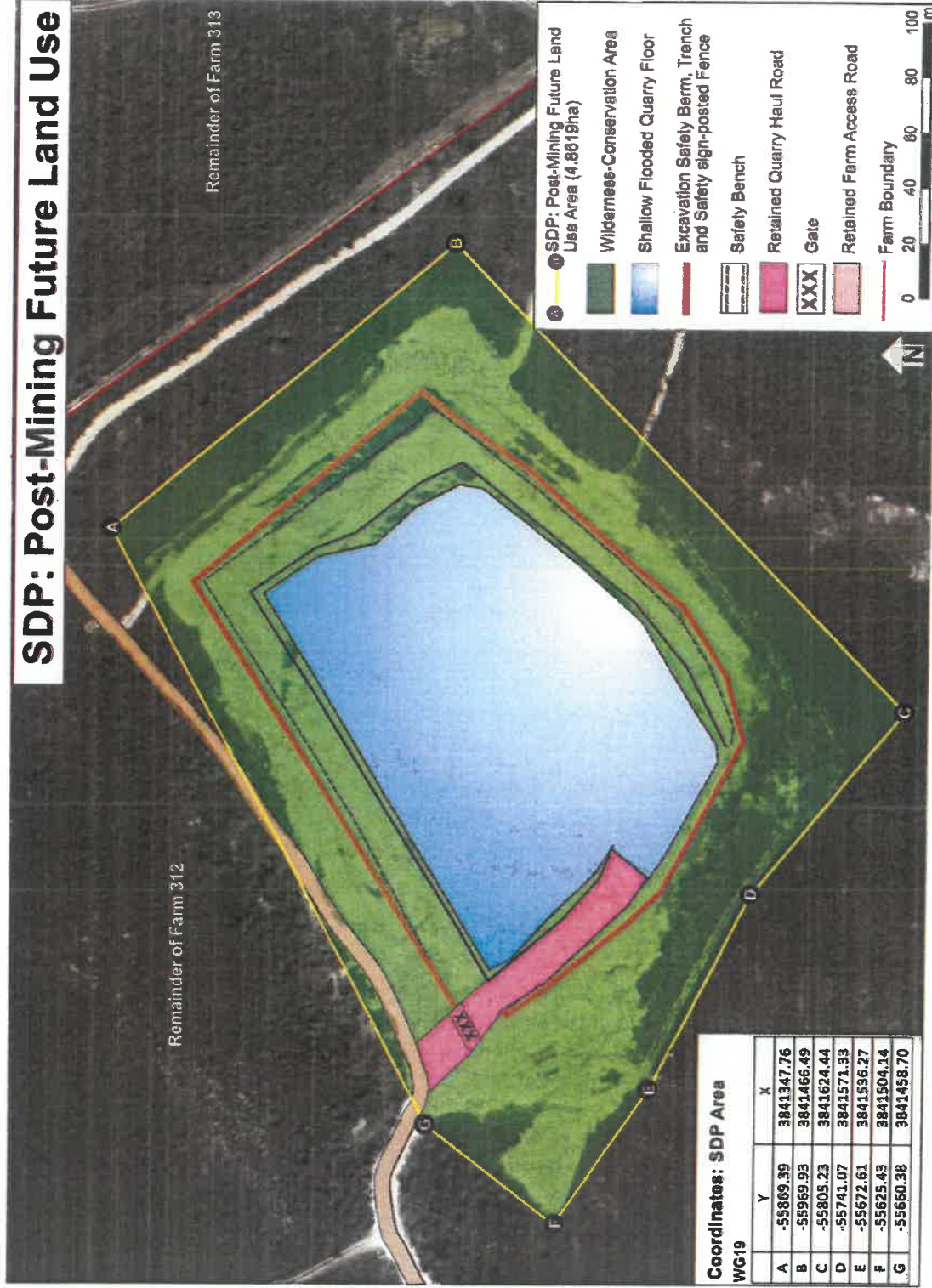


Figure 17: SDP; Post-Mining Future Land Use

7. DESIRABILITY

This section puts forward the desirability of the proposed mining extension of the existing Die Dam Quarry on portion of Rem Farm 312 as informed by the Quarry Layout Plan: Final Extent of Excavation (Figure 15), the Rehabilitation Plan (Figure 16) and the Post-Mining Future Land Use SDP (Figure 17) to address the local Overstrand and Overberg demand for construction aggregate. Such desirability is informed by the consistency of the proposed land use with Overstrand's spatial policies, including the Overstrand Municipality Spatial Development Framework (OMSDF, 2020), Overstrand Municipality: Amendment By-Law on Municipal Land Use Planning (2020), the Overstrand Land Use Scheme, 2020 and criteria for deciding on applications (i.e. Section 68 of the By-Law), as well as the Municipality's Environmental Overlay Zones (EMOZ).

7.1. Consistency with Overstrand Municipality Policy

- (i) Consistency with the Overstrand Municipality Spatial Development Framework (OMSDF, 2020), the Overstrand Integrated Development Framework (2014) (IDF, 2014), the Overstrand Environmental Management Framework (2014)(EMF, 2014), HPOZ (2020) and EMOZ (2020).

Section 5.2.7 sought the relevant informants for the proposed aggregate quarry extension from Overstrand Municipal Spatial and Environmental Policy, notably the 2020 Municipal Spatial Development Framework, the Environmental Management Overlay Zone Regulations, 2020 and the Heritage Protection Overlay Zone Regulations, 2020, together with Municipality's Environmental Management Framework (2014), the recent Overstrand SDF (2016) and the Overstrand Integrated Development Framework (2016).

As put forward in Section 5.2.7.4, key land uses as noted in the OMSDF 2020, including mining activities and the significance of view-sheds and designated NPAES area, and Protected Area Buffer, together with the proposed post-mine future land use of the quarry extension (i.e. wilderness-conservation) resonate positively with several of the Municipality's Environmental Objectives (EOs), notably:

- *“Mining development not resulting in unsustainable change in land use of biodiversity rich rural areas, agricultural activity and soil with agri-potential;*
- *The desirability of designating mining areas where the benefit of mining does not outweigh the loss of environmental integrity or environmental services; and*
- *Mining encouraging and supporting the development of networks of open space that sustain and encourage eco-system functioning, connect fragments of indigenous and conservation-worthy vegetation, protect wetland habitats and reinstate the natural environment”*

Section 5.2.7.4 demonstrates the alignment of the mining extension with the OMSDF (2020) and not impacting EMOZ and HPOZ, with such extension having the potential to serve as a catalyst and conservation initiative supported by alien vegetation and fire management, and tipping the benefit of mining in the favour of environmental enhancement. The quarry extension demonstrates support for Protected Area Buffer: EMOZ and HPOZ: Scenic Drives, as well as respecting the National Protected Area Expansion Strategy, being within a NPAES Focus Area.

Accordingly, it is concluded that the land use (operational and post-mining) of the proposed mining extension:

- Aligns with the OMSDF (2020), reinforcing the integration of the quarry operation and its post-mining rehabilitation with its environmental setting (proclaimed reserves) within the rural/ agricultural area, with the Post-Mining Future Land Use Site Development Plan (SDP) put forward in Section 6 confirming such alignment and integration.
- Aligns with the Overstrand Environmental Management Overlay Zones, 2020 (EMOZ and HPOZ).

(ii) Consistency with the Overstrand Land Use Scheme (2020).

However, the "integrated" zoning scheme of the Overstrand Municipality includes mining requiring land use authorisation as either a primary use through a rezoning or as a permitted or consent use within a designated primary use (i.e. a consent use).

Accordingly, in terms of the Overstrand Land Use Scheme (2020), the subject portion of Rem Farm 312 will seek a "consent" to allow mining within Agricultural Zone 1 for the Mining Permit approval, up to a maximum of 5-years, hereby achieving consistency with the Land Use Scheme..

7.2. Consideration Criteria

There is compelling evidence as to the proposed aggregate quarry extension meeting/ addressing the necessary criteria in consideration of the SDP and the consent use, as presented below and detailed in previous sections of this report:

(i) Economic Impact

The aggregate quarry, since its commencement, has had a **positive** economic impact given the following:

- Continued employment of two (2) permanent staff and a team of eighteen (18) staff who conduct the necessary excavation, crushing, loading and stockpiling.
- Continued supply of construction aggregate to the wider Overstrand and Overberg construction industry (both having growing construction sectors) at a competitive price given the proximity of Gansbaai, Pearly Beach and Bredasdorp customers.

(ii) Socio-Economic Impact

- Securing Employment

While the quarry operation will only result in the continued employment of existing employees (i.e. excavator operator(s), truck drivers, etc.), the purpose of the mine is to provide a continued locally sourced "strategic resource" in support of the Overstrand and Overberg construction industry, both significant employers in the wider district

- Resolution of Social Conflict

Negative social impact of the proposed mine land use is negligible given the following:

- No staff overnight on the mine site
- No agricultural labour will be displaced from the quarry extension area, given it being that no additional staff will be employed due to the extension
- The Environmental Management System (EMS) provides for an independent monitoring committee, the Environmental Monitoring Committee, which could (if there is sufficient interest) meet on site on a pre-determined basis to discuss issues relating to environmental management, with members comprising representatives of the mining company, the Town and Environmental Planning Sections of Overstrand

Municipality, the landowner representative and other environmental/ community-based organisations.

(i) Capital Investment

While the extension aggregate excavations will utilise the existing logistical facilities on Rem Farm 312, it will result in on-going replacement investment in machinery/ plant and maintenance thereof to undertake such operation. Furthermore, the extended mining will generate a land rental income for the land owner (i.e. P. J. Penwill Properties Ltd) and royalty payments to the State.

(ii) Compatibility with Surrounding Land Uses

As illustrated in Figures 3 and 6, the impact on surrounding land uses is limited given the general isolation of the existing and extension quarry area from surrounding land uses, noting the following: The 4.8619ha Mining Permit area site comprises of the following land uses (refer Figure 5):

- 90% unrehabilitated earlier quarrying footprint of the excavation and the plant/stockpiling area.
- The other 10% is land classified as undisturbed wilderness which may not be disturbed during the lifespan of this Mining Permit authorisation.
- Existing logistical facilities comprising three (3) containers, a weighbridge and a mobile bunded fuel tank for the purposes of the Mining Permit.
- No complaints from surrounding land owners during the past operation of the quarry insofar noise, dust or traffic impact.
- Mitigatory measures being in place to reduce any impact on surrounding properties (e.g. hydrocarbon management, dust and noise abatement, and ensuring no visual impact, etc.).

(iii) Impact on Existing Services

- The on-going operation of the mine will not impact on services, given that such services have been in place during its past operation, including:
 - Water obtained from the excavation used for road and plant area wetting, with potable water brought to the site in containers on a daily basis
 - On-site electrical power supply generation
 - Sewage treatment; on-site chemical toilet (contractor supplied and maintained)
 - Waste (domestic); collection removal to municipal disposal facility by mine management
 - Waste (industrial e.g. oil spill); removed by specialist contractor

(iv) Impact on Safety, Health and Well-being of Surrounding Communities

The relative isolation and distance from the nearest surrounding homestead (minimum of 2.8km), as well as the mine operation being restricted to week-days 07h00-17h00 Monday to Thursday and 07h30 – 14h30 on Friday, negates impacts emanating from mine operations (e.g. dust, noise, etc.), with mitigatory measures in place should impact occur, including:

- Road and plant area wetting to reduce the impact of dust from truck movement, notably the access road.
- Truck washing on departure to reduce dust/ rock particle deposition on Main Road (R43)
- Vehicle mechanical compliance (e.g. silencers) to restrict noise impact
- Regulatory provision (e.g. safety/ warning signage at the quarry access road/ R43 intersection) to reduce delivery vehicle traffic speed, improve road safety and improve awareness to public road users of heavy truck movement

- Hydrocarbon Management Programme in place to avoid and manage any fuel/ oil spills by quarry vehicles and plant, and thereby avoid groundwater pollution
- On-going daily quarry operations and presence of personnel on Rem Farm 312 will continue to contribute to the security of the area.

(v) Impact on Existing Use Rights

The extension mining area use will not impact on existing surrounding land use rights given that such approval in terms of section 69 of the Overstrand Municipality: Amendment By-Law on Municipal Land Use Planning (2020) will be subject to specific conditions ensuring appropriate operation of the quarry extension as well as its closure, rehabilitation and post-mine future land use. Furthermore, the quarry has a rehabilitation fund in place (i.e. security lodged with DMR) to ensure reinstatement of the land (quarry) in the event of failure by the lessee (i.e. mine operator). Additionally, the land owner and the quarry operator should be mutually protected by a lease agreement in respect of the right to mine, lease period and ancillary rights and responsibilities.

(vi) Impact on Heritage

Heritage Western Cape letter dated 8 February 2022 (refer Appendix 11) states that “since there is no reason to believe that the proposed development will impact on heritage resources, and accordingly no further action under Section 38 of the NHRA (Act 25 of 1999) is required”.

(vii) Impact on the Biophysical Environment

Impact Management Protocols put forward in Section 5 purposely address impact on the biophysical environment as may be experienced in the proposed quarry extension and highlighted in the environmental assessment undertaken. Mitigation as per such protocols will reduce any impact to acceptable levels, particularly when supported by strict monitoring, a highest order of site management maintenance and a transparent environmental management system, including community representation on a monitoring committee.

(viii) Traffic Impact and Access Related Considerations

The aggregate quarry access over Rem Farm 312 has always been via the existing private gravel access road extending over Remainder of Farm Buffel Jagte 309 (same owner) en-route to the R43 intersection.

Given the existing truck movement (22 per workday) via the gravel access road to the R43, and the fact that such current truck movement will not increase with the proposed extension, traffic volume increase post-extension will be negligible on the gravel road and the R43. However, mitigating measures are in place to reduce the impact of sand and gravel delivery trucks, including:

- Road wetting in the vicinity of the gravel road/ R43 intersection during high dust periods
- Speed and road safety management (e.g. signage) and driver education/ awareness, including heavy vehicle movement warning signage in the vicinity of the R43
- Vehicle compliance (e.g. silencer noise), removal of crusher dust and debris prior to trucks leaving the mine and covering of loaded material to prevent windblown crusher dust and material spillage

(ix) Compliance with Overstrand Town and Spatial Planning Department's Application Requirements

This motivation report addresses all items raised during telephonic discussions with the Town and Spatial Planning Department of Overstrand Municipality and in correspondence with the Environmental Department of Overstrand Municipality, such reflecting the Pre-application Consultation.

8. CONCLUSIONS

8.1. Conclusions

As per Section 16(2)(h) of the Overstrand Municipality: Amendment By-Law on Municipal Land Use Planning, 2020, and structured in terms of the criteria for deciding on an application (Section 68 of the By-Law), this application is motivated on the following grounds:

- (i) Complies with the requirements of the **Overstrand Municipality: Amendment By-Law on Municipal Land Use Planning (2020)**
- (ii) Comprises a reasonable and permissible deviation from the **Overstrand MSDF (2020)**, and aligns with the **Overstrand Municipality Environmental Management Overlay Zone Regulations, 2020** and the **Heritage Protection Overlay Zone Regulations (2020)**
- (iii) Constitutes a desirable amendment of Zoning approval as per Section 16(2) of the Overstrand Municipality: Amendment By-Law Municipal Land Use Planning (2020) and the **Overstrand Land Use Scheme (2020)**

(iv) The Western Cape Provincial Spatial Development Framework, 2014 (PSDF)

The PSDF recognises the importance of mineral resource assets, especially where such resources can contribute to, or support economic growth, often requiring trade-offs and coherent land use planning. The PSDF puts forward the safeguarding of strategic minerals through municipal SDFs and applying land use policy to reserve these resources for possible use.

- (v) Complies with **Chapter 2 of the Western Cape Land Use Planning Act (2014)** insofar the proposed quarry extension, operation and rehabilitation is guided by and promotes the following "**development principles**" put forward in the Act:
 - **Spatial sustainability**; through an existing quarry site selection in order to limit impact on agriculture, biodiversity and coastal culturally significant land, and its development and reinstatement (rehabilitation) being consistent with land use measures in accordance with environmental management instruments (e.g. BAR/ EMP process, appointment of an Environmental Control Officer, and conducting regular Environmental Performance Assessments (EPAs)). Furthermore, the rehabilitation will restore the mined land to wilderness and construction, thereby ensuring land use sustainability and limiting the impact on adjoining agriculture, protected areas, resource conservation, and other uses.
 - **Sustained protection of the environment**; through the quarry extension site selection having regard for natural habitats, systems (CBA's) and view-sheds, and re-establishing wilderness use, together with ensuring reserve protection and maintenance of environmental services maintenance.
 - **Realising the economic potential of the area**; through the supply of a strategic material (i.e. construction aggregate) in support of the local construction industry, thereby unlocking the latent benefit and synergy vested in the non-renewable mineral resource to create a positive socio-economic benefit through capital earning, job creation and socio-economic development, including supporting and growing tourism.

- **Employing the principle of efficiency**, though optimising the strategic resource (i.e. construction aggregate) by sourcing the mineral deposit in close proximity to its end-use (Overstrand/ Overberg and environs) and thereby reducing the carbon footprint (i.e. delivery/ distance) and reducing impact on roads (i.e. maintenance) and impact on road user safety, compared to if such mineral sourcing was from further afield deposit reserves.
- (vi) The location, land development and rehabilitation of the proposed quarry extension portion of Rem Farm 312 Gansbaai promotes the following **SPLUMA “principles” put forward in the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)**:
- The end-use of the mined material contributes to addressing **past spatial injustice** in improving socio-economic conditions in Gansbaai and Pearly Beach environs, as well as being a catalyst to foster rural, peri-urban and urban development and community facility establishment and support.
 - While no mineral resource use is sustainable, the unlocking of the latent benefit and synergy vested in the non-renewable mineral resource through employment creation and stability contributes to **spatial sustainability**.
 - The location of the quarry and its extension relative to the proximity of its product use (Overstrand and environs) ensures **efficiency** through reduced transport cost, limiting the carbon footprint and reducing impact (i.e. road maintenance and public road safety).
 - The quarry’s contribution to rural and urban development improves **spatial resilience** through ensuring improved sustainable community livelihoods and addressing the impact of economic and environmental shocks (e.g. climate change) on communities.
 - The BAR/ EMP and Land Use Authorisation planning and management processes applied to the quarry extension location, its operation and rehabilitation reflects **good administration**, being inclusive of all spheres of government (National, Provincial and Municipal).

It is therefore concluded, as demonstrated in this application, that through the effective implementation of the mitigation measures provided, the extension, operation, rehabilitation and post-mining future land use of the aggregate quarry extension on portion of Rem Farm 312 can deliver a **sustainable and efficient contribution to socio-economic development and transformation** without the **rehabilitation “legacy costs” and loss of land capability** (botanical and agricultural) historically and traditionally associated with aggregate quarries. Furthermore, the mining, rehabilitation and future use of the mining area can be a **catalyst for “integrated” and “sustainable” rural management and development, underpinned by safeguarded and improved environmental services.**

8.2. Recommendation

As motivated in this report, the approval of the following to permit the extension of existing aggregate quarry on portion of the Remaining Extent of Farm 312, Registration Division of Bredasdorp in terms of the Overstrand Municipality: Amendment By-Law on Municipal Land Use Planning, 2020.

- (i) Section 16 (2)(o): Consent Use to Permit Mining in Agricultural Zone 1: Agriculture (AGRI) on a 4,8619ha Portion of Rem Farm 312 depicted in Diagram 5
- (ii) Section 16(2)(g): A Post-Mining Future Land Use Site Development Plan for the 4,8619ha Portion of Rem Farm 312 as put forward on Figure 17, within the spatial extent as depicted in Diagram 5.

Diagram 5 depicts the spatial context (4.8619ha) of the above Consent Use and the SDP as per Diagram A, B, C, D, E, F and G (4.8619ha).

Furthermore, such approval to be applicable to the period of the Mining Permit, that being two-years, extendable to a total maximum of five-years.

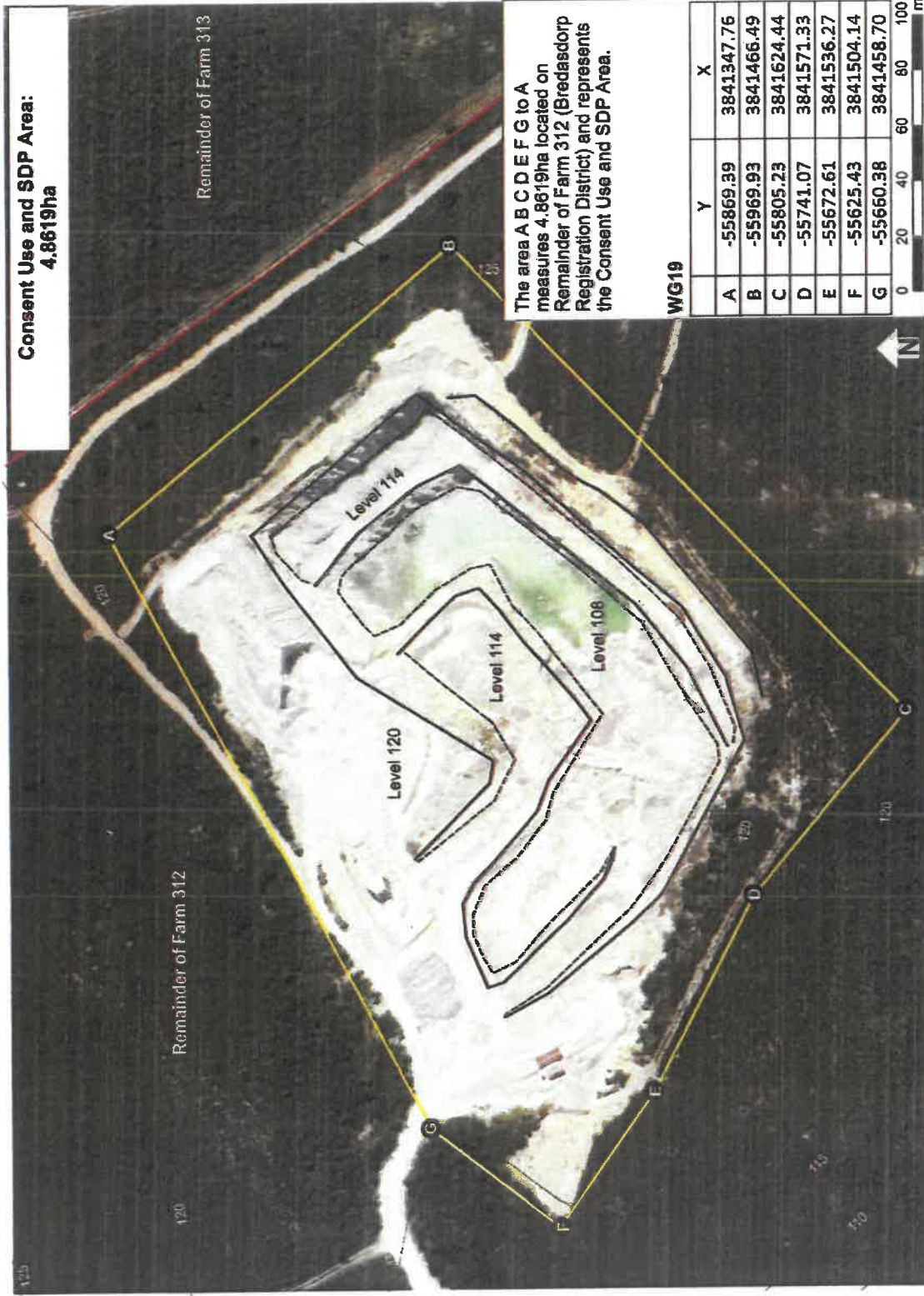


Diagram 5: Consent Use and SDP: 4,8619ha Portion of Rem Farm 312, Registration Division of Bredasdorp, situated in the Overstrand Municipal Area

